

1997

GVSU Undergraduate and Graduate Bulletin, 1997-1998

Grand Valley State University

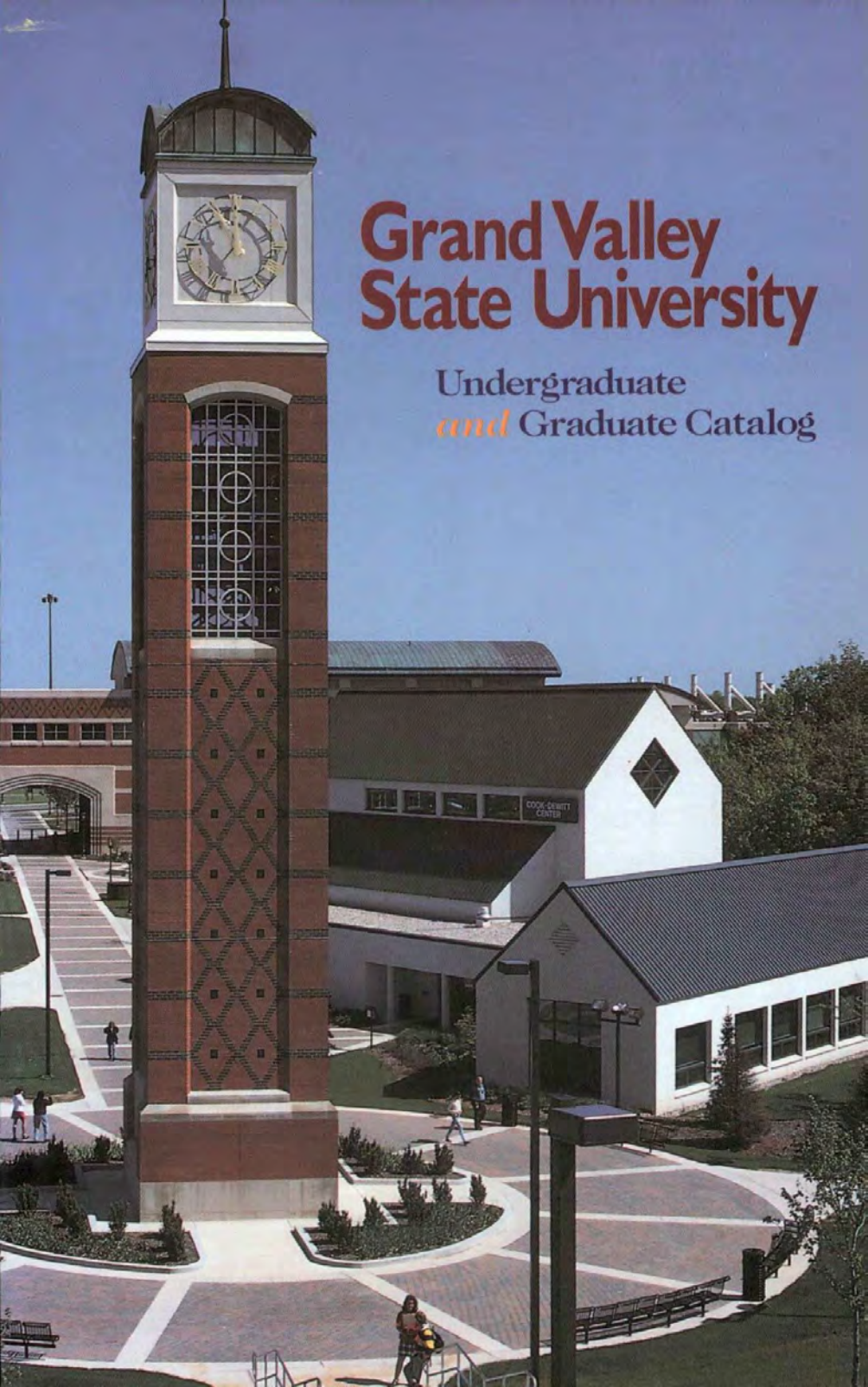
Follow this and additional works at: http://scholarworks.gvsu.edu/course_catalogs

 Part of the [Archival Science Commons](#), [Education Commons](#), and the [History Commons](#)

Recommended Citation

Grand Valley State University, "GVSU Undergraduate and Graduate Bulletin, 1997-1998" (1997). *Course Catalogs, 1963-Present*. 65.
http://scholarworks.gvsu.edu/course_catalogs/65

This Book is brought to you for free and open access by the University Archives at ScholarWorks@GVSU. It has been accepted for inclusion in Course Catalogs, 1963-Present by an authorized administrator of ScholarWorks@GVSU. For more information, please contact scholarworks@gvsu.edu.



Grand Valley State University

Undergraduate
and Graduate Catalog

Some Facts About Grand Valley

Location: Allendale, Michigan (12 miles west of Grand Rapids).

Established: 1960. First class in 1963. **Campus:** 897 acres.

Type of Institution: Four-year public university, undergraduate and graduate programs. Undergraduate degrees: bachelor of arts (B.A.), bachelor of science (B.S.), bachelor of fine arts (B.F.A.), bachelor of music (B.M.), bachelor of music education (B.M.E.), bachelor of social work (B.S.W.), bachelor of business administration (B.B.A.), bachelor of science in engineering (B.S.E.), bachelor of science in nursing (B.S.N.). Graduate degrees: master of business administration (M.B.A.), master's in communication (M.S.), master's in computer information systems (M.S.), master of education (M.Ed.), master's in engineering, with MSU and WMU (M.S.), master of health sciences (M.H.S.), master's in physical therapy (M.S.), master's in physician assistant studies (M.P.A.S.), master of public administration (M.P.A.), master of the science of taxation (M.S.T.), master of social work (M.S.W.), and master of science in nursing (M.S.N.).

Tuition: Undergraduate tuition is \$128 per credit hour for 1-11 credits, \$1,433 total for 12-16 credits, and \$128 per credit over 16 hours for Michigan residents. For non-residents it is \$287 per credit hour for 1-11 credits, \$3,335 total for 12-16 credits, and \$287 per credit over 16 hours.

Graduate tuition is \$139 per credit hour for Michigan residents, \$300 for non-Michigan residents.

Room and Board: Residence halls: \$4,640 to \$5,040, depending on the residence hall and the food plan selected. Ravine Apartments: \$1,970 to \$2,450, depending on the type of apartment and the number of roommates.

Note: Rates for tuition and room and board are those for 1996-97 and are subject to change by the Board of Control.

Enrollment: 14,662. **Faculty (regular):** 476. **Support staff:** 598.

Academic year: Two 15-week semesters; fall semester, August 25, 1997, to December 13, 1997; winter semester, January 5, 1998, to April 25, 1998. Summer session: 12 weeks.

Library: 489,000 volumes, 2,774 periodicals, 19,000 reels of microfilm.

Computer Support: IBM mainframe, open laboratories with both Macintosh and IBM microcomputers, microcomputer consultation and sales, Wide Area Fibre Optic Network that provides connections for computer servers such as Internet, IBM mainframe, electronic mail, and file servers.

Accreditation: North Central Association of Colleges and Schools. Associate member of the National Association of Schools of Art and Design and the National Association of Schools of Music. Chemistry Department accredited by Committee on Professional Training of the American Chemical Society. School of Education accredited by the National Council for Accreditation of Teacher Education (NCATE). The bachelor of science in engineering program is accredited by the Accreditation Board for Engineering and Technology (ABET). Nursing program accredited by National League for Nursing. Physical Therapy program accredited by the American Physical Therapy Association. School of Social Work accredited by the Council on Social Work Education.

For more information about Grand Valley, write or telephone the Admissions Office, 1 Campus Drive, Grand Valley State University, Allendale, Michigan 49401-9403. Telephone: 616-895-2025, or toll free, 1-800-748-0246.

A map of the Grand Valley campus is on the inside back cover.

Table of Contents

Some Facts About Grand Valley	inside front cover
Calendar	4
The Campus	6
Academic Excellence	13
Student Life	15
Campus Services	24
Admission to Grand Valley	32
Costs and Financial Aid	41
General Academic Regulations	72
Academic Resource Center	94
International Affairs Office	96
Academic Programs	98
Continuing Education Division	471
Glossary of Terms	474
Academic Degree Programs	478
Directory	480
Campus Security	516
Index	523
Campus Map	Inside back cover

Grand Valley State University is committed to equal opportunity, affirmative action, and nondiscrimination on the basis of religion, race, color, national origin, age, sex, height, disability, weight, and marital status in all educational programs, activities, and conditions of employment. Questions and concerns should be directed to the Director of Affirmative Action, Lake Michigan Hall, extension 2242. If you believe any accommodation of a handicap or disability is necessary, Michigan and Federal law requires that you notify GVSU after you know or should have known that the accommodation was needed. Questions and concerns regarding an accommodation should be directed to the Americans with Disabilities Act Coordinator, Kirkhof Center, extension 3585.

The University and Its Objectives

Grand Valley State University's role is that of a public, comprehensive institution which provides educational services to west Michigan. The institution offers liberal arts and professional education for its students, contributes to the advancement of knowledge, applies that knowledge to societal needs, assists the state in its development, enriches the cultural life of the citizens of the region, and prepares its graduates to be citizens of an increasingly global society. Grand Valley State is dedicated to the pursuit of excellence in all its endeavors.

Grand Valley State University seeks to achieve its undergraduate instructional mission through a liberal education curriculum which acquaints students with the tradition of humane values and the heritage, problems, and perspectives of their own and other cultures, and which develops lifelong skills of critical thinking, articulate expression, and independent learning. All degree-seeking undergraduates complete a General Education Program, which continues through the senior year. Liberal education values permeate the major programs as well, both the traditional liberal arts and sciences disciplines and the professional programs. International experiences help students expand their knowledge of their own cultural heritage and gain new perspectives on society and on themselves.

Grand Valley State's graduate instructional mission is linked to its cooperative relationships with business, industry, public and private agencies, and institutions worldwide. In response to student and community needs, master's degrees are offered primarily in professional fields. Graduate programming includes degree programs, continuing education programs, and special certificate programs. Where appropriate, graduate study is offered in cooperation with other institutions.

Grand Valley State University endorses the ideal of lifelong learning and is committed to increasing educational access for adult learners. Accordingly, it sponsors an extensive continuing education program which makes community-based instructional programs available to working adults and other nontraditional students. Through this program, undergraduate and graduate courses and selected degree sequences are regularly scheduled. A variety of short-cycle, noncredit courses, workshops, and conferences are also offered to meet specific educational needs.

Grand Valley State University is a learning community where close student-faculty interaction enhances both teaching and learning. To support such an environment, the institution encourages students to participate actively with faculty in all aspects of their education, from formal classroom instruction to research, academic advising, cross-cultural interaction, and extracurricular activities.

The active pursuit of new knowledge is also essential for academic excellence, and Grand Valley State's faculty conduct both applied and basic research. The institution focuses its applied research activity primarily on issues directly related to the regional, national, and global aspects of economic and social development, and it conducts research projects in partnership with business, industry, and the public sector in west Michigan. Grand Valley faculty conduct basic research to develop new insights in all domains of knowledge. Rigorous scholarly inquiry of both types enhances the quality of instruction.

Grand Valley State University recognizes and supports the substantial contributions of its faculty and staff to its service mission. Additionally, the institution serves as a major cultural and information resource for the region by maintaining

a comprehensive library, broadcasting public-interest programs over its radio and television stations, and sponsoring artistic performances, lecture series, and other cultural events. Individual members of the university community serve as consultants in numerous areas of public and private enterprise in the region.

Grand Valley State University provides educational services throughout west Michigan from several locations. A full range of liberal arts and sciences, and professional programs is offered at the main campus in Allendale, where the characteristics of a liberal arts college are combined with the resources of a small university. The learning community is supported by library, computer, research, laboratory, cultural, and recreational resources. In addition, the institution draws upon and contributes to the resources of the area through four regional centers. At the Grand Rapids campus, graduate and upper-division professional programs are offered, research is conducted, and economic development services are provided to meet the needs of west Michigan's business, industry, and public sector. Its location in the center of Michigan's second largest metropolitan area enables the Grand Rapids campus to most effectively support the growth and development of high-technology companies, to improve the competitiveness of traditional manufacturing industries, and to foster the creation of new industries. Its central location also strengthens its capacity to provide instructional and applied research support to the various agencies and governmental units which provide and administer human services. Educational centers in Holland, in Muskegon at the Muskegon Center for Higher Education, and in Traverse City at the Northwestern Michigan College University Center provide educational opportunities for students in communities along the eastern shore of Lake Michigan.

As its mission expands, Grand Valley State University remains committed to its original tenets: an emphasis on the centrality of liberal education, an instructional approach which stresses the need to pay attention to students as individuals, a recognition that the ambience of campus life has a major impact on the educational process, a commitment to community service, and access for all qualified citizens of west Michigan and the state. The institution will continue to evolve as the educational needs of its students, west Michigan, the state, the nation, and the world change. Grand Valley State University provides academic, cultural, and economic leadership commensurate with its mission as the public higher educational resource for the region.

Notice

All material in this catalog applies to the 1997-98 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. A reorganization in 1982 merged certain academic units and programs. These changes will not affect the credits already earned by current students.

Grand Valley Calendar, 1997-00

Fall Semester 1997

Convocation	August 22, 1997
Classes Begin	August 25, 1997
Labor Day Recess	August 31-September 2, 1997
Thanksgiving Day Recess	November 26-30, 1997
Classes End	December 6, 1997
Commencement	December 6, 1997
Examinations	December 8-13, 1997
Semester Ends	December 13, 1997

Winter Semester 1998

Classes Begin	January 5, 1998
Spring Break	March 1-8, 1998
Classes End	April 18, 1998
Examinations	April 20-25, 1998
Semester Ends	April 25, 1998
Commencement	April 25, 1998

Spring/Summer Session 1998

Classes Begin first six-week session and 12-week session	May 4, 1998
Memorial Day Recess	May 25, 1998
Classes End first six-week session	June 15, 1998
Examinations first six-week session	June 16-17, 1998
Classes Begin second six-week session	June 22, 1998
Independence Day Recess	July 3, 1998
Classes End second six-week session and 12-week session	July 31, 1998
Examinations second six-week session and 12-week session	August 3-4, 1998
Session Ends	August 4, 1998

Fall Semester 1998

Convocation	August 28, 1998
Classes Begin	August 31, 1998
Labor Day Recess	September 6-8, 1998
Thanksgiving Day Recess	November 25-29, 1998
Classes End	December 12, 1998
Commencement	December 12, 1998
Examinations	December 14-19, 1998
Semester Ends	December 19, 1998

Winter Semester 1999

Classes Begin	January 11, 1999
Midsemester Break	March 7-14, 1999
Classes End	April 24, 1999
Examinations	April 26-May 1, 1999
Semester Ends	May 1, 1999
Commencement	May 1, 1999

Spring/Summer Session 1999

Classes Begin first six-week session and 12-week session	May 10, 1999
Memorial Day Recess	May 31, 1999
Classes End first six-week session	June 21, 1999
Examinations first six-week session	June 22–23, 1999
Classes Begin second six-week session	June 28, 1999
Independence Day Recess	July 5, 1999
Classes End second six-week session and 12-week session	August 9, 1999
Examinations second six-week session and 12-week session	August 10–11, 1999
Session Ends	August 11, 1999

Fall Semester 1999

Convocation	August 27, 1999
Classes Begin	August 30, 1999
Labor Day Recess	September 5–7, 1999
Thanksgiving Day Recess	November 24–28, 1999
Classes End	December 11, 1999
Commencement	December 11, 1999
Examinations	December 13–18, 1999
Semester Ends	December 18, 1999

Winter Semester 2000

Classes Begin	January 10, 2000
Semester Ends	April 29, 2000
Commencement	April 29, 2000

Spring/Summer Session 2000

Classes Begin	May 8, 2000
Session Ends	August 8, 2000

Fall Semester 2000

Classes Begin	August 28, 2000
Commencement	December 9, 2000
Semester Ends	December 16, 2000

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

The Campus

Grand Valley State University is located almost midway between downtown Grand Rapids and Lake Michigan, near the town of Allendale. The natural land structure of Grand Valley's 897-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 and the Affirmative Action Offices, the University Communications Office, and the Alumni Relations Office.

Lake Superior Hall houses the English and Philosophy Departments, the School of Communications, and the Office of the Dean of the Arts and Humanities Division.

Lake Huron Hall houses the Seidman School of Business, including the Economics Department.

Located in Seidman House are the Archives, 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 scenic views of the Ravines. 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, has received several awards for its architectural design. It 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, library offices, reference collection and periodical abstracts and indexes. 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 489,000 volumes, 2,774 periodical subscriptions, 19,000 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 and catalogs large numbers of federal and state documents. For those with special needs, access is provided to the collections of other libraries.

Alexander Calder Fine Arts Center, named for the artist whose stable *La Grand Vitesse* is a Grand Rapids landmark, houses faculty offices, classrooms, practice rooms, and teaching studios for the performing arts. Located in this building is the 490-seat Louis Armstrong Theatre for presentations of plays, operas, concerts, and other programs. The Art Gallery is also located in this building. In addition to the building entrances from the inner-campus walkways, an entry through a landscaped courtyard provides access to the Calder Fine Arts Center from the Campus Drive parking areas.

Kirkhof Center is a multipurpose building containing student service facilities. Located here are the University Bookstore, the Lobby Shop, postal services, pay phones, DeFranco's Total Image Salon, commuter lockers, and the box office operations for campus events. Food service is available from the River Cafe restaurant, the Oak Room, and from vending machines. In addition to meeting rooms and lounge areas, the offices of the Student Senate, the Student Life Office, and the Special Event Services Office are located here.

The Campus

AuSable Hall houses the School of Education undergraduate division, with a K-12 Curriculum Resource Center, and the Departments of Anthropology and Sociology, Modern Languages and Literatures, History, Political Science, Psychology, and the Office of the Dean of Social Sciences. 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 in size 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 Maryin and Jerene DeWitt, who donated funds for its construction.

The Islands Group: Mackinac Hall and Manitou Hall. The "L" position of these two buildings, constructed with ribbed concrete walls, bronze glass, and porcelain panels, forms a natural outdoor court with the adjacent Commons building.

Mackinac Hall contains classrooms as well as faculty offices. The Departments of Hospitality and Tourism Management, Mathematics and Statistics, Computer Science and Information Systems, and the School of Criminal Justice are housed in this building. A microcomputer teaching laboratory for students providing Macintosh, NeXT, and Zenith PCs is also located here. The computers are connected to the university-wide network.

Manitou Hall contains lecture halls, Information Technology, Academic and Administrative Computing, and a 120-station computer lab (both PCs and Macintosh) for use by students. The campus mainframe, an IBM S390, is 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. Many computers spread throughout the campus serve both the instructional and administrative needs of the university. A number of classrooms and lecture halls are equipped with computers and projection equipment for instruction. Nearly all academic disciplines use computer services on the Grand Valley campus.

The Art Center houses facilities for graphic design, painting, print-making, art education, drawing, and ceramics.

Science Complex. This complex consists of three separate buildings, the **Student Services Building**, **Henry Hall**, and **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, International Affairs, Student Employment, Academic Resources and Special Programs, and the Dean of Students are



located here. Also housed in the three-story building is the new 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 as well as the Physical Therapy program, the Kirkhof School of Nursing, and six microcomputer labs (113 Pentium and 46 MacIntosh) and a two-way interactive video distance learning classroom. 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 Biology, Chemistry, Geology, and Physics Departments, as

The Campus

well as the School of Health Sciences, the Water Resources Institute, the Regional Math and Science Center, the Learning Center, and the office of the Dean of the Science and Mathematics Division are located in this building. Financed originally in part by funds from the Loutit Foundation of Grand Haven, the facility has been enlarged and remodeled as part of the new 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 accommodates dining facilities and offices. A dining room which 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 new 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 located here also.

Student Residences. Curving in an "S" shape along the winding rim of a ravine are three dormitories, named after a founding member of the University's governing body: James M. Copeland House, Kenneth W. Robinson House, and Grace Olsen Kistler House. Accommodating 900 students, the dormitories are coeducational units with separate wings for men and women connected to central lounges.

The Ravine Apartments, a townhouse style complex built along another scenic ravine nearby, accommodates 350 upperclass students in efficiency and one- or two-bedroom units.

Seven Living Centers, named for GVSU Board of Control members Richard M. DeVos, Icie Macy Hoobler, Paul A. Johnson, Arnold C. Ott, Robert C. Pew, William F. Pickard, and Ella Koeze Weed, house approximately 430 students. Two additional Living Centers housing 210 students will open in Fall 1997. All the buildings are divided into suites consisting of two double rooms and a bath.

The Physical Education/Recreation/Athletic Complex is located in the north central portion of campus. It includes playing fields, baseball and softball diamonds, a soccer field, tennis courts, and the Lubbers Stadium for football and track. The 210,000 square-foot fieldhouse includes a multi-purpose arena for a variety of events, including basketball, volleyball, track, and cultural events. In addition, it includes two tennis courts and four badminton courts. The arena has a seating capacity for up to 5,900 for concerts and 4,600 for center court athletic events. Other facilities in the complex include a 25 yard x 25 meter swimming pool with seating for 300 spectators, racquetball and walleyball courts, a weight training room, a gymnastics room, a human performance laboratory, an athletic training room, and instructional areas for programs such as dance and athletic training.

A recreation wing provides an added 41,000 square feet to the existing building and has the capacity to serve approximately 4,000 persons a day. The wing features a two-level fitness center, an elevated track, and wood playing courts. The courts include three basketball courts, overlays for three volleyball courts, and six badminton courts. The fitness center includes a ground floor area with approximately 35 weight machines. The second-floor balcony houses approximately 40 pieces of cardiovascular equipment, including stair steppers, bicycle machines, rowing ergometers, and treadmills. The elevated four-lane jogging and walking track separates runners from the active sports on the main floor.



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 construction, operation, or maintenance of the course.

The Eberhard Center, on the Grand Rapids Campus downtown, has 43 classrooms and labs, a Library Access Office, and includes high-technology teleconference and conference facilities, and three computer labs. Classes offered in the center include graduate degree programs in business administration, computer information systems, education, engineering (in consortium with Michigan State and Western Michigan Universities), nursing, public administration, social work, and taxation, plus selected upper-level bachelor degree offerings in business, communications, criminal justice, computer science, engineering, and other technology programs.

The Meijer Public Broadcast Center, part of the university's Grand Rapids Campus, houses Grand Valley's public television stations, WGVL-TV 35 and WGVK-TV 52, and radio stations AM 1480 and 88.5 FM WGVU. These operations provide both local and national programs of interest to west Michigan audiences.

The Campus

25 Commerce, in downtown Grand Rapids, houses the offices of the Schools of Public Administration and Social Work and the Center for Philanthropy and Nonprofit Leadership.

The Riverfront Plaza Building, at 55 Campau Avenue, N.W. in downtown Grand Rapids, houses GVSU's Development Office.

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, talk with faculty members, or sit in on classes.

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. 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

Student Services Building

Grand Valley State University

Allendale, Michigan 49401-9403

(616) 895-2025 or

Toll free: 1-800-748-0246 (for Admissions, Financial Aid, Housing, and Records).



Academic Excellence

Grand Valley prides itself on being a teaching institution dedicated to providing the highest level of quality instruction possible. The most crucial ingredient necessary for the achievement of this goal — the quality of the faculty — was judged “impressive” by the evaluation team of the North Central Association of Colleges and Schools. Seventy-eight percent of the faculty have earned doctoral degrees or other appropriate terminal degrees. Similarly, the evaluators cited the nonteaching professional staff and Grand Valley’s facilities as institutional strengths. In addition, the evaluation team was impressed by the enthusiasm and loyalty of the Grand Valley students, who were characterized as articulate and well-informed. The quality of instruction is enhanced further by small class size, individual student advising, and career counseling.

The Center for Research and Development is the focal point of the university-wide effort in research and other aspects of professional development of the faculty. Students are involved with the center through their participation in research projects directed by the faculty. These projects range from laboratory or field-based work to library-derived information and creative, fine arts, or performing arts projects. Grand Valley encourages student involvement in its efforts to generate new knowledge as an invaluable learning experience.

Our instructional offerings encompass over one hundred academic and career preparation programs leading to degrees in more than 75 major areas.

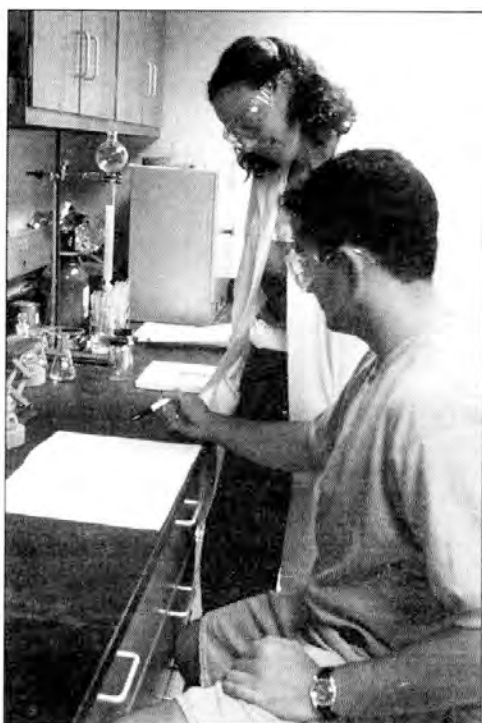
Grand Valley is proud to have campus chapters of 14 national honor societies: Phi Kappa Phi (general scholarship and character, all disciplines), Beta Beta Beta (biological sciences), Delta Mu Delta (business), Dobro Slovo (Slavic), Phi Alpha Theta (history), Phi Epsilon Kappa (physical education, health, and recreation), Pi Alpha Alpha (public administration), Pi Sigma Alpha (political science), Psi Chi (psychology), Sigma Delta Pi (Spanish), Sigma Tau Delta (English), Sigma Theta Tau (nursing), Sigma Xi (science), and Upsilon Pi Epsilon (computer science).

Grand Valley is a member of the National Association of Schools of Art and Design and of the National Association of Schools of Music. The Chemistry Department is accredited by the Committee on Professional Training of the American Chemical Society, the School of Education is accredited by the National Council for Accreditation of Teacher Education (NCATE), the bachelor of science in engineering program is accredited by the Accreditation Board for Engineering and Technology (ABET), and the nursing program is accredited by the National League for Nursing. The physical therapy curriculum is accredited by the Commission on Accreditation in Physical Therapy of the American Physical Therapy Association, and the School of Social Work is accredited by the Council on Social Work Education. The Master of Public Administration program is accredited by the National Association of Schools of Public Affairs and Administration.

Grand Valley nursing graduates traditionally earn high scores on state board examinations. The placement rate of Grand Valley graduates in professional schools such as law and medicine is high.

Grand Valley offers an undergraduate Honors Program for especially qualified students. 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.

Academic Excellence



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

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, e.g., lectures, concerts, and festivals, allows students to develop leadership skills and promotes culture and diversity at Grand Valley.

Asian Pacific Islander Student Organization (APISO)	La Tertulia
Black Student Union	Latino Student Union
Ethnic Festival Committee	Le Cercle Français
International Student Association (ISA)	Native American Club
	Russian Circle

Performing and Fine Arts Organizations

Performing arts organizations offer students the opportunity to become involved in music, dance, and stage activities outside the classroom.

Concert Band	Orchestra
Festival Chorale	Small Jazz Ensemble
GVSU Singers	Student Technicians and Actors Guild for Entertainment (S.T.A.G.E.)
Madrigal Ensemble	Symphonic Wind Ensemble
Marching Band	Voices of GVSU (Gospel Choir)
Music in Motion	

Special Interest Groups

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

Afterthoughts	Otaku No Anime
Alternative Realities	Pillar Society
Amateur Radio Council (HAM)	Reflections
College Republicans	Renaissance Festival
Collegians for Life	Repair Group
Country Kickers	SISTER
Dance Troupe	S.T.A.G.E.
Electric Racing Team	Student Democrats
Ellipsis (creative writing)	Tanarri Winter Guard
Environmental Management Association	Ten Percent of U. (gay/lesbian)
Euchre Club	Vegetarian Awareness
Filmmakers' Society	WCKS (student radio)
Harpoon (humor magazine)	You Beautiful Black Woman
Organization for the Advancement of Disabled Students (OADS)	

Student Life

Sports 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	Men's Soccer
Bicycling Club	Men's Volleyball
Cheerleading	Rowing Club/Crew Team
Fencing Team	Ski Team
GVSU Shooting Team	Vertical Ventures (rock climbing)
Hockey Club	Water Polo
Kung-Fu Club	Women's Volleyball
Laker Dance Team	

Religious Groups

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

Campus Bible Fellowship	His House Christian Fellowship
Campus Ministry	Inter-Varsity Christian Fellowship
Chi Alpha Christian Fellowship	Soldiers for Christ
Christianity on Campus	

Professional Associations

Professional associations offer students 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.

Accounting Club	Master of Social Work Student Organization
Alpha Psi Omega (theatre)	Mathematics and Statistics Club
American Advertising Federation	Mu Phi Epsilon (music fraternity)
American Marketing Association	National Association of Black Engineers
American Society of Mechanical Engineers	National Association of Black Social Workers
American Society of Safety Engineers	Physical Therapy Club
Anthropology Club	Pre-Law Society
Association of Physician Assistant Studies (APAS)	Pre-Med Club
Athletic Training/Sports Medicine	Pre-Physical Therapy Club
Bachelor of Social Work	Psi Chi (psychology)
Biology Club	Public Relations Student Society of America (PRSSA)
Chemistry Club	Sigma Delta Pi (Spanish)
Clinical Laboratory Science Club	Sigma Tau Delta (English)
Computer Science Club	Society for Human Resource Management
Council for Exceptional Children	Society for the Advancement of Management
Delta Sigma Pi (business)	Society of Manufacturing Engineers
Designers Ink	Sociology Club
Finance Club	Soil and Water Conservation Society
Future Educators Organization	Therapeutic Recreation Club
Geology Club	
Hospitality Management Association	

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.

Governing Councils

GVSU Panhellenic Council
 Interfraternity Council
 National Pan-Hellenic
 Council
 Order of Omega
 Presidents' Council

Fraternities

Alpha Phi Alpha
 Alpha Sigma Phi
 Delta Sigma Phi
 Lambda Chi Alpha
 Omega Psi Phi
 Phi Beta Sigma
 Phi Delta Psi
 Phi Eta Psi
 Sigma Phi Epsilon
 Tau Kappa Epsilon

Sororities

Alpha Beta Chi
 Alpha Kappa Alpha
 Alpha Omicron Pi
 Alpha Sigma Tau
 Delta Sigma Theta
 Delta Zeta
 Emeralds
 Sigma Gamma Rho
 Sigma Kappa
 Sigma Sigma Sigma
 Zeta Phi Beta

Student Programming Organizations

Several student organizations plan and present a wide variety of recreational, cultural, educational, and social events. Students choose entertainers and work together to produce events. The organizations are open to all students. Freshmen and new students are especially encouraged to become involved. These organizations include:

CinemaTECH (film)	Sound Spectrum Concert Productions
Crossroads (Commuters)	Spotlight Productions (comedy)
Ideas and Issues (lectures)	Student Organization Network (SON)
MCA (Major Campus Activities)	

Student Government

Students living in residence halls can become involved in their governance through the following organizations:

Campus West Organizational Committee	Ravine Club
Copeland House Council	Residence Hall Floor Governments
Kistler House Council	Resident Housing Association
Living Centers I & II	Robinson House Council
NRHH (National Residence Hall Honorary)	

Student Senate

The Student Senate is an elected body of 35 students. The Senate conveys student opinion to the GVSU Administration and the Board of Control in matters of institutional policy. The Senate also provides a forum for discussion, investigation, and resolution of student ideas and concerns. The Senate is responsible for the allocation of the Student Life Fee 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 Allocations, Student Resources, Public Relations, Community Affairs, and Political Actions Committees.

Student Life

Lanthorn

The *Lanthorn* is a weekly student newspaper which gives students an opportunity to gain experience in the total production of a newspaper. The Lanthorn Office is located on the lower level of the Commons. The *Lanthorn* staff includes advertising, business, graphic artist, staff writer, and staff photographer positions.

Student Life Office

The Student Life Office, located on the main level of Kirkhof Center, seeks to enhance student development through involvement in diverse experiences. The office assists with the activities of more than 150 student organizations. Students are strongly encouraged to join one or more organizations which will assist in the development of their personal and leadership skills. The office also coordinates several major programs which promote volunteerism and leadership, including:

Volunteer! GVSU

Volunteer! GVSU is a service learning project which encourages students, faculty, and staff to engage themselves in their community in order to learn about the economic, social, and political issues facing society. Students are encouraged to become involved in a community service activity which will enhance their understanding of civic responsibility. The Leadership and Volunteer Center is located on the second floor of the Kirkhof Center. Volunteer opportunities are available in the following areas:

Alternative Spring Breaks	Hunger/Homelessness
Area High School Partnership	Into the Streets
Disabilities/Best Buddies	Literacy
Big Brother/Big Sister	Senior Citizens
Environment	Social Services
Habitat for Humanity	Substance Abuse
Health and AIDS	Youth Volunteer Corps
Human Services	

Opportunities to participate in international volunteer projects are available through Volunteer! GVSU and the Office of International Affairs.

Excellence in Leadership Program

The Excellence in Leadership Program is designed to assist students in developing their personal and leadership skills. The program includes four sequential levels of leadership: Bronze, Silver, Gold, and Diamond. Each level has its own set of requirements. Students work at their own pace to complete the required competencies. The program includes workshops, conferences, retreats, individual counseling, hands-on experience, a resource center, and recognition program.

Campus Life Nite

Campus Life Nite, held at the beginning of each 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. Door prizes and a performance by a nationally known entertainer highlight the evening.

Traditions and Festivals

Student organizations and special committees work with professional staff in sponsoring and planning such events as Family Day, Homecoming, Siblings'



Weekend, Ethnic Festival, Winter Carnival, Black History Month, Seidman Business Week, and the Presidents' Ball.

Student Promotions

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

Campus Events Information

Information on campus events can be obtained by contacting the Student Life Office at (616) 895-2345 or by calling one of three 24-hour campus information hotlines. These include the Student Life Office Campus Connection line (895-INFO), athletic events information (895-3800), and music, theatre, and arts information (895-3610).

Communications

WGVU-TV 35 and WGVK-TV 52, affiliated with the Public Broadcasting Service, present a variety of informative and entertaining programs including children's shows, public affairs, cultural offerings, and sports. The stations also broadcast courses for college credit and supply educational programming for thousands of elementary and secondary school children in west Michigan. For those planning careers in television, the stations offer many paid positions in which students can gain practical on-the-job training under actual broadcast conditions. The offices and studios are located in the Meijer Public Broadcast Center in Grand Rapids.

WGVU 88.5 FM is a National Public Radio station licensed to the Grand Valley State University Board of Control. WGVU-FM broadcasts jazz and news and information programs from NPR. A strong commitment to local news is emphasized.

Student Life

WGVT-AM 1480 is a National Public Radio station also licensed to the Grand Valley State University Board of Control. AM 1480 broadcasts NPR programs and local news, talk, and information programs.

The radio stations provide coverage of Grand Valley State football and basketball and are strongly committed to locally-produced news and talk programs.

Our television stations and radio stations provide employment opportunities and professional experience for students. A number of internships are available each year, and an annual GVSU tuition scholarship is awarded. The offices and studios of the stations are located in the Meijer Public Broadcast Center.

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.

Intercollegiate Athletics

Grand Valley is a member of the Great Lakes Intercollegiate Athletic Conference (GLIAC) and the Midwest Intercollegiate Football Conference (MIFC). 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. Membership in the MIFC includes: Ashland, College of St. Francis, Ferris, Grand Valley, Hillsdale, the University of Indianapolis, Michigan Tech, Northern Michigan, Northwood, Saginaw Valley, and Wayne State. Grand Valley is also a member of the National College Athletic Association (NCAA Division II).

Since the beginning of the GLIAC in 1972, Grand Valley has won the President's Cup, a symbol of athletic excellence, five times. Grand Valley has won Great Lakes championships in the following men's sports: football, three times; basketball, five; baseball, six; wrestling, six; and tennis, two. In women's sports, we have won championships in basketball six times; softball, eight; tennis, two; and volleyball, five. MIFC football championship (1990, 1992).

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. **Coed:** cheerleading.

Housing and Food Service

Although Grand Valley does not require on-campus residency for any classification of student, the university does consider residence halls to be particularly beneficial in helping all students become oriented and adjusted to college life. A university staff member living in each hall, along with resident 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 residence halls accommodate approximately 900 freshman students.

In addition, nine Living Centers accommodate 642 students. The centers are divided into suites, consisting of two double rooms (for four students) and a shared bathroom.



Room and board may be paid in full at the beginning of each semester or in installments. All room-and-board rates are subject to change by action of the Board of Control.

Admission to Grand Valley does not guarantee housing of any kind, and students must make their own arrangements by contacting the Housing Office. This should be done immediately upon acceptance for admission since residence halls are filled on a first-come, first-served basis. Approximately 1,500 spaces in the residence halls and living centers are reserved for freshmen; the remaining spaces are available for upperclass students. All rooms are smoke free.

Dining Halls

The three residence halls and the living centers provide accommodations and meals for approximately 1,500 students. Four room-and-board plans are available — 15-meal plan, 7-plus plan, 10-plus plan, and a declining balance plan, called Board Plus. Meals are served in the Laker Dining Commons, the Kleiner Commons, and in Kirkhof Center depending on the plan selected. The cafeteria-style service in the Laker Dining Commons provides several entrees, including a vegetarian entree, at each meal 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. There is also a cash operation located on the first floor of Kirkhof Center and in the Kleiner Commons.

Apartments

The on-campus apartments complex provides housing for students who have completed at least one full year of living in the residence halls or Living Centers or earned a minimum of 30 semester hours. There are 148 two-bedroom units designed for four students and 19 one-bedroom units for two students. A university staff member living in the complex, along with student assistants, arranges educational, diversity, and recreational programs that foster pleasant living and study conditions.

The apartments, built beside a scenic ravine, are arranged in a village-style cluster 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.

Students must make their own arrangements for the apartments. Since 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 Housing Services Office, located at 103 Student Services Building, telephone (616) 895-2120.

Other Housing

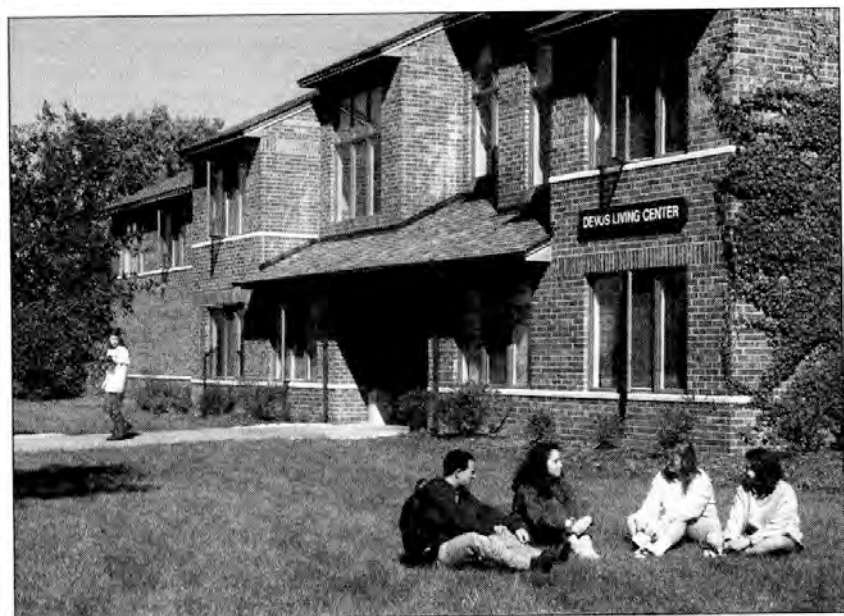
Other living accommodations near the campus — including rooms, apartments, houses, and mobile homes — are available at a wide variety of costs. Grand Valley does not involve itself in negotiations for off-campus rentals but does provide, solely as a service to students, a listing of available housing through its Off-Campus Referral Service located in the Housing 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 Housing Office immediately upon acceptance for admission, since spaces are filled on a first-come, first-served basis. Summer session housing applications are accepted 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.

The residence halls, apartments, and living centers contracts are for the entire academic year. 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 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.



Campus 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 international and returning adult students; serves as a resource for gay, lesbian, and bisexual 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: 895-3585.

International Students

This program, recognizing the value and contributions of international student involvement, serves as a promoter and planner of cross-cultural exchange and activities. Support services include an extensive orientation program, cross-cultural adjustment seminars, housing assistance, host family arrangements and immigration compliance. International student services are coordinated with Exchange Student Programs, which originate in the Office of International Affairs.

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.

Career Planning

Career counseling provides students with assistance in choosing a career. The office provides individual counseling sessions where personal values, interests, abilities, and goals are assessed and then used as a basis for career exploration and decision making. The Center houses an extensive Career Resource Library where up-to-date information on a wide range of careers is available. Counseling and Career Services staff offer a credited career planning course, listed as FS 101. Also offered each semester are career seminars which aid students in planning for the future. Study skill techniques, planning for graduate school, and job interviewing skills are the subjects of some of the seminars. Current career information and job trends data are included in both individual career counseling sessions and career seminars through use of SIGI PLUS, a computerized program. The Career Planning and Counseling Center and Library are located in 204 Student Service Building, telephone 895-3266.

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 Career Planning and Counseling Center, in 204 Student Services Building. Staff members are available from 8 a.m. to 6 p.m. Mondays through Friday. To make an appointment, call 895-3266.

Career Services and Graduation Employment Assistance

The Career Services Office provides extensive services to students as they prepare for post-graduation employment. The staff assists students in preparing resumes and credentials and in developing interviewing skills. Students who register with the office may take advantage of the 24-hour phone hot line to get current job listings and the Resume Expert system which provides for electronic resume database availability to employers. The staff also arranges employment interviews and notifies students of positions in their field. The office holds four annual Career Days: a business, engineering, and computer science event; a liberal arts event;

Campus Services

a teaching event; and an event for health professions majors. Representatives from business, health organizations, industry, government, and public schools come to campus to provide information on prospective jobs in their area and to interview students for employment. In addition, the office provides internship listings and assistance in locating internships for students. The Career Services Office is located in 206 Student Services Building and is open from 8 a.m. to 6 p.m. Monday through Thursday, and 8 a.m. to 5 p.m. Friday, to assist with employment-related concerns. Services are also available at the Eberhard Center by appointment.

Internships and Cooperative Education

Internships. A supervised work experience directly related to an academic discipline. The internship may be full time 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 GVSU majors.

Cooperative Education. A work training program for specified GVSU majors, including Hospitality and Tourism Management and Engineering. Co-ops are 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 programs are 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 assure that the experience meets specific departmental criteria. Students must complete an internship/cooperative education form from the academic department and/or the Career Services Office before beginning the internship/co-op experience. Students are required to comply with academic department requirements regarding GPA for internships or co-ops. The work setting must provide an opportunity for learning which is relevant to the academic field of the intern. The employer provides a field supervisor and the academic department provides a faculty member to direct the experience. Field supervisors evaluate the student before completing the work experience. Students must complete all academic departmental requirements for internship/cooperative education experiences, 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.

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. Fifteen credits is normally the maximum number of internship/cooperative education credits which may be applied toward graduation. The nature of the academic component of an internship/cooperative education experience is defined by the academic department. A single work experience may not be used by a student to generate both internship/cooperative education credit and other forms of credit, e.g., independent study credit.

Employment Statistics for 1995-96

The employment rate for GVSU 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, those doing something of their own choice, and those attending graduate school—are listed for various majors at Grand Valley.

Major	Percent Employed Directly	Percent Enrolled in Graduate School
Accounting	89%	0%
Advertising and Public Relations	77%	5%
Art and Design	67%	7%
Biomedical Science	48%	33%
Computer Science	94%	0%
English	62%	0%
General Education	100%	0%
Health Science	34%	42%
Marketing	78%	7%
Mathematics	57%	21%
Physical Therapy	100%	0%
Psychology	70%	16%
Public Administration	81%	6%
Social Work	71%	21%
Special Education	96%	0%

Math and Science Student Support

Math and Science Student Support (MS²) is an academic assistance and enrichment program offered in the Learning Center in Padnos Hall. We offer academic support and problem-solving assistance for freshmen interested in entering the fields of mathematics, science, and health science. Our student facilitators, successful upper-level students in biology, chemistry, computer science, geology, 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, 3rd Padnos Hall of Science, provides a quiet area for both group and independent studying. The goal of MS² is to assist students in the transition to upper-level science and mathematics.

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 or student complaints regarding discrimination or harassment of any kind should be filed with the Director of Affirmative Action. For more information, contact the Affirmative Action Office, Room 147 Lake Michigan Hall, (616) 895-2242.

Campus Services

Minority Affairs

This office was established to serve as an umbrella structure for a variety of programs. The programs are sponsored or co-sponsored by the Multicultural Center with various departments on campus, student organizations, and the community. The purposes are to promote the academic and social enrichment of all students on campus; assist in planning educational, social, and recreational activities for students, with an emphasis on cultural diversity; provide advising and problem solving for students; and serve as a university resource for students, faculty, and staff. The office also assists in the development of faculty and staff. The office is located in 130 Commons. Telephone: (616) 895-2177.

Multicultural Center

The purpose of the Multicultural Center is to carry out the mission of the Office of Minority Affairs. The Multicultural Center coordinates the Minority Business Education Center Program, the Minority Science Education Center Program, the Minority Teacher Education Center Program, the King Chavez Parks programs (graduate scholarships, College Day programs for 6th-11th graders, and the Visiting Professors Program), the Mentor Program, the Wade H. McGree Incentive Scholarship Program, and a variety of other special programs designed to create a culturally sensitive campus environment for all students. The office is located in 130 Commons. Telephone: (616) 895-2177.



The Children's Center

The Grand Valley Children's Center, located on West Campus Drive, serves young children ages 2½ to 12, both from the campus and the nearby community. Programs are designed to help children grow socially, psychologically, and physically. Fees range from \$2.50 per hour to \$95 for full time. Hours are from 7 a.m. to 6 p.m., Monday through Friday. Evening hours are determined by need each semester. Telephone: (616) 895-4146.

Bus Service

Transportation between the Grand Rapids campus and the Allendale campus is easy and convenient with Grand Valley's daily bus service Monday through Friday during the fall, winter, and spring/summer semesters. The bus route has nine daily round trips, with buses arriving at Kirkhof Center from 7:45 a.m. to 4:57 p.m. There are two additional runs from the Eberhard Center on the Grand Rapids campus to the Allendale campus, at 6 p.m. and 9:10 p.m. Monday through Thursday. More information and schedules are available at the Eberhard Center Information Desk, telephone 771-6600, and the Student Life Office, telephone (616) 895-2345.

Student Employment

The Student Employment Office assists students in finding jobs both on and off campus during and between semesters. While the office cannot guarantee specific jobs, almost any eligible student needing or wanting part-time work can be referred for some kind of employment. Many opportunities exist in university departments, such as working at the public television studios, the computer center, the library, as a research assistant, or in the GVSU student activities or intramural program. Other jobs exist in nearby businesses or with public nonprofit agencies in the Kent-Ottawa County area. The Student Employment Office is located in the Student Services Building. Telephone (616) 895-3238.

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 personal counseling. Weekly services include Sunday Morning Worship (Dialogue) at 10:30 a.m. and Catholic Mass at 6:30 p.m. The Campus Ministry Offices are located in the Cook-DeWitt Center. Telephone: (616) 895-3111.

The Bookstore

The University Bookstore is located on the first floor of Kirkhof Center. In addition to carrying the textbooks and supplies required for students taking classes on the Allendale campus, the bookstore offers a variety of GVSU-imprinted clothing and gifts, computer software, classroom supplies, and general reading books. The store is open 7:30 a.m. to 6 p.m., Monday through Thursday, 8:30 a.m. to 5 p.m. on Friday, and 10 a.m. to 5 p.m. on Saturday. Hours are extended during the first two weeks of the semester. Telephone: (616) 895-2450.

Students taking classes at the Eberhard Center in Grand Rapids should purchase books and materials at the Eberhard Center Bookstore, located on the first floor. Store hours are 8 a.m. to 9 p.m., Monday through Thursday, 8 a.m. to 4 p.m. on



Friday, 8 a.m. to 5 p.m. on Saturday, and 8 a.m. to 1 p.m. on Sunday. Hours are reduced during the summer and semester breaks. Telephone: (616) 771-6602

Health, Recreation, and Wellness

Health Services at Grand Valley provides limited ambulatory medical services to members of the campus community. The Recreation component provides scheduled individual and team competition activities for the campus community and educational programs that promote healthy lifestyles.

Health Services

The Health Service, located at 163 Fieldhouse, provides primary health care for ill and injured students. In addition, preventive medical services are available, including immunization, contraceptive services, physical examinations, and health care counseling. Reasonable fees for service are in effect and are payable within thirty days.

The Health Service is open and staffed by a nurse practitioner on a daily basis Monday through Friday during specified hours each semester. After-hours service is available off campus at Campus Towne Professional Center, one and a half blocks west of campus.

Grand Valley students may subscribe to a medical insurance plan offered through a commercial insurance company. Dependent and maternity benefits are available in the regular sickness and accident policy. All services available at the Health Service are paid for on a fee-for-service basis.

Recreation and Wellness Services

Recreation on campus provides a well-rounded, constructive, and full program of activities for the students, faculty, and staff. You can participate in intramural sports, informal recreation, club sports, outdoor recreation outings, and other leisure activities.

Men's, women's and coed activities are offered in 40 intramural sports. Special events, such as Free Throw Shooting and an All-Nighter, are offered throughout the year to round out the program.

Outdoor facilities: Two softball fields, one soccer field, eight tennis courts, an eight-lane 400-meter track, and several outdoor basketball courts are available for use to members of the Grand Valley State University community.

Indoor facilities: The Fieldhouse includes a four-lane 200-meter track, three basketball/volleyball/tennis courts, four badminton courts, six racquetball courts, two squash courts, a weight room, a combatives room, a human performance laboratory, a six-lane L-shaped pool (25 yards by 25 meters) with one- and three-meter diving boards, lockers, and showers. A new addition to the Fieldhouse houses the Recreation Services office, a two-level fitness center with Nautilus equipment as well as aerobic equipment such as bicycles, rowers, and stair steppers, three basketball and volleyball courts, and a four-lane jogging track ($\frac{1}{8}$ mile lap).

Equipment available from the Equipment Issue Room, lower level of the Fieldhouse: racquetball court reservations; squash court reservations; basketballs; racquetball, tennis, and badminton racquets; paddleball paddles; softball bats and balls; jump ropes; footballs; soccer balls; volleyballs; frisbees; and walleyball equipment.

Competitive Sport Clubs: Cheerleading, Hockey Club, Lacrosse Club, Martial Arts Club, Men's Soccer, Men's Volleyball, Lakerettes, Rowing Club/Crew Team, Ski Team, and Women's Volleyball.

The Fitness Trail (located north of Cedar Studios) is a 1.07 mile path which includes 20 exercise stations.

Parking

Approximately 5,550 parking spaces are available in ten lots on campus for students who wish to drive their cars to Grand Valley. There is no charge for open parking. Freshmen, as well as upperclass students living in the residence halls and living centers, are welcome to have their vehicles on campus. However, they must obtain a parking permit for reserved resident parking lots from the Department of Public Safety Services.

Department of Public Safety

The Department of Public Safety 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. They are deputized by the Ottawa County Sheriff with full arrest powers. The department also maintains a Lost and Found Bureau, a Parking Violations Bureau, a weapons safekeeping program, and approves drivers for operating state vehicles.

The department is located in the Central Utilities Building, at the north end of campus. Telephone (616) 895-3255.

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.

The college preparatory program should include four units of English, with one composition course; two units of science; three units of mathematics, with two years of algebra; three units of social sciences; and seven units of electives. These electives might include a fourth year of math, two years of a foreign language, two years of fine arts, or a computer literacy course.

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.

Applicants should maintain a minimum of a B- (2.7) grade average in their college preparatory course work. Results of the ACT (American College Test) 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 interview prospective students. Appointments for interviews should be arranged in advance by calling the Admissions Office at (616) 895-2025 or, toll free, 1-800-748-0246, or by writing:

Admissions Office
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.
- \$20 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 for registration of fall and winter semester enrollment. 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 course work 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 course work.

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

- completed undergraduate application.
- \$20 nonrefundable application fee.
- official transcripts from *all* previous colleges (transcripts must be sent directly from the colleges to the Grand Valley Admissions Office).

Admission to Grand Valley

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

- 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 of fall and winter semester enrollment. 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. Credit from nonaccredited colleges may, under special circumstances, be granted if it is germane to a student's program. Approval for such credit must be given by the Dean of Academic Resources and Special Programs. Such credit will be validated after 15 semester hours of satisfactory work have been completed at GVSU (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. This statement tells how course work 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. General education requirements will be waived for persons who have received a MACRAO-approved associate of arts or science degree. A transfer student with a MACRAO associate's degree is required to demonstrate proficiency in mathematics (MTH 110 or 115); 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 ENG 305); and they must complete one Supplemental Writing Skills (SWS) course in their major or division. To receive benefit of the MACRAO agreement, it must have been awarded prior to the posting of their first semester grades at Grand Valley.

Nondegree-Seeking Applicants

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

Application requirements and limitations:

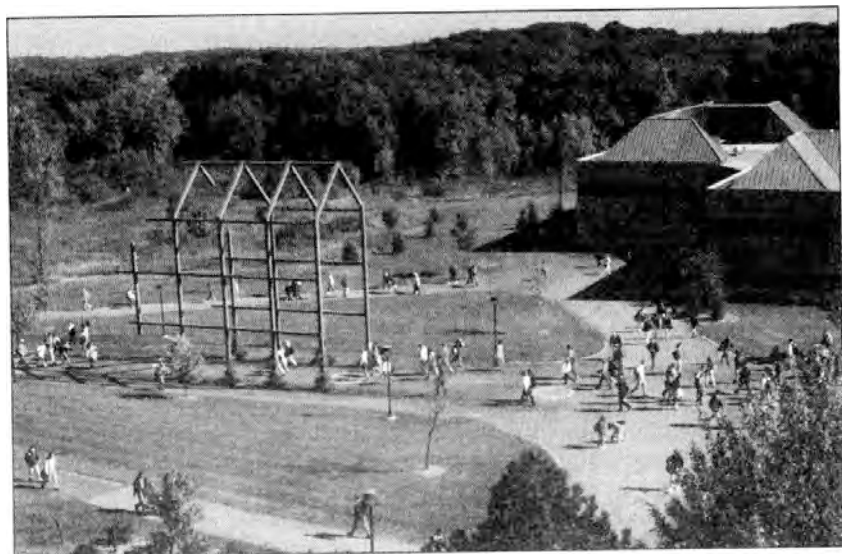
- graduation from high school two or more years previous to their first enrollment.
- guest students who are eligible to re-enroll at their home institution.
- a maximum of 30 semester hours earned as a nondegree-seeking undergraduate student may apply toward a Grand Valley degree program.
- completed application/enrollment form or, when appropriate, the official Guest Application.

High School Scholars Program

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

- completed nondegree-seeking application.
- official high school transcript.
- an overall GPA of 3.0 or above in high school course work.
- official results of ACT or SAT if available.
- written permission from the student's high school principal or counselor.
- 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.

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.



Admission to Grand Valley

Honors Program

The Grand Valley State University Honors Program 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 for challenges.

High school students admitted to Grand Valley State University will be invited to join the Honors Program 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 Honors Program may apply for admission if they have a 3.2 or better college GPA. Applicants should contact the director of the Honors Program.

For more information about the Honors Program, consult the Honors Program section in this catalog.

International Students

Grand Valley welcomes international students wishing to study at our campus. In 1996–97, students from 26 nations were enrolled at GVSU.

To be considered for admission the following items must be submitted:

- completed International Admission Application.
- \$20 nonrefundable application fee.
- evidence of English language proficiency verified by the Test of English as a Foreign Language (TOEFL) scores or CELT (Comprehensive English Language Test) scores.
- the Declaration and Certification of Finances.
- original or certified true copies of all certificates and grade reports of secondary and post-secondary work. If the credentials are not in English, they must be accompanied by an English translation.
- Applicants for whom English is a second language or whose past academic experiences have been at non-English speaking institutions will be classified as international students, regardless of visa or residency status.

International student applicants should be able to communicate well in English. The following minimum scores are expected: TOEFL 550 or CELT 85.

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 GVSU. 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.

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 regarding 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.

Athletic Training	Music
Business	Nursing
Clinical Laboratory Sciences	Occupational Therapy (M.S.)
Education	Physical Therapy (M.S.)
Engineering	Physician Assistant Studies (P.A.S.)
Film and Video Production	Policy Academy (MLEOTC)
Graphic Design	Social Work
Liberal Studies	Therapeutic Recreation

Appeal of Admissions Decisions—Undergraduate

Applicants denied admission may appeal that decision in writing to the Director of Admissions within thirty 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 mature 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 must be affiliated with a program or school and will be classified as either degree seeking or non-degree seeking.

Application Procedure for Degree-seeking Students

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

1. A baccalaureate degree from an accredited institution of higher education.
2. Submission of all required admission materials, including:
 - a. Completed graduate application for admission.
 - b. \$20 nonrefundable application fee (unless you have previously applied to GVSU).
 - c. Official copies of transcripts from all institutions of higher education previously attended. **Transcripts must be sent from those institutions directly to the GVSU Admissions Office.**
 - d. Unless otherwise indicated, applications should be submitted two months prior to the semester in which you wish to enroll.
 - e. Scores from either the TOEFL (Test of English as a Foreign Language) or CELT (Comprehensive English Language Test) by international students whose native language is not English.

Admission to Grand Valley

3. Additional requirements and application procedures are listed under each master's degree program.

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 12 semester credits may be earned at Grand Valley State University as a nondegree-seeking student for some graduate programs. 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. Students who have completed 12 semester hours and wish to continue their nondegree affiliation with the university must complete and sign a plan of study which identifies their projected academic program of professional development. Completion of a planned program contract is important because registration beyond 12 credits for nondegree-seeking students without a planned program may be blocked.

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

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 course work at Grand Valley.
4. The time limit to satisfy degree requirements and the time limit on transfer of credits are applicable to the second master's degree.
5. Students who meet separate emphasis area requirements within a program but not the additional residence requirements for two degrees may have both emphasis areas certified and recorded on their academic record.

International Students

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. \$20 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. The Declaration and Certification of Finances.
5. Original or certified true copies of all certificates and grade reports of secondary and post-secondary work. If the credentials are not in English, they must be accompanied by an English translation.
6. Applicants for whom English is a second language or whose past academic experiences have been at non-English-speaking institutions will be classified as international students, regardless of visa or residency status.

Applicants must be able to communicate well in English. The following minimum scores are expected: TOEFL 550 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 course work 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.

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 on the Allendale campus 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 on the Allendale campus 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, resident or nonresident.*

Tuition for undergraduate students who are Michigan residents taking anywhere from 12 to 16 credit hours is the same, a total of \$1,433 per semester. Tuition is \$128 per credit hour for fewer than 12 credits and for each credit over 16. Tuition for graduate resident students is \$139 per credit hour for graduate courses, \$128 for undergraduate courses.

For nonresident undergraduate students, tuition is \$3,325 total per semester for anywhere from 12 to 16 credits and \$287 per credit for fewer than 12 credits and for each credit over 16. Nonresident graduate tuition is \$300 per credit hour for graduate courses, \$287 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 non-credit courses in special programs apart from the regular university curriculum are published with the announcements of such programs.

Residency

Since 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

In addition to tuition, a \$25 registration fee is charged to all students enrolling for classes at Grand Valley. A \$15 transportation improvement fee is charged each semester to all Allendale and Grand Rapids campus students. All students are charged a \$5 per-credit-hour facility fee and a \$3 per credit hour technology fee. A \$20 student life fee for full-time undergraduate students in the fall and winter semesters is also required. Course fees are assessed to those students taking classes that require special equipment, consumable supplies, or extraordinary overhead. Late registration (allowed only in the first five days of the semester) requires a \$20 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.

One official copy of a student's transcript is provided at graduation without charge. Additional copies cost \$4.00 each. Unofficial copies are provided free of charge.

*Tuition rates and fees are set by the Board of Control. The rates listed here are for the 1996-97 academic year.

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 Control.

Tuition and Fees Refund Policy

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

1. Students withdrawing before the start of the semester and during the first week of classes are eligible for a full 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.
5. Students who drop to less than full time during the 100 percent refund period will be eligible for a full refund of their student life fee. Students dropping to less than full time during the 75 percent refund period will be eligible for a 75 percent refund of their student life fee. There will be no refund of this fee after the last date for a 75 percent refund as published in the Schedule of Classes.
6. To comply with Federal regulations, student recipients of Federal Title IV financial assistance who are in their first semester of attendance who completely withdraw during the first nine weeks of a regular semester, the first three weeks of a six-week session, or the first seven weeks of a twelve-week session, shall be issued a pro-rata refund of all institutional charges minus a \$100 administrative fee for that period.

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 where 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 "Refunds and Repayment of Financial Aid" section in the catalog for the details of the 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

At Grand Valley State University more than 70 percent of the full-time students receive some kind of financial aid. The average award is approximately \$4,850. 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, since no one program can cover all college expenses, aid programs are usually combined in "packages" suited to the student's needs. This means that students receive aid in a variety of forms. Rarely would a student receive all one type of aid—for example, a grant—but rather would receive a mixture of grant, scholarship, job, and loan.

To be considered for aid, a student must be admitted as a degree-seeking student and be enrolled for 12 credit hours or more per semester (15 credit hours per semester is considered a normal load). Exceptions are made for part-time students. Students who receive scholarships based on merit are required to average 15 credit hours per semester. The graduation rate, as defined in the federal Student Right-to-Know and Campus Security Act, for students entering Grand Valley State University as new, full-time degree-seeking freshmen during the fall of 1987 was 47%. The cohort includes students who may have stopped out, 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%.

To maintain and renew aid, students must make satisfactory academic progress. For all forms of aid, genuine need must be demonstrated by submitting a Free Application for Federal Student Aid (FAFSA). Forms are 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: 616-895-3234.

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 you to apply well before the fall semester, since limited funds are available for awards made after the start of the academic year. If you are a degree-seeking student, you are eligible to apply for financial assistance. Most aid is awarded to students attending at least half time (six or more credit hours), although students attending less than half time may be considered for the Federal Pell Grant Program. Continuing education students (part-time, non-degree-seeking students) are not eligible for most financial aid; however, they may apply for and receive institutional tuition loans. Financial aid for international students is extremely limited.

Costs and Financial Aid

Additional aid may be awarded for the summer session depending on the availability of funds. You must enroll at least half-time to receive financial aid for the summer session. If you are seeking a summer session 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. You should fill out the form completely and accurately, indicating Grand Valley as your choice of schools. Do not leave blank spaces. Indicate zeros in situations that do not apply. *There is no other separate application form required for need-based financial aid.*
3. In some cases you and your parent or guardian will be required to submit Federal 1040 forms to verify the information submitted on your application. If you are a new transfer student, you may be required to have a financial aid transcript sent from the colleges you have attended.

We may request additional information if, upon reviewing data you have presented, we feel 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

We encourage 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 a completed Free Application for Federal Student Aid to the appropriate agency listed on the form.

February 15: Renewal aid applicants and returning upperclass students: submit a completed Free Application for Federal Student Aid to the appropriate agency listed on the form.

April 15: Entering freshman, graduate, and transfer students are notified by mail of their financial aid award.

May 1: Summer semester students are notified by mail of their financial aid award.

July 1: Renewal aid applicants and returning upperclass students are notified by mail 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 a completed Free Application for Federal Student Aid to the appropriate agency listed on the form for winter semester aid.

December 1: Students are notified by mail of their awards.

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

February 15: Entering freshman, graduate, transfer, renewal aid applicants, and upperclass students: submit a completed Free Application for Federal Student Aid to the appropriate agency listed on the form for summer session aid.

May 1: Students are notified by mail of their awards.

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).

Resident Students

Tuition and fees*	\$3,226
Books and supplies	600
Personal and miscellaneous	600
Room and board*	4,380
Transportation	400
Total	<u>\$9,206</u>

*Tuition and fees and room and board charges are determined by the Grand Valley State University Board of Control. The rates listed here are for the 1996-97 academic year.

Costs and Financial Aid

Commuting Students

Tuition and fees*	\$3,226
Books and supplies	600
Personal and miscellaneous	600
Food (lunches)	600
Transportation	900
Total	<u>\$5,926</u>

Out-of-State Students

Out-of-state tuition is \$3,325 per semester for 12–16 credit hours, \$287 per credit hour for fewer than 12 credits and more than 16.* Additional transportation costs are usually necessary.

Self-supporting Students

Grand Valley generally uses the guidelines set by the U.S. Office 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, (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 may be requested to 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 on an exception basis if you are enrolled part time (normally at least six credit hours). As a part-time student, you should follow the normal application procedures. Students taking fewer than six credit hours may be eligible for the Federal Pell Grant and the Michigan Adult Part-Time (see "Programs Based on Need").

Financial Aid for Graduate Students

There are three types of financial aid available to degree-seeking graduate students enrolled for at least six 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 \$8,500 per academic year or Federal Perkins Loans up to \$1,800 per academic year 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.

*Tuition and fees and room and board charges are determined by the Grand Valley State University Board of Control. The rates listed here are for the 1996-97 academic year.

Financial Aid for Overseas Study

Financial aid is available to assist in financing the cost of study abroad. Students may be eligible for assistance for Grand Valley summer programs as well as academic-year and one-semester programs through exchanges as well as 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.

Students interested in a study abroad experience should contact the Office of International Affairs regarding available program options.

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

Programs Not Based on Need

Grants and Scholarships

Scholarship eligibility criteria indicated below are for students entering in the 1997–98 academic year and may change. GVSU 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 in to the Admissions Office by February 1 for the following fall semester. Additional supportive materials may be required, such as an essay, interview, or Free Application for Federal Student Aid form. The additional supportive materials for scholarship consideration must be received by February 15. There are three levels of merit-based scholarships, 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. Other factors taken into consideration in determining the amount of the scholarships in this category include rank in class, strength of high school or

Costs and Financial Aid

community college curriculum, minority status, intended major, and extracurricular activities.

- a. **Presidential Scholarships.** To be considered for a Presidential Scholarship you must have a 3.8 high school GPA, a minimum 32 composite ACT, complete an Awards of Distinction Scholarship application, and submit other supportive materials that may be required, such as an essay and/or campus interview. Awards range from \$3,000 to \$6,000. You must be a Michigan resident and a graduate from a Michigan high school. 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 3.5 high school GPA, a minimum 29 composite ACT, complete an Awards of Distinction Scholarship application, and submit other supportive materials that may be required, such as an essay and/or campus interview. Awards range from \$2,000 to \$4,000. You must be a Michigan resident and a graduate from a Michigan high school. 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.** This group of scholarships provides you with an automatic \$1,000 scholarship if you meet the following criteria:
- a. **Entering Freshmen Awards for Excellence.**
 - You must be a Michigan high school graduate or the equivalent before enrolling in Grand Valley State University.
 - Grand Valley must be the first institution you attend following your high school graduation.
 - You must have a minimum cumulative grade point average of 3.5, as computed by GVSU when you apply, and a minimum ACT composite score of 26.
 - Your complete application for admission, ACT scores, and official academic transcript must be received by our Admissions Office before February 1 for the following fall semester.

This scholarship is renewable for three additional years provided you maintain a 3.25 for 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. **Transfer Student Awards for Excellence**
 - You must receive an associate degree from a Michigan accredited community college before enrolling in Grand Valley State University.
 - Grand Valley must be the first institution you attend after you earn your associate's degree.
 - You must have a minimum cumulative collegiate GPA of 3.75, as computed by Grand Valley at the time of your admission.

- You must have official academic transcripts in to our Admissions Office by February 1.

This scholarship is renewable for one additional year provided you maintain a 3.25 or better GPA and complete 25 credits after your first year of attendance.

c. **Out-of-State Student Awards for Excellence:**

- You must be a graduate from an accredited high school or community college before enrolling in Grand Valley.
- Grand Valley must be the first institution you attend after you earn your high school diploma or associate degree.
- You must have a minimum cumulative high school GPA of 3.5, as computed by Grand Valley when you apply. Community college transfer students must have a 3.75 GPA as computed by GVSC.
- High school graduates must have an ACT composite score of 26 (or SAT of 1150).
- Your complete application for admission and official academic transcripts must be received by our Admissions Office before February 1 for the following fall semester.

This scholarship is renewable for three additional years (one in the case of transfer students) provided you maintain a 3.25 or better GPA after your first year, 55 credits after your second year, and 85 credits after your third year of attendance.

3. **University Bert Price Scholarships.**

- You must have a high school or cumulative collegiate GPA of 3.1.
- If an entering Michigan high school student, you must have a minimum composite ACT of 20. Nonresidents may have a 20 ACT or 930 SAT.
- You must file a Free Application for Federal Student Financial Aid form and submit it to the appropriate agency by February 15, listing Grand Valley State University to receive the results of the need calculation.
- Minority status, where one parent is 100% minority, will be one of the determining factors in awarding this scholarship.
- Other factors include the intended major of the student, involvement in extra-curricular activities, rank in class, financial need, and high school curriculum.
- Awards vary from \$100 to \$3,000.

This scholarship is renewable for three years (one in the case of transfer students) provided the student maintains a minimum 2.85 college GPA and satisfactory academic progress.

4. **Minority Business Education Center Scholarships.** These scholarships are awarded to students who are admitted to the Minority Business Education Center Program. Generally, students must meet the criteria listed below. Award amounts will vary, up to full tuition for a Michigan resident.

- You must have a high school or cumulative collegiate GPA of 3.1.
- If an entering Michigan high school student, you must have a 20 composite score on the ACT. Nonresidents may have a 20 ACT or 930 SAT.

Costs and Financial Aid

- You must apply to and be accepted into the Minority Business Education Center Program.

This scholarship is renewable for three additional years (one in the case of transfer students) provided the student maintains a minimum 2.85 GPA.

For additional information on this program, and to receive application materials, contact the Director of the Minority Business Education Center Program at Grand Valley State University.

5. **Minority Teacher Education Center Scholarships.** These scholarships are awarded to students who are admitted to the Grand Valley Minority Teacher Education Center Program. Generally, students must meet the criteria listed below. Award amounts will vary, up to full tuition for a Michigan resident.

- You must have a high school or cumulative collegiate GPA of 3.1.
- If you are an entering Michigan high school student, you must have a 20 composite score on the ACT. Nonresidents may have a 20 ACT or 930 SAT.
- You must apply to and be accepted into the Minority Teacher Education Center Program.
- 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.

This scholarship is renewable for three additional years (one in the case of transfer students) provided the student maintains a minimum 2.85 GPA and is accepted into the School of Education.

For additional information on this program, and to receive application materials, contact the Director of the Minority Teacher Education Center Program at Grand Valley State University.

6. **Minority Science Education Center Scholarships.** These scholarships are awarded to students who are admitted to the Grand Valley Minority Science Education Center Program. Generally, students must meet the criteria listed below. Award amounts will vary, up to full tuition for a Michigan resident.

- You must have a high school or cumulative collegiate GPA of 3.1.
- 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.
- You must apply to and be accepted into the Minority Science Education Center Program.

This scholarship is renewable for three additional years (one in the case of transfer students) provided the student maintains a minimum 2.85 GPA.

For additional information on this program, and to receive application materials, contact the Director of the Minority Science Education Center Program at Grand Valley State University.

7. **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 the following community colleges: Northwestern Community 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. Students are selected by the respective community college presidents. Students must have a total cumulative 3.5 or better GPA, be completing the associate 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.

8. **Phi Theta Kappa Scholarships.** 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, 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. Recipients will be chosen and notified by April 1.
9. **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 grade point average, a minimum ACT composite score of 22, and not be the recipient of other academic scholarships offered by Grand Valley. Entering freshmen wishing to be considered should contact the counseling office in their high school.
10. **Grand Valley UAW Region 1-D Scholarships.** Grand Valley State University, in cooperation with Region 1-D of the UAW, offers two \$1,000 scholarships to entering freshman students who are children of UAW Region 1-D members from selected counties. Transfer students are also eligible for awards. To apply for a scholarship, students must have a minimum grade point average of 3.1, an ACT composite of 21, and 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. 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.
11. **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 are nominated by academic departments and are requested to submit applications and personal essays. Selection of upperclass honor award recipients is made by the GVSU Scholarship Committee. Students must apply by the March 1 deadline.
12. **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.

Costs and Financial Aid

13. **Music Scholarships.** Music talent awards of up to \$1,000 per year are available to outstanding instrumentalists, pianists, and singers 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.
14. **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.
15. **High School Scholars Tuition Grant.** High school students taking classes at Grand Valley before they graduate from high school are eligible for tuition grants providing up to one half (50 percent) of actual tuition costs. To be eligible, students must have a 3.5 GPA and permission of their high school.
16. **Other Grand Valley State University Scholarship Programs**

Accounting Alumni Scholarship

Eligibility: Transfer students who have earned an associate's degree and who are entering the accounting program.

Amount: \$500, renewable.

Selection: By the Seidman School of Business.

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

Esther N. Adams Memorial Scholarship

Eligibility: For African-American students.

Amount: \$1,000.

Selection: By GVSU Scholarship Committee, with final approval by family of Esther Adams.

Application: Contact Alumni Relations Office.

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 GVSU graduates.

American Institute of Plant Engineers Scholarship

Eligibility: Engineering and Management majors.

Amount: Two \$500 scholarships.

Selection: One selected by Padnos School of Engineering and one selected by the Management Department of the Seidman School of Business.

Application: Contact the Padnos School of Engineering and the Management Department of the Seidman School of Business.

American Production and Inventory Control Society Scholarship

Eligibility: Business administration major with an emphasis in production and inventory control.

Amount: \$600.

Selection: By Seidman School of Business.

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

American Society of Quality Control

Eligibility: Upperclass student in engineering.

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 copy of academic transcript to the Academic Resource Center.

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 School of Business.

Berkowitz Scholarship for Handicapped Students

Eligibility: 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 State University Scholarship Committee with the advice and consent of a representative of GVSU's Student Support Program.

Application: Contact the GVSU Student Support Program. Deadline is March 1.

Owen Bieber Scholarship

Eligibility: Full-time entering student with 3.5 GPA and 27 ACT. Apply for admission prior to February 1.

Affiliated with the UAW as follows:

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

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

Selection: By GVSU Scholarship Committee.

Application: Available in the GVSU Financial Aid Office.

Edith Blodgett Piano Scholarship

Eligibility: Music major.

Amount: \$1,000.

Selection: Grand Valley Music Department Faculty.

Application: Contact the GVSU Music Department.

Costs and Financial Aid

Branstrom Fine Arts Scholarship

Eligibility: Portfolio and/or application to the fields of music, 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.

Johnny C. Burton Scholarship

Eligibility: For African-American students majoring in business.

Amount: Varies; \$500 minimum.

Selection: By Minority Business Education Center and family of Johnny Burton.

Application: Contact Minority Business Education Center.

Butterworth Nursing Scholarship

Eligibility: Students admitted into the clinical nursing program.

Amount: \$1,000 per year; number and amount vary.

Selection: By Butterworth Hospital School of Nursing Alumni Committee.

Application: Contact the School of Nursing or the GVSU Financial Aid Office.

Alexander Calder Honor Scholarship

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

Amount: Tuition, nonrenewable.

Selection: By committee of the Arts and Humanities Division.

Application: Contact the Dean's Office, Arts and Humanities Division.

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 Merit Scholarship Committee.

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.

Computer/Calculator Competition Scholarship

Eligibility: Winner of the Grand Valley-sponsored computer-calculator competition if the student chooses to attend Grand Valley.

Amount: \$500.

Selection: Automatic to winner.

Application: None.

Consumer Credit Association of Greater Grand Rapids Scholarship

Eligibility: Undergraduate students with an academic interest in accounting or finance, or an M.B.A. student, 3.5 GPA.

Amount: Four \$500 scholarships awarded each year, three undergraduate and one graduate.

Selection: Seidman School of Business.

Application: Contact the Seidman School of Business. Deadline is March 15.

Ann M. Cusack Memorial Scholarship

Eligibility: Senior students in the Hospitality and Tourism Management program.

Amount: Up to \$200, to be used to cover costs associated with applying for employment.

Selection: By a committee of HTM full-time faculty and student officers of the Hospitality Management Association.

Application: Contact the Hospitality and Tourism Management Department.

Gilbert and Patricia Davis Scholarship

Eligibility: Junior or senior humanities majors; 3.0 GPA with 30 hours at GVSU for transfer students.

Amount: Up to \$1,000.

Selection: Scholarship Committee of the English Department.

Application: Contact the English Department. Deadline: March 1.

Greta and Arthur DeLong Scholarship

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

Amount: Up to \$1,000.

Selection: By School of Education and Psychology Department committees.

Application: Contact the School of Education or Psychology Department.

Eileen DeVries Scholarship Fund

Eligibility: Junior or senior woman student at Grand Valley Seidman School of Business with an interest in finance, economics, or general business.

Amount: \$1,000 plus additional support to take golf lessons.

Selection: By the Seidman School of Business.

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

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 School of Business.

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

L.V. Eberhard Graduate Research Assistantship

Eligibility: Full-time, degree-seeking graduate student in the Seidman School 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 School of Business Faculty Committee.

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

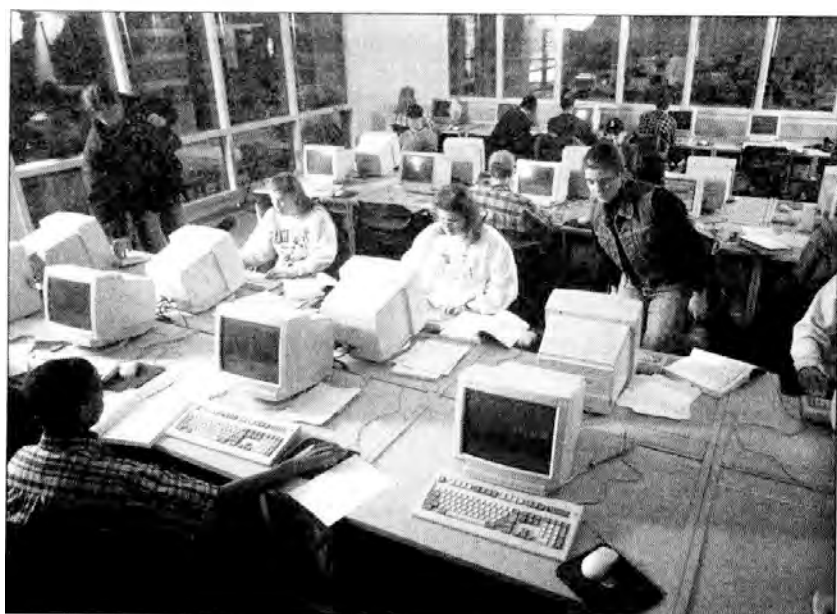
Federated Garden Clubs of Michigan Scholarship

Eligibility: Biology major with a demonstrated interest in gardening, botany, and horticulture.

Amount: \$1,000.

Selection: By the Biology Department.

Application: Contact the Biology Department.



First of America Scholarship

Eligibility: Students accepted into the Minority Business Program who are permanent residents in the First of America's west Michigan market area. 3.0 GPA and a minimum ACT of 19.

Amount: Up to \$4,000.

Selection: Screening will be done by Grand Valley, with final selection made by First of America.

Application: Contact the Office of Minority Affairs.

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.

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.

Geology/Earth Science Tremba Scholarship

Eligibility: For geology majors.

Amount: \$500.

Selection: By Geology Department.

Application: Contact the Geology Department.

Gibson Refrigeration Company 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.

Charlotte Gierst and Salome Egler Music Scholarship

Eligibility: Talented students in music.

Amount: Varies, renewable as determined by Music Department.

Selection: By Music Department.

Application: Apply directly to the Music Department.

Richard Giles Scholarship

Eligibility: Graduate or undergraduate seniors in accounting.

Amount: In-state tuition for two semesters.

Selection: By the Seidman School of Business.

Application: Contact Accounting Department, Seidman School of Business.

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 GVSU Scholarship Committee.

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

Grand Rapids Foundation 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 forwarded to the Grand Rapids Foundation for final selection.

Application: Special application sent to prospective applicants by the Financial Aid Office.

Grand Rapids Rotary South Environmental Scholarship

Eligibility: Upperclass major in Natural Resource Management with a GPA of 3.0 or better.

Amount: \$1,000 per year; two awarded annually.

Selection: By faculty of the Natural Resource Management Department.

Application: Contact the Natural Resource Management Department by April 1.

Grand Valley State University Peace Fund Essay Contest

Eligibility: Any GVSU student enrolled in a degree program.

Amount: \$250.

Selection: By the GVSU Peace Fund Faculty Committee.

Application: Contact the Academic Resource Center.

Grand Valley State University Peace Fund Scholarship

Eligibility: Any GVSU student enrolled in a degree program.

Amount: \$500.

Selection: By the GVSU Peace Fund Faculty Committee.

Application: Contact the Academic Resource Center.

Grandville AMBUCS Scholarship

Eligibility: Admitted to the clinical portion of the Physical Therapy Program. Strong academic background and community involvement also required.
Amount: \$1,000, nonrenewable, although previous recipients may reapply.
Selection: By the GVSU Scholarship Committee and the Grandville AMBUCS.
Application: Contact the GVSU Financial Aid Office.

GVSU Finance Club Student Scholarship

Eligibility: For business majors with 3.2 GPA who are members of the GVSU Finance Club.
Amount: \$500; nonrenewable.
Selection: By an appointed member of the Finance Club and the advisor.
Application: Contact the Finance Department, Seidman School of Business.

GVSU Women's Scholarship

Eligibility: Nontraditional, full-time or part-time women.
Amount: Three credit hours of undergraduate or graduate tuition (not including fees).
Selection: GVSU Women's Scholarship Committee.
Application: Contact Academic Resource Center or 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: \$500.
Selection: Minority Advisory Council.
Application: Contact Minority Affairs or Career Planning and Placement Office.

Bill Hemmer Memorial Scholarship

Eligibility: Business majors studying abroad.
Amount: Up to \$1,000 for tuition.
Selection: By Seidman School of Business faculty.
Application: Contact Seidman Undergraduate Advising Office.

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.

Daniel Kemp Alumni Leadership Scholarship

Eligibility: Freshman Faculty Scholarship applicant.
Amount: Varies. Renewable for three years.
Selection: GVSU Alumni Scholarship Committee.
Application: Awards of Distinction Scholarship application, which is automatically sent to eligible students by the Admissions Office.

Kent Medical Foundation

Eligibility: Students from the Kent County area enrolled in the clinical portion of the Nursing program.
Amount: Varies.
Selection: By the faculty of the School of Nursing.
Application: Contact the School of Nursing.

Kent Metro Association Grant

Eligibility: Junior and senior criminal justice majors.

Amount: \$250.

Selection: By Criminal Justice faculty.

Application: Contact Criminal Justice 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: \$1,000 for the first year; up to \$2,000 per year as an upperclass student.

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

Application: Contact the Padnos School of Engineering.

Lynn Kraemer Memorial Scholarship

Eligibility: 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 School of Nursing. Final approval made by the family of Lynn Kraemer.

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

Lacks Enterprises Scholarship Program

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

Amount: \$500.

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

Application: Contact the Human Resources Office of Lacks Industries or the GVSU 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.

Dr. Faite R-P Mack African-American Teacher Education Scholarship

Eligibility: Full-time students of African-American descent, financial need, high GPA, and admitted to the School of Education.

Amount: \$500.

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

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

Math and Computer Science Scholarship

Eligibility: Upperclass computer science, information systems, mathematics, or statistics major.

Amount: \$500, not renewable.

Selection: By faculty of the Computer Science and Information Systems Department and the Mathematics and Statistics Department.

Application: Contact the Computer Science and Information Systems Department or the Mathematics and Statistics Department.



Paul C. Miller Scholarship

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

Amount: Up to half tuition per year. Renewable for up to three years with a 2.5 GPA and satisfactory academic progress.

Selection: Scholarship Committee composed of the Sparta High School principal, a Grand Valley State University Financial Aid Officer, and the university's Director of Admissions.

Application: Apply for admission by February 1 and submit the FAFSA form by February 15.

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).

Orchestra Scholarship

Eligibility: Audition with Music Department, participation in Grand Valley Orchestra.

Amount: Varies.

Selection: By music faculty.

Application: Apply directly to the Music Department.

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 GVSU Financial Aid Office.

Application: Contact Padnos Company.

Plant Services Personnel Scholarship

Eligibility: Dependents of GVSU Plant Service personnel.

Amount: \$500.

Selection: Plant Services Scholarship Committee.

Application: Contact Plant Services.

The Positive Black Women Scholarship

Eligibility: For African-American Women

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

Selection: Positive Black Women Scholarship Committee

Applications: Contact Career Services or Financial Aid Office.

Bert Price Memorial Scholarship

Eligibility: Student who has completed at least 15 credits with a 2.5 GPA. Must demonstrate knowledge of the black experience.

Amount: Varies, up to \$500.

Selection: Minority Advisory Council's Bert Price Scholarship Subcommittee.

Application: Contact the Financial Aid Office.

Joe E. Reid Scholarship

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

Amount: \$500.

Selection: By the School of Education Faculty Committee.

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

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: \$500 per year renewable for three additional years provided the student maintains a minimum 3.25 GPA.

Selection: By the faculty of the School of Nursing.

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

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 Arts and Humanities.

Application: Contact the Dean of Arts and Humanities.

Thomas Seykora Alumni Leadership Scholarship

Eligibility: Freshman Faculty Scholarship applicant.

Costs and Financial Aid

Amount: Varies. Renewable for three years.

Selection: GVSU 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.

Elizabeth K. Sherwood Memorial Scholarship

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

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

Selection: By Financial Aid Office.

Application: No additional application necessary.

Marilyn and Budge Sherwood Scholarship

Eligibility: Female and minority M.B.A. candidates.

Amount: \$500.

Selection: By the Seidman School of Business.

Application: Contact the M.B.A. program director, Seidman School 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: \$1,000.

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.

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.

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. Submission of the Free Application for Federal Student Aid (FAFSA) is also required. Deadline is March 1 each year.

Stephenson Foundation Scholarship

Eligibility: Freshmen with a 3.4 GPA, transfer students with a 3.0 GPA, and graduate students interested in business.

Amount: \$500, renewable.

Selection: By Seidman School of Business.

Application: Contact the Dean's Office, Seidman School of Business, by March 15.

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.

Telephone Pioneers Scholarship

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

Amount: Up to the equivalent of three credits of tuition.

Selection: By School of Education faculty committee.

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

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.

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.

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: \$750; renewable for one year.

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

Application: Contact the School of Nursing or Office of Financial Aid.

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.

Sanford F. Wilcox 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.

Lt. William Zimmerman Scholarship

Eligibility: Member of U.S. Marine Corps Reserve, admitted or enrolled in good standing as full-time degree-seeking student. Deadline, April 1. Must submit letters of recommendation and high school transcripts.

Costs and Financial Aid

Amount: \$750 per year.

Selection: By GVSU Scholarship Committee.

Application: Available in the Financial Aid Office.

Felix V. and Gladys A. Zukaitis Scholarship Trust Fund

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

Amount: \$1,000.

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

Application: Applications for admission must be received by February 1 of the student's senior year in high school. Must submit the FAFSA form by February 15.

Felix V. and Gladys A. Zukaitis Athletic Scholarship Trust

Eligibility: Must be a member of a GVSU 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, accepted as a member of an intercollegiate varsity athletic team, and submit the FAFSA form to the appropriate agency.

Student Employment

Student Employment Referral Service. A number of on-campus opportunities are available for students who do not qualify for the Federal College Work-Study Program. The hours and pay rates are similar to those under the Work-Study Program. The Student Employment Office also maintains a registry of off-campus employment opportunities. For information on job openings, you should visit the Student Employment Office.

Educational Loans

Michigan Alternative Loan Program (MI-LOAN). This loan program is an alternative source of loan funds to credit-worthy Michigan students and their families. Need is *not* a factor, but students *must* submit a Free Application for Federal Student Aid (FAFSA) to be considered. The student or an eligible co-signer must meet the Student Loan Authority's credit test. Interest is at a fixed 8.4 percent or variable and repayment begins immediately, although the student may request to make only interest payments while enrolled. MI-LOAN applications are available from Grand Valley State University's Office of Financial Aid, participating lenders, and from the Student Loan Authority.

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 GVSU and subtracting any financial aid the student has been awarded. The interest rate is variable, with a cap of 8.25%. Under the Unsubsidized Federal Direct Student Loan Program, however, *the student must pay the interest on the loan* while enrolled in school, during the grace period, and during any periods of deferment or repayment. Students may defer the interest payments and allow them to be capitalized on their principal. Students selecting this option should be aware that their loan principal will increase based on the amount of that unpaid interest. There is a 4% origination fee deducted by the federal government from the total amount of your loan. Repayment of the loan principal begins six

months after you leave school. To be considered for the Unsubsidized Federal Direct Student Loan, students must first complete the Free Application for Federal Student Aid form listing Grand Valley to receive this application.

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 Treasury Bill rate and repayment begins 60 days after loan funds are disbursed. Applications for this loan may be obtained from the GVSU 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 Scholarships.** These awards, of up to \$1,000, are based on financial need and availability of funds. To be eligible, students must have a 3.1 GPA, a minimum ACT of 20 and not be eligible for certain other forms of scholarship assistance. To apply, you must complete the FAFSA. These scholarships are awarded to freshman students and are not renewable.
2. **Michigan Competitive Scholarships.** The Michigan Higher Education Assistance Authority (MHEAA) offers scholarships on an annual, renewable basis. You must (1) fill out the Free Application for Federal Student Aid form and have a copy sent to the State of Michigan before February 15, (2) demonstrate financial need, (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 and application forms before the end of your junior year.

As a scholarship winner, you are eligible to have your scholarship renewed, provided you are making satisfactory academic progress, have a cumulative grade point average of 2.0 or higher, and continue to demonstrate financial need. You must reapply for the scholarship each year and *have a copy of your FAFSA sent to the State of Michigan* before March 15. You must also satisfy other regulations adopted by the state authority.

3. **Federal Pell Grants.** This program is the main source of federal financial aid funds. Under it, you can receive awards up to \$2,700. If you are eligible to receive a Pell Grant, you will be notified directly by the federal government. 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.

Costs and Financial Aid

4. **Federal Supplemental Educational Opportunity Grants (SEOG).** These federal grants, ranging from \$100 to \$1,500, are awarded to full-time students of *exceptional* financial need who, without the grant, would be unable to continue their education. No specific grade point average 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 (Free Application for Federal Student Aid). 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 an FAFSA (Free Application for Federal Student Aid) and notify the GVSU 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 nor is repayment required while you carry at least a half-time load in most institutions of higher education. Repayment at a minimum of \$50 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.

The interest rate is a simple annual 5 percent on the unpaid balance with repayment beginning six to nine months after the termination of study.

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% 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. Eligible students will be notified by the GVSU 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 follow closely those of the Federal Perkins Loan Program.
4. **Harriet D. Dively Loan Fund.** A limited number of institutional long-term loans to students with unusual situations of documented financial need. Loans are granted for up to \$1,000 per year at 6% 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 upperclass students.
5. **Leon W. Hall Loan Fund.** Institutional loan funds to students who do not qualify for other Federal and institutional loans but who still demonstrate need. Loans are made at 6% interest up to \$1,000 per year. Preference is given to upperclass students. Students must complete the FAFSA.
6. **Grand Valley Tuition and Short-Term Loans.** For a small service fee, short-term loans are available for tuition and other emergencies. Repayment dates are determined by the Financial Aid Office at the time of application but generally do not exceed sixty days or the end of the semester (whichever comes first). Applications and general policies regarding tuition and short-term loans are available at the Financial Aid Office.
7. **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 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. Attempts are made to find jobs in line with the students' class schedules and job skills. No guarantee of employment is made, however. If you are currently working under the College Work-Study Program, you must reapply for financial aid each year. Eligibility to continue in the program is based on approval of the supervisor in charge, financial need, and your enrollment as a full-time student. If you wish to remain on work-study, you should consult with your supervisor and indicate on your application where you are currently working.
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 tuition waivers 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 654 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 the Bureau of Rehabilitation, Department of Education, Lansing, Michigan 48904. 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.

Bureau of Indian Affairs Higher Education Assistance Program. The Bureau of Indian Affairs has the responsibility to assist Native American students to continue their education and training beyond high school to develop leadership and increase employment opportunities in professional/vocational fields.

Grants are available for eligible students who are American Indian, Eskimo, or Aleut, who are of tribes served by the Bureau of Educational Purposes, who are enrolled or accepted for enrollment in an accredited college or university, and who have a definite financial need.

Application forms and additional information are available from the Bureau of Indian Affairs, P.O. Box 884, Sault Ste. Marie, Michigan 49783, or GVSU Financial Aid Office.

Native American Tuition Waiver. The State of Michigan has provided funds which permit tuition waivers for all Native Americans who can certify 25 percent or more of Indian blood. Application forms are available in the Financial Aid Office. At the time this catalog was published, the State of Michigan had not approved continuing funds for this program.

Other Private Sources. A limited number of scholarships from private sources are awarded from various donors. You can obtain information on other scholarships directly from the donor. Among these are the Women's Resource Center, General Motors, area foundations, and professional and community organizations.

Refunds of Financial Aid

If a student completely withdraws and is due a refund under Grand Valley's refund policy for tuition and room and board charges, the refund will first be applied against financial aid received. If a student is the recipient of Federal Title IV financial aid, the refund will be returned to the Title IV programs as follows:

1. If the student received a Federal Direct or Plus Loan, the refund will first be applied against the Federal Direct or Plus Loan up to the amount the student received in the Federal Direct or Plus Loan.
2. If the student received a Federal Perkins Loan, the refund or repayment will next be applied against the loan up to the amount the student received in a loan during the payment period.
3. If the student received a Federal Pell Grant, the refund or repayment will next be applied against the Pell Grant Program up to the amount the student received in the Pell Grant.
4. If the student received a Federal Supplemental Educational Opportunity Grant, the refund or repayment will next be applied against the Supplemental Educational Opportunity Grant up to the amount the student received in a Supplemental Educational Opportunity Grant during that repayment period.

Students who withdraw during the 100% 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 the student's transcript 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 (SEOG), Federal College Work-Study (CWS), Federal

Costs and Financial Aid

Pell Grant Program, and Federal Direct Loan Program (FDSL). 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 or known class attendance will be used as the date of withdrawal. *All* cash disbursements made to that student will be required to be repaid if he is unable to document his 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 degree 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 Standards require a minimum 2.0 GPA after four semesters of attendance at Grand Valley. Undergraduate students may receive financial aid for a maximum of twelve semesters, graduate students for six semesters, and students returning to complete a second undergraduate degree for four 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 Fin. Aid		Full-time Normal Progress	
	Grad	Ungrad	Grad	Ungrad
1	5	10	9	15
2	11	20	18	30
3	18	30	27	45
4	27	40	36	60
5	36	50	45	75
6	45	60	54	90
7		70		105
8		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. Students may be required to interview with the Financial Aid Appeals Committee. 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. You will report to Grand Valley's Financial Aid Office if you receive assistance from any source which was not originally reported on your Free Application for Federal Student Aid. Grand Valley reserves the right to adjust financial aid when other aid is received.
4. You will maintain sufficient academic progress toward your degree according to the policy of Grand Valley State University (see Academic Progress section).
5. You have not defaulted or on any previous Title IV loan, do not owe a refund or repayment to any institution on any Title IV program, and have not borrowed in excess of any loan limits from any Title IV program at any institution.
6. You will maintain the minimum credit requirements for your financial aid award. Your award letter 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).
7. 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, SEOG, Perkins Loan, NDLS, Work-Study, Federal Direct Loans, and State Student Incentive Grant Program). 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 receiving Title IV student financial aid, you must 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.
8. You may be asked to submit additional documentation (e.g., 1040 tax returns) to the GVSU 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.
9. You will be required to have entrance counseling prior to disbursement of your first Direct Loan at GVSU to receive information about your rights and responsibilities as a borrower.

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

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

Deferred Grade

The grade of X (deferred) is a temporary grade that may be given only in a course that cannot be completed in one semester. Such courses are usually research



projects. A department that wishes to assign the grade of X must receive approval for such courses from the Curriculum Committee before students enroll. This grade is given only for work that is satisfactory in every respect but for which students need more than one semester to complete. An X grade must be removed within two calendar years from the date of assignment. If not, it will be changed to NC.

Credit/No Credit Grade

All course work will be graded (A-F) unless the appropriate faculty body within a division, the dean of the division, 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 course work 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). Courses which 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

General Academic Policies

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.

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 and signed 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.

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 Aids, 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

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

3. Reserved Graduate Course Numbers

- a. The number 680 is to be used for graduate special topics courses.
- b. The number 690 is to be used for graduate research preparation courses.
- c. The number 693 is to be used for graduate project courses.
- d. The number 695 is to be used for graduate thesis courses.
- e. 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 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 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 payment of \$4.00 per copy. Unofficial transcripts will be prepared immediately for currently enrolled students and within 24 hours for inactive students at no charge. No transcripts will be released if a student has an encumbrance or indebtedness to Grand Valley State University.

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

Access to Records

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

Academic Honesty

Integrity of Scholarship and Grades. Truth and Honesty. The principles of truth and honesty are recognized as fundamental to a community of teachers and scholars. The university expects that both faculty and students will honor these principles, and in so doing protect the validity of university grades. This means that all academic work will be done by the student to whom it is assigned without unauthorized aid of any kind. Instructors, for their part, will exercise care in



the planning and supervision of academic work, so that honest effort will be positively encouraged. Compliance shall include compliance with the following specific rules:

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

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

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

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

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 (or unit head equivalent for purposes of grievance — see below), 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 (or equivalent) decision.
 3. If the disposition by the unit head (or equivalent) is not acceptable to either party, an appeal, in writing, may be made by either party to the dean of the division or autonomous school. 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 division or autonomous school of the course under appeal, and a student representative. Upon receiving the committee's recommendation in the latter procedure, the dean shall rule on the grievance. Both the student and the faculty member will be notified in writing of the dean's decision.
 4. If the disposition by the dean is not acceptable to either party, an appeal, in writing, may be made to the Provost. The Provost's review and judgment in the case will be final. Both the student and the faculty member will be notified in writing of the Provost's decision.

In cases where the faculty member in question also serves as the unit head (or unit head equivalent for purposes of grievance), the dean shall appoint a

General Academic Policies

suitable faculty member from the division or autonomous school 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.

The organization of divisions and autonomous schools differ, so that some organizational units may not have a unit head who fulfills the duties described for a unit head in the Faculty Handbook. In these cases, subject to approval by the UAS, these schools will appoint a member of the faculty to function as the unit head equivalent for purposes of grievance.

- 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 unit head equivalent for purposes of grievance — see (a) — 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 division 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 division. 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 (except summer). Any registration or tuition payment received during the period must be accompanied by a \$20 non-refundable late registration fee. Courses beginning after the fifth class day, workshops, or similar offerings without a prescribed registration process will be free of late fee assessment on the first class day.

Schedule revision, or drop/add, is held concurrently with all registrations. A student may drop or add any course for which prerequisites have been met and capacity permits. Additional tuition charges are due when a student adds a credit. There is no late penalty.

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 Control of Grand Valley State University applies to all students:

Since 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 not later than 10 calendar days following the first day of classes of the semester for which such reclassification is sought. Such application shall set forth in writing a complete statement of the facts upon which the application is based, together with affidavits or other supporting documentary evidence. Failure to file such an application on time shall constitute a waiver of all claims to reclassification or rebates for such semester.

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

Application for Degree

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

Degree candidates must notify the registrar of their intention to graduate by completing the Application for Degree card and submitting it to the Student Assistance Center prior to the semester of graduation.

Degree candidates will be allowed 30 days after the last day of the semester or session to complete all requirements and provide evidence of satisfactory completion to the registrar. 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 record keeping is required by either state or federal mandate. Grand Valley adheres to the compliance guidelines of the Family Educational Rights and Privacy Act of 1974, as amended. A statement of the compliance policy is available in the Student Assistance Center and is published in the *Student Code*.

Academic Waivers

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

Student Responsibility

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

Undergraduate Academic Policies and Regulations

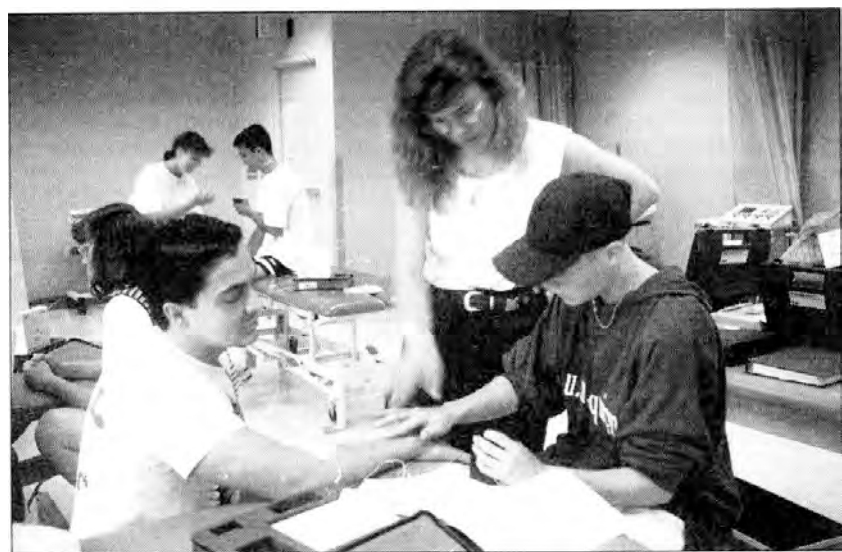
Classification of Students

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

Academic Review

The following system of evaluating academic progress has been developed so that undergraduate students can check earned credits, cumulative grade point average, and percentage of completed work to readily determine their academic standing. The table below lists credits earned and the minimum grade point average for good standing or probation, and for suspension or dismissal. The following criteria and procedure will be used:

1. *Good Standing.* Each student must have a cumulative GPA of 2.0 or better to be in good standing.
2. *Academic Probation.* Students who fall below the GPA required for good standing in any semester will be placed on academic probation.
3. *Academic Suspension.* Any student whose cumulative average is below the grade point for suspension will be allowed one semester in "jeopardy of suspension." If the student's average does not rise above the suspension level and if the current average is less than 2.01, the student will be suspended for a minimum of one semester.
4. *Readmission Following Suspension.* After a minimum of one semester, a suspended student may apply for readmission. Such application must be submitted to the Student Assistance Center not less than thirty working days before the intended registration. The application will be considered by the Academic



General Academic Policies

Review Committee. The committee will take into consideration the achievement of the applicant in any course work undertaken, or independent study pursued, as well as any other supportive information submitted in written form. All readmitted students will be allowed to enroll on a conditional basis, as stipulated by the Academic Review Committee. Their review status will be jeopardy of dismissal; refer to No. 5.

- 5. Dismissal.** If a student who has been readmitted after suspension continues to fall below the GPA required for continued enrollment, and the student's current GPA is less than 2.01, the student will be dismissed. While academic dismissal in this system does connote a certain finality, a dismissed student may, after a period of one calendar year, apply for readmission. Certainly, evidence of maturity and improved attitudes toward college must support any such application. This application for readmission must be submitted to the registrar not less than thirty working days before the intended registration. The application will be considered by the Academic Review Committee.
- 6. Due Process Through Appeal.** In the event that students so notified believe the action to be incorrect, they may submit a written appeal to the Academic Review Committee, *v/o* the Registrar. It is in the student's interest to appeal immediately if he or she intends to do so but no later than the first class day of the subsequent semester. All appeals will be considered by the Academic Review Committee.

Semester Hours Earned*	GPA for Suspension or Dismissal	GPA for Good Standing
1-18	1.10 or less	2.00 or better
19-31	1.30 or less	2.00 or better
35-51	1.50 or less	2.00 or better
52-66	1.70 or less	2.00 or better
67-84	1.90 or less	2.00 or better
85+	1.99 or less	2.00 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, according to the following scale:

Cum laude — 3.757-3.842

Magna cum laude — 3.843-3.999

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 make-up 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 the Office of Academic Resources and Special Programs.

Advising/Degree Audit

All undergraduate programs recommend that their degree-seeking students meet with an assigned faculty advisor periodically to ensure that there are no misunderstandings regarding program requirements.

Credit by Examination

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

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

1. Examination credit will be awarded if the student has not previously registered for the course in question at Grand Valley or elsewhere.
2. The credits, while counting toward graduation, will not be used in computing the GPA.
3. In keeping with the senior residency requirement, examination credit will not be granted within the last 30 hours toward the degree.
4. The maximum amount of credit by examination which 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.

Defense Activity for Non-Traditional Educational Support (DANTES). Grand Valley will also 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 Center.

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 studies. The final step of orientation is 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

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* 50 semester hours toward a baccalaureate degree must be earned in GVSU 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 grade point average of at least a 2.0 based on all course work 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, English, 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: English 150 with a grade of C or better.
- d. Junior-level Writing Requirement: A satisfactory score on the junior-level assessment essay or a grade of C or better in English 305.

Students should complete the mathematics, reading, and freshman writing requirements within the first two years, or first 60 semester hours, of their undergraduate course work. Students are eligible to write the junior-level assessment essay after earning a grade of C or better in English 150, registering for one SWS class, and registering for their 55th overall semester hour. Students are eligible for English 305 after receiving a grade of C or better in both English 150 and one SWS course and upon reaching junior standing. Students should complete the junior-level writing requirement within the first three years, or first 90 semester hours, of their course work.

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 divisional 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.

In the divisional section of the general education program, 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

General Academic Policies

candidate must complete the general education program described below. The specific courses in the college and divisional 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.

Group A (CGE/A): Study of Logical and Mathematical Quantitative 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
- MTH 225 Discrete Structures I
- PHI 103 Logic

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

- AAA 340 African American Culture and Social Thought
- ANT 215 Origins of Civilization
- ANT 370 Cross-cultural Perspectives on Gender
- CHI 101 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
- HIS 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 Government and Politics of China and Japan
- RST 225 Introduction to Russian Culture
- RUS 102 Elementary Russian II
- SPA 102 Elementary Spanish II
- SPA 150 Intensive Elementary Spanish
- SS 211 Peoples of the World
- SS 270 Gender and Family in Third World Development
- SS 280 Comparative Religions
- SS 311 The American Indian
- SS 312 Cultures in Indonesia

- SS 322 Militarism
- SS 323 The Family
- SS 324 Urbanization
- US 101 Diversity in the U.S.

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
- HST 105 Western Civilization to 1500 A.D.
- HST 106 Western Civilization Since 1500 A.D.
- HST 107 American History to 1877
- HST 108 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 202 Ethics in the Professions
- PHY 120 Einstein's Universe
- PSY 311 Controversial Issues in Psychology
- SS 101 The Idea of a Social Science
- SS 381 Death and Dying
- SS 382 Love, Sex, and Gender
- SS 383 Education and American Society
- SS 384 Social Inequalities
- WS 300 Gender Perspectives on Values

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
- ENG 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.

General Academic Policies

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
- GEO 100 Environmental Geology
- GEO 105 Living with the Great Lakes
- GEO 111 Physical Geology (lab)
- NRM 140 The Climatic Factor (lab)
- PHY 105 Descriptive Astronomy (lab)
- PHY 201 Foundations of Physical Science (lab)
- PHY 202 Foundations of Physical Science II (lab)

Group B (NS/B): Life Sciences

- ANT 206 Human Origins
- BIO 105 The Biology of People (lab)
- BIO 105 Environmental Science
- BIO 107 The Great Lakes and Other Water Resources
- BIO 111 General Biology I (lab)
- BIO 112 General Biology II (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
- SS 260 Human Aggression and Cooperation I

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
- SS 261 Human Aggression and Cooperation II
- 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 English 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 since 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 since they may also count as courses in general education or the major.

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

Courses that have received the SWS designation are not merely courses that require written assignments; they adhere to certain guidelines. Students turn in a total of at least 3,000 words of writing during the term. Part of that total may be essay exams, but a substantial amount of it is made up of finished essays or reports or research papers. The instructor works with the students on revising drafts of their papers, rather than simply grading the finished piece of writing. At least four hours of class time are devoted to writing instruction. For a three-credit course at least one third of the final grade is based upon the writing assignments.

Students must pass the writing skills courses (English 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, Professor Sheldon Kopperl, through the Academic Resource Center.

Honors Program

Honors Program students may satisfy their general education requirements through the Honors Program 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 ENG 305); and they must complete one Supplemental Writing Skills (SWS) course in their major or division. They must also complete the capstone course in that major and the B.A./B.S. cognate where applicable. To receive the benefit of the MACRAO agreement, it must be posted to the student's transcript prior to the awarding of the first GVSU grade.

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

General Academic Policies

foreign language who wish advanced placement or waiver of the foreign language requirement.

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

8. Capstone Course.

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

9. Required Hours at Grand Valley.

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

10. Senior Institution Requirement.

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

11. Transfer Hours for Major and Minor.

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

Double Major; 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.

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 course work.

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

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 twelve 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 course work 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 course work to remain in the program. A cumulative grade point average of 2.0 or below after nine hours of graduate level course work 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



General Academic Policies

dismissal should direct a written appeal to the dean of the appropriate division. Appeals for dismissal made by nondegree students must be directed to the Dean of Continuing Education.

Credit Load

Full-time graduate students register for nine or more credit hours per semester. Permission from the dean of the appropriate division 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 course work.
2. A cumulative GPA of at least a 3.0 is required of all candidates for the master's degree.
3. The student must fulfill all requirements for the degree within a period of eight consecutive years. The date of entry into the first graduate course at GVSU 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 course work 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 which 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 which were taken in their undergraduate program. If such a course is a master's program requirement, the department will make an appropriate substitution.
7. Undergraduate credits are not applicable to graduate degrees.
8. 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 which 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 course work at Grand Valley.
4. The time limit to satisfy degree requirements and the time limit on transfer of credits are applicable to the second master's degree.
5. Students who meet separate emphasis area requirements within a program but not the additional residence requirements for two degrees may have both emphasis areas certified and recorded on their academic record.

Catalog Limitations and Guarantees

Graduate students follow the requirements in the Grand Valley catalog at the time they were originally admitted into a program as degree-seeking students. Students who have not enrolled in Grand Valley for 24 consecutive months must follow the requirements in the Grand Valley catalog in effect at the time of their re-entry. All students have the option of using the program requirements in effect at the time of graduation. Any exceptions must be approved in writing by the faculty advisor and program director and filed in the appropriate program office.

Academic Resources and Special Programs

The Academic Resource Center (ARC) supports students' learning by providing a wide range of services to students in one central location. The ARC coordinates orientation for all new students and houses the Freshman Studies, General Education, Honors, and Supplemental Writing Skills programs. Academic advising is coordinated by the ARC and advising for students who have not decided on their majors or who have been provisionally admitted is provided by the ARC. Support services provided by the ARC include: workshops to assist students with study skills, test anxiety, time management, information on graduate study, preparation for professional and graduate school tests, and administration of College Level Examination Program (CLEP) testing and placement testing.

Beyond these services the ARC also 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 GVSU, the EXCEL Program provides its participants with the following resources and services: assessment testing, study skill development, academic and career advising, specialized tutoring, survival skills seminars, individualized academic plans, peer mentoring, and counseling.

Office of Academic Support

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 GVSU 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 GVSU.

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 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. Located in downtown Grand Rapids, 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 symposiums 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.

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 the campus of GVSU.

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 help these students select college preparatory courses, provide students with academic, personal and career counseling, and conduct tutorial sessions for students experiencing difficulties in their classwork 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 State campus.

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. The Math Lab provides group tutoring for students enrolled in Math 096, 097, 110, 125, 201 and Statistics 215, as well as individual tutoring where applicable in other math courses.

Writing Center

The Writing Center offers free peer consulting services on writing for students enrolled in classes. The center provides weekly small group activities for English 098 students, assistance to English 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.

The Office of International Affairs

Since 1994, Grand Valley State University has embarked on an ambitious program of internationalization in recognition of the increased interdependency of the United States and other nations. Advances in communications, international commerce, and scientific technology have resulted in an unprecedented intermingling of cultures and languages. New markets, environmental challenges, and peaceful conflict resolution are only a few examples of areas where there is a need for an internationally informed citizenry.

It is no longer possible to live in isolation. Societies and individuals need international literacy, and GVSU accepts its responsibility to prepare students to be knowledgeable, skilled global citizens. Virtually all academic units and programs include international perspectives.

The Office of International Affairs was created to organize and coordinate the university's international programs and activities. It oversees study abroad programs and exchange agreements in a variety of disciplines around the world. It serves as a catalyst for international curriculum development and helps make GVSU's international resources and expertise available to the community. The Office of International Affairs coordinates with Student Affairs and Admissions to recruit, admit and advise international students. The office also works with universities, nongovernmental organizations, and governmental agencies to develop and administer programs and services. In addition, it works with faculty to internationalize the curriculum and provide overseas study opportunities relevant to the curriculum.

International Exchange Agreements

Partnerships with foreign institutions create opportunities for educational and living experiences abroad and increase the presence of international students and faculty at Grand Valley State. Currently, GVSU has agreements with the following institutions, which offer summer, semester, and year-long study abroad opportunities for GVSU students.

- The Academy of Economics, Krakow, Poland
- East China University of Science and Technology, Shanghai, China
- International Christian University, Tokyo, Japan
- The Japan Center for Michigan Universities, Hikone, Japan
- Kingston University, Surrey, England

National Chengchi University, Taipei, Taiwan
The School of Business (EISSCA), Angers, France
The School of Business (Fachhochschule Rheinland-Pfalz), Worms, Germany
St. Petersburg State University, St. Petersburg, Russia
The University of Sarajevo, Bosnia
The University of Finance and Economics, St. Petersburg, Russia

New exchange initiatives are under way in Australia and New Zealand. In 1996, GVSU was admitted to membership in COUNCIL:CIEE, a worldwide consortium sponsoring overseas study opportunities, student identity cards, travel reservations, work abroad, and volunteer opportunities worldwide. As a member of COUNCIL:CIEE, GVSU students may participate in COUNCIL'S overseas study centers in Argentina, Australia, Belgium, Brazil, Chile, China, Costa Rica, Czech Republic, Dominican Republic, France, Hungary, Indonesia, Japan, Mexico, The Netherlands, Poland, Russia, Spain, Taiwan, Thailand, Tunisia, and Vietnam.

Summer Courses Abroad

Students can acquire international experience through a variety of short-term study programs supervised by GVSU faculty. Summer programs may include:

Aix-en-Provence, France — French language, culture, art
Costa Rica, Central America — primate behavior
Costa Rica, Central America — tropical biology
Guadalajara, Mexico — Spanish language and culture
Kingston, England — British culture
Krakow, Poland — Polish language and culture
Shanghai, China — Eastern philosophy, language, and civilization
St. Petersburg, Russia — Russian language and culture
Tubingen, Germany — German language and culture

The Office of International Affairs assists students with their plans and participation in these programs. 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. For further information, contact the Office of International Affairs, Room C104, Student Services Building, telephone 895-3898.



Academic Programs

African/African American Studies (AAA) Minor

Coordinator: H. Bellrichard-Perkins

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 the social sciences, in addition to the critical tools needed to examine the social construction of African American lives and community. While 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 American, and the Caribbean — indeed, 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 the other locations of the diaspora to understand what the African American experience means.

The minor in African/African American studies requires 21 units (approximately seven courses); collectively, the AAA core courses are intended to provide students with:

1. A critical perspective on social science research and on the representation of African Americans within the discipline.
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 socio-cultural 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, history, humanities, liberal studies, sociology, and social work. The program offerings are also supportive of and complementary to Latin American studies, women's studies, and multicultural studies. Students minoring in African/African American studies are required to complete 21 hours of course work.

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, and 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 course work. Consult with the program coordinator regarding special topics or courses from other departments which may qualify as course electives for the minor.

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, cultural continua of African forms in the New World. Three credits. Offered every 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 every 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 every 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 every 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. General Education course CGE B. Three credits. Offered every fall 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 every 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 future of African American males. Three credits. Offered fall 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 in response to special program interests of faculty and students.

AAA 390 Issues in Africana Studies. An in-depth 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, contemporary elaborations of the "black code." Prerequisites: Three credits in any African/African American Studies course offering or US 101 or SOC 382. Offered in 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 hours of 399 and 499 combined may count toward the minor. One to three credits. Offered in 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 in 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

Aging and Adult Life Minor

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 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

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 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 years.

HST 335 Africa: Past and Present. 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.

SS 313 The Africans. An intensive study of the three traditions (Native, Christian, and Islamic) which have shaped Africa's past and which will have 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 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 those 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 307 (Recreation for the Aging), SS 323 (The Family), SS 381 (Death and Dying), or SOC 356 (Sociology of Health Care).

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 upon 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. General education course AH-B. 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 307 Recreation for the Aging. Involves the study of characteristics and needs of the aging and principles of program planning for them. Three credits.

SOC 356 Sociology of Health Care. An analysis of the social facets of health and disease; the social functions of health organizations, the relationship of health care delivery to other social systems, the social behavior of health care providers and consumers, and international patterns of health services. Race, class, and gender issues are examined. Three credits. Offered fall and winter semesters.

SOC 388 Middle Age and Aging. An examination of some of the myths about aging; older people are less likely to change, are less productive, etc. Major attention will be given to psychological stages of the life cycle, socio-psychological theories of aging, literary and historical portrayals of aging, and cross-culture differences. Three credits. Offered winter semester of odd-numbered years.

SS 323 The Family. An examination of the basic concepts of culture and their application, first to the American family and then to the family in other cultures. General education course CGE-B. 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. Students may not receive credit for both SS 381 and PSY 389. General education course CGE-D. Three credits. Offered fall semester.

Anthropology (ANT)

Professor: Brashler; Assistant Professors: Hull, Rhoads.

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 can offer you a perspective for critically analyzing culture and prepare you for multicultural career settings both in the United States and abroad. Both a major and a minor are available in anthropology.

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 course work: (1) courses concerned with the discipline; (2) courses specializing in a subdiscipline 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 BIO 355, ANT 310, and STA 215.

Majors must complete at least 36 hours in the major: 30 in anthropology and three hours in sociology and SS 300 (Research Methods in the Social Sciences). The 30

Anthropology

hours in anthropology must include ANT 204, 206, 220, 310 or 346; 405, and 495. 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 "focusing" in applied anthropology, economic anthropology, psychological anthropology, 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), and/or a practicum (490). No more than six hours of 399 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 SS 211 or ANT 220. At least six of the remaining hours must be at the 300 or 400 level.

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 "package" their major with other disciplines. For example, a student with a double major in business and anthropology and with a foreign language proficiency is ideally suited to work for companies with overseas operations. Students interested in working with minority people should consider a double major in anthropology and social work, one of the health sciences, or other related fields. Students interested in museum work should consider history as a second major.

It is important to identify your interests as early as possible so that you and your advisor can develop the best academic program possible. For many career paths in anthropology, it is important to have experience through a practicum or actual field experience in archaeology. 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

First Year

ANT 204 Introduction to Cultural Anthropology
ANT 206 Human Origins
ANT 220 Introduction to Archaeology
ENG 150 Strategies in Writing
HST 105 Western Civilization to 1500 A.D.
MTH 110 Algebra
MUS 100 Introduction to Music Literature
PHI 101 Introduction to Philosophy
HS 100 Human Health and Disease
SOC 201 Introduction to Sociology
Electives

Second Year

ANT 207 Language and Culture
 ANT 215 Origins of Civilization
 GEO 100 Environmental Geology
 CS 150 Introduction to Computing
 SOC 280 Social Problems
 SOC 382 Minority and Ethnic Relations
 SS 211 Peoples of the World
 SS 280 Comparative Religions
 Electives

Third Year

ANT 310 Physical Anthropology and Osteology
 ANT 325 Archaeology of North America
 ANT 346 Kinship and Social Organization
 ANT 360 Ethnology of Mesoamerica
 ANT 380 Special Topics
 SOC 360 Social Psychology
 SS 300 Research in the Social Sciences
 BIO 200 Human Heredity
 STA 215 Introductory Applied Statistics
 Electives

Fourth Year

ANT 307 Field Techniques and Laboratory Methods
 ANT 405 Anthropological Theory
 ANT 490 Practicum: Career Service
 ANT 495 Practicing Anthropology (Capstone)
 SS 311 Native Peoples of North America
 Electives

Courses of Instruction

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 one hundred years. The principles of anthropology are explained with examples drawn from non-Western culture. Comparisons are drawn with our own. General education course SS/B. 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. General education course NS/B. 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. We live with the consequences of decisions and choices made by our ancestors around the world. This course examines the successes and failures of our ancestors so that we may better understand our own behavior. The foundations of world civilization are explored by looking at archaeology of preliterate societies. General education course CGE/B. Three credits. Offered fall 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 field work opportunities and draws on examples from local and worldwide research. Three credits. Offered fall semester.

Anthropology

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 Physical Anthropology and Osteology. A survey of human osteological remains, with emphasis on fossil hominids and archaeological specimens, including forensic analysis of more recent materials, disease, human variability, and other attributes manifest in the human skeleton. Prerequisite: 206 and BIO 200. Three credits. Offered winter semester of odd-numbered years.

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 demand.

ANT 346 Kinship and Social Organization. A survey and practical application of basic kinship concepts and terminology. The major theories of social organizations are critically evaluated. Cross-cultural perspective is emphasized. Prerequisite: 204. Three credits. Offered winter semester of even-numbered years.

ANT 347 Environments and Cultures of the Great Lakes Region. Pleistocene history, land-forms, 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 demand.

ANT 360 Ethnology of Mesoamerica. Examines the cultural history and social dynamics which have shaped modern Mesoamerica, through reading of texts and ethnographies. Includes discussion of topography, archaeology, and social development of Mesoamerica, the diversity of modern Mexican and Guatemalan cultures and current issues of development and human rights. Three credits. Offered fall of odd-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. General education course CGE B. Prerequisite: 204 or 206. Three credits. Offered winter semester of odd-numbered years.

ANT 380 Special Topics in Anthropology. A series of courses providing an in-depth study of a problem in anthropology and the methods of investigating it. Various topics of cross-cultural interest, such as human evolution, peasant cultures, preliterate societies, kinship pattern, and culture and personality will be examined. Offered on demand. Three credits.

ANT 399 Independent Readings. Independent supervised readings in selected topics. A student may take only one reading course for one to three credits per 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: 204 or 206 and the written consent of the instructor before registration. Offered fall and winter semesters. Offered on a credit/no credit basis.

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 fall and winter semesters. Offered on a credit/no credit basis.

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 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 fall and winter semesters. Offered on a credit/no credit basis.

Social Science Courses

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

SS 211 Peoples of the World. A course in general 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. General education course CGE/B. Three credits. Offered fall and winter semesters.

SS 270 Gender and Family in Third World Development. An examination of how gender and family affect and are affected by Third World development, including a consideration of relevant theory, of practice and problems, and of efforts to improve development projects, e.g., in the areas of agriculture, the global economy, and U.S. foreign aid. Three credits. Offered on demand.

SS 280 Comparative Religions. A cross-cultural study of the development and function of religious beliefs and magical practices in primitive and contemporary society, sects, denominations, and crisis cult movements. General education course CGE/B. Three credits. Offered fall and winter semesters.

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 fall and winter semesters.

SS 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. General education course CGE/B. Three credits. Offered winter semester.

SS 315 The Africans. An intensive study of three traditions (Native, Christian, and Islamic) which have shaped Africa's past and which 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 winter semester.

SS 325 The Family. An examination of the basic concepts of culture and their application, first to the American family and then to the family in other cultures. General education course CGE/B. Three credits. Offered every semester.

Art and Design (ART)

Chair: Seley. Professors: Kerr, Menning; Associate Professors: Henke, McGee, Muskovitz, Seley, Thomas, Weis, Wong-Ligda; Assistant Professors: Keister, Van Gent, Wittenbraker.

The Department of Art and Design offers courses in studio art and art history with degree programs leading to a B.A. and B.S. degree in studio art and the B.F.A. degree in studio art with an emphasis in ceramics, graphic design, illustration, jewelry and metalsmithing, painting, printmaking, or sculpture. In conjunction with the School of Education, the department also offers a B.A. or B.S. degree in art education with full state certification on the elementary and secondary levels. Under the guidance of an art advisor, students may thus choose either a generalized art program (B.A. or B.S.) or a focused track (B.F.A.) preparing

Art and Design

them for entry into a specific profession such as graphic design. They may also prepare for a career as an independent artist or for entry into graduate school. Minor programs are also available in general studio art and secondary art teacher certification.

Course work is augmented by field trips, a campus exhibition program, and visiting artists. Internships and independent study also augment class work, 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.

Degree Requirements

B.A. and B.S. Degrees

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 325, 19th Century Art (3 credits)

or

Art 425, 18th and 19th Century American Art (3 credits)

Art 326, 20th Century Art (3 credits)

or

Art 426, 20th Century American Art (3 credits)

Art 495, Senior Project: Issues in Art (3 credits)

One additional course in Art History at the 200 level or above (3 credits)

Two courses in different 2-D areas (Prints, Painting, Graphic Design, 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 203 Logic.
2. STA 215 Introductory Applied Statistics.
3. STA 216 Intermediate Applied Statistics or SS 300 Investigative Methods in the Social Sciences.

Upon completion of the foundation program, all art students are required to submit their collective work for faculty review and comment. Based on the review, students may be asked to repeat up to two courses and/or 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 (particularly in graphic design).

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. (Art education minor, see information on Teacher Certification, below.)

B.E.A. Degree

The B.E.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:

1. Open entry, except for graphic design emphasis. After completing the Foundation program (ART 150, 151, 152, 153, 155, and 157), students are evaluated for entrance into the graphic design emphasis. Only 40 students will be admitted to the emphasis annually. Contact the department for specific details.
2. A 2.0 grade point must be maintained.
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 and comment.
 - b. Two semesters before their B.E.A. exhibition, all B.E.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 repeat up to two courses and/or submit to a second review. If a second review is unsuccessful, the student will be asked to leave his or her program.
 - d. See the B.E.A. Handbook for scheduling details and specific requirements.
4. Graduating seniors must have a B.E.A. group show and a final evaluation and acceptance of their work by the whole faculty.

Students seeking a B.E.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 150 2-D Design	3
Art 151 3-D Design	3
Art 152 Color and Design	3
Art 153 Creative Problem Solving	3
Art 155 Introduction to Drawing I	3
Art 157 Introduction to Drawing II	3
	<hr/>
	18

Art History

Art 221 Survey of Art History I	3	} taken in sophomore year
Art 222 Survey of Art History II	3	
Art 325 19th Century Art*	3	
or		
Art 425 18th and 19th Century American Art	3	} taken in junior year
Art 326 20th Century Art	3	
or		
Art 426 20th Century American Art	3	
	<hr/>	
	12	

*The graphic design emphasis substitutes Art 218 for one of the two 300-400-level art history courses.

Art and Design

Note: The art history component of the B.F.A. program must be completed by the end of the junior year and is a prerequisite for Art 495, Senior Project: Issues in Art.

Emphases

Ceramics

Ceramics 275, 370-7, 477-8	15
Drawing 257, 258, 355, 356	12
Sculpture or Metals	6
Painting, Printmaking, or Illustration	6
Studio elective	3
Senior Seminar 401	3
Senior Capstone/Project 495	3
Senior Project B.F.A. 498	6
	<hr/>
	54

Graphic Design

Graphic Design 210-1, 310-1, 410	15
Drawing 257	3
Portfolio 413	3
Senior Project: Graphic Design 415	3
Practicum/Internship 417, 418, or 491	3
Issues in Art (Capstone) 495	3
Six studio electives*	18
Business practice course**	3
Communication skills course†	3
	<hr/>
	54

Illustration

Illustration 280, 381-2, 482-3	15
Drawing 257, 258	6
Graphic Design 210	3
Painting 260	3
Figure/Painting 261	3
Printmaking 265, 366	6
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
Drawing 257, 258, 355, 356	12
Sculpture or Ceramics	6
Painting, Printmaking, or Illustration	6
Studio elective	3
Senior Seminar 401	3
Senior Capstone/Project 495	3
Senior Project B.F.A. 498	6
	<hr/>
	54

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
Senior Capstone/Project 495	3
Senior Project B.F.A. 498	6
	<hr/>
	54

Printmaking

Printmaking 265, 366-7, 467-8	15
Drawing 257, 258, 355, 356	12
Painting 260, 361	6
Metals, Sculpture, or Ceramics	6
Two studio electives	6
Senior Seminar 401	3
Senior Capstone/Project 495	3
Senior Project B.F.A. 498	6
	<hr/>
	54

Sculpture

Sculpture 270, 371-2, 472-3	15
Drawing 257, 258, 355, 356	12
Ceramics or Metals	6
Painting, Printmaking, or Illustration	6
Studio elective	3
Senior Seminar 401	3
Senior Capstone/Project 495	3
Senior Project B.F.A. 498	6
	<hr/>
	54

*CPH 171 or 175 and comprehensive program selected in consultation with advisor. Access to studio courses in the School of Communications cannot be guaranteed for art majors.

**Business practice courses include BUS 201 Law and Business, MKT 350 Marketing Management, CAP 210 Fundamentals of Advertising, and CAP 220 Fundamentals of Public Relations. †Communication skills courses include ENG 350 Business and Preprofessional Writing, CAP 315 Advertising Copywriting, CAP 321 Public Relations Writing I, and CFV 361 Scriptwriting I. Some of these courses may require prerequisites or permission of the instructor.

Students are expected to furnish most of their own art supplies and small equipment.

Art Education (Teacher Certification)

Students majoring in art education or degree-holding students wishing teacher certification must complete 37 credits in art. Art 332 and 333 must be taken before arranging for teaching assisting (junior year) and directed teaching (senior year). To become eligible for entrance into the School of Education and the teacher assisting programs, students must have a 3.0 minimum GPA in the elementary-secondary art education major and a 3.0 minimum GPA in the secondary art education minor. Students should consult the Education section for teaching assisting and directed teaching requirements.

Art 230 and 331 may be counted for the (fine arts requirement) elementary teaching minor. Special education students are required to substitute Art 331, Art in Special Education, for Art 230.

Required courses for both the elementary and secondary levels are Art 150, 151, 155, 157, 221, 222, 260, 270, 275, 332, 333, 495, and six credit hours (two courses) in post-medieval art history above the 200 level, including one course in modern. Art 230 and 331 will be offered during the fall, winter, and summer semesters. In both Art 230 and 331 students may satisfy elementary minor requirements.

Students obtaining certification in art at either the elementary or secondary levels are permitted to teacher assist at both the elementary and secondary levels.

Art Education Minor

The minor program in art for secondary teacher certification requires a minimum of 28 semester hours. Required courses are Art 150, 151, 221, 222, 332, and 333. Three additional studio courses must be selected from the following: Art 155, 260, 270, and 275.

Transfer Students

1. All transfer credit for studio art courses will be by departmental portfolio review only. Contact the department for 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 as to 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.

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*, potter, printmaker*,

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

Art and Design

sculptor*, set designer, stylist of industry (sculptors), and supervisor museum school*.

Sample Curriculum for B.S. or B.A. program

A general fine arts curriculum (check specific major requirements with your advisor), working toward a B.S. or B.A. degree.

First Year

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

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

Third Year

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

Fourth Year

ART 495 Senior Project: Issues in Art
Art electives
General electives

Recommended Curricula for B.E.A. Program

Freshman Year — B.E.A. Fine Arts

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
(ENG 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

Freshman Year — B.E.A. Graphic Design

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
(ENG 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

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

Sophomore Year — B.E.A. Fine Arts

Fall Semester

ART 221 Survey of Art History I	5
ART 257 Life Drawing	3
ART Emphasis: Fine art studio of choice: ceramics, metals, painting, printmaking, sculpture	3
Two general education courses	6
	<hr/> 15

Winter Semester

ART 222 Survey of Art History II	3
ART 258 Intermediate Drawing	3
ART Emphasis: Fine art studio of choice, second semester	3
Two general education courses	6
	<hr/> 15

Sophomore Year — B.E.A. Graphic Design

Fall Semester

ART 210 Graphic Design I	3
ART 221 Survey of Art History I	3
ART 257 Life Drawing	3
One studio elective	3
One general education course	3
	<hr/> 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
	<hr/> 15

Junior Year — B.E.A. Fine Arts

Fall Semester

ART 325 (425) 19th Century Art	3
ART 355 Advanced Drawing	3
ART Emphasis: Fine art studio of choice	3
ART Fine art studio: Follow emphasis program	3
One general education course	3
	<hr/> 15

Winter Semester

ART 326 (426) 20th Century Art	3
ART 356 Advanced Drawing	3
ART Emphasis: Fine art studio	3
Two art studio courses selected from emphasis listing	6
	<hr/> 15

Junior Year — B.E.A. Graphic Design

Fall Semester

ART 310 Graphic Design III	3
Art history elective	3
One studio elective	3
Business practice course	3
One general education course	3
	<hr/> 15

Winter Semester

ART 218 Design History	3
ART 311 Graphic Design IV	3
One studio elective	3
Communication skills course	3
One general education course	3
	<hr/> 15

Senior Year — B.E.A. Fine Arts

Fall Semester

ART 401 Senior Seminar	3
ART 495 Senior Project: Issues in Art	3
ART Emphasis: Fine art studio	3
One studio elective	3
One general education course	3
	<hr/> 15

Winter Semester

ART 498 Senior Project (B.E.A. Exhibit)	6
ART Fine art studio (choice)	3
Two general education courses	6
	<hr/> 15
	122

Art and Design

Senior Year — B.F.A. Graphic Design

Fall Semester

ART 410 Graphic Design V	3
ART 491 Internship/ART 417–418 Practicum	3
ART 495 Issues in Art (Capstone)	3
One general education course	3
One studio elective	3
	<hr/>
	15

Winter Semester

ART 413 Portfolio	3
ART 415 Senior Project: Graphic Design	3
One studio elective	3
Two general education courses	6
	<hr/>
	15
Total	<hr/>
	122

Recommended Curriculum for Art Education

Freshman Year (all students)

ART 150 2-D Design	3
ART 151 3-D Design	3
ART 155 Introduction to Drawing I	3
One B.S. or B.A. cognate course	3
Four general education courses	12
Two courses for the elementary distributive minor or the secondary teachable minor	6
	<hr/>
	30

Elementary Post-Freshman Spring and Summer Session

MTH 221 Mathematics for Elementary Teachers I	4
One general education course	3
	<hr/>
	7

Secondary Post-Freshman Spring and Summer Session

Two general education courses	6
One teachable minor course	3
One B.S. or B.A. cognate course	3
	<hr/>
	12

Sophomore Year — Elementary

ART 332 Art in the Elementary Classroom	4
ART 333 Art in the Secondary Classroom	3
ED 300 Introduction to Education	3
ED 305 Educational Technology	2
CS 205 Computers in Education	2
PSY 301 Child Development	3
ENG 308 Teaching Reading: The Necessary Skills	4
One B.S. or B.A. cognate course	3
One general education course	3
One distributive minor course	3
	<hr/>
	30

Sophomore Year — Secondary

ART 332 Art in the Elementary Classroom	4
ART 333 Art in the Secondary Classroom	3
ED 300 Introduction to Education	3
ED 305 Educational Technology	2
CS 205 Computers in Education	2
PSY 301 Child Development	3
ART 221 Survey of Art History I	3
ART 222 Survey of Art History II	3
One B.S. or B.A. cognate course	3
One studio art course	3
	<hr/>
	29

Students must apply for entry into the School of Education in their junior year by February 1 for fall semester assistant teaching seminar and by September 15 for winter semester assistant teaching seminar (see Education section of catalog).

Prerequisites to the teacher assisting program include ART 150, 151, 155, 157, 221, 222, 332, and 333.

Junior Year — Elementary

ED 303 Methods and Strategies of Teaching — Elementary Teacher Assisting	6
ED 304 Mainstreaming in the Public Schools (taken concurrently with ED 303)	1
PSY 325 Psychology Applied to Teaching	3
ART 221 Survey of Art History I	3
ART 222 Survey of Art History II	3
One B.S. or B.A. cognate course	3
Two studio art courses	6
Two general education courses	6
	<hr/>
	31

Senior Year — Elementary

ED 403 Student Teaching, Elementary	12
ART 495 Senior Project: Issues in Art	3
ED 320 Materials and Methods in Elementary Reading	3
Three studio art courses	9
One distributive minor course	3
	<hr/>
	30
Total	130*

Junior Year — Secondary

ED 307 Methods and Strategies of Teaching — Secondary Teacher Assisting	6
ED 304 Mainstreaming in the Public Schools (taken concurrently with ED 307)	1
PSY 325 Psychology Applied to Teaching	3
Two studio art courses	6
Two general education courses	6
Three teachable minor courses	9
	<hr/>
	31

Senior Year — Secondary

ED 407 Student Teaching, Secondary	12
ART 495 Senior Project: Issues in Art	3
ED 321 Reading in the Content Area	3
Two studio art courses	6
Two teachable minor courses	6
	<hr/>
	30
Total	131*

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. General education course AH/A. 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 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 which 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.

*The art education and teacher certification program will take at least nine semesters to complete. Enrollment in ART 305-307 is limited to seven per semester. Students should be aware that various screening strategies may preclude the pursuit of an art education degree.

Art and Design

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: Completion of Foundations. 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 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 a variety of fabrication techniques in metalsmithing with emphasis on uses of metal and mixed media in creative design. 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 261 Figure Painting. Introduction to painting the figure, with an emphasis on perceptual accuracy. Prerequisite: 260. 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 275 Introduction to Ceramics. Basic techniques and concepts related to pottery and ceramics, with some historical background. 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 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 311 Graphic Design IV — Package 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: 310. Three credits. Offered winter semester.

- ART 325 19th Century Art.** A survey of art in Europe during the 19th century. Prerequisite: 222. Three credits. Offered fall semester of even years.
- ART 326 20th Century Art.** A survey of art in Europe and America in the 20th 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 mentally impaired. 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 346-347 Intermediate Jewelry and Metalsmithing I and II.** An advanced study of metalsmithing techniques — casting, inlays, forging and raising — with emphasis on developing skills and solving design problems. Prerequisite: 245 or 346. Three credits. Offered fall and winter semesters.
- 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 371-372 Intermediate Sculpture I and II.** A continuation of Art 270 with an in-depth exploration of three-dimensional media and emphasis on individual problems. Prerequisite: 270 or 371. Three credits. Offered fall and winter semesters.
- ART 376-377 Intermediate Ceramics I and II.** A continuation of Art 275 with emphasis on forming, throwing, glazing, and decorating pottery. Prerequisite: 275 or 376. 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 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.

Art and Design

stress is on individually conceived and developed projects. Prerequisite: 311. Three credits. Offered fall semester.

ART 413 Portfolio. Refinement and development of a body of work constituting a professional portfolio. Includes a required three-day field trip to Chicago. Prerequisite: Senior standing in major. 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 485. 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 425 Eighteenth- and Nineteenth-Century American Art. A survey of art in America from the Colonial period through the nineteenth century. Prerequisite: 325 or 326. Three credits. Offered fall semester of odd years.

ART 426 Twentieth-Century American Art. A survey of art in America during the twentieth century. Prerequisite: 325 or 326. Three credits. Offered winter semester of even years.

ART 447-448 Advanced Jewelry and Metalsmithing I and II. A continuation of 346-347. The specific aim is to increase personal exploration, competence, and aesthetic development so as to produce a student extremely competent in the field of metalsmithing. Prerequisites: 347 or 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. 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. Prerequisite: 367 or 467. Three credits. Offered fall and winter semesters.

ART 472-473 Advanced Sculpture I and II. A continuation of Art 371 with strong emphasis on exploration of individual expression. Prerequisite: 372 or 472. Three credits. Offered fall and winter semesters.

ART 477-478 Advanced Ceramics I and II. A continuation of Art 376-377 with emphasis on individual solutions to problems in design, clay and glaze composition, forming, and firing techniques. Prerequisites: 377 or 477. Three credits. Offered fall and winter semesters.

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 where 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 which 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 Senior Project: 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. Prerequisite: 497. 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 15 credit major requirement. Prerequisite: Prior arrangement with a specific faculty. Variable credit. Offered fall and winter semesters.

Behavioral Science (BSC)

Psychology and Sociology/Anthropology 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/Anthropology.

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/Anthropology Concentration is Statistics 215, Social Science 300 and Sociology 300.

Students must complete a minimum of 36 hours, including SS 300. For the Psychology Concentration students, the 36 hours should also include PSY 360 and PSY 492 (Capstone). For the Sociology/Anthropology Concentration students, 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 which is *not* the concentration (from Psychology if the area of concentration is Anthropology/Sociology; from Anthropology/Sociology if the area of concentration is Psychology.). In addition to the 36-hour major, three other courses are to be selected in consultation with the student's advisor from such courses as human heredity, statistics, and advanced courses in philosophy, political science, economics, or history.

For a list of courses see the separate listings under Psychology and Sociology.

Biology (BIO)

Chair: Rogers; Professors: Bajema, Rogers, J. Shontz, Ward; Associate Professors: Huiuzenga, Lombardo, Luttenton, N. Shontz, Thorpe; Assistant Professors: Courtney, Hunt, Staves.

Degrees offered: B.S., B.A. in biology; B.S. in group science, biology emphasis; B.S. in biopsychology; major for secondary or elementary teaching certification offered in biology and major for elementary teaching certification offered in group science, biology emphasis; minor for secondary teaching certification offered in biology.

Biology

The study of animals and plants has fascinated people for thousands of years. All of us have wondered at some time about how our bodies are put together and how they function, why plants flower, how organisms interact with each other and respond to the environment, or why some bacteria cause disease and others do not. Biology is an exciting and dynamic field filled with the satisfaction of answers to many questions and the challenge of others waiting to be explained.

As a science, biology offers the opportunity to study and experiment with animals, plants, fungi, and bacteria in the laboratory and outdoors. Biologists make contributions in widely varying areas, including medicine, crop development, 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 which 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 provides flexibility to allow students to select among several emphasis areas, including premedical, pre-physical therapy, plant biology, animal biology, wildlife biology, aquatic and fisheries biology, and environmental health. Any of these areas, in addition to the basic major, may be used as the foundation for graduate study. Biology majors, in consultation with their advisors, are able to tailor programs to fit career needs or interests. All majors must complete 38 credits in biology.

The biology major requires fulfillment of 1, 2, 3, and 4, below. Emphases are optional.

1. General university degree requirements as identified in the General Academic Regulations section of the catalog.
2. Biology Core (24 semester credits):
 - BIO 111 General Biology I
 - BIO 112 General Biology II*
 - BIO 215 General Ecology
 - BIO 375 and 376 Genetics*

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

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 280 and 281. One course must be taken from the Plant Biology category (BIO 303, 323, 333, 403, 413, 573 with permission), and one course must be taken from the Animal Biology category (BIO 222, 232, 302, 342, 352, 362, 372, 422, 432; 572 with permission; HS 208 and 309, HS 280 and 281). BIO 103, 105, 107, and 355 are excluded from the biology major.
4. Cognates (minimum of 24 credits):
 - CHM 109, 231, and 232 *or* CHM 115, 116, 231, and 232 *or* CHM 115, 116, 241, and 242†
 - CS 160* or 162*
 - Completion of one of the following options:
 - a. PHY 220 or 230 and one additional course from CS 231, 233, 237, 262; MTH 125, 201; STA 215; PHY 221, 231.
 - b. PHY 200 and two additional courses from CS 231, 233, 237, 262; MTH 125, 201, 202; STA 215, 216.
 - c. PHY 200 and one course from CS 231, 233, 237, 262; MTH 125, 201; STA 215. One additional 300- or 400-level biology course (excluding 399 and 499).

Emphases (optional):

1. Teacher Certification Emphasis:
Students preparing to teach in either elementary or secondary schools must complete the biology major outlined above. Secondary admission to the School 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 School of Education. The required courses in biology must be approved by the department chair or designee.
2. Premedical, Preosteopathic, and Predental Emphasis:
Students planning careers as physicians and dentists may major in biology. There is no absolute list of required courses for persons seeking admission to medical or dental schools, though some of these schools have more specific course requirements than others. Careful consultation with your faculty advisor throughout the undergraduate program is strongly advised. Premedical students majoring in biology should complete the following: Chemistry 115, 116, 241, and 242, and Physics 220 and 221. In addition, electives should be considered from among Biology 302, 357, 422, and 432; Health Sciences 208 and 309, 212 and 213, 280 and 281; and Chemistry 351, 461, 462, and 463.
3. Pre-physical therapy emphasis:
Students planning to apply to the M.S. program in physical therapy may select

*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.

†Students seeking a minor in chemistry must complete CHM 115, 116, *and* CHM 231 and 232 *or* 242 and 242, plus other requirements detailed in the chemistry section of this catalog.

Biology

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.

Computer Science: CS 160 or 162.

Genetics: BIO 375 and 376.

CGE/D elective: BIO 336 (225).

In addition, BIO 111, 215, 405/406, 495, and a plant biology course (BIO 303, 323, 333, 403, 413; 573 with permission) are needed to complete the biology major.

4. Plant Biology Emphasis requires:
BIO 303, 333, and 403 as biology electives.
5. Animal Biology Emphasis requires:
BIO 222, 232, 302, and 432 as biology electives.
6. Wildlife Biology Emphasis requires:
BIO 222, 333, 342, and 408 as biology electives and NRM 281 as a cognate.
7. Aquatic and Fisheries Biology Emphasis requires:
BIO 232, 323, 362 and 440 as biology electives and CHM 115 and 116 as cognates.
8. Environmental Health Emphasis requires:
Electives from the following: BIO 232, 440; CHM 115, 116, 222; HIS 202, 212 and 213; OSH 314, 404; NRM 281. Consult your academic advisor.

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.

Group Science Major

With a Biology Emphasis for the B.S. Degree

The group science major with a biology emphasis is designed for students seeking certification to teach at the elementary school level. It provides the student with breadth of exposure in all the sciences and mathematics and permits concentration in biology. In order to be certified, students must complete this major with at least a 2.8 GPA and the elementary teaching minor. The following requirements must be completed for the major:

1. One course chosen from BIO 103 or 105 or 107, CHM 102, GEO 100, PHY 106.
2. One course chosen from CS 160, PHY 105 or 201.
3. CHM 109* or 115* or 201*, and CHM 119.
4. GEO 111 or 201.
5. BIO 111 and 112.
6. Biology Capstone and electives (a minimum of twelve semester credits, including the capstone, is required):
Capstone: BIO 494.

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

Electives: Courses must be taken from each of the following three categories; one must be a field course, designated with an (F).

Animal Biology category — HIS 202, 208, BIO 222 (F), 232, 302, 325, 342 (F), 352, 422, 432, 572 (F) with permission.

Plant Biology category — BIO 303, 333 (F), 403, 573 (F) with permission.

Ecology, Genetics, Microbiology category — HIS 212 and 213, BIO 215 (F), 355, 357, 375 and 376, 575 (F) with permission.

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. Chemistry 109 is a required cognate in addition to the 24 credits. Requirements of the minor are:

BIO 111 General Biology I

BIO 112 General Biology II

BIO 325 Human Sexuality

One course chosen from each of the following three categories:

Genetics category — BIO 355 or 375 and 376.

Animal Biology category — BIO 222, 232, 342, 352; (572 with permission only); HIS 202 or 208 and 209.

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

HIS 212 and 213, 280 and 281 count in the minor toward the required 24 credits in biology.

Cognate: CHM 109, Introductory Chemistry.

Health science majors selecting a biology minor for teacher certification are not permitted to double count the following courses: HIS 208 and 309, HIS 212 and 213, and HIS 280 and 281.

Master of Education Degree

The M.Ed. degree with a concentration in biology is offered by the School 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 expanding 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 course work, and copies of teaching certificates. Students must have at least a 3.0 cumulative grade point average. For additional details, see the School 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 School of Education catalog description.

Biology

Upon admission to the program, the student and an advisor from the Biology Department or the School of Health Sciences will evaluate all previous course work 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 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

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 towards a biology major or minor. General education course NS/B. (3-0-2). Four credits. Offered every fall, every winter, and summer semesters of even-numbered years.

BIO 105 Environmental Science. Study of natural ecosystems, their interrelationships, and human impacts; 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. General education course NS/B. (3-0-0). Three credits. Offered fall and winter 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. General education course NS/B. (3-0-5). Four credits. Offered every fall semester and summers of odd-numbered years.

BIO 111 General Biology I. Introduction to the diversity of living creatures, anatomy and physiology of organisms, animal behavior, patterns of reproduction, ecology, and major pathways of Darwinian mechanisms of evolution. (3-0-2). General education course NS/B. Four credits. Offered fall and winter semesters.

BIO 112 General Biology II. 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). Biology majors who elect CHM 115 must later also complete CHM 116. (3-0-2). General education course NS/B. Four credits. Offered fall, winter, and occasional summer semesters.

BIO 209 Outdoor Landscape and Garden Plants. The application of the principles and practices of horticulture to landscape and garden settings. Two Saturday field trips. (2-0-2). Three credits.

BIO 213 Indoor Plants. Identification, propagation, and care of plants suitable for the home. Two Saturday field trips. (2-0-2). Three credits.

BIO 215 General Ecology. Population, communities, and ecosystems, including primary productivity and energy flow, materials cycling, succession, population dynamics, and

systems modeling. Prerequisites: 112 and sophomore standing (111 recommended). (3-0-3). Four credits. Offered fall and spring 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: 111. (2-0-2). 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: 111. (2-0-3). Three credits. Offered winter semester.

BIO 302 Comparative Vertebrate Anatomy. Phylogeny and anatomy of vertebrates. Prerequisite: 111. (2-0-4). Four credits. Offered winter semester in even-numbered years.

BIO 303 Plants and Fungi. Evolution, reproduction, and structure of algae, fungi, bryophytes, lower vascular plants, and seed plants. Prerequisite: BIO 111. (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 323 Aquatic Plants. Aquatic vascular plants and algae of the Great Lakes region with emphasis on taxonomy, physiology, and ecological distribution. Prerequisite: 111. (2-0-2). Three credits. Offered fall semester.

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

BIO 333 Systematic Botany. Principles and methods of taxonomy of vascular plants. Prerequisite: 111. (2-0-3). Three credits. Offered winter semester.

BIO 336 Bioethics. Examination of the values, ideas, and technologies that humans have used, are using, and may use in the future with respect to biological issues. One course section will focus on biomedical issues, and another section will concentrate on environmental issues. Only one section may be taken for credit. Prerequisite: Junior standing. (3-0-0). Three credits. Offered fall, winter, and occasional spring/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: 111. (2-0-2). 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. (2-2-0). Three credits. Offered fall 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: 112 or 103, or permission of instructor. (3-0-0). Three credits. Offered fall, winter, and occasional 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: 111, 112, 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: 111; 112 is recommended. (3-0-3). Four credits. Offered fall semester in even-numbered years.

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: 111, 112, and 252 are recommended. (2-0-3). Three credits. Offered winter semester.

Biology

- 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: 111 (or HS 208) and 112. (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 200 or 301. (0-0-2). One credit. Offered fall and winter semesters.
- BIO 380 Selected Topics.** Readings, lecture, discussions, lab, or field experience for any combination on a specific biological topic. Prerequisites: Variable, and permission of instructor. One to four credits.
- BIO 590 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 599 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 chairman before registration. May be elected for up to five credits toward a biology degree. Prerequisite: Permission of department chairman. One to four credits are available per semester. Offered fall, winter, and 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 111 and 112 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 of odd-numbered years.
- 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: 375-376; a human genetics course, and CHM 232 may be substituted. (3-0-0). Three credits. Offered winter 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: 111 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 winter semester.
- BIO 422 Embryology.** Development in animals from fertilization of the egg to hatching or birth. Emphasis on vertebrates. Prerequisites: 111 and Chemistry 232 or 242 or permission of instructor. (2-0-3). Three credits. Offered fall semester in even-numbered years.
- BIO 432 Comparative Animal Physiology.** Functions of the organ systems of animals, including their regulatory mechanisms. Prerequisites: 111 (or HS 208), 112, CHM 232 or 242. (3-0-3). Four credits. Offered fall semester in odd-numbered years.
- 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. (2-0-1). Four credits. Offered fall semester in odd-numbered years.
- 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

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

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: 111 and 215 or permission of instructor. (3-0-0). 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: 111 and 112; or ANT 206 or permission of instructor. (3-0-0). Three credits. Offered fall semester of odd-numbered years.

BIO 460 Productivity of Ecosystems. Function of ecosystems; their productivity and nutrient cycling. Measurement of growth and yield in farm, field, forest and wetland environments. Prerequisites: 215; NRM 281 recommended. (3-0-3). Four credits. Offered every fall semester and occasional summers of odd-numbered years.

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 towards the major. Prerequisites: Major in biology and permission of the department chairman. One to six credits.

BIO 494 Biology in the 21st Century (Capstone for Group Science—Biology Emphasis Majors). Four major biological topics which 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: 111, 112, 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 111, 112, 215, 375, 376, and CHM 231 or 241. (3-0-0). Three credits. Offered fall and winter 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 spring-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 summers of odd-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 in 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 in 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 spring-summer session in 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

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

Business

of college-level biology; bachelor's degree. Three credits. Offered spring/summer semester in 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 in 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 spring/summer session.

BIO 675 Methods for Aquatic Ecosystems. A survey of methods used in the study of aquatic ecosystems with emphasis upon 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 spring/summer semester in even-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 699 Research in Biology. Independent research in topics of special interest to the student. One to three credits. May be elected for up to three credits towards an M.Ed. degree. Prerequisite: permission of instructor and department chairperson.

Seidman School of Business

Dean: Turner; Assistant Dean: Gulembo; Faculty: Accounting and Taxation: DeBruine, Godwin, Goldberg, Grant, Harris, Klein, Lindquist, Martin, Sopariwala, Veazey, Yuhas; Finance: Bhagwat, Blose, Dimkoff, Griggs, Swartz; Management: Castro, Crampton, Dandridge, Douglas, Hall, Hodge, IsHak, Jiang, Jones-Rikkers, Kumar, Larson, Margulis, McKendall, Mishra, Motwani, Sanchez, Sanford, Subramanian, Vrancken; Marketing: Benet, Cotter, Pelham, Rudolph, Wolter.

Mission Statement

The Seidman School of Business plays an important role as part of a strong regional university. Our commitment is to excel in teaching, to conduct research, and to provide service to the west Michigan region, as we help our stakeholders compete in the domestic and international marketplace.

The Seidman School is first committed to teaching, including development of students' critical thinking, analytical skills, and ethical awareness. Our primary goal is to educate and develop management and professional practitioners with the potential to advance to leadership positions.

We are engaged in basic and applied research and instructional development which complement our teaching mission and service outreach. Through intellectual contributions we strive to contribute to our disciplines, improve our abilities to teach, and enrich our service to the regional community.

In fulfilling our commitment to the west Michigan region, we respond to internal and external constituencies. Internal committee service contributes to department, school, and university well-being. The external needs and demands of our stakeholders in the region are served through a variety of channels including faculty contributions to the region, interfaces with business advisory boards, and outreach efforts through specialized centers and programs within the school.

Programs and Objectives

The Seidman School of Business offers programs in business and economics (for a description of the economics program, see Economics). The business programs

lead to the bachelor of business administration (B.B.A.), master of business administration (M.B.A.), and master of science in taxation (M.S.T.) degrees. Through these programs the school 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 American 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, finance, general business, international business, management, and marketing. An emphasis in human resources management is available in the management program. There are also opportunities for students who do not wish to enter a degree program to take courses that apply to their professional interests.

In each case, the school 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 School 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 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 on 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 School, 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 School. Grand Valley's purpose has been to honor the man not merely by affixing his name to the school, but by perpetuating those high ideals to which he personally dedicated himself.

Seidman School Advisory Board

The Seidman School 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 School and the business community. The Board meets to advise the Seidman School of Business on goals, curriculum, and other matters that are of benefit to the continued enhancement of the student body, the School, and the business and public communities.

Accounting Alumni Advisory Board

The Accounting Alumni Advisory Board is composed of at least 15 accountants and meets every two months to advise the school on all matters pertaining to the accounting curriculum and programs to plan alumni events. Representatives of national, regional, and local accounting firms, presidents of the local accounting associations, and corporate accountants are members of this board.

M.S.T. Advisory Board

The M.S.T. Advisory Board is composed of attorneys and accountants from the professional community who actively support, teach in, and refer students to the M.S.T. program. The board meets at least two times a year.

Office for Economic Expansion

The Office for Economic Expansion, located on the Grand Rapids campus in the Eberhard Center, is dedicated to building a strong link between academic programs and economic development and job creation in the region. Established in the fall of 1984 after a comprehensive analysis of economic and business needs of west Michigan, the office serves as a vehicle for providing management-level education, training, economic research and consultation resources, and market analysis, and planning services for existing and potential area businesses. The office works closely with all economic development organizations, including local chambers and municipal staff. Community leaders in Grand Rapids regard the Office for Economic Expansion as an outstanding partnership between the state's public higher education system and labor, business, government, and other academic resources of the region.

The Office for Economic Expansion is located in the Eberhard Center at 301 West Fulton, Grand Rapids, telephone (616) 771-6770.

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 M.B.A. 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.

Executive-in-Residence

The Seidman School of Business sponsors the Executive-in-Residence program, which provides students and faculty with 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. Recent outstanding participants have included Jay Van Andel, Chairman of the Board, Amway Corporation; Earl Holton, President, Meijer, Inc.; and Robert Pew, Sr., Chairman of the Board of Steelcase, Inc.

Seidman Business Week

Seidman Business Week helps prepare students for business careers, offers interaction with professionals, and fosters an esprit de corps among Seidman students. A portion of this festive week is devoted entirely to fun outdoor activities and friendly competition among the many Seidman student organizations. The activity-filled week also includes a keynote address by the Executive-in-Residence.

Student Organizations

Presidents' Council

The Presidents' Council is a group composed of officers from the various Seidman School of Business student organizations. Members work together to facilitate interaction among the various SSB student organizations; avoid overlap of extracurricular activities within Seidman; and assist with recruiting and orientation of incoming SSB students. Members also serve as advisors to the Dean's Office, providing insight and assistance in a variety of areas.

Accounting Club

The objectives of this club are to serve as a service organization for the Grand Valley State University community and to encourage and give recognition to scholastic and professional excellence in the field of accounting. The club holds regular meetings, takes trips, sponsors speakers, conducts a pre-recruiting dinner, and participates in an annual awards banquet.

American Marketing Association

The Grand Valley 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 22,000 marketing practitioners, educators, and students. The Grand Valley student chapter attempts to enhance student participation in the real world of marketing by sponsoring conferences, seminars, 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.

Business

Society for Human Resource Management

Students interested in human resource management are eligible to join the student chapter of the Society for Human Resource Management.

Students who join SHRM join thousands of human resource management executives, staff specialists, and students with similar responsibilities, needs, and problems. 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 GVSU 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 fund-raisers, organizing field trips, and offering social events. Membership is open to pre-business and business students from all Seidman business disciplines who meet the Seidman School academic standards.

Finance Club

The club's goals are to foster interaction among students interested in finance and to enhance their career opportunities. The functions of the club include regular meetings, trips, speakers, and social events. Another function is the supervision and management of the SSB 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)

The Grand Valley Student Chapter of the Society for Advancement of Management (SAM) is an affiliate of the national organization which strives to integrate different business disciplines. The national organization encompasses more than 160 campus chapters consisting of practitioners, educators, and students. Membership in the association helps students make the transition from campus to career. Membership 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

Delta Mu Delta

The Grand Valley State University Beta Mu Chapter of Delta Mu Delta, a National Honor Society in Business Administration, promotes high scholarship in business education by recognizing and rewarding scholastic attainment in business subjects.

Membership in Delta Mu Delta is awarded once each year to certain undergraduate and graduate students who have completed at least 50 percent of their degree requirements and are in the top 20 percent of their class with at least a 3.7 overall grade point average at the undergraduate and graduate levels.

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 the Seidman School 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, BDO/Seidman, and Clipper Belt Lacer accounting awards are presented at the annual spring accounting awards dinner. These awards are for outstanding academic and leadership excellence.

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

Scholarships

Richard H. Giles Memorial Scholarship. This scholarship is awarded to senior, full-time, degree-seeking students who show promise of making outstanding contributions in the field of accounting. Graduate recipients, selected on the basis of outstanding academic potential, interest in accounting, and financial need, receive tuition for two semesters. Undergraduate recipients receive academic year tuition scholarships for their senior year only.

Accounting Alumni Scholarship. Each year several scholarships of \$500 to \$1,000 are awarded by the accounting alumni to accounting majors at the junior level.

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 award is \$600 and is provided by the Grand Rapids Chapter of the American Production and Inventory Control Society.

Grand Rapids Consumer Credit Association Scholarship. Annual awards of \$500 are given to three undergraduate students and one M.B.A. student. Undergraduate recipients must be at least half-time students. Special consideration is given to accounting and finance majors. M.B.A. students may be either full time or part time to qualify. The awards are based on scholarship. Recipients are selected by a Seidman School committee.

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 3.5 grade point average and a 28 ACT 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 School 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 3.5 undergraduate grade point average and a minimum GMAT score of 600. For renewal, students must maintain a 3.5 GPA. Recipients are selected by the Seidman School 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.

Business

Earl Harper Management Scholarship. Each year one \$500 scholarship is awarded to an African-American management major. Qualified students must have earned a minimum of a 2.5 GPA after completing 15 credits at GVSC. The recipient is selected by the Minority Advisory Council.

Marilyn and B.P. Sherwood III Scholarship. One \$500 scholarship is awarded each year to a woman M.B.A. 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 School of Business committee.

Stephenson Foundation Scholarship. The purpose of this scholarship is to provide distinguished scholarship awards to outstanding students interested in business. Scholarships of \$500 will be awarded each year (the number of scholarships will depend on the amount of the funding). Incoming freshmen, transfer students, and graduate students may apply. The scholarship will not be automatically renewable, but past recipients will be encouraged to reapply.

Undergraduate Business Program

The undergraduate program provides students with a 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

Students who have earned fewer than 55 semester hours are admitted to the Seidman School of Business pre-major program and must complete general education requirements (see section on "General Education"). This program covers the freshman and sophomore years and 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 2.5 grade point average, students are admitted to the upper-division programs. During their junior and senior years they 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.

Any student with guest student status (a degree-seeking student at another college or university who is taking classes at GVSC for one semester) must meet the criteria set forth for all Seidman School 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 School of Business. The guest student is advised to bring a transcript at the time of registration.

Academic Review

In order to graduate, upper-division business students must achieve a 2.5 minimum cumulative grade point average and a 2.5 minimum cumulative GPA in all Seidman business and economics courses. If the cumulative GPA falls below 2.5, the student 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.

Professional Advising/Scheduling

All routine advising for program requirements and scheduling for undergraduate students is provided by the SSB Undergraduate Student Services Office, 141 Lake

Huron Hall. 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 SSB 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 administration students are encouraged to become involved in a work experience directly related to their major and receive academic credit. 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 grade point average of 2.5 or higher to be eligible to apply. Application forms are available at the SSB Undergraduate Student Services Office. Students selected will intern 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 and, in a limited number of cases, through the Minority Business Education Center. 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 who maintain the required grade point average a renewable full-tuition scholarship and, when possible, up to four summers of paid work-related experience in an accounting or business firm. The program also provides weekly career educational opportunity meetings where the students develop personally and professionally through writing resumes, discussing time management and "dress for success," and holding mock interviews and business etiquette workshops.

For more information and applications, contact the Office of Minority Affairs, 130 Commons, telephone (616) 895-2177.

Transfer Students

Transfer students will receive transfer credit for basic courses in accounting, business law, computer programming, data processing, economics, mathematics, and statistics completed at their junior or community college. They may receive transfer credit for Intermediate Accounting I, basic management and basic marketing if such courses are validated at the Seidman School. Credit will be given for Intermediate Accounting I if the student is able to pass a validation exam. No credit will be given for Intermediate Accounting II. A 200-level basic management course will be treated as the equivalent of SSB's MGT 331, Concepts of Management, when the student successfully completes MGT 333, Human Resource Management, at GVSU with a grade of C or better.

A 200-level basic marketing course will be treated as the equivalent of SSB's MKT 350, Marketing Management, when the student successfully completes an upper-division marketing course at GVSU with a grade of C or better. In all cases, transfer students may apply a maximum of 24 hours of transfer credit for business courses toward their Seidman School business degree and must complete a minimum of five of the twelve business core and four of the six business major courses required for the degree at the Seidman School of Business. Five of the seven courses required for a major in accounting must be completed at the Seidman

Business

School of Business. It is extremely important that transfer students meet with an advisor in the SSB Undergraduate Student Services Office, 141 Lake Huron Hall, before registering for classes.

Requirements for the B.B.A. Degree

To complete the requirements for graduation with a B.B.A. degree, the following course requirements must be met: general education and basic skills, at least 36 hours; business core, 39 hours; business major, major requirements listed with information on individual majors; cognates and electives (must include an upper-division economics course), 30 hours; for a total of 120 hours.

Possible Curriculum—First Two Years*

First Year			
First Semester	Credits	Second Semester	Credits
Mathematics 110	4	Life Sciences	3 or 4
English 150	4	Exploration of art, music, theatre	3
History	3	Quantitative cognate	3
Social Science (not Economics)	3	Cultural Studies	3
Freshman Seminar	1	Computer Science 150	3
	<hr/> 15		<hr/> 15 or 16
Second Year			
First Semester	Credits	Second Semester	Credits
Accounting 212	3	Accounting 213	3
Social Science	3	Statistics 215	3
Business 201	3	Economics 200	3
Physical Science	3 or 4	Values and Major Ideas	3
Exploration of Literature	3	Elective (non-business)	3
	<hr/> 15 or 16		<hr/> 15

Each student must complete courses (in addition to English 150) in which writing is emphasized. These two courses are called Supplemental Writing Skills (SWS) courses. See General Academic Regulations for details. It is strongly recommended that students complete all 200-level core and cognate courses prior to enrolling in 300- and 400-level Seidman School courses.

Business Core

The business core courses acquaint students with various fields in business and help them learn to communicate, to interact, and to assume responsible positions in their chosen fields.

Students majoring in business administration must complete the following courses:

- ACC 212 Principles of Financial Accounting
- ACC 213 Principles of Managerial Accounting
- BUS 201 Legal Environment for Business
- FIN 320 Managerial Finance
- MGT 331 Concepts of Management
- MGT 366 Operations Management
- MGT 368 Management Information Systems
- MGT 495 Administrative Policy

*Many variations of this curriculum are possible

MKT 350 Marketing Management

Four upper-division Seidman courses not applied to the major, minor, or cognate (12 credits total)

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**

Quantitative Group — choose one: MTH 122 Intermediate 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. Upper-division economics courses do not count as non-business electives.

The requirements for each major offered by Seidman School are presented below.

Accounting

Students who elect to major in accountancy 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 Certified Management Accountant (C.M.A.) examination. Accountancy also provides an excellent undergraduate background for a degree in law.

Accounting majors must complete the business core and take the following accounting courses: ACC 314, 315, 340, 408, and 414; one of the following three courses: ACC 321, 322, or 329; and one of the following two courses: ACC 317 or 318. Transfer students must take at least 15 hours of accounting and ACC 414 at the Seidman School. A minimum of 90 hours of the total hours required for the degree must be in non-accounting courses.

It is suggested that students who want an academic background in financial accounting which fulfills the C.P.A. accounting program requirements complete the business core and take ACC 314, 315, 317, 318, 321, 340, 408, 414, 415, and BUS 402. Satisfactory completion of 24 semester credit hours of course work in accounting (including auditing, accounting systems, and fund accounting, one tax course, but excluding independent research and internships), as well as satisfactory completion of 24 semester hours in general business subjects, fulfills the Michigan accounting educational requirements to attempt the C.P.A. examination.

Students who want an academic background in management accounting which fulfills the C.M.A. accounting program requirements must complete the business core and are encouraged to take ACC 314, 315, 321, 322, 329, 340, 414, and 415.

*One of these will satisfy one of the general education requirements in category SS-A or SS-B.

**This will also satisfy the general education requirement in category CGE A.

†May also be used as one of the four required core elective courses.

Business

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

For students entering the accounting program at Seidman, a basic knowledge of spreadsheets is assumed before the student enrolls in upper-division accounting courses.

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, 422, 423, and three other courses: one from Group A and two others from Group B.

Group A: FIN 331, 350, 380, 420, 428, 429, 490 and 499.

Group B: FIN 351, 350, 380, 420, 428, 429, 490 and 499, ACC 314, 315, 316, 318, ECO 312, 313, 413, 414, and 480.

Some west Michigan financial institutions require a minimum of 12 credits of accounting for those students who plan to seek positions as credit analysts.

International Business

A major in international business develops a student's ability to meet the challenges of the global business environment. The major trains students to identify and develop appropriate solutions to problems that are unique to doing business internationally. The international business major provides students with a strong grounding in international aspects of business by offering upper-level courses in international management, marketing, finance, accounting, and economics. An important component of the international business major is the requirement that students complete course work in non-business international culture and foreign languages.

Required courses: Business core, five courses from the business disciplines component and one option from the cultural component *and* at least 3 semesters (or the equivalent) of a foreign language.

Business Disciplines Component

Four courses from the following group: ACC 330, ECO 369, FIN 429, 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 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. 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 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 two areas of emphasis.

Human Resources. Study in the area of human resources places emphasis on developing a greater understanding of a capacity for dealing with the human side of the firm. This emphasis is recommended for students interested in management-labor relations who plan to pursue careers in business, nonprofit organizations, government, or unions, or who plan to do graduate study. In private industry there are opportunities in industrial relations or personnel departments. Government agencies at the federal and state levels as well as private enterprises and nonprofit organizations employ trained specialists to manage personnel departments and to administer laws and programs dealing with labor-management relations, employment policies, labor law, affirmative action programs, social security, worker's compensation and mediator services. Labor unions seek trained personnel for staff positions and for positions in their education and research departments.

Required courses: Business core, MGT 333, 334, 431, 432, and one of the following: MGT 338, 355, 438, or 466.

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: production, management science, management information systems, and small business management. By selecting from a range of courses, students may acquire knowledge of total quality management, world class manufacturing practices, international management, and information systems and related technologies.

Required courses: Business core and six additional management courses at or above the 300 level.

Marketing

A major in marketing provides students with the 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, retailing, product and brand management, promotion, distribution strategy, marketing research, sales management, logistics, purchasing, market strategy planning, distributor relations, and many other related fields. This 18 credit hour major is very application oriented and stresses interaction with many leading regional business organizations.

Required courses: Business core, MKT 352, 358, 451, and three additional marketing electives at or above the 300 level.

Business

General Business

The 18 credit hour major in general business develops a student's 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 which meet their individual needs.

Required courses: Business core, one upper-division business elective each in accounting (ACC 317, 318, or 329 recommended), finance, management, and marketing and two additional upper-division business electives.

Students have the option of choosing *any* upper-division electives, but may also fulfill the two electives by completing two upper-division economics courses (in addition to the upper-division economics cognate requirement).

Minor Programs

Business

The undergraduate minor program in business is for non-business majors and includes 18 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. The prerequisites for FIN 320 are ACC 212 and 213, ECO 210 and 211, and MTH 110. Students must complete all prerequisites before enrolling in the course. Students must achieve a minimum 2.5 grade point average in these courses to receive the business 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. 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 grade point average 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.

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 two upper-level management courses for electives that are not part of the SSB business core. Students must achieve a cumulative 2.5 grade point average to receive the management minor designation.

Graduate Business Administration Program

The Seidman School is seeking mature graduate candidates who, as a result of their work experience or undergraduate education, are interested in expanding or continuing their professional education in business administration. The school expects these candidates to make effective use of opportunities to obtain academic and program advice from the faculty and to make maximum use of the program flexibility to plan courses around their professional objectives.

The program is open to qualified individuals with bachelor's degrees from accredited colleges or universities. No particular undergraduate major is necessary, although candidates may be required to complete some background courses in business before attempting advanced work. It is recommended that M.S.T. students have a background in accounting.

Candidates are admitted into the master's degree programs in business administration or taxation on the basis of interest, aptitude, and capacity for study as indicated by previous academic record, work experience, achievement scores on the Graduate Management Admission Test (GMAT), pertinent information from the student applications and, if judged necessary by the Graduate Admissions Committee, letters of reference. A GMAT score of 450 and an undergraduate grade point average of 3.0 (last two years) are typically considered minimum admission requirements. A personal interview with the program director is very helpful in consideration for admission, and in some cases mandatory. Prospective candidates should hear from the school concerning admission into the program within one month after their application is complete. Candidates will be admitted to the program in any academic semester provided their application, transcripts of prior college work, and the GMAT results are in the Admissions Office at least two weeks before the semester begins.

The GMAT is not required for admission to the M.S.T. program if the candidate has a J.D., M.B.A., or master's of accounting with at least a 3.0 average.

Candidates who have not become degree-seeking may be allowed to enroll in 500-level courses with permission of the program director. Potential graduate degree-seeking candidates may enroll in undergraduate courses at the beginning of any semester.

All candidates registering for 600-level business courses must be degree-seeking in the M.B.A. or M.S.T. programs, or have permission of the appropriate program director.

Once admitted to the M.B.A. or M.S.T. program, candidates are expected to devote sufficient time to complete the work assigned in each course. Although the demands are rigorous, the results can be exciting and rewarding. Candidates are expected to maintain the highest ethical standards at all times.

Academic Advising

Candidates seeking the M.B.A. or M.S.T. degree can meet with the appropriate program director at the downtown Eberhard Center campus to discuss career interests, professional objectives, and program plans.

Advising sessions can be scheduled in the evenings for the benefit of candidates who work full time. Candidates should call the Seidman School office at the Eberhard Center for an appointment.

Graduate course registration can be completed by phone or at an on-site registration session. A program director 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 will be given for appropriate graduate courses completed with a grade of B or better at another 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. No transfer credit will be given for BUS 681.

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. Each candidate must receive a grade of C or better in all graduate-level courses that fulfill graduation requirements for the M.B.A. or M.S.T. degree. In the case of core courses, a grade of 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 grade point average requirement.

A graduate candidate whose grade point average falls below 3.0 after completion of nine hours of graduate-level course work 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 course work to remain in the program. A grade point average of 2.0 or below after nine hours of graduate-level courses means automatic dismissal from the school.

Graduation with Distinction

Candidates who maintain a 3.75 grade point average in 600-level courses completed as part of their master's program will be awarded a degree "with distinction." Historically about ten percent of all graduate business students have achieved this distinction.

Background Studies

Candidates must have a base of underlying knowledge relevant to business. For the M.B.A. program, this background must be in computers, accounting, finance, statistics, legal environment, economics, marketing, and operations. For the M.S.T. program, background work must be in accounting and economics and in at least four of the following subjects: legal environment, computers and information systems, marketing, finance, and statistics. Courses taken to fulfill background

studies are not counted as part of the 33-hour requirement for the M.B.A. or M.S.T. 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 a regionally-accredited, four-year 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 School in the relevant area(s); complete appropriate courses in the undergraduate program at Grand Valley or any other regionally-accredited, four-year college or university; or pass one or more qualifying examinations after appropriate study. Questions should be addressed to the M.B.A. program director. Computer word-processing and spreadsheet skills are required for all M.B.A. courses and for most background courses. Those students who are not computer proficient are advised to complete the background course in computers (MGT 501) during their first semester.

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, with the permission of the program director, complete background studies during the same semester that they enroll for BUS 601.

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	GVSU Undergraduate Course
Computer Problem-Solving	MGT 501 (3 credits) *	
Accounting	ACC 511 (3 credits)	ACC 212 and 213 (6 credits)
Statistics	FIN 521 (2 credits)	STA 215 (3 credits)
Finance	FIN 522 (2 credits)	FIN 320 (3 credits)
Legal Environment	BUS 531 (2 credits)	BUS 201 (3 credits)
Economics	ECO 542 (3 credits)	ECO 210 and 211 (6 credits)
Marketing	MKT 551 (2 credits)	MKT 350 (3 credits)
Operations	MGT 561 (3 credits)	MGT 361 and 366 (6 credits)

Degree Requirements

The M.B.A. and M.S.T. programs consist of 33 semester hours of 600-level graduate course work. Each degree can be completed in one calendar year if the candidate has completed all of the background requirements and studies full time in the Seidman School. 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.

*A proficiency test is required for demonstration of appropriate skill level.

M.B.A. Program

All M.B.A. candidates must complete the following four three-credit-hour 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

BUS 601, The Business Plan, is designed as application of the theories developed in the background courses. It is to be taken 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 M.B.A. course for 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 and other core or directed elective courses may be taken concurrently during the student's first semester of 600-level course work. All students must complete 33 credit hours of 600-level business course work, 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 core courses and three directed electives are completed.

The balance of the program, two to four additional electives, will depend on the candidate's objectives and career interests and should be planned in consultation with the program director. Individuals choosing a generalist M.B.A. degree should take all five directed electives to provide the breadth of the traditional M.B.A. Individuals wanting depth in a particular area are advised to complete electives in the particular discipline.

M.S.T. Program

Each M.S.T. candidate must complete eleven three-credit-hour 600-level courses. Five courses are required:

- TAX 602 Tax Research
- TAX 604 Corporate I
- TAX 607 Estate, Gift and Trust I
- TAX 609 Partnership Taxation
- TAX 616 Taxation Problems, Planning and Current Issues

Two courses must be selected from:

- TAX 601* Federal Taxation—General Concepts
- TAX 603 Sales, Exchanges, and Other Property Dispositions
- TAX 605 Corporate II
- TAX 608 Estate, Gift and Trust II

*TAX 601 is required unless the student has taken a basic income taxation course.

All taxation classes not already taken in the seven-course core are available for selection as the four remaining electives.

Independent Study

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

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 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

Sixteen universities have recognized the importance of training private sector managers and leaders in the "art" of working with the federal government and have established the Washington Campus Program. These colleges and universities are Grand Valley State, Arizona State, the University of California at Berkeley, the University of California at Los Angeles, Cornell University, Dartmouth College, Georgetown University, Howard University, Indiana University, Ohio State University, the University of New Mexico, the University of Michigan, 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 present 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 one month in Washington, attending classes every morning, Monday through Friday. The afternoons are used for special lectures, attending hearings, and library research. The candidates stay in appropriate facilities in Washington. Students will receive three hours of graduate credit and a Certificate of Completion from the Washington Campus Program. For additional information, contact the M.B.A. Office.

Graduate Assistantships

Graduate assistants work with Seidman School 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 School 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, non-financial performance measures, relevant costs for decision making, and total quality management will be examined using spreadsheets wherever applicable. Prerequisites: 212, CS 150. Offered fall, winter, and summer semesters. Three credits.

ACC 314 Intermediate Accounting I. Theory and applications of financial accounting. Topics include the accounting cycle, development of accounting standards, financial statement presentation, current assets, current liabilities, and revenue recognition. Prerequisite: 212. Offered every semester. Four credits.

ACC 315 Intermediate Accounting II. Continuation of theory and application of financial accounting. Topics include noncurrent assets and liabilities, stockholders' equity, accounting changes, EPS, the statement of cash flows, and other special topics. Prerequisite: 314. Offered every semester. Five credits.

ACC 317 Federal Income Tax Theory and Practice — Individual. Consideration of the basic theory and practice applicable to the determination of the taxable income of individuals. Tax research is included. Offered fall and winter semesters. Prerequisite: 212. Three credits.

ACC 318 Federal Income Tax — Corporations, Partnerships, and Fiduciaries. Federal income tax regulations, principles and practices as applied to corporations, partnerships, estates and trusts. Tax-planning and form preparation will also be included. Prerequisite: 212. Offered fall and winter semesters. Three credits.

ACC 321 Cost Accounting. An examination of product cost determination and inventory valuation for financial statements. Job, process, operational, backflush and standard costing systems are evaluated. Cost allocation techniques and their applications to service department and joint cost allocations are analyzed. Master budgets for manufacturing organizations are emphasized. Prerequisite: 213. Offered fall and winter semesters. Three credits.

ACC 322 Advanced Managerial Accounting. An in-depth examination of topics covered in ACC 213, such as activity-based costing (ABC), relevant costs for decision making, and total quality management. In addition, managerial accounting topics such as theory of constraints, transfer pricing, performance evaluation, Japanese cost management and sales, profitability, mix, yield and productivity variances will be discussed. Prerequisites: 213 and STA 215. May be offered any semester. Three credits.

ACC 329 Seminar in Management Accounting. Identification, description, and analysis of the behavioral science applications for management accounting and world class manufacturing concepts. Prerequisite: 215. May be offered any semester. Three credits.

ACC 330 International Accounting. Survey of the major differences between accounting systems around the world, 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. Fundamental concepts of information, communication, and system which form the framework of the design of data processing and accounting systems. Prerequisite: 314. Offered fall and winter semesters. 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 408 Governmental and Non-Profit Accounting. Accounting and auditing principles and fund accounting for governmental and non-profit entities. Prerequisite: 213. Offered fall and winter semesters. Three credits.

ACC 414 Auditing Theory and Practice. Professional development in the basic concepts of auditing. Internal control procedures, diagnostic analysis techniques, substantive testing, collecting and analyzing evidential data, and the accountant's report are discussed. A short microcomputer case is used. Prerequisites: 314, 340. Offered fall and spring semesters. Three credits.

ACC 415 Advanced Accounting Problems. Special accounting problems related to business combinations, cash management, foreign currency translation, and financial statement analysis. Prerequisites: 314 and 315. Offered winter semester. Three credits.

ACC 419 Seminar in Financial Accounting. Identification and analysis of contemporary issues and problems in the area of financial accounting through case analysis. Prerequisites: 314 and 315. May be offered any 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.

Business

BUS 101 Introduction to Business. Introduces the disciplines of Business Law, Marketing, Management, Finance, Accounting, and Economics; seeks to synthesize them into a general view of business; and briefly explores business careers. Primarily for freshmen interested in business, it is open to all students except upper-division students in the Seidman School of Business. Offered fall semester. Three credits.

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 202 Team Building. A class which integrates theory and application by teaching students how to function effectively as members of a work team. Dynamics and processes within assigned task teams will serve as the focus of analysis discussion, learning, and practice. 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 B.B.A. degree. Open to juniors and seniors only. Offered on sufficient demand.

BUS 402 The Accountant's Legal Environment. An intensive course in business law with emphasis on those subjects which 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 314. Three credits.

Business

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.

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 213, ECO 210 and 211, 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 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.

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: 320. Offered fall and winter semesters. Three credits.

FIN 423 Financial Institutions and Markets. An overview of the whole financial system. Analysis of money and capital markets, securities, interest rates as well as financial institutions and new developments in the financial system. Prerequisites: 320; Economics 414 recommended. Offered fall and winter semesters. 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 320 CAD Applications: ARRIS. Introduces ARRIS, a PC-based computer-aided design and facilities management (CAFM) tool. Students learn basic concepts and techniques for three-dimensional spatial modeling. Assignments are used to demonstrate knowledge of concepts and skills with the software. "Real life" assignments are used when available. 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 332 Administrative Behavior. Integration and application of knowledge concerning individual, peer group, intergroup and other organizational behavior phenomena. Prerequisite: 331. 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 337 Purchasing and Materials Handling. Examines the organization of a purchasing department, its objectives, functions, and personnel. Purchasing specifications, standards, bidding, ordering, and sources are among the topics covered. Discussion and analysis of the duties and responsibilities of the materials handling manager in a typical manufacturing firm. Specifically, the handling of materials in the manufacturing process is discussed, including coordination between manufacturing departments and plants within a firm. Three credits.

MGT 338 Case Studies in Labor-Management Relations. An exploration of the process through which American organizations and business enterprises have evolved. Current problems facing business and unions will be reviewed. Prerequisite: 333. 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). General education course SS/C. Offered every semester. Three credits.

MGT 342 Facilities Structure and Maintenance. Addresses planning, designing, implementing, and managing work environments as physical systems. Foci include architectural design, space planning and maintenance, environmental support systems, building structural subsystems (e.g., walls, floors, windows, ceilings), energy distribution, telecommunications, building operations, and maintenance, health, safety, security; building codes. Three credits.

MGT 355 The Diversified Workforce. A course designed to promote understanding and positive interactions between different groups in the American workforce through an examination of cultural differences, including values and assumptions, customs, communication styles, and systems of etiquette. Race, ethnicity, gender, age, disability, and sexual orientation are specifically addressed. 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 366 Operations Management. Application of strategic and quantitative tools and techniques in manufacturing and service organizations. Specific topics include manufacturing

Business

strategy formulation, forecasting, aggregate planning, scheduling, Just in Time, management and assurance of quality, inventory management and advanced technologies. Prerequisites: 331 and STA 215. Offered every semester. Three credits.

MGT 368 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 or 151. Offered every semester. 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 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 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 438 Business Ethics. An inquiry into the relevance of the classical ethical literature to the resolution of everyday business problems. Particular emphasis will be placed on the practical usefulness of the Socratic tradition. That tradition requires that we attend to clarifying our own values as well as those of others. We will read a number of Socratic Dialogues, respond to a variety of business cases, and attend to the relationship between them and the process of understanding ourselves. Prerequisite: 331 or permission of the instructor. Three credits.

MGT 466 International Management and Multinational Corporations. A study of opportunities, complexities, and intricacies of managing in a global economy via multinational corporations. Case studies will be used with special emphasis on Michigan and relations with the Pacific Rim Basin. Requires senior status or approval of instructor. 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 which 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 354 Marketing Institutions. An integrated study of all functional aspects of marketing institutions involved in channels of distribution and logistics. Topics include retailing, wholesaling, channel management, and transportation. Prerequisite: 350. Offered every other winter 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 non-personal 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 non-personal 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 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 Physical Distribution/Logistics Management. Approaches the management of business logistics from an integrated systems approach. Attention is focused on marketing's managerial role in strategic management of distribution assets, customer service, finished product inventory-control, forecasting, and multinational distribution planning. Prerequisite: 350. Offered every other winter 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. Prerequisite: MGT 501 (may be taken concurrently). Offered fall and winter semesters. Three credits.

ACC 611 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 and non-financial performance measures emphasizing total quality management and just-in-time. Prerequisites: ACC 511 or equivalent; BUS 601 (may be taken concurrently). Offered fall and winter semesters. 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: 314 and 315. Three credits.

ACC 615 Federal Income Taxation: Concepts and Business Application. Provides a general understanding of the multiple economic, political, and social ramifications of tax law and practice. Includes fundamental Federal income tax concepts, multi-state taxation concepts, and international taxation concepts applied to business. Three credits.

ACC 616 Accounting Systems. Students will learn to design, document, and use accounting systems. Emphasis on how accounting systems can be designed and used as a foundation for enterprise wide information systems. Students will apply course concepts using appropriate microcomputer software. Course fulfills Michigan C.P.A. exam requirement to take Accounting Information Systems. Prerequisites: MGT 501, 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. Prerequisites: 611. Three credits.

ACC 619 Industrial Accounting Practices. Study of managerial accounting as an information subsystem to the organization. Emphasis on the interactions of the components of the enterprise in response to current industry needs and practices. Prerequisite: 316 or 611. Three credits.

ACC 699 Independent Study. One to three credits.

Business

BUS 531 Legal Environment of Business. Explorations of the legal, regulatory, and ethical environment of business, with emphasis on the regulation of business and the political and social factors influencing case and statutory law. Topics covered include: contracts, employment law, international law, environmental law, and business organizations. 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 proforma 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 M.B.A. Program Director. Three credits.

BUS 660 Executive-in-Residence Topics. Taught by prominent area executives, course includes class discussion and examination of relevant business issues, principles, and methods. Variable content depending on instructor. Five-week module. Permit only. One credit. Course may be repeated when content varies. Concurrent enrollment allowed.

BUS 664 Entrepreneurship. For those interested in launching or being associated with a new venture. The impact of, and managerial response to, change involving growth, financial, marketing, vendor and customer needs, staffing needs, including organization structure and processes to make these effective, are given special attention. Analysis of cases is an integral part of the course. Prerequisite: MGT 331. Three credits.

BUS 666 Statistical Decision Processes. A study of concepts used in decision-making under uncertainty. Uses subjective probability, Bayesian statistics and statistical decision theory, with emphasis on applications to areas involving managerial decision-making under conditions of risk, uncertainty, and incomplete information. Prerequisite: 562. Three credits.

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 other required courses. Offered fall and winter semesters. Three credits.

BUS 698 Washington Program. Special intensive study in Washington, D.C., for four weeks during the summer. Principal topics are Policy Development in the Executive Branch, Government Regulation, Congress — Interest Groups — Lobbying, and Domestic and International Economic Policy Issues. Open to graduate students. Special application forms available in the M.B.A. Office. Credit-no credit.

BUS 699 Independent Study. One to three credits.

Economics

ECO 542 Economic Reasoning. An examination of economic concepts, principles, definitions, and relationships. Designed to provide analytical micro and macroeconomic techniques and concepts necessary to reason from an economic point of view. Prerequisite: MTH 110. 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, HN 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.

Business

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 SSB 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; discussion of commonly encountered problems in the interpretation of financial and other business data. Prerequisite: BUS 501 (may be taken concurrently). Offered fall and winter semesters. Two credits.

FIN 522 Finance Principles for Managers. A development of the foundation tools of business finance for M.B.A. students. 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. 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 622 Central Banking and Monetary Policy. An analytical examination of fractional reserve banking, the Federal Reserve System, sources of bank reserves, techniques for influencing the stock of money interest rates and economic activity and the multiple expansion of money and credit. The role of the money stock in inflation and depression. Analysis of controversial topics in monetary theory and policy. Prerequisites: ECO 542 and 562. Three credits.

FIN 623 Financial Institutions and Markets. Analytical examination of participants, relationships, and institutions of the markets for all types of securities. Analysis of financial intermediaries, flow of funds, determinants of level and structure of interest rates, money and capital market instruments, and the current problems and trends in the financial markets. Prerequisites: FIN 520 and ECO 542; 622. 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.

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, SDR's, 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. One to three credits.

Management

MGT 501 Business Problem Solving with Computers. Provides M.B.A. students with a significant grounding in computing skills as used in business problem solving. Course provides students with tools that will be used in analysis as well as research for later courses in the M.B.A. program. Library, Internet, word processing, spreadsheets, SAS, and database applications will be covered. Prerequisite: CS 150 (within two years) or permission of instructor. Offered every semester. Three credits.

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. 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: 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 636 Multinational Management. A systems approach to overall aspects of organizational design and implementation. The components that constitute the whole will be studied on a comparative basis. Enterprise strategic planning of organizations based in both the United States and other parts of the world will be compared and evaluated through written analysis and discussion of comprehensive cases and other materials. Prerequisite: 331. 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: 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 663 Management Science and Management Analysis. Concepts and techniques as they relate to the transformation of data and economic interpretation of information for purposes of assisting management in its decision-making role. Prerequisites: ECO 542 and 562. 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 665 International Operations Management. In-depth analysis of selected current topics and problems in international operations management. Topics covered include the organization of global operations, cultural and national comparisons, planning global operations, facilities location, sourcing, logistics, technology, transfer, quality, and inventory management. Prerequisite: 661. Three credits.

MGT 666 Operations Strategy. Development and implementation of operations strategy and the integration of this strategy with the corporate, business, and other functional strategies of both manufacturing and service organizations. Topics include decisions involving plant location and capacity, systems design, productivity management, and implementation of specific operations strategy such as quality, price, flexibility, technology, time, and product differentiation. Prerequisite: BUS 601. Three credits.

MGT 667 Service Management. Provides an examination of operating activities in service industries. Emphasis on the principles of design, operation, and control of service delivery systems. Lectures, cases, and assignments focus on such topics as service system design, client interfaces, capacity planning, inventory management, customer service, and quality control. Prerequisite: BUS 601. Three credits.

MGT 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. One to three credits.

Marketing

MKT 551 Marketing Management: Principles and Institutions. An accelerated learning course covering the principles of marketing in sufficient depth to provide a background for M.B.A.-level marketing studies. Prerequisites: FIN 521, ECO 542, MGT 501. 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 Retail Marketing Management. Introduction to and evaluation of retailing with emphasis on profit elements, pricing and merchandising policies, inventory, and merchandise control. The management functions of planning, organizing, and controlling as applied in the operation of various classes of retail establishments are examined. Emphasis on significant developments taking place in the major environments within which retailers must operate—social, economic, technological, and legal. Prerequisite: 651 or equivalent. 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 and Planning. Provides insights into the process by which a company develops strategic plans. Emphasis on the major components of this process, including the setting of overall corporate objectives and development of payout measures; specifying of environmental trends relevant to the company and its resources, competitive

situation analysis; generation of viable product-market relationships; the concept of synergy and its relation to the firm's strategy; auditing the company's present situation and measuring the gap between extrapolated performance and corporate goals; developing strategic plans for existing products; new product and new market development; appraising product-market opportunities outside the firm's present scope; and organizing and controlling the strategic planning activity. Prerequisite: 651. 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 which 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 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. One to three credits.

Taxation

TAX 601 Federal Taxation—General Concepts. A brief overview of the entire federal tax system, history and development. Subjects include: gross income, adjusted gross income, deductions, taxable income, computation of tax and tax credits. Emphasis is placed on learning to read and understand the Internal Revenue Code. Landmark court cases are studied. Three credits.

TAX 602 Tax Research and Writing. Focuses on tools and techniques of tax research and preparation of formal written communications common to tax practice. Three credits.

TAX 603 Sales, Exchanges, and Other Property Dispositions. Topics treated include the distinction between capital and ordinary gains and losses, significance of the realization requirements and the concept of recognition, preferential treatment of gains arising from disposition of assets used in a trade or business, non-taxable exchanges, installment sales, determination of basis and holding period, loss carryovers, and depreciation recapture. Three credits.

TAX 604 Corporate I. This course covers tax problems at both the corporation and shareholder levels involving definition of a corporation, organization and formation of a corporation, capital structure, the subchapter S election, 1244 stock, accumulated earnings, personal holding companies, collapsible corporations, professional corporations, multiple corporations and related party dealings. Three credits.

TAX 605 Corporate II. This course covers the advanced corporate tax subjects of stock redemptions, the preferred stock bailout, twelve-month liquidations, one-month liquidations, liquidation of a subsidiary, and partial liquidations. Reorganization topics include mergers, consolidations, division of a single corporation, non-recognition of gain or loss provisions, treatment of basis and boot, and the business purpose and continuity of interest doctrines. Prerequisite: TAX 604. Three credits.

TAX 607 Estate, Gift and Trust I. Six weeks are devoted to the study of gift tax rules. The balance of the course covers the estate tax and the generation-skipping transfer tax. Three credits.

Chemistry

TAX 608 Estate, Gift and Trust II. Seven weeks are devoted to Subchapter J and the study of the income taxation of trusts and estates. Fiduciary income tax accounting, income-in-respect of decedent and the "throwback" rules are studied in detail. The balance of the course is devoted to estate planning applying the knowledge acquired in TAX 607 and TAX 608. Prerequisites: TAX 607. Three credits.

TAX 609 Partnership Taxation. General principles of taxation pertaining to partners and partnerships. Topics include formation and termination of the partnership entity, dispositions of partnership assets, liquidation of partnership interests, and problems involving basis adjustments, appreciated assets, and compensation. Three credits.

TAX 610 Multistate Taxation. Conceptual implications and pragmatic applications of taxation at the state level are presented, including discussion of the single business tax, planning for multistate operations, and landmark court cases. Three credits.

TAX 611 Employee Benefit Plans and Deferred Compensation. This course details the types of deferred compensation plans offered by employers and the tax qualification and operating requirements of pension, profit sharing, and stock bonus plans. Three credits.

TAX 612 Tax Accounting. Topics include establishing and changing accounting periods and methods, inventory methods and valuation, carrybacks and carryovers, and consolidated income tax returns. Three credits.

TAX 613 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.

TAX 614 Directed Study and Report. Preparation of an extensive tax research and writing assignment under the direction of the coordinator is required. Offered all semesters and locations to persons who have obtained permission of the coordinator. One to three credits.

TAX 615 Advanced Tax Subjects. This course offers an in-depth study of an advanced tax topic. Three credits.

TAX 616 Taxation Problems, Planning and Current Issues. An overall policy course designed to integrate the specific knowledge learned in the prior ten courses with sophisticated business individual taxation problems. Students will be expected to research and defend their solutions to various taxation controversies. Emphasis will be given to tax ethics, policies, and current issues, cases and legislation. Taxation Advisory Council members will be invited to attend class at various times to question students regarding class projects. Last course prior to graduation. Offered fall semester. Three credits.

Chemistry (CHM)

Chair: Nikkel. Professors: Atkinson, Baum, Knop, Nikkel, Richmond; Associate Professors: Carlson, Miller; Assistant Professors: Karpen, Matchett, Qi, Schaertel, Smart, Tanis, VanDyke.

Degrees offered: B.S., B.A., in chemistry; minor in chemistry. Teaching certification (secondary) in chemistry major and minor. Major with elementary teaching certification offered in group science, chemistry emphasis.

Accreditation: The Chemistry Department is accredited by the Committee on Professional Training of the American Chemical Society.

Students may choose one of five chemistry degree programs: the professional emphasis, the technical emphasis, the education emphasis, the biochemistry 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 with additional senior-level courses leads to a degree certified by the American Chemical Society. The technical emphasis is designed

for students who wish to work in industry and do not intend to enter graduate or professional school. Students interested in attending medical school or in obtaining employment in biochemical and biomedical laboratories may choose the biochemistry emphasis. 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.

The goal of the environmental emphasis program is to prepare students for professional employment in a position related to environmental chemistry or for furthering their studies in an advanced degree program which may be related to environmental issues.

We recommend that students start in the professional emphasis, since it is easier to transfer to a technical emphasis 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 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 course work, 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 Regulations 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 241 Organic Chemistry I
 - CHM 242 Organic Chemistry II
 - CHM 391 Chemistry Seminar
 - CHM 491 Chemistry Seminar

Chemistry

Specifically excluded from any major program in chemistry are CHM 102, 109, 201, and 230. CHM 391 is required only of students who take their junior year at GVSU.

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.

CHM 344 Qualitative Organic Analysis
CHM 356 Physical Chemistry I¹
CHM 357 Physical Chemistry Laboratory I
CHM 358 Physical Chemistry II
CHM 359 Physical Chemistry Laboratory II
CHM 421 Instrumental Methods of Analysis
CHM 422 Instrumental Methods Laboratory
MTH 201 Calculus and Analytic Geometry I²
MTH 202 Calculus and Analytic Geometry II
PHY 230 Principles of Physics I²
PHY 231 Principles of Physics II²

Students who wish to be certified by the American Chemical Society must also complete CHM 471 and six additional credits of chemistry at the 400 level, including a minimum of 94 hours of laboratory work.

Technical Emphasis

The technical emphasis may be selected by those students not planning to go to graduate school in chemistry.

A choice of either CHM 252 Biological Chemistry or CHM 342 Polymers
CHM 344 Qualitative Organic Analysis
CHM 351 Introduction to Physical Chemistry¹
CHM 352 Applied Physical Chemistry
CHM 421 Instrumental Methods of Analysis
CHM 422 Instrumental Methods Laboratory
MTH 201 Calculus and Analytical Geometry I²
PHY 220 General Physics I²
PHY 221 General Physics II²

And one of the following Computer Science courses:

CS 150 Introduction to Computing
CS 160 Computer Science I

Education Emphasis

The education emphasis is designed specifically for students who plan to teach chemistry at the secondary level.

CHM 220 Computer Interfaces for Chemistry Teachers
CHM 319 Chemistry in Secondary Education
CHM 344 Qualitative Organic Analysis
CHM 351 Introduction to Physical Chemistry¹

CHM 352 Applied Physical Chemistry
 CHM 421 Instrumental Methods of Analysis
 CHM 422 Instrumental Methods Laboratory
 MTH 201 Calculus and Analytical Geometry I²
 PHY 220 General Physics I²
 PHY 221 General Physics II²

Students in this emphasis must also complete a certified minor and the Secondary Professional Program (School of Education)

Biochemistry Emphasis

The biochemistry emphasis prepares students for entry level employment in biotechnical or biomedical laboratories or for entry into medical or dental schools.

CHM 351 Introduction to Physical Chemistry¹
 CHM 352 Applied Physical Chemistry
 CHM 461 Biochemistry I
 CHM 462 Biochemistry Techniques
 CHM 463 Biochemistry II
 MTH 201 Calculus and Analytical Geometry I²
 PHY 220 General Physics I²
 PHY 221 General Physics I²
 BIO 112 General Biology II
 BIO 375 and 376 Genetics with laboratory

And two of these three biology cognate options:

BIO 432 or HS 280 Physiology
 BIO 357 or HS 212 and 213 Microbiology with Laboratory
 BIO 405 Cell and Molecular Biology

Students interested in graduate school should take the following:

CHM 356, 357, 358, and 359 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
 CHM 351 Introduction to Physical Chemistry
 CHM 352 Applied Physical Chemistry Laboratory
 CHM elective (2–3 credits) at the 300–400 level (approval required)³
 MTH 201 Calculus and Analytical Geometry I²
 PHY 220 General Physics I²
 PHY 221 General Physics II²
 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 112, BIO 215.

And any two of the following courses:

BIO 336 (environmental section), BIO 357, BIO 440.

Chemistry

- Natural Resources Management Track; GEO 111, NRM 281.

And any two of the following courses:

NRM 320, 410, 451, 452, GPY 307.

- Geology Track; GEO 111, GEO 112.

And any two of the following courses:

GEO 440, GEO 445, GPY 307.

Students interested in graduate school are encouraged to take the following:

CHM 356, 357, and 359 instead of CHM 351 and 352

PHY 230 and 231 instead of PHY 220 and 221

MTH 202

Minor Requirements

- A minor in chemistry requires a minimum of 24 credit hours, including the following courses:

CHM 115 Principles of Chemistry I

CHM 116 Principles of Chemistry II

CHM 221 Survey of Analytical Chemistry or CHM 222 Quantitative Analysis

and *one* of the following sequences:

CHM 241 Organic Chemistry I

CHM 242 Organic Chemistry II

or

CHM 231 Introductory Organic Chemistry

and *at least two* of the following five courses:

CHM 232 Biological Chemistry

CHM 319 Chemistry in Secondary Education (education majors only)

CHM 321 Environmental Chemistry

CHM 322 Environmental Chemical Analysis

CHM 351 Introduction to Physical Chemistry

Specifically excluded from the minor in chemistry are CHM 102, 201, 220, and 230.

- 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.
- CHM 109 may be counted toward the minor **only** if completed prior to CHM 115.
- A chemistry minor for **teacher certification** also requires CHM 319 and a minimum GPA of 2.8.

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

MTH 201 Calculus I

CHM 116 Principles of Chemistry II

MTH 201 Calculus II

Second Year

CHM 222 Quantitative Analysis

CHM 241 Organic Chemistry I

CHM 242 Organic Chemistry II

PHY 230 Principles of Physics I

Third Year

CHM 356 Physical Chemistry I
 CHM 357 Physical Chemistry Lab I
 CHM 391 Chemistry Seminar I*
 PHY 231 Principles of Physics II
 CHM 344 Qualitative Organic Analysis
 CHM 358 Physical Chemistry II
 CHM 359 Physical Chemistry Lab II
 CHM 391 Chemistry Seminar I

Fourth Year

CHM 491 Chemistry Seminar II*
 CHM 421 Instrumental Analysis
 CHM 422 Instrumental Analysis Lab
 CHM 491 Chemistry Seminar II*

Group Science Major with Chemistry Emphasis For the B.S. Degree

The group science major with a chemistry emphasis is designed for students seeking certification to teach at the elementary school level. This major provides students with breadth of exposure in all the sciences and mathematics with a concentration in chemistry. In order to be certified, students must complete this major and the elementary teaching minor.

The following requirements must be completed for the major:

1. One course chosen from BIO 103, 105, or 107; GEO 100, PHY 106.
2. One course chosen from CS 160, PHY 105 or 201.
3. CHM 115² and 116, and 119, and 231.
4. GEO 111 or 201.
5. BIO 111 and 112.
6. CHM 232 (Capstone).

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. General education course NS/A. (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 or concurrent enrollment. General education course NS/A. (4-1-2). Five credits. Offered fall and winter semesters.

CHM 112 General Chemistry II. A continuation of General Chemistry I (CHM 111, not taught after summer 1996). Topics include chemical kinetics, thermodynamics, solution equilibria, and oxidation-reduction. Laboratory work includes qualitative analysis of the common ions. Prerequisite: 111. (2-1-2). Three credits.

CHM 114 Inorganic Chemistry. Survey of chemical behavior of the elements and their compounds. Normally taken concurrently with 112. Prerequisite: 111. (2-0-0). Two credits.

*Required of all chemistry majors. Two semesters of seminar are required for one credit. Students should register for zero credit in the fall semester and one credit in the winter semester.

¹Capstone course.

²Completion of MTH 201, PHY 230 and 231 satisfies the B.S. degree cognate for professional chemistry majors. Completion of MTH 201, PHY 220 and 221 satisfies the B.S. degree cognate for technical chemistry majors.

³CHM 115 and MTH 221 and MTH 222 satisfy the B.S. cognate requirement for the Group Science major.

Chemistry

CHM 115 Principles of Chemistry I. The first semester in the two-semester general chemistry sequence for the sciences. Begins with the concepts of atomic structure and builds up the principles of modern chemistry. Emphasis on connections between atomic/molecular structure and observed chemical behavior. Prerequisites: High school chemistry or CHM 109, and MTH 110. General education course NS/A. (1-1-2). Five credits. Offered fall and winter semesters.

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. Prerequisite: 115. (1-1-2). Five credits. Offered fall and winter semesters.

CHM 119 Chemistry in Teaching Education. Preparation of lecture demonstrations and experiments for use in teaching chemistry at the elementary level. Prerequisites: 109 or 116 or 201; Group Science Major. Two credits. Offered fall and winter semesters.

CHM 201 Introduction to Chemical Sciences. Introduction to chemical sciences emphasizing the descriptive approach. Lectures, demonstrations, discussions, experiments, and assignments illustrate the chemical concepts. 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. General education course NS/A. (3-0-2). Four credits. Offered winter semester.

CHM 220 Computer Interfaces for Chemistry Teachers. A laboratory course in which a variety of computer interface devices will be made. These can be used to quantify results of experiments in the high school chemistry laboratory. Two credits. Offered on sufficient demand.

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. Prerequisites: 112 or 116 or one full year of General Chemistry. (3-0-4). Four credits. Offered fall and winter semesters.

CHM 222 Quantitative Analysis. Volumetric and gravimetric methods of analysis; introduction to spectrophotometric and electrometric methods of analysis. Prerequisite: 112 or one full year of general chemistry. (2-1-6). Four credits. Offered fall semester.

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. 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 I. This course, together with Chemistry 242, is intended for chemistry majors and others who require a full year of organic chemistry. Topics include structure, reactions, stereochemistry, and the spectroscopic analysis of organic compounds. Laboratory instruction includes the use of gas chromatography, infrared, and nuclear magnetic resonance spectroscopy. Prerequisite: 112 or 116. (1-1-3). Five credits. Offered fall and winter semesters.

CHM 242 Organic Chemistry II. A continuation of 241, including an introduction to fats, carbohydrates, and amino acids. Prerequisite: 241. (1-1-3). Five credits. Offered fall and winter semesters.

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 and MTH 125 or MTH 201. (2-0-0). Two credits. Offered winter semester in odd-numbered years.

CHM 319 Chemistry in Secondary Education. Course is intended to expand the perspectives on the teaching of specific topics in an introductory chemistry course. Emphasis on lecture demonstrations, laboratory experiments, and computer programs. Prerequisites: Chemistry

major or minor, teacher certification candidate, and 18 credits in chemistry. Two credits. Offered fall semester.

CHM 320 Applied Analytical Chemistry. Application of classical and instrumental chemical analytical methods to individual problems in chemistry or other natural sciences. Prerequisite: 222 and permission of department chairman and project sponsor before registration. Two credits. Offered on demand.

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 permission of instructor. (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. Prerequisites: 221 or 222, and 231 or 242, or permission of instructor. (2-0-3). Three credits. Offered fall semester.

CHM 342 Polymers. Covers the physical and chemical properties of polymers, the preparations and reactions of polymers, and the industrial uses of polymers. Prerequisite: 242 and credit or registration in 351 or 356. (3-0-0). Three credits. Offered winter semester of even-numbered years.

CHM 344 Qualitative Organic Analysis. Identification of organic compounds using chemical and instrumental methods. Prerequisite: 242. (1-1-4). Three credits. Offered fall semester.

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. Prerequisite: 112 or 116, MTH 201, credit or registration in PHY 220. (3-0-0). Offered fall semester.

CHM 352 Applied Physical Chemistry. Laboratory experiments in physical chemistry for students with credit or concurrent registration in CHM 351 (Introduction to Physical Chemistry). Topics will include thermodynamics, equilibrium, spectroscopy, and kinetics. Prerequisites: 112 or 116, MTH 125 or MTH 201, credit or registration in PHY 220, credit or registration in CHM 351. (0-0-3). One credit. Offered fall semester.

CHM 356 Physical Chemistry I. Introduction to the mathematical-physical interpretation of chemical theory. Topics include chemical kinetics, kinetic-molecular theory of gases, thermodynamics, quantum chemistry. Prerequisites: 112 or 116, MTH 202, and credit or registration in PHY 230. (4-0-0). Four credits. Offered fall semester.

CHM 357 Physical Chemistry Laboratory I. Laboratory experiments in physical chemistry. Prerequisites: 222 and credit or registration in 351 or 356. (0-0-3). One credit. Offered fall semester.

CHM 358 Physical Chemistry II. A continuation of 356. Prerequisite: 356. (3-0-0). Three credits. Offered winter semester.

CHM 359 Physical Chemistry Laboratory II. A continuation of 357. Prerequisites: 222 and 357. (0-0-3). One credit. Offered winter semester.

CHM 380 Selected Topics in Chemistry. Topics covered will reflect the special interests of the student and/or instructor. Prerequisite: Permission of instructor. One to three credits. Offered on 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). 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 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.

City and Regional Planning Minor

CHM 421 Instrumental Methods of Analysis. Theory and application of modern instrumental methods of analysis with emphasis on spectrometric and electrometric techniques. Prerequisites: 222 and 351 or 356. (3-0-0). Three credits. Offered winter semester.

CHM 422 Instrumental Methods Laboratory. Practical application of instruments in analysis. Prerequisites: Credit or registration in 421. (0-1-3). Two credits. Offered winter semester.

CHM 424 Clinical Chemistry. A study of the chemistry, significance, and application of current techniques in clinical chemistry. Prerequisites: 222 and 232. (4-0-0). Four credits. Offered on sufficient demand.

CHM 425 Laboratory Techniques in Clinical Chemistry. Application of the chemical principles used in clinical chemistry. Prerequisite: Credit or registration in 424. (0-0-5). One credit. Offered on sufficient demand.

CHM 441 Advanced Organic Chemistry. An advanced treatment of organic structure, reactions, and mechanisms and physical organic chemistry. Prerequisites: 242 and credit or registration in 351 or 356. (3-0-0). Three credits. Offered winter semester of odd-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: Credit or registration in 471, 441 recommended. (0-0-6). Three credits. Offered winter semester of odd-numbered years.

CHM 461 Biochemistry I. Structure and function of biological compounds, bioenergetics, intermediary metabolism, and protein synthesis. Prerequisite: 242. (4-0-0). Four credits. Offered fall semester.

CHM 462 Techniques in Biochemistry. Laboratory experiments and lectures covering techniques used in modern biochemical research. Prerequisite: 461 or permission of instructor. (2-0-3). Three credits. Offered winter semester of odd-numbered years.

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. Prerequisites: BIO 112 and CHM 461 or permission of instructor. Three credits. (3-0-0). Offered winter semester of even-numbered years.

CHM 471 Advanced Inorganic Chemistry. Structure and bonding as related to chemical and physical properties of inorganic compounds. Prerequisite: Credit or registration in 351 or 356. (3-0-0). Three credits. Offered fall semester.

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 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). 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 fall and winter semesters.

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: Poitras

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 (21 credits):

- GPY 235 World Regional Geography
- GPY 309 Introduction to City and Regional Planning
- PLS 203 State Politics
- PA 270 Public Administration
- PA 307 Local Politics and Administration
- SS 324 Urbanization
- SOC 351 Urban Sociology

Classics (CLA, GRK, LAT)

Classics is the study of ancient Greece and Rome, one of the world's most exciting and important civilizations. As an interdisciplinary field, Classics explores the history, art, literature, philosophy, and religious traditions of Greek and Roman civilization, as well as its relationships to other civilizations and cultures throughout the world, including our own. Classics offers students a broad and solid liberal arts foundation and a valuable opportunity to investigate first-hand the works and traditions that have provided some of the intellectual background of their own chosen fields.

While GVSU does not offer a degree program in Classics, several courses in the university curriculum afford students the chance to pursue studies in the field. The Courses of Instruction listed below represent courses with significant Classical content offered by different departments and programs throughout Grand Valley State University. Students interested in current offerings in Classics should contact the Coordinator of Classics, William Levitan, for further information.

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. Greek is particularly important for students of literature and philosophy, and 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.

Classics

Both Greek 201 and Latin 201 fulfill the B.A. requirement of a third-semester proficiency in a foreign language. Greek 102, Latin 102, and Latin 150 all fulfill the College General Education requirement in Foreign Culture and Multicultural Approaches (CGE/B).

Courses of Instruction

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 in odd-numbered years.

GRK 102 Elementary Ancient Greek II. Continuation of GRK 101. Language work will be supplemented with discussion of ancient Greek history and culture. General education course CGE/B. Prerequisite: C (not C-) or better in GRK 101. Four credits. Offered winter semester in even-numbered years.

GRK 201 Intermediate Ancient Greek I. Continuation of GRK 102. Readings from Homer's *Iliad* or *Odyssey*. Prerequisite: C (not C-) or better in GRK 102. Four credits. Offered fall semester in even-numbered years.

GRK 202 Intermediate Ancient Greek II. Reading of selected ancient authors, such as Euripides, Plato, or the lyric poets. Prerequisite: Completion of GRK 201 or permission of the instructor. Four 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 in even-numbered years.

LAT 102 Elementary Latin II. Continuation of LAT 101. General education course CGE/B. Prerequisite: C (not C-) or better in LAT 101. Four credits. Offered winter semester in odd-numbered years.

LAT 150 Intensive Elementary Latin. An intensive review of the essentials of Latin grammar and syntax for students with prior study who are not adequately prepared for 200-level courses. Not open to students with credit in LAT 101 or 102 or their equivalent. General education course CGE/B. Prerequisite: Appropriate high school background or permission of the instructor. Four credits. Offered winter semester in odd-numbered years on sufficient demand.

LAT 201 Intermediate Latin I. Continuation of LAT 102 or 150. Introduction to the study of selected ancient authors. Prerequisite: C (not C-) or better in LAT 102 or 150, or appropriate high school background. Four credits. Offered fall semester in odd-numbered years.

LAT 202 Intermediate Latin II. Readings in Virgil's *Aeneid*. Prerequisite: Successful completion of LAT 201, or appropriate high school background. Four credits. Offered winter semester in even-numbered years on sufficient demand.

Courses in Translation

CLA 270 Homer and the Archaic Age of Greece. The epics of Homer and the literature of the archaic age of Greece studied in their cultural context. In addition to the *Iliad* and *Odyssey*, selections from the Homeric Hymns and works of such authors as Hesiod, Sappho, and Parnenides will be included. All works read in English translation. Cross-listed with ENG 270. Students may not receive credit for both classes. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall semester in odd-numbered years.

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 winter semester in even-numbered years.

CLA 280 The Roman Response to Greece. A study of the major works of Roman literature and the ways in which they reveal Rome's adoption and transformation of the cultural experience of ancient Greece. Emphasis on epic, lyric, and drama, including such authors

as Virgil, Ovid, Horace, and Plautus. All works read in English translation. Cross-listed with ENG 280. Students may not receive credit for both classes. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall semester in even-numbered years.

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.

ENG 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*. General education course AH/B. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall and winter semesters.

ENG 204 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. General education course CGE/B. Prerequisite: Fulfillment of the Freshman Writing Requirement. 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 their 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 HST 105. 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. Prerequisite: HST 105 or junior standing. Three credits. Offered fall semester, even-numbered years.

HP 211/221 Classical World I. See *Honors Program* for description.

HP 212/222 Classical World II. See *Honors Program* for description.

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 will also be given to context and tradition. Three credits. Offered fall semester, even-numbered years.

The School of Communications

Director: Nesterenko. Professors: Morse, Salazar. Associate Professors: Ellis, Helgert, Mayberry, Nesterenko, Perrine, Proctor, Rathbun, Roos. Assistant Professors: Chapman, Miller.

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.

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.

Communications

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.

The General Major in Communications draws on the resources of both communication arts and mass communications. To these it adds the rhetorical tradition which 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 the practical skills appropriate to their professions.

In order to create a common experience for students in the School of Communications, a common core of course work 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 faculty advisor or internship coordinator in identifying internships that best suit their interests and career ambitions.

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

and two of the following:

COM 201 Speech

COM 210 Nonverbal Communication

COM 215 Story Making

Students also complete the requirements for one of the eight majors listed below.

Capstone requirement: COM 495 Theories of 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 before students embark on a professional career.

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 social science methodology.

For Advertising and Public Relations, General Communications, and Journalism, the B.S. cognate is:

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 an academic environment. All students are required to take courses applicable to advertising and public relations as well as to business in general. 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* (31 credits).

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 410 Senior Seminar
 CPV 125 Media Production I
 CJR 256 News Reporting I
 ART 107 Reproduction Processes
 PHI 202 Ethics in the Professions

3. *Electives* (minimum 9 credits).

With advisor approval, select a minimum of three courses at the 200 level or above from the following areas: advertising, business, communication, film and video production, journalism, photography, psychology, public relations.

4. *Capstone*: COM 495 Theories of Communication (3 credits).

Public Relations Sequence

1. *School of Communications Core* (9 credits).

2. *Public Relations Core* (31 credits).

- CAP 210 Fundamentals of Advertising
- CAP 220 Fundamentals of Public Relations
- CAP 320 Public Relations Management and Cases
- CAP 321 Public Relations Writing I
- CAP 400 Advertising/Public Relations Campaigns
- CAP 410 Senior Seminar
- CFV 125 Media Production I
- CJR 256 News Reporting I
- ART 107 Reproduction Processes
- PHI 202 Ethics in the Professions

3. *Electives* (minimum 9 credits).

With advisor approval, select a minimum of three courses at the 200 level or above from the following areas: advertising, business, communication, film and video production, journalism, photography, psychology, public relations.

4. *Capstone*: COM 495 Theories of 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 210 Fundamentals of Advertising
- CAP 220 Fundamentals of Public Relations
- ART 107 Reproduction Processes
- CAP 310 Advertising Management and Cases, or CAP 320 Public Relations Management and Cases

Broadcasting

Besides courses in broadcasting, students are required to take courses in marketing, media production, management, and advertising. Internships are available in broadcasting, news programming, production, and sales.

1. *School of Communications Core* (9 credits).

2. *Broadcasting Core* (28–29 credits):

- COM 240 Survey of Electronic Media
- COM 371 Media and Society
- CJR 368 Broadcast News I
- COM 281 Audio Production I
- CFV 125 Media Production I
- COM 490 Internship (minimum of three credits)
- COM 411 Broadcast Seminar

Select one of the following two-course sequences:

Audio Sequence

- COM 382 Audio Production II and
 - COM 485 Audio Production III
- or

Video Sequence

- CFV 226 Media Production II and
- CFV 320 Television and Studio Production

3. *Management Core* (select 3 of 4 courses for 9 credits):

- MGT 331 Concepts of Management
- MKT 350 Marketing Management
- CAP 312 Merchandising and Sales Promotion
- COM 350 Broadcast Operations

4. *Capstone*: COM 495 Theories of Communication (3 credits).

Film and Video Production

A strong hands-on emphasis characterizes the film/video program. Majors begin production courses in their first year. The curriculum integrates production experience with the insights offered by media history, theory, and interpretation. Students are encouraged to recognize the increasing synthesis between computers, film, video, and audio.

Graduates find a wide range of professional employment, both in the west Michigan area 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, an Amiga Video Toaster, S-VHS camcorders, a fully equipped nonbroadcast 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.

Students are required to have a minimum 2.0 overall grade point average and complete the three film/video pre-admission courses (with a minimum 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 write an analytical essay on an assigned film or video production. Guidelines for the essay are available on request from the School of Communications Office, 121 Lake Superior Hall. The essay is required of all applicants to the major.

Students may petition to bypass the three pre-admission courses on the basis of prior course work at another institution for which they have received a 2.5

Communications

minimum GPA. 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 GVSU course work, if any, is required of the petitioner prior to admission to CFV 300- and 400-level courses.

Students interested in a major in film/video are urged to complete the "Declaration of Major" form promptly upon admission to GVSU and to maintain regular contact with their advisor to ensure proper course enrollment and steady progress toward full acceptance into the major upon completion of the pre-admission requirements described above.

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
- COM 281 Audio 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

b. *Film Production*** (21 credits)

- CFV 321 16mm Film Production I
- CFV 328 Film Practicum I** (variable credit)
- CFV 329 Post-production
- CFV 424 16mm Film Production II
- CFV 428 Film Practicum II** (variable credit)
- CFV 370 Film and TV Interpretation
- 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

*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.

4. *CFV 498 Senior Thesis/Project, or CFV 490 Internship* (variable credit).
5. Capstone: COM 495 Theories of Communication (3 credits).

Intermediate Production:

- CFV 320 Television Studio Production
- 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 329 Post-production

Advanced Production:

- CFV 424 16mm Film Production II
- CFV 425 Animation II
- CFV 426 Cinematic Multimedia
- CFV 428 Film Production II
- CFV 470 Business and Educational Media

History/Theory/Criticism:

- CFV 370 Film and TV Interpretation
- COM 240 Survey of Electronic Media
- COM 348 Film Theories (SWS)
- COM 371 Media and Society
- COM 372 Global Communications
- COM 373 Women and Minorities in Film and Television

General Major in Communications

The general major in communications is designed to combine a broad overview of communication. 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.

Some courses, beyond those required for distribution, are required from outside the school. These help the student obtain subject matter about which to be a knowledgeable communicator, or they provide a critical perspective upon communication from a larger context.

1. *School of Communications Core* (9 credits).
2. *General Communication Core* (9 credits):

- COM 203 Argument and Analysis
- COM 301 Interpersonal Communication, or COM 371 Media and Society
- COM 498 Senior Thesis/Project (minimum of three credits)

3. *Mass Communication*

Minimum of 9 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

Communications

ii. Journalism:

- CJR 256 News Reporting I
- CJR 270 News Reporting II, or CJR 316 Editing
- CJR 290 Journalism History

iii. Broadcasting.*

- COM 240 Survey of Electronic Media
- COM 371 Media and Society
- CJR 368 Broadcast News Reporting, or COM 281 Audio Production I

4. *Communication Arts*:

Minimum of 9 credits in one — i, ii, or iii.**

i. Film/Video:

- CFV 125 Media Production I
- CFV 124 Image and Sound, or CFV 261 Scriptwriting I
- COM 348 Film Theories, or CFV 170 American Cinema

ii. Photography:

- CPH 171 Photography I
- CPH 172 Photography II
- CPH 376 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

5. *Outside Electives* (9 credits).

A minimum of 9 credits from outside the School of Communications. These electives should be chosen from a coherent group of courses, approved by the advisor, that provide depth in a single topic, issue, or subject, or in theory, criticism, or policy. Such a group may include courses from more than one discipline. All courses in the group must be at the 200 level or above and must not have been counted for distribution credit.

6. *Capstone*. COM 495 Theories of 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

*Students who select the Broadcasting emphasis must take COM 301 in the General Communication core, #2 above.

**In the Theatre group (iii) it is possible for as few as eight credits to satisfy the credit requirement.

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 which is operated by highly skilled, deeply educated technical professionals whom the public does not fully understand. Thus, the skills and competency of the health communicator have become central to the success of the health care industry and, indeed, to its success in maintaining wellness and conquering disease.

Health communicators are well-educated college graduates who have a foundation in 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 111 Medical Terminology
 HS 202 Anatomy and Physiology
 HS 223 Public Health Concepts
 HS 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 three credits)
 MKT 350 Marketing Management

4. *Elective Group* (select 2 of 6 courses for 6–8 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 Theories of Communication (3 credits).

*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 111) 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.

Journalism

The journalism program offers majors a broadly based education in which the study of journalism is grounded in the liberal arts. Students are encouraged to develop a thorough background in writing skills of different kinds and in literature. They are further encouraged to develop depth outside of journalism in an area common to the news science, business, foreign language studies, and sociology, among others.

Journalism studies at Grand Valley include a combination of theory and skills courses, as well as internships and other experiences, in *print* and *electronic media*. Students are strongly encouraged to publish articles in newspapers and magazines while still in school. Internship opportunities include the student-run weekly newspaper, *The Lanthorn* daily and weekly newspapers, minority publications, trade and popular magazines, and commercial and public broadcasting stations.

1. *School of Communications Core* (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
CJR 368 Broadcast News I
CJR 482 Broadcast News II

4. *Outside Elective* (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 Theories of 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 both black-and-white and color imaging processes.

Working closely with a faculty advisor, students plan at least 36 semester credits directly relating to photography, plus the communications core (9 credits), and the capstone (three credits). Students connect photography to related fields in the visual arts, performing arts, media and publications, and the humanities.

The emphasis of the photography program is on the students' growth as educated picture makers who not only know photography, but also know something about themselves, about the world around them, and about the culture which 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 which 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 which 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, 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. A large number of graduates pursue photography as a fine art and many continue their education in graduate programs.

Finally, some graduates find employment in the photographic processing and finishing industry which serves the needs of the millions of people who employ cameras in the course of their activities.

1. *School of Communications Core* (9 credits).
2. *Photography Core* (7 courses, for a minimum of 24 credits).

CPH 171 Photography I
 ART 150 Two-Dimensional Design
 CPH 172 Photography II
 CPH 273 Classic 4 x 5 Photography
 CPH 278 Color-Positive Photography
 CPH 376 Photo History
 CPH 498 Senior Thesis/Project (minimum of three credits)

3. *Electives* (minimum of 12 credits).

CPH 279 Color Printing
 CPH 371 Experimental Black & White Photography
 CPH 372 Computer Photo I
 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 477 Photographics in Illustration
 CPH 490 Internship

4. *Capstone*: COM 495 Theories of Communications (3 credits).

Theatre

The major in theatre prepares students for careers which require skills in communications, creativity, and problem-solving, or for careers in the entertainment

Communications

industry. It provides professional orientation and background within a broad liberal arts framework. Students may use the major as a preparation for graduate or professional work; the required courses provide basic training in essential theatre areas, and students planning to pursue more advanced work should take well-chosen electives in areas designed to increase specific skills.

All 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. *General Communication Core* (9 credits).

COM 203 Argument and Analysis

COM 301 Interpersonal Communication, or COM 371 Media and Society

CTH 490 Internship, or COM 498 Senior Thesis/Project (minimum of three credits)

3. *Theatre Core* (25 credits).

CTH 101 Introduction to Theatre

CTH 151 Acting I: Improvisation

CTH 161 Theatre Production

CTH 250 Stage Management

CTH 368 Lighting

CTH 371 Theatre History

CTH 372 The Modern Theatre

CTH 380 Special Topics

CTH 465 Directing

4. *Electives* (9 credits).

With the consent of their advisor, students select a coherent group of courses at the 200 level or above either from within or outside the School of Communications.

5. *Capstone*: COM 495 Theories of Communication (3 credits).

Note: Theatre majors are encouraged to take English 312 in general education.

Minor in Theatre

Minors must complete 20 hours of theatre course work in any area. Students who are interested in completing a minor must meet with a faculty advisor in the theatre program.

*The theatre program requires COM 201 and COM 210 in the School of Communications core above).

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.

Communication professionals who become managers and decision-makers will increasingly be selected because they have leadership skills, knowledge of research methodology, information systems and information access and assessment, the ability to effectively implement secondary information and primary data in the decision-making process, and a command of communication theory at the mass media, organizational, small group, and interpersonal levels. The curriculum of the master's program is attendant to these concerns.

The master's program is designed with working professionals in mind. Courses are scheduled during evenings and offered at GVSU's Eberhard Center on the Grand Rapids campus. Students who take one or two courses each semester will be able to complete the 36-credit program in three years.

Required Courses

The following courses (30 credits) are required of all students.

- COM 600 Systems Theory and Communication
- COM 610 Secondary Information and Analysis
- COM 620 Empirical Methods in Communication I
- COM 634 Ethics in Professional Communication
- COM 650 Empirical Methods in Communication II
- COM 660 Communication Management and Cases I
- COM 670 Communication Management and Cases II
- COM 690 Master's Thesis Seminar
- COM 695 Master's Thesis
- BUS 631 Leadership and Organization Dynamics
- or —
- PA 520 Foundations of Public Management

Elective Courses

Two elective courses (6 credits) are required, either from the following list or from 600-level courses in business, public administration, or other programs for which students are eligible. See the School of Communications for approval.

- COM 641 Emerging Telecommunication Technologies
- COM 642 Communication Law
- 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 grade point of 3.0.
2. Graduate Record Examination.

*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

3. Full-time professional communication experience (preferably a minimum of three years).
4. Grades of B or better in the following undergraduate courses (or their equivalents):
 - COM 495 Theories of Communication
 - MGT 331 Concepts of Management
 - SS 300 Research Methods in the Social Sciences
 - STA 215 Introductory Applied Statistics
5. Basic competence with microcomputers.
6. An entrance essay (to determine the overall suitability of the applicant).
7. Two letters of endorsement from communication professionals.

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 Elective

Winter

BUS 631 Leadership and Organization Dynamics, or
PA 520 Foundations of Public Management
Elective course

Second Year

Fall

COM 610 Secondary Information and Analysis
COM 620 Empirical Methods in Communication I

Winter

COM 650 Empirical Methods in Communication II
COM 660 Communication Management and Cases I

Spring

Elective course

Third Year

Fall

COM 634 Ethics in Professional Communication
COM 670 Communication Management and Cases II

Winter

COM 690 Master's Thesis Seminar

Spring

COM 695 Master's Thesis

Courses of Instruction

Advertising/Public Relations (CAP)

CAP 210 Fundamentals of Advertising. Basic principles of advertising, including its socioeconomic role; the function and operation of client advertising departments and the advertising

agency; application of research, budgeting, and the creative process; media characteristics and media selection. Prerequisite: Completion of composition requirement with grade of C (not C-) or better. Offered fall and winter semesters. 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: Completion of composition requirement with grade of C (not C-) or better. Offered fall and winter semesters. Three credits.

CAP 305 Sports Promotion. Deals with sports promotion, sponsorship, and the lifestyle industry by studying the effect of media on sports, using critical analysis and exploring communication theory. Emphasis on defining and applying communication concepts and strategies, including the corporate motivation to participate in sports sponsorship. Prerequisite: 220 or permission of instructor. Offered winter semester of even-numbered years. Three credits.

CAP 310 Advertising Management and Cases. Management and direction of the advertising function as viewed and practiced by the client advertising manager, the advertising agency, and the media. Analysis of actual cases and presentation of findings and recommendations. Prerequisite: 210. Offered fall and winter semesters. Three credits.

CAP 311 Direct Mail Advertising. Study of direct mail as used to promote magazine circulation, merchandise, services, resorts and travel, conventions and meetings, fund raising, and other purposes. Includes emphasis on determining appropriate creative strategy, format, and development of budgets. Prerequisite: 210 or permission of instructor. Offered on sufficient demand. Three credits.

CAP 312 Merchandising and Sales Promotion. A study of the methods and materials which 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 313 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 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.

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 Public Relations Writing I. Teaches skills beyond basic techniques. Includes practice in writing brochures, letters, internal announcements, annual reports, corporate statements, speeches, and other forms of written communication expected of the public relations writer. Prerequisite: CJR 256 or permission of instructor. Offered fall semester. Three credits.

CAP 323 Public Relations Writing II. An advanced writing course which teaches preparation of written pieces involving complex audience/context/production factors. Includes newsletters, brochures, backgrounders, position papers, PSA's, speeches, advertising copy, and annual reports. Prerequisite: 321. Offered on sufficient demand. Three credits.

CAP 380 Special Topics. A study of special topics not regularly covered in the curriculum. Expectations of the student in this course approximate those in other 300-level courses. Prerequisite: Sophomore standing. Three credits. May be repeated for credit when content varies. Offered on sufficient demand.

CAP 399 Independent Study in Advertising/Public Relations. Individually designed learning projects. Prerequisites: Advertising public relations major, junior status, and permission of advisor. Offered fall and winter semesters. 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 advertising. Offered fall and winter semesters. Three credits.

Communications

CAP 410 Senior Seminar. Course intended to serve as a bridge between the student's academic and professional careers. The course seeks to help students synthesize their communication education into a view of the dominant themes, issues, and trends of the field. Prerequisites: 310 or 320 and senior standing. Three credits. Offered fall and winter semesters.

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 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 fall and winter semesters. 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 semester. 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 WGVI/WGVK-TV. Prerequisite: 125. Offered fall and winter semesters. Four credits.

CFV 261 Scriptwriting I. Writing for film, video, radio, and mixed media. Writing exercises in dramatic, informational, documentary and public service announcement and commercial formats. Prerequisite: 125, or GPH 171 or permission of instructor. Offered fall and winter semesters. Three credits.

CFV 320 Television Studio Production. Production techniques for studio television, producing, directing, and lighting, using class members as production crew. Prerequisites: 124 and 125. Offered fall even-numbered years. Three credits.

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: 226. Offered fall semester. 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: 226. Offered every other year. Three credits.

CFV 323 Radio and Television Electronics. Basic electronics theory, audio and video recording, synthesizing an audio or video signal, and signal processing. Prerequisite: 226 or COM 281; Physics 226 or 229 recommended. Offered every other year. 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 and 125. Offered once a year. Three credits.

CFV 326 Computer Image Making. An introduction to the Macintosh computer system for imaging, image manipulation, and multimedia production. In considering computer image making, emphasis will be placed on how the computer as a tool affects the communications environment. Prerequisites: 124 and 125. 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: 226. Offered every other year. 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/summer term (12-week course). Variable, three or six credits.

CFV 329 Post-production. The process of audio, film, and video post-production, emphasizing the draft/revision process. The medium is film. However, editing will proceed in a non-linear digital environment. Prerequisite: 226 or permission of instructor. Offered fall 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: 361. Offered every other year. Three credits.

CFV 370 Film and Television Interpretation. A series of courses, each of which considers the political, dramatic, and aesthetic qualities of a specific group of films or television programs. Offered once a year. May be repeated for credit. 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. Offered on sufficient demand.

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 which 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.

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: 321. Offered every other winter. 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: 325. Offered every other year. 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 which 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: 326. Offered every other year. 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: 424. Offered spring and summer semester (12-week course). Variable, three to six credits.

CFV 470 Business and Educational Media. Linear and nonlinear media in nonbroadcast settings. How the media expert serves within a problem-solving team. Development of media productions for actual clients. Prerequisite: One advanced video production course (CFV 320 or higher). Offered every other winter 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 work site. 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

Communications

information, interviewing, and writing to meet deadlines. Prerequisite: Fulfillment of the composition requirement. Offered fall and winter 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 semester. 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 essays 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 of even-numbered years. 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 non-fictional 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 every other year. Three credits.

CJR 364 Article Writing. Practice in writing feature-length articles on factual subjects. Emphasis not on the ins and outs of getting published but on the fundamental skills involved in producing knowledgeable and readable material. A workshop dealing with the problems inherent in finishing a work. Professional editing standards insisted upon. Students will be encouraged to submit their finished work for publication. Prerequisite: 256 or permission of instructor. Offered on sufficient demand. 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 of odd-numbered years. 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 course work in one or more of the arts. Prerequisite: 256 or permission of instructor. Offered on sufficient demand. Three credits.

CJR 368 Broadcast News I. News writing for radio and television. Projects include writing and producing newscasts and interviews. Prerequisite: Completion of composition requirement with grade of C (not C-) or better and junior standing. Offered fall semester. 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. Three credits. May be repeated for credit when content varies. Offered on sufficient demand.

CJR 390 Technical Writing. The interpretation, rewriting, and editing of specialized material for both professional and general readers is emphasized. For advanced students in the sciences or writing. Students are required to read professional journals in one scientific or technical field, e.g., medicine, environmental science, chemistry, biology, psychology, computer science, communications, economics, or sociology. There will be practice in analyzing, organizing, and presenting information to a variety of audiences for different purposes. Writing definitions, abstracts, and instruction guides will also be used to develop clarity, concision, and control. Offered winter semester. 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 which 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 GVSU, 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 of even-numbered years. 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: Permission of instructor. Offered on sufficient demand. Three credits.

CJR 466 Freelance Journalism. The purpose of this course is to show students the various local, regional, and national markets for free-lance 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. Free-lance writing for newspapers, magazines, and public relations will be included. During the course students will be asked to write a query letter, research a topic of their choice and write out possible interview questions, submit at least four story ideas for publications of their choice, produce a short finished article, and participate fully in the work of the class. Offered on sufficient demand. Three credits.

CJR 481 Investigative Reporting. Discusses the techniques as well as the problems and pitfalls of journalistic investigation. Develops skills in investigation and reporting through the use of classroom examples, individual and team assignments. Emphasis on real-life situations and submission of articles for publication on and off campus. Prerequisites: 270 and 316 or permission of instructor. Offered on sufficient demand. Three credits.

CJR 482 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: 368 and GFV 226 or permission of instructor. Offered winter semester of even-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 work site. 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. General education course AH/B. Offered fall and winter semesters. Four 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.

Communications

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 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.

COM 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 and winter semesters. Three credits.

COM 301 Interpersonal Communication. An exploration of the nature of the communication process; analyzing language, nonverbal clues, environment, listening, and communication ethics. The course will be taught through practice in speaking, game-playing, discussion, and research. Offered on sufficient demand. 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 348 Film Theories. Examines a selection of major theories concerning sources of meaning and power in film and television. General education course AH-A. Prerequisite: Junior standing. Offered every semester. Three credits.

COM 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: Junior standing. Offered on sufficient demand. 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. Offered winter semester of even-numbered years. Three credits.

COM 373 Women and Minorities in Film and Television. An examination of American film and television from the perspective of those social groups whose participation in the 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 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 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 individual performance. Prerequisite: 281 or permission of instructor. Offered winter semester. Three credits.

COM 399 Independent Study. An experience of an essentially scholarly and/or creative nature undertaken by a student under the supervision of one or more faculty members. Initiated by the student who has a special interest in a subject which 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 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: Senior broadcasting major. 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.

COM 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.

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 work site. 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 Theories of Communication (Capstone). A critical survey of major theories of human communication. Analysis and application of concepts from representative primary source statements, to understand what they say, presuppose and imply about the nature of communication. 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: COM 600. Three credits.

COM 620 Empirical Methods in Communication I. The primary approaches to communication research with special emphasis on content analysis, survey research, focus groups, discourse analysis, projective techniques, sampling techniques, and proposal and report writing. Prerequisite: COM 600. Three credits.

COM 634 Ethics in Professional Communication. An examination of ethical issues and problems in professional communication. Special attention is given to understanding the connections between the communication industry and society, government, economics, and the law. Prerequisite: COM 600. Three credits.

COM 641 Emerging Telecommunication Technologies. An analysis of the impacts of a variety of new telecommunication technologies on business and industry, with particular emphasis on the use of these technologies to increase efficiency and productivity. Technologies considered in some detail include cable television, microcomputers, teleconferencing, and fiber optics. Prerequisite: Admission to a GVSU 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 GVSU master's program. Three credits.

Communications

COM 643 Small Group Communication and Leadership. Examines the life cycle and communication structure of the problem-solving group or task force. Emphasis on the emergence of roles and leadership as a result of the communication within the group. Also, communicative and behavioral patterns associated with leadership. Prerequisite: COM 600, MGT 651. Three credits.

COM 644 Network Analysis. Research in complex organizational settings focusing on communication interrelationships and problems. Prerequisite: COM 650. Three credits.

COM 650 Empirical Methods in Communication II. Advanced research methodologies and techniques that are particularly appropriate to the communication field. Includes analysis of variance, factor analysis, Q-methodology, McQuitty's pattern analytic techniques, path analysis, cluster analysis. Prerequisite: COM 620. Three credits.

COM 660 Communication Management and Cases I. The conceptualization of communication problems, definition of terms, determination of information needs, conceptualization/operationalization of primary research where needed, and implementation of findings into the decision-making process. Prerequisites: COM 620, MGT 631. Three credits.

COM 670 Communication Management and Cases II. Utilizing pertinent theory, research methodology, and sources of information, the student proposes, researches, analyzes, and reports actual case problems. Problems selected are typically those central to the student's professional work. Prerequisites: COM 650 and 660, MGT 651. Three credits.

COM 680 Special Topics. A study of special topics not regularly covered in the curriculum. Prerequisite: COM 600. Three credits.

COM 690 Master's Thesis Seminar. The context for students to present their master's thesis proposal to the community of students and faculty. Prerequisites: COM 670, one approved master's level elective, and approval of advisor. Three credits.

COM 695 Master's Thesis. Master's thesis research and writing in consultation with the student's advisor and committee. Prerequisite: COM 690. Three credits.

COM 699 Independent Study. Initiated by the student who has a special interest in a subject not available in the current curriculum. The student and the faculty sponsor agree on the scope of the study, its components, and methods of evaluation. Prerequisites: COM 600 and 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 on sufficient demand. 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 semester. 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 Ektacolor printing, and expressive use of color in photography. Prerequisites: 172 or permission of instructor. Offered fall semester. Four credits.

CPH 371 Experimental Black & White Photography. An advanced production course which 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 of odd-numbered years. 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: 278 or CIV 226, or permission of instructor. Offered fall semester of even-numbered years. Three credits.

CPH 373 Computer Photo II. An exploration of the history, contemporary trends, and future possibilities of digital imaging processes. Includes an examination of visual communication within the digital environment. Student readings and discussions will be augmented with digital imaging projects. Prerequisite: 372 or permission of instructor. Offered winter semester of odd-numbered years. 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 every other winter semester. Three credits.

CPH 376 Photo History. A survey of the origins and developmental phases of photography. Technical innovations will be examined, but emphasis will be on changing climates of aesthetic intent, philosophical rationale, and visual experimentation. Prerequisites: 171 and junior standing. 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. 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 which 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 which 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 477 Photographics in Illustration. Uses well-known techniques employed in television and cinema as well as multiple imaging, high-contrast effects, bas-relief, texturization, reticulation, the Sabattier effect, and photo-posterization. Offered alternate years concurrently with Photographic Illustration. Prerequisites: 279 and permission of instructor. 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 work site. 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. Offered every fall and winter semester, 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 write two short essays on them. Includes nine hours of stagecraft lab work. General education course AH/A. Offered every semester. Three credits.

Communications

- 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 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. 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 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 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. Offered on sufficient demand. 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, even-numbered years. Three credits.

CTH 369 Costume Design. Study of the principles of costume design, including figure drawing and rendering techniques. An introduction to the history of costume. Final project will include the design of costumes for an assigned play. Prerequisite: 161. Offered on sufficient demand. 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. Essay requirement. Offered fall, even-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. Offered fall, odd-numbered years. Three credits.

CTH 380 Special Topics. A study of special topics not regularly covered in the curriculum. Expectations of the student in this course approximate those in other 300-level courses. 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 on sufficient demand. Three credits.

CTH 465 Directing. An introduction to the process of directing a play. Primary emphasis on the interrelationship of the actor, text, and director. Intensive work on preparing scenes for in-class presentation, focusing on staging, blocking, polishing, and interpretation. Final project will center on the direction of a one-act play for public performance. Prerequisite: Acting: Improvisation (151), Characterization (252), and Theatre Production (161), or permission of instructor. Offered winter, odd-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 course work 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.

Computer Science and Information Systems

Chair: Klein. Associate Professors: Adamski, Erickson, Johnson, Jorgensen, B. Klein, Kotman, Tao; Assistant Professors: Ahuja, Leidig; Instructors: Last, Levin; Visiting Instructors: Lange, Jacques-Pawloski, Peterman, Sapkowski.

Degrees offered: B.S., B.A. in computer science, with an optional emphasis in secondary (K-12) certification; B.S., B.A. in information systems; M.S. in computer information systems; minor in computer science with optional emphases in microcomputer systems and teacher certification (secondary); minor in 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.

Computer Science and Information Systems

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, and a variety of positions in computer sales, design, manufacturing, and customer service.

Computer Science and Information Systems Advisory Board

The Computer Science and Information Systems Advisory Board (CSISAB) is composed of the department chairperson, the CSISAB Coordinator, and at least 12 leading computer science and information systems experts in west Michigan. The Board meets twice each year and advises the department on curriculum development and continuing education. It serves as an important contact between the department and the computing community.

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 39 credits of required computer science classes and six credits of electives with a minimum 2.0 GPA.

Required Computer Science Courses:

- CS 162 Computer Science I
- CS 262 Computer Science II
- CS 350 Systems Concepts
- CS 351 Computer Organization and Assembly Language
- CS 353 Database
- CS 362 Data Structures and Algorithms
- CS 451 Computer Architecture
- CS 452 Operating Systems Concepts
- CS 457 Data Communications
- CS 461 Compiler Design and Construction or CS 465 Automata and Theory of Computation
- CS 462 Structure of Programming Languages
- CS 467 Computer Science Project*

Computer Science Elective Courses. All computer science majors must complete six credits (two courses) from the following:

- CS 231 Problem Solving Using Spreadsheets
- CS 361 C and UNIX
- CS 365 Artificial Intelligence
- CS 367 Computer Graphics

*Capstone course.

3. Cognate Courses:

All computer science majors not seeking teacher certification must complete the following 21 credits of cognate courses:

- ENG 350 Writing in the Workplace or COM 201 Speech
- MTH 201 Calculus and Analytic Geometry I
- MTH 202 Calculus and Analytic Geometry 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**

4. Computer Science Major for Secondary (K-12) Certification

Computer science majors seeking teacher certification must complete the following 34 credits of computer science classes and 12 credits of cognate courses. Students are required to assist in the Computer Laboratory at Grand Valley State University as partial fulfillment of their field experience requirement. A minimum GPA of 2.8 in the computer science courses is required for recommendation for teacher certification.

Required Computer Science Courses:

- CS 162 Computer Science I
- CS 251 Problem Solving Using Spreadsheets
- CS 257 Microcomputer Communications
- CS 262 Computer Science II
- CS 307 Computer Science Teacher Assisting Seminar
- CS 309 Teaching Computer Science
- CS 350 Systems Concepts
- CS 351 Computer Organization and Assembly Language
- CS 353 Database
- CS 362 Data Structures and Algorithms
- CS 467 Computer Science Project*

5. Cognate Courses:

All computer science majors seeking teacher certification must complete the following 12 credits of cognate courses:

- ENG 350 Writing in the Workplace 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**

Requirements for a Computer Science Minor

A minor in computer science requires a minimum GPA of 2.0 to be approved.

I. Computer Science (not for teacher certification).

- CS 162 Computer Science I
- CS 262 Computer Science II
- CS 350 Systems Concepts
- CS 351 Computer Organization and Assembly Language
- CS 353 Database, or CS 361 C and UNIX, or CS 457 Data Communications
- CS 362 Data Structures and Algorithms

*Capstone course.

**Completion of MTH 225, 325, and either STA 215 or 312 satisfies the B.S. degree cognate for all computer science majors. Students completing a B.A. degree must complete these courses plus the foreign language requirement for a B.A.

Computer Science and Information Systems

- MTH 225 Discrete Structures: Computer Science 1
- MTH 325 Discrete Structures: Computer Science 2

2. Computer Science (for teacher certification)

A minimum GPA of 2.8 in this minor is required for recommendation for teacher certification.

- CS 162 Computer Science I
- CS 231 Problem Solving Using Spreadsheets
- CS 233 Microcomputer Database Management
- CS 237 Microcomputer Communications
- CS 262 Computer Science II
- CS 309 Teaching Computer Science
- CS 351 Computer Organization and Assembly Language
- MTH 225 Discrete Structures: Computer Science 1

3. Microcomputer Systems (not for certification).

A minor in microcomputer systems must complete at least 24 hours, as follows:

All the following (12 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 courses selected from the following (9–10 hours):

- CS 162 Computer Science I
- CS 230 Microcomputer Operating Systems
- CS 235 Expert 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 (not for teacher certification).

A minor in computer engineering requires a minimum GPA of 2.0 to be approved.

- CS 162 Computer Science I
- CS 162 Computer Science II
- CS 351 Computer Organization and Assembly Language
- EGR 214 Circuit Analysis I
- EGR 226 Introduction to Digital Systems
- EGR 326 Advanced Digital Systems
- EGR 424 Design of Microcontroller Applications

Elective courses (3–4 credits required):

- CS 362 Data Structures
- CS 452 Operating Systems Concepts
- CS 457 Data Communications

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 Regulations section of the catalog.

2. 41 semester credit hours from the following courses, with a minimum 2.0 GPA:

- CS 162 Computer Science I
- CS 231 Problem Solving Using Spreadsheets or CS 238 Desktop Media
- CS 253 COBOL
- CS 262 Computer Science II
- CS 337 Network System Management
- CS 350 Systems Concepts
- CS 351 Computer Organization and Assembly Language
- 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

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
- ENG 350 Writing in the Workplace
- MGT 331 Concepts of Management
- MTH 225 Discrete Structures: Computer Science I**
- STA 215 Introductory Applied Statistics**or STA 312 Probability and Statistics**
- STA 216 Intermediate Applied Statistics**

Requirements for a Minor in Information Systems

A minor in information systems requires a minimum GPA of 2.0 to be approved.

- CS 162 Computer Science I
- CS 253 COBOL
- CS 262 Computer Science II
- CS 337 Network System Management
- CS 350 Systems Concepts
- CS 353 Database
- MTH 225 Discrete Structures: Computer Science I

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. Students interested in this option should contact the department for further information.

Sample Curriculum

These options assume students will complete the required skills and general education courses with the help of their advisor. The following course sequence also assumes a strong mathematics background for the entering student. If mathematics deficiencies exist, they should be the student's top priority.

*Capstone course.

**Completion of MTH 225, either STA 215 or 312, and MTH 325 satisfies the B.S. degree cognate for all computer science majors. Students completing a B.A. degree must complete these courses plus the foreign language requirement for a B.A.

Computer Science and Information Systems

Computer Science

CS 162 Computer Science I
CS 262 Computer Science II
CS 351 Computer Organization and Assembly Language
MTH 225 Discrete Structures: Computer Science I
General education courses

CS 350 Systems Concepts
CS 353 Database
CS 362 Data Structures and Algorithms
MTH 201 Calculus and Analytic Geometry I
MTH 325 Discrete Structures: Computer Science 2
General education courses

CS 451 Computer Architecture
CS 457 Data Communications
Computer science elective
MTH 202 Calculus and Analytic Geometry II
STA 215 Introductory Applied Statistics, or STA 312 Probability and Statistics
ENG 350 Writing in the Workplace, or COM 201 Speech
General education courses

CS 452 Operating Systems Concepts
CS 461 Compiler Design and Construction, or CS 465 Automata and Theory of Computation
CS 462 Structure of Programming Languages
Computer science elective
CS 467 Computer Science Project
General education courses

Information Systems

First Year

CS 162 Computer Science I
CS 262 Computer Science II
MTH 225 Discrete Structures: Computer Science I
ACC 212 Principles of Financial Accounting
General education courses

Second Year

CS 231 Problem Solving Using Spreadsheets, or CS 238 Desktop Media
CS 253 COBOL
CS 353 Database
ACC 213 Principles of Managerial Accounting
COM 201 Speech
STA 215 Introductory Applied Statistics, or STA 312 Probability and Statistics
STA 216 Intermediate Applied Statistics
General education courses

Third Year

CS 337 Network System Management
CS 350 Systems Concepts
CS 351 Computer Organization and Assembly Language
CS 443 Software Development Tools
ENG 350 Writing in the Workplace
MGT 331 Concepts of Management
General education courses

Fourth Year

CS 437 Distributed Computing
CS 450 Advanced Application Development
CS 460 Management of Information Systems
CS 463 Information Systems Project
General education courses

Master of Science—Computer Information Systems

The Master of Science degree in Computer Information Systems is offered in the Department of Computer Science and Information Systems at Grand Valley State University. The primary purpose of the program is to make educational opportunities available to the professional computing community in the west Michigan area. 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. Submit acceptable recommendations from at least two individuals attesting to the likelihood of the candidate's successful completion of the program.
3. 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. In particular, 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.

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, and Distributed Systems is awarded to a student who completes a content area. The last two courses in the content area must be completed at Grand Valley State University.

Admission criteria for a certificate program are identical to admission criteria for the master's degree program. Certificate candidates enroll in the standard master's degree program courses, with grading criteria being identical. Should a certificate candidate decide to change to the master's degree program, all course work 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*
- 18 all courses in two content areas**
- 9 three elective courses
- 3 project or thesis course

Each candidate must complete either the project course or the thesis option.

Content Areas

Four 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 Systems Analysis and Software Life Cycles
- CS 612 Requirements Specification
- CS 613 Software Validation and Verification

Object-oriented Technology

- CS 621 Object-oriented Programming

*Students not required to take this course must take an additional elective.

**Students who select the software engineering and the information systems management content areas need an additional elective because CS 611 is common to both of these content areas.

Computer Science and Information Systems

CS 622 Software Design Methodologies

CS 623 Graphical User Interface Design

Information Systems Management

CS 611 Systems Analysis and Software Life Cycles

CS 642 Software Project Management

CS 643 Information Systems Policy

Distributed Computing

CS 654 Computer Networking

CS 656 Operating Systems

CS 658 Distributed Computing

Elective Courses

CS 500 Fundamentals of Computer Science

CS 610 Software Process Engineering

CS 633 Microcomputer Database Management

CS 672 Computer Systems Architecture

CS 673 Database Management and Design

CS 674 Modeling and Decision Systems

CS 675 Compiler Construction

CS 680 Seminar in Computer Information Systems

CS 685 Computing Workshop for Educators I

CS 686 Computing Workshop for Educators II

Courses in the two content areas not selected by the student.

Project Course

Contact the department for detailed information one semester before beginning

CS 693 Master's Project.

Thesis Option

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 the project course and one elective.

CS 690 Master's Thesis Research

CS 693 Master's Thesis

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. General education course CGE/A. Corequisite: 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. General education course CGE/A. Prerequisite: MTH 110. (3-0-2). 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 sufficient demand.

CS 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. Prerequisite: ED 200 (3-0-0). Three credits. Offered fall and winter semesters.

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: 150, 160, or 162. (3-0-0). Three credits. Offered winter semester.

CS 231 Problem Solving Using Spreadsheets. An introduction to spreadsheets such as Lotus 1-2-3, and their use as a tool in problem solving and applications. Prerequisites: 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 dBASE or R-base. Prerequisite: 150, 160, or 162. (3-0-0). Three credits. Offered fall semester.

CS 235 Expert Systems. Study of the technology of expert systems. Knowledge representation and reasoning. The knowledge base. The inference engine. The user interface. Development and integration of expert systems. Future of expert systems. Prerequisite: 150, 160, or 162. (3-0-0). Three credits. Offered fall semester of even-numbered years.

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, on-line information services, computer conferencing, bulletin board services, local area networks, and requirements analysis. Laboratory projects will be used to complement the lectures. Prerequisite: 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: 150, 160, or 162. (3-0-0). Three credits. Offered fall semester.

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. Prerequisite: 162. (4-0-0). Four credits. Offered fall and winter semesters.

CS 262 Computer Science II. Programming methodology, design and analysis of algorithms, and an introduction to data structures. Examples from a wide range of computing applications will be discussed. Prerequisite: 162. Corequisite: MTH 225. (3-0-0). Three credits. Offered fall and winter semesters.

CS 307 Computer Science Teacher Assisting Seminar. Strategies for teaching computer science in junior and senior high school. Coordinated and taken concurrently with Education 307. Prerequisites: 262 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. Prerequisite: 262 (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

Computer Science and Information Systems

prepared to serve as in-house consultants on spreadsheet applications. Prerequisites: 231 and either 160 or 162 (3-0-0). Three credits. Offered fall semester.

CS 337 Network System 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. Prerequisite: 162. (2-0-2). Three credits. Offered winter semester.

CS 339 Microcomputer Applications Project. Individual student project using the microcomputer 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: 231 and 233. (5-0-0). Three credits. Offered winter semester.

CS 350 Systems Concepts. 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. Prerequisite: 262. (3-0-0). Three credits. Offered fall and winter semesters.

CS 351 Computer Organization and Assembly Language. 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. Prerequisite: 262. (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. Prerequisite: 262. (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, interprocess communication, and UNIX system calls. UNIX utilities and software development tools are used throughout the course. Prerequisite: 262. (3-0-0). Three credits. Offered fall semester.

CS 362 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: 262 and MTH 325. (3-0-0). Three credits. Offered fall semester.

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 262 and either STA 215 or STA 312. (3-0-0). Three credits. Offered fall of odd-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: 351 and either MTH 227 or both MTH 123 and MTH 225. (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 sufficient 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 OS. Network programming paradigms, network applications, and client/server development. Laboratory exercises in network and client/server programming. Prerequisites: 262, 337, and 353. (3-0-2). Four credits. Offered fall semester.

CS 443 Software Development Tools. On-line programming using CICS and COBOL. Fourth-generation tools in application development. Use of a specific, representative fourth-generation environment. Prerequisites: 255, 350, and 355. (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: 350 and 353. (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. Prerequisite: 351. (3-0-0). Three 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: 262 and 351. (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: 262 and 351. (3-0-2). Four credits. Offered fall and winter semesters.

CS 460 Management of Information Systems. Capstone for the information systems major. The course ties together concepts provided in other courses. The information needs of the organization are integrated with information systems. Administration and policy are applied to specific areas of information system management. Prerequisites: 350 and MGT 351. (3-0-0). Three credits. Offered winter semester.

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: 351 and 362. (3-0-0). Three credits. Offered fall semester of even-numbered years.

CS 462 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. Prerequisite: 362. (3-0-0). Three credits. Offered winter semester.

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: 350, 353 and 443. (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 and CS 162. (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: 350 and 362. (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 sufficient demand.

CS 490 Computer Science 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 field work per week under the supervision of a work supervisor is required. Graded credit/no credit. Prerequisites: Junior status, 2.75

Computer Science and Information Systems

overall GPA: 3.0 GPA in major. See departmental application form for further information. Variable credit. Offered fall and winter semesters.

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: 162 or knowledge of a high-level programming language. (3-0-0). Three credits. Offered fall semester.

CS 610 Software Process Engineering. Models and techniques for the major phases of software development, with emphasis on requirements specification, design, testing, and software maintenance. Description of the roles of project management, quality assurance, and configuration management. (3-0-0). Three credits. Offered fall semester.

CS 611 System Analysis and Software Life Cycles. 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: 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: 611. (3-0-0). Three credits. Offered fall semester.

CS 613 Software Validation and Verification. Discussion of the major techniques of software verification and validation: 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: 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: 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: 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: 622. (3-0-0). Three credits. Offered fall semester.

CS 633 Microcomputer Database Management. Database management with emphasis on microcomputer database management systems. Relational model concepts and applications. Database design methodology. Evaluation and selection of database management systems. Database administration. Fourth generation tools. Detailed coverage of a major microcomputer DBMS such as dBASE. Prerequisite: Some computer experience. (3-0-0). Three credits. Offered winter semester of even-numbered years.

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: 611. (3-0-0). Three credits. Offered fall 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: 642. (3-0-0). Three credits. Offered winter semester.

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: 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, administration. Continuation of client/server programming, including RPC and distributed object-oriented programming. Prerequisite: 654. (3-0-0). Three credits. Offered winter semester of odd-numbered years.

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: 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: 500. (3-0-0). Three credits. Offered fall semester.

CS 673 Database Management and Design. History and principles of database management. Relational, network (CODASYL), and hierarchical models. Survey of existing systems such as DB2, INGRES, IDMS/R, and IMS. The information and physical levels of database design. Database administration. The fourth generation environment. Distributed databases. Database machines. Prerequisite: 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: 500. (3-0-0). Three credits. Offered fall semester.

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: 500. (3-0-0). Three credits. Offered fall semester of odd-numbered years.

CS 680 Seminar in Computer Information Systems. Discussion of current advances in computer information systems theory, methodologies, and support systems. Prerequisite: 650. (3-0-0). Three credits. Offered winter semester of even-numbered years.

CS 685 Computing Workshop for Educators I. Detailed examinations of current topics, techniques, and methods relating to the use of computers and technology in the K-9 classroom. Prerequisites: EDG 618 (ED 684) or permission of the instructor. One to three credits. Offered on sufficient demand.

CS 686 Computing Workshop for Educators II. Current topics, techniques, and methods concerning the implementation and integration of computers and technology in middle and high school curricula. Prerequisites: EDG 618 (ED 684) or permission of the instructor. One to three credits. Offered on sufficient 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.

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.

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 to three credits. Offered fall and winter semesters.

School of Criminal Justice (CJ)

Acting Director: Baro, Professors: Kalinich, Van Meter, White; Associate Professors: Baro, Walker; Assistant Professors: Bailey, Johnson, Mullendore, Yared, Ziembo-Vogl; Instructor: Fisk.

The School of Criminal justice offers the bachelor of science or bachelor of arts degree in criminal justice with an emphasis in law enforcement, juvenile justice, corrections, or private security. The major is designed for professional preparation in criminal justice and related occupations. The school also offers a 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.L.E.O.T.C. Police Academy during the summer months. The program leads to eligibility for police certification in Michigan and several other states, and it can be counted toward a major in criminal justice or general electives for graduation. The Police Academy has achieved a reputation for excellence. Any student wishing further information should contact the academy director.

Internships

The School of Criminal Justice allows selected students to complete internships at specified job sites. Upper-division students may elect CJ 490 and/or CJ 491 if they are approved by the internship coordinator and supervisors at a job site. Private security students may apply for CJ 492, an intensive semester at a job site. CJ 490 and 491 require 15 hours on the site per week. CJ 492 may require students to spend an entire semester exclusively at a private security job site. To apply for an internship, see the coordinator of the internship program.

Major Program Requirements

To complete the requirements for graduation with a bachelor's degree in criminal justice or legal studies, students must fulfill the general education requirements. While most courses 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, SS 300, and CJ 400.

Bachelor's in Criminal Justice: A minimum of 36 credits is required. All majors must take the following six courses (18 credit hours): CJ 101, 301, 305, 470, 495, and SOC 382. In addition, majors must complete either six courses (18 credit hours) in a general emphasis area or eight courses (24 credits hours) in the law enforcement certification track. The emphasis areas include:

1. Law Enforcement Option I (MLEOTC certification). All students must complete: CJ 410, 461, and 490 and the summer Police Academy (CJ 415, 416, 417, 418, and 419). Academy entry is restricted by separate admissions examinations, and the selection process is highly competitive. Declaration or completion of

the criminal justice major does not guarantee admission to the Police Academy. Students considering the Police Academy should take a broadly based series of social science courses in addition to the major requirements for criminal justice. Students are also encouraged to complete a minor in business administration, 12 hours of accounting, and fluency in Spanish.

2. **Law Enforcement Option II.** All students must complete CJ 302, 410, and 461. In addition, students must elect one class (three credit hours) from each of the following areas for a total of nine elective credit hours: advanced criminology CJ 320, 350, 355, or SOC 384; advanced law enforcement CJ 311, 380 (with advisor's permission) or 490; historical and legal bureaucracy SS 321, SS 322, or PA 270. CJ 399 and 499 may also be used as electives with advisor's permission.
3. **Juvenile Justice.** All students must complete CJ 350, 355, and 462. In addition, students must elect three classes (nine credit hours) from the following: CJ 302, 320, 490, SOC 384, SOC 389, SS 323, PSY 331, CJ 380, 399, and 499 may also be used as electives with advisor's permission.
4. **Adult Corrections.** All students must complete CJ 330, 331, and 463. In addition, students must elect three classes (nine credit hours) from the following: CJ 302, 320, 355, 490, SOC 384, PSY 303, CJ 380, 399, and 499 may be used as electives with advisor's permission.
5. **Private Security.** All students must complete CJ 315, 464, and OSH 110. In addition, students must elect a total of nine credits from the following: CJ 492 (three to nine credit hours depending on job site), BUS 201, accounting elective, or management elective. BUS 201, ACC, and MGT are offered through the Seidman School of Business. Students must check with the Seidman School for proper placement in accounting and management classes.

Minor Program Requirements

Minor in Criminal Justice. Minors are required to complete at least 21 credit hours, including, CJ 101, 301, 305, and 470 and three of the following: CJ 330, 350, 400, 410, and 495, or another approved sequence. See the Director of the School of Criminal Justice for information.

Courses of Instruction

CJ 101 Justice and Society. Overview of our present-day criminal justice apparatus. Puts into perspective the social and political origin of our formal means of social control, and the philosophical contributions of past and present social scientists. General education course SS/C. Three credits. Offered fall and winter semesters.

CJ 301 Criminology. An analysis of crime, criminal behavior, punishment, and the theories of deviancy from historical perspectives. Three credits. Offered fall and winter semesters.

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 fall and winter semesters.

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 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

Criminal Justice

- technology, internal and external threats, and fire prevention and safety. Three credits. Offered fall semester.
- CJ 320 Crimes Against Women.** An in-depth study of crimes committed almost exclusively against women. Such crimes include: sexual harassment, rape, and certain types of murder. The course is taught within the framework of feminist theory and research. Three credits. Offered winter semester.
- CJ 330 Adult Community Corrections.** Survey of correctional programs designed to treat, punish, and control offenders in the community. Special topics include probation and parole, and intermediate sanctions. Also includes applied criminal theory and related political philosophies. Prerequisite: 301 (may be taken concurrently). Three credits. Offered fall semester.
- CJ 331 Adult Institutional Corrections.** The history of imprisonment as a mechanism of social control, punishment versus treatment as a philosophy, rights of prisoners, and examination of contemporary institutional subcultures and programs. Three credits. Offered fall semester.
- CJ 350 Juvenile Justice and Corrections.** An analysis of the historical and philosophical foundations of juvenile justice and corrections. Special attention is given to the diversity of interactions between youth and state officials at every stage of the judicial system process. Current issues, controversies, and serious juvenile offenders are also examined. Three credits. Offered fall and winter semesters.
- CJ 355 Youth Culture and Crime.** The study of the relationship between crime and historical development of specific youth cultures including modern urban, suburban, and rural gangs. The diversity of youth cultures, including gender and ethnic differences, is explored as is the interactiveness of mass media. 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. Three credits. Offered fall and winter semesters.
- CJ 399 Independent Readings in Criminal Justice.** Independent supervised readings on selected topics which are 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 each semester.
- CJ 400 Case studies in Criminal Justice.** Emphasis on criminal justice theories and practices as they developed in applied areas of research. A case-by-case approach will be used in an effort to prepare students for documentary and bibliographical research techniques. Required for B.S. cognate in criminal justice. Prerequisite: Junior or senior status. Three credits. Offered fall and winter semesters.
- CJ 410 Police and Society.** Theoretical and practical problems and issues in the relationship between police agencies and the total community. Problem oriented and community policing will be emphasized as will as future trends. Prerequisite: Junior standing. 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 insure that basic state requirements are met in physical education, defensive tactics and firearms. Three credits. Offered summer only. 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.
- CJ 417 Criminal Investigations II.** An advanced class in techniques and theories of all aspects of the discovery and preservation of evidence to insure 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 protect life and property and to promote theories 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 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. Prerequisite: 305. Three credits. Offered fall and winter semesters.

CJ 462 Juvenile Administration and Legal Issues. The study of contemporary juvenile justice organizations, philosophies, management strategies, and professional standards. Current case law on staff liability, juvenile rights, and important policy issues are included. Prerequisite: 305 (may be taken concurrently). Three credits. Offered winter semester.

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. Prerequisite: 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 organization 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 Seminar on Crime Control and Justice Policy. A capstone course offering a philosophical review of the nation's justice system and providing an evaluation of policies and practices designed to prevent, control, and reduce crime and to improve justice. Prerequisite: Senior standing in the program. Three credits. Offered fall and winter semesters.

CJ 490 Criminal Justice Practicum I. Internship in local agencies with individual faculty supervision to allow students to apply academic knowledge to actual and professional experience. Prerequisites: Senior status, permission of instructor, and completion of an application form obtained during the semester before the practicum. Offered on a credit-no credit basis. Three credits. Offered fall and winter semesters.

CJ 491 Criminal Justice Practicum II. A second internship to be taken concurrently with 490 for those serving additional field work experience. Prerequisites: Senior status, permission of instructor and completion of an application form obtained during the semester before the practicum. Offered on a credit-no credit basis. Three credits. Offered fall and winter semesters.

CJ 492 Internship in Private Security. Internship in private security agencies with individual faculty supervision to allow students to apply academic knowledge through participant observation. Prerequisites: CJ 315, CJ 464, and OSH 110 and completion of application. Offered on a credit-no credit basis. Three to nine credits. Offered every semester.

CJ 495 Issues in Criminal Justice. Consideration of special subjects in criminal justice. Topics to be announced in advance. Prerequisites: 305 and junior or senior status. Three credits. Offered fall and winter semesters.

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 would normally fall in the area of major emphasis selected by the students. Prerequisite: Permission of the instructor and senior standing. Offered on a credit-no credit basis. Three credits. Offered each semester.

Graduate Courses in Criminal Justice

The following graduate courses may be used in a master of public administration degree program. Students should see an advisor in the M.P.A. program for details.

CJ 630 Modeling Criminal Justice Systems. A required gateway course designed to introduce M.P.A. candidates to the criminal justice concentration. Emphasis is on systems theory and design, qualitative modeling, operations analysis, and organizational design and function. Police and correctional structures are emphasized. Three credits.

CJ 631 Criminal Justice Policy Management. A required course for students in the criminal justice concentration. Emphasis is on the construction of policies and procedures in actual police and correctional settings. The impact of policies on various constituencies is discussed. Prerequisites: PA 673 (may be taken concurrently). Three credits.

East Asian Studies Minor

CJ 641 Emergency Response Planning. Law enforcement role in emergency planning and response. Focuses on violence and disorder beyond traditional crime. Emphasizes disaster planning, civil defense, multi-agency coordination, and crisis management. Specific attention to rioting and terrorism. Prerequisites: Permission of instructor. Three credits. Offered every other year.

CJ 642 Correctional Process: Theory and Practice. Examines the role of treatment in American correction. Focuses on both community-based and institutional programs, on treatment agents, the treatment environment, and the effects of treatment of offenders. Applies to both juvenile and adult offenders. Prerequisite: Permission of instructor. Three credits. Offered every other year.

CJ 645 Administering Criminal Justice Training. An elective course. Focus is on the development, delivery, and evaluation of in-service training in criminal justice agencies. Needs assessment and evaluation are emphasized. Three credits. Offered winter semester every other year.

CJ 646 Police Policies and Operations. Application of management techniques to practical problems in law enforcement administration. Students design and analyze policies focusing on critical police functions. Personnel policies, fiscal matters, traffic management, police discretion, and the role of coercive force are emphasized. Prerequisite: Permission of instructor. Three credits. Offered every other year.

Social Sciences Courses

The following courses may be used for certain general education categories. Some of them may also count toward your major. See your advisor for further information.

SS 321 Crime and Punishment. Examines primary theoretical orientations toward crime and punishment that have been evident throughout history. Also how different societies at different times have attempted to define crime and how these definitions have created social reactions and legal punishments. Three credits. Offered each semester.

SS 322 Militarism. Examines militarism, its structures and functions across cultures. Includes a case study of Germany, 1648–1945, and pays special attention to nationalism, imperialism, industrialization, and social control. General education course CGE/B. Three credits. Offered every semester.

Earth Science

See the Geology section of this catalog.

East Asian Studies Minor (EAS)

Coordinator: Helgert; Professor: Salazar; Associate Professors: Ellis, Helgert; Assistant Professors: Caillaud, Ihrman, Lai, Ni, Westra.

East Asian studies at Grand Valley explores the languages, cultures, histories, and socioeconomic conditions of Japan and China. The program recognizes the complex traditions and historical contributions while acknowledging the essential roles these countries play in the world today.

China, with over a billion people, and Japan, with its unparalleled economic progress, have been 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

language as vital for their effectiveness in an increasingly international marketplace. Students at Grand Valley majoring in 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 having Japanese or Chinese 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 National Chengchi University in Taipei, Taiwan, or at the East China University of Science and Technology in Shanghai, China. Consult the Office of International Affairs 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 and the Chinese Association of West Michigan, along with student groups such as the Asian Pacific Islander Student Organization (APISO) 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, 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

In addition to the above required courses, students will choose nine credit hours of elective courses from the following list:

ENG 204 Mythology (when taught by EAS faculty)
 GPY 354 Geography of Asia
 HST 333 Survey of Modern Chinese History
 PLS 283 Comparative Politics: China and Japan
 EAS 380 Special Topics
 EAS 399 Independent Study

Current and potential special topics include: 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.

Economics

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 334 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 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. 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, namely, Confucian, Taoist, Buddhist, and Shinto. Prerequisite: 201 or junior standing. Three credits. Offered winter semester of odd-numbered years.

EAS 380 Special Topics in East Asian 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 fall semester of even-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: Gonca, Reifel, Singh; Assistant Professor: Sicilian, Simons, Thorsnes.

The economics program, part of the Seidman School 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 either a B.S. or a B.A. degree. Completion of the B.A. degree requires demonstrated third-semester proficiency in a foreign language. Majors must complete 30 hours of economics, including Economics 210, 211, 312, 313, and a senior-level capstone course, Economics 495. 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, they can

take either SS 300 Research Methods in Social Sciences or STA 216 Intermediate Applied Statistics.

Since economics is a department in the Seidman School of Business, economics majors must achieve a 2.5 minimum cumulative grade point average and a 2.5 minimum GPA in all economics courses. If their cumulative GPA falls below 2.5, they will not be permitted to take additional 300- and 400-level economics courses. However, such students may repeat 300- and 400-level Seidman economics courses for which they received a low grade.

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.

Economics minors are required to complete at least 21 hours in economics, including Economics 210 and 211.

Social studies group majors who choose an emphasis area in economics should make their economics course selections with the advice of the Economics Department.

Career Opportunities

Competence in economic analysis is a good preparation for work in private enterprise, non-profit firms, and government. It is recognized as an excellent preparation for M.B.A. and law programs.

Suggested Curriculum (first two years)

First Year	
First Semester	Second Semester
ENG 150 Strategies in Writing	PHI 103 Logic
MTH 110 Algebra	General Education course
General Education course	Social Sciences course
Science course	STA 215 Introductory Applied Statistics
Elective (or foreign language)	Elective (or foreign language)
17	15

Second Year	
First Semester	Second Semester
Humanities/Arts course	Humanities/Arts course
ECO 210 Introductory Macroeconomics	Elective
STA 216 Intermediate Applied Statistics or SS 300 Research Methods in Social Science	ECO 211 Introductory Microeconomics
Elective (or foreign language)	General Education course
Elective	Elective (or foreign language)
15	15

Courses of Instruction

ECO 100 Current Economic Issues. Examination of a series of current social issues from an economic perspective, such as drugs, rent control, environmental pollution, poverty, crime, traffic congestion, and the distribution of medical care. Especially recommended for students who do not plan to take additional work in economics. General education course SS/B. Offered fall and winter semesters. Three credits.

Economics

ECO 200 Business Economics. Principles of micro and macroeconomics are employed to analyze a wide range of business issues. Topics include: analysis of demand and market pricing strategies; analysis of supply and production costs; profit maximization of firms in different types of markets; influence of monetary and fiscal policy on business cycles. 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. 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. 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 315 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 employee compensation; cost-benefit analysis of investment projects. Prerequisites: 211 or 200. Three credits. Offered every other year.

ECO 345 Environmental and Resource Economics. Introduction to market and government influences on environmental and natural resources. Topics include: trends in land development and land-use policies, relationship between land use 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. 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 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. 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, 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. 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). Research project in conjunction with a seminar where student projects are discussed with economics faculty and representatives from other social sciences. Faculty research and general perspectives on the nature of economics are also included in seminar discussions. Prerequisites: 312, 313, and Statistics 216. 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, cumulating in a written and oral report. One to four credits. Offered fall and winter semesters.

ECO 542 Economic Reasoning. An examination of economic concepts, principles, definitions, and relationships. Designed to provide analytical micro and macroeconomic techniques and concepts necessary to reason from an economic point of view. Prerequisite: MTH 110. Three credits. Offered fall and winter semesters.

ECO 615 Business and Economic Forecasting. Econometric applications of data collection, analysis, and forecasting to economic and business problems. Topics include time-series analysis, multiple regression, economic modeling, and research applications. Prerequisite: 542, BUS 561 and 562 or equivalents. Three credits. Offered every other winter semester.

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: 542 and BUS 601, or equivalents. Three credits. Offered fall and winter.

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

Education

reduce the risk inherent in business cycles. Prerequisites: 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 SSB 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: 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 the students and faculty interests. Consult the current schedule of classes for details. Prerequisite: Approval of instructor. Three credits.

The School of Education (ED)

Dean: Hagerty; Assistant Dean: Mader, Professors: Armstrong, Cross, Grant, Herrera, Jackson, Konecki, Lazarus, Mack, Ten Eyck. Associate Professors: Abramson, Chattulani, Hagerty, King, Osmun, Pottorff, Price, Wissink, Wochholz. Assistant Professors: Bair, Chlebo, Fisher, Latif, McCrea, Miller, Pryor, Reinken. Visiting Instructors: Hollums, Litherland, O'Connell, Remenap, Storey, Victor, Widdis, Worman. Admissions and Placement Coordinator: Harrison; Certification Coordinator: Eikenberry. Urban Teacher Preparation Program Coordinator: Perkins. Professional Development Coordinator: Stockman.

The School of Education is an upper-division and graduate unit.

The School of Education undergraduate division offers programs leading to the bachelor's degree and Michigan Provisional Certification. Certification is available in elementary general education, secondary general education, or elementary education with special education endorsement.

The School of Education graduate division offers the Master of Education degree (M.Ed.), Michigan Provisional and Professional Certification, certification renewal and programs leading to approvals, endorsements, and professional development.

The Undergraduate Program

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 the School of Education and from subject area concentrations teach courses and seminars in educational philosophy and psychology, methods and materials, and school organization and management.

Advising

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 School of Education. Students will have two advisors: a major advisor in the student's teaching major and an education advisor who will be assigned upon admission to the professional program. Transfer students follow the same dual advising process. Students are also welcome to

consult with education faculty prior to admission. Students should discuss career and employment opportunities with their advisors and with the university career center. Candidates should also review policies in the *School of Education Student Handbook*, available in the GVSU Bookstore.

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 School of Education to request background materials and register to attend one of the regularly scheduled information meetings.

Application Procedures

Deadlines for application to the School of Education are: September 15 for winter admission and field placement; February 1 for fall admission and field placement. Application packets are available in the School of Education.

Packets must be complete at the time of application unless otherwise noted. Preference will be given to those who have completed all requirements by the time of application.

Students who postpone admission must reapply and compete with the total application pool at the time of their reapplication.

Students should apply during the semester before they expect to do their first field placement (Education 303, 307, 351, 362), except for the following:

1. Music majors should apply the semester before student teaching. Beginning with Winter 1998 applicants, music majors must also apply before and complete Teacher Assisting.
2. Hearing-impaired program candidates must apply during winter semester.
3. Secondary modern language majors must apply during winter semester.
4. Elementary art and physical education majors must also apply for and take the accompanying Education 307 subject area seminar. This provision takes effect for elementary music education majors beginning with Winter 1998 applicants.

Minimum Admission Criteria

In order to maintain high-quality instruction, the School of Education limits the number of students accepted into its program. Achievement of the minimum criteria does not guarantee admission. The average GPA of applicants for the last several semesters exceeds 3.0.

In keeping with National Council for the Accreditation of Teacher Education (NCATE) guidelines and faculty resources to supervise students in field placements, the School of Education will admit approximately 130 new students from the pool of qualified applicants to its programs each of the fall and winter semesters only. As a unit granting secondary admission, admission requirements are those which 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. A minimum 2.8 GVSU grade point average overall and in the major and minor. English, English/language arts and art education require a 3.0 major grade point average. Achievement of the minimum standard does not guarantee admission.

Education

- Michigan Basic Skills Test. Acceptable test scores in reading, writing and mathematics as established by the Michigan Department of Education. Students may take the test during the semester of application, but preference will be given to applicants who have completed the test and received scores prior to application.
- Prerequisite Courses may be in progress during the semester of application, but preference will be given to candidates who have completed the requirement at the time of application.

SOE applicants before or during Fall, 1997:

- ED 200 or 300, Introduction to Education, with B- or better.
- PSY 301, Child Development, with B- or better.
- ENG 308, Teaching Reading (elementary general education).
- MTH 221 or 222 or 223, Mathematics for Elementary Teachers I or II or III (elementary general education; for special education, not required until time of application for general education student teaching).

SOE applicants during or after Winter, 1998:

- ED 200 or 300, Introduction to Education, with B- or better.
- ED 225, Diversity in Education, with B- or better.
- CS 205, Computers in Education, with B- or better.
- PSY 301, Child Development, with B- or better.
- PSY 325, Psychology Applied to Teaching, with B- or better.
- ENG 308, Teaching Reading (elementary general education).
- MTH 221 or 222 or 223, Mathematics for Elementary Teachers I or II or III (elementary general and special education).
- Preprofessional Teacher Perceiver Interview. Appropriate commitment and interpersonal skills as demonstrated by interview scores of 27 or above (Predictive or High Predictive ranges). Candidates with lower scores will have the opportunity for further self-assessment, but program application may be delayed. Interviews should be scheduled a semester or two prior to application.
- Positive Recommendations. One from the major advisor/department; another from an individual who can address the candidate's ability as a prospective teacher.
- Experience. Documentation of 25 hours of experience with children or youth. The experience must be with the age group for which the applicant intends to seek certification. This would rule out, for example, volunteering in the university tutoring center. Special education candidates must have volunteer experience, which must be with handicapped persons, e.g., camp experience, Special Olympics, respite care. For additional options, contact Volunteer GVSU.
- Academic Progress. Completion of 60 semester credits and progress in major course work.
- University Basic Skills. Completion of university course requirements or test equivalents in English 150 and Mathematics 110 or 115.
- TB Test Report. Must be negative and current.
- Felony Conviction Statement. Review procedures for those convicted of a felony or certain misdemeanors are available from the School of Education.

Conviction may cause the candidate to be denied for admission, field placement, or final certification.

11. Copies of degree analysis and current course listings.
12. Three copies of current resume.

All admissions decisions will be rendered by the Dean of the School of Education based on recommendations from the faculty.

Requirements for Field Placement

Teacher Assisting/Pre-Teaching Education 303, (330/350), 307, (331), 351, (332), 362:

Upon admission to the School of Education, the student will be placed in Teacher Assisting or Pre-Teaching for the following semester, contingent upon an interview and acceptance by the school administrator. Students who postpone their entrance to the School after admission must re-apply as new applicants if they seek readmission. Field placements are 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 403, (430/480), 407, (431), 470, 471, 472). Placement requires the following:

1. Submission of completed application packet by September 15 for winter placement, February 1 for fall placement.
2. Completion of Teacher Assisting or Pre-Teaching with grades of B- or better and positive recommendations.
3. Continued 2.8 grade point average overall and in the major, minor and professional sequence.
4. Completion of or current enrollment in Mathematics 221 or 222 or 223 by special education candidates. Completion of Education 304 and Psychology 325 by music majors. (Note new requirements for SOE applicants during or after Winter, 1998.)
5. Interview and acceptance by school administrator.

Students must inform the Admissions and Placement Coordinator 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. Grade point average 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.
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.

Reading Requirement

Candidates recommended for Michigan Provisional or Professional Certification must show six credits in reading methodology for elementary certification, three credits for secondary certification. English 308 and Education 320 satisfy elementary requirements; Education 321 satisfies secondary requirements. Elementary special education candidates may substitute Education 460, 495, and 496 (a total of nine semester credits) in place of English 308, but not in place of Education 320.

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. Art, 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 twelve majors approved by the State of Michigan at Grand Valley State University are listed below. Specific requirements for each major are outlined in this catalog and must be planned with the major advisor.

Humanities: Art for K-12, English, English/Language Arts (Group Major) French, Spanish, Music for K-12. *Science and Mathematics:* Biology, Science (Group Major), Mathematics, Physical Education for K-12. *Social Sciences:* History, Social Science (ceases after 1997), 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.

- ENG 308 Teaching Reading: The Necessary Skills.
- MTH 221 and MTH 222 or MTH 223, Mathematics for Elementary Teachers I and II or III. (Note: Students who entered GVSU prior to Fall 1996, need complete only one of these courses.)

Also select one from each of the following except the major area:

- Fine Arts:* Art 230 or Music 350.
- Language Arts:* English 219, 309, 310, or any foreign language.
- Physical Education/Theater:* Physical Education 305 or Children's Theater 366.
- 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, Physics 201, Geology 201.
- Social Science:* Economics 210, 211, History 105, 106, 107, 108, Political Science 102, Sociology 280 or Geography 235.

3. Professional Program—Elementary Certification.

Candidates must complete the following 34–39 credit program. At least one field semester must be done in a multicultural setting.

- ED 200 or 300 Introduction to Education.

- b. ED 225 Diversity in Education (SOE applicants Winter 1998 or later), ED 304 Mainstreaming in the Public Schools (SOE applicants Fall 1997 or before).
- c. CS 205 Computers in Education (or CS 205, 2 cr. and ED 305, 2 cr.).
- d. PSY 301 Child Development.
- e. PSY 325 Psychology Applied to Teaching.
- f. ED 303 or 330/350 Elementary Teacher Assisting. Art and physical education majors (and music majors beginning with Winter 1998 SOE applicants) also take the ED 307 or 331 seminar.
- g. ED 310 Managing Classroom Environments (GV entrants Fall 1996 or later).
- h. ED 320 Materials and Methods in Elementary Reading.
- i. ED 403 or 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. Art, music, physical education, and computer science majors are endorsed K-12 in their major. In addition to degree requirements, candidates must complete the following areas:

1. Teaching Major—Secondary Certification.

The 16 majors approved by the State of Michigan at GVSU are listed below. Specific major requirements are outlined in this catalog and must be planned with the student's major advisor.

Humanities: Art for K-12, English, English/Language Arts, French, German, Spanish, Music for K-12. *Science and Mathematics:* Biology, Chemistry, Computer Science for K-12, Geology/Earth Science, Mathematics, Physical Education for K-12, Physics.

Social Sciences: History, Social Science (ceases after 1997), Social Studies.

2. Teaching Minor—Secondary Certification.

The nineteen minors 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: Art, English, French, German, Music, Spanish. *Science and Mathematics:* Biology, Chemistry, Computer Science, Geology/Earth Science, Health Science, Mathematics, Physical Education, Physics. *Social Sciences:* Economics, Geography, History, Political Science, Psychology, Sociology.

3. Professional Program—Secondary Certification

Candidates must complete the following 34–39 credit program. At least one field semester must be done in a multicultural setting.

- a. ED 200 or 300 Introduction to Education.
- b. ED 225 Diversity in Education (SOE applicants Winter 1998 or later), ED 304 Mainstreaming in the Public Schools (SOE applicants Fall 1997 or before).
- c. CS 205 Computers in Education (or CS 205, 2 cr. and ED 305, 2 cr.).
- d. PSY 301 Child Development.
- e. PSY 325 Psychology Applied to Teaching.
- f. ED 307 or 331 Secondary Teacher Assisting.
- g. ED 310 Managing Classroom Environments (GV entrants Fall 1996 or later).

Education

- h. ED 521 Reading in the Content Area.
- i. ED 407 or 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 eighth 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 psychology advisor 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 multi-cultural setting.

1. Psychology/Special Education Major.

The 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 Mental Hygiene
- PSY 304 Psychology and Education of the Exceptional Child
- PSY 303 Abnormal Behavior
- PSY 325 Psychology Applied to Teaching
- PSY 452 Counseling: Theories and Application
- ED 351 (332) Special Education Pre-Teaching
- ED 361 Principles, Processes and Methods in Special Education
- ED 495 Diagnostic and Interpretive Procedures
- ED 496 Remedial Procedures

2. Elementary Teaching Minor.

The elementary teaching minor develops teaching competencies across the curriculum. It consists of the following courses:

- ED 200 or 300 Introduction to Education
- ED 320 Materials and Methods in Elementary Reading
- ED 460 Language and Reading Development
- MTH 221 and MTH 222 or MTH 223 Mathematics for Elementary Teachers I and II or III. (Note: Students who entered GVSU prior to Fall 1996, need complete only one of these courses.)
- ART 331 Art in Special Education
- SOC 280 Social Problems
- CS 205 Computers in Education (or CS 205, 2 cr. and ED 305, 2 cr.)

3. Professional Program/Special Education Endorsements.

The professional program includes student teaching in general elementary education and completion of two of the following three special education endorsement areas. Successful completion of ED 403 (430/480) is prerequisite to any special education student teaching.

- ED 225 Diversity in Education (SOE applicants winter 1998 or later)
- ED 310 Managing Classroom Environments (GV entrants fall 1996 or later)
- ED 403 (430/480) Elementary Student Teaching

Teaching the Mentally Impaired:

- PSY 326 Mental Retardation
- ED 461A Curriculum for Special Education: Mentally Impaired

ED 471 Directed Teaching: Mentally Impaired
 ED 496A Remedial Procedures: Mentally Impaired

Teaching the Emotionally Impaired:

PSY 310 Behavior Modification
 ED 461B Curriculum for Special Education: Emotionally Impaired
 ED 472 Directed Teaching: Emotionally Impaired
 ED 496B Remedial Procedures: Emotionally Impaired

Teaching the Hearing Impaired:

ED 352 Language and Communication
 ED 362 Preteaching, Hearing Impaired
 ED 450 Audiology and Anatomy of Speech and Hearing Process
 ED 461C Curriculum for Special Education: Hearing Impaired
 ED 470 Directed Teaching: Hearing Impaired
 ED 496C Remedial Procedures: Hearing Impaired

The Graduate Program

The graduate program of the School of Education offers the Master of Education degree (M.Ed.), Michigan Provisional Certification, Michigan Professional Certification, Michigan Administrator Certification, and programs leading to certificate renewals, certificate endorsements, special education approvals, and professional development. In addition, the School of Education offers graduate courses in secondary, adult and higher education in the following concentrations: Biology, English, History, Mathematics, and College Student Affairs Leadership.

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 three major areas: general education, reading, and special education. Most graduate program faculty have offices in the Eberhard Center in Grand Rapids.

Areas of Emphasis

Master of Education (M.Ed.). To obtain the M.Ed., students must successfully complete the university requirements for a graduate degree, the School of Education's foundations requirements, and the requirements in one area of emphasis under a degree area (General Education, Reading, or Special Education).

Emphasis areas in General Education include: Early Childhood Education, Educational Leadership, Educational Technology, Elementary Education, Gifted and Talented Education, Secondary, Adult and Higher education, and Secondary, Adult and Higher Education with concentration in English, Mathematics, History, Biology, or College Student Affairs Leadership.

Emphasis area for the M.Ed. in Reading is Reading Language Arts.

Emphasis areas within Special Education include: Learning Disabilities, Special Education Administration, and Preprimary Impaired.

Certification, Endorsement, Approval and Emphasis Programs. Programs are also available in the following areas:

1. Michigan Provisional Certification
2. Michigan Professional Certification
3. Early Childhood, Elementary, Middle School and Secondary Endorsement.
4. Reading Endorsement: Elementary, K-12.

Education

5. Library Science Endorsement: K-12.
6. Special Education Endorsement: Learning Disability, Emotional Impairment, Mental Impairment, Pre-Primary Impairment.
7. Administration: Elementary, Secondary, Central Office, Superintendent.
8. Subject area majors and minors, usually at the undergraduate level.
9. 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 School of Education 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 at least one calendar year (elementary) or one academic year (secondary). 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 grade point average of 3.0 or higher for the final 60 semester credits.
2. Possession or completion of a teachable major with a grade point average 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 volunteer experience with children or youth.
6. Personal interview.
7. Negative TB test report.
8. Signed statement regarding criminal activity.
9. Completion of EDG 618 or CS 205 or competency test (Microcomputers in Education).
10. Admission to M.Ed. degree-seeking status.
11. Completion of application materials for graduate teacher certification program.

Candidates will be eligible for Michigan Provisional Certification after they successfully complete course work, maintain a 3.0 grade point average, 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. Admission

In addition to the requirements listed in the Admissions section of the catalog, applicants must have an undergraduate GPA of 3.0 or higher calculated on the last 60 credits of undergraduate work taken from a regionally accredited college or university. Applicants must submit an application essay on a current issue in education, three professional or academic recommendations on designated forms, and copies of teaching and/or administrative certificates or equivalents. (Note: Graduate Teacher Certification and College Student Affairs Leadership do not require the teaching certificate. Others will be considered on an individual basis.)

Applicants with less than a 3.0 grade point average 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, or outstanding performance in specified courses.

Admissions decisions will be made by the Dean of the School of Education, based on recommendations of the faculty.

The Master of Education program is designed for students who have a teaching certificate and are working in the field. Individual consideration, however, will be given to applicants who are not certified but whose career goals and objectives are consistent with our programs.

Academic Policies. All students seeking a degree, certification, additional endorsement, special education approval, or a change in certification status must establish a planned program of professional study with a School of Education advisor which specifies program objectives, competencies, and course requirements. Degree candidates must complete the degree within eight years from the first GVSU course. A maximum of nine credits may be transferred toward the degree from other institutions. A maximum of 12 credits earned under non-degree status may be applied toward the degree. A 3.0 grade point average must be maintained by applicants for degree, endorsement or approval. Endorsement, approval and professional certification programs require that at least half the credits be earned at GVSU. Individuals who have been convicted of 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 *SOE Policies and Procedures*, available in the graduate office.

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. Students are urged to partially satisfy program requirements by enrolling in a course designed to expand their appreciation for multicultural education and/or education of minority or handicapped students.

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:

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. Degree requirements, in addition to the foundation courses, include EDG 610, 611, 612, 613, EDS 646; one course from either EDS 647 or ED 634; one elective course; and EDG 695A. Students desiring only

Education

the ZA, or early childhood education additional 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 grade point average.

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. In addition to the foundation courses, there are seven required courses: EDG 685E, or EDG 685I or EDG 685G or EDG 685H, EDG 665, 666, 668, 669, 670, and 695E. 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 secondary schools. Content of the program includes the educational applications of microcomputers, CD-ROM, videodiscs, and other related technologies. Courses concentrate on hardware and software, software evaluation, instructional materials acquisition and utilization, managerial use of technology, and media center development management. Students may choose between two degree 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, concentration in School/Library Media Services with endorsement in K-12 Library Science include, in addition to the foundations courses, ED 630, EDG 618, 619, 621, EDR 624, EDG 622, 623, 624, 625, 685J, and 695E. Students seeking only the K-12 Library Science endorsement complete ED 630, EDG 618, 619, 621, EDR 624, EDG 622, 623, 624, 625, and 685J. Endorsement candidates must also pass the Michigan Competency Test in Library Science and maintain a 3.0 grade point average.

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 35 semester hours. Degree requirements, in addition to the foundation courses, include ED 630, EDR 622 and EDG 611; two courses from the following: ED 633, EDG 630, 631, 641, 667, EDR 621, 624, 628, and EDS 637; two electives/workshops, and EDG 695C. Candidates in the Elementary Certification Concentration must be formally admitted to the program and complete 36 credits: ED 650, 652, EDG 610, 630, 631, 632, 685A, EDR 622, 627, EDG 601 or EDR 624. Candidates must also maintain a 3.0 grade point average 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, EDG 695C.

Gifted and Talented. This program prepares 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. Degree requirements include, in addition to the foundation courses: ED 630, EDG 640, 641, 642, 685C, two electives/workshops; and EDG 695D).

Secondary, Adult, and Higher Education. This program is designed primarily for teachers who wish to develop their skills and competencies in teaching secondary and adult students and for individuals who wish to enter student affairs administration in higher education. The program is also useful for those interested in learning about secondary, adult and higher education. Students are required to complete a minimum of 33 semester hours. Degree requirements, in addition to foundation courses include four courses in the major area (ED 630, 633, EDG 641, 648, 649, 650, 671, and EDR 623), three electives/workshops; and EDG 695E. Candidates in the Secondary Certification Concentration must be formally admitted to the program and complete 24 credits: ED 650, 652, EDG 601, 610, 685B, EDR 623. Candidates must also maintain a 3.0 grade point average, possess or complete a secondary teachable minor, and pass the Michigan Subject Area test in the minor. Completion of 18 additional credits will fulfill M.Ed. degree requirements: two remaining foundations courses, EDG 695E, and three approved electives.

Emphasis requirements change to permit subject matter concentrations. Concentrations in **Biology, Mathematics, English, and History** require the education foundations, ED 630, EDG 695E, and an education course selected from ED 633, EDG 641, 648, 649, 650, 671, and EDR 623, plus 15 semester hours in the selected subject area approved by the subject area and education advisors. A concentration in **College Student Affairs Leadership** requires the education foundations, EDG 648, 649, and 695, plus 18 semester hours in the concentration area (EDG 651, 652, 653, 654, 655, and 685) and six semester hours of electives.

See course listing for subject matter concentrations under **Biology, Mathematics, English, and History**. Other subject matter options are being developed. Please consult with an advisor for further information.

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. Degree requirements, in addition to the foundation courses, include all of the following: EDR 621, 622 or 623, 624 and 628. In addition, students must take at least two courses from the following: ED 631, 633, EDG 641, EDR 626, 627, 685A, EDS 637, one elective; and EDR 695.

K-12 Reading Endorsement

The K-12 reading endorsement is a 30-semester-hour program leading to state certification in reading at the elementary, middle, and high school levels. It will enable the bearer to be employed as a school reading consultant/teacher consultant, to teach in special remedial or developmental programs, and to teach reading as a special subject. The K-12 endorsement may be added to either the

Education

elementary or secondary certificate. Requirements include the following: EDR 621, 622, 623 or 627, 624, 626, 628, 685A, and EDR 695. In addition, students must take at least two courses from the following: ED 631, 651, 652, 653, 661, 670, 672, EDG 641, and EDS 637. Optional elective courses may be substituted with advisor approval. Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Elementary Reading Endorsement

The elementary reading endorsement is a 21-semester-hour program leading to state certification in reading in the elementary school. It will enable the bearer to be employed as an elementary school reading consultant/teacher consultant and to teach in special remedial or developmental programs. The elementary endorsement may be added only to an elementary certificate. Requirements include the following: EDR 621, 622, 624, 626, 628, and 685A. In addition, students must take at least one course from the following: ED 631, EDR 623, 627, and EDG 641. Optional elective courses may be substituted with advisor approval. Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

M.Ed. — Special Education

Grand Valley's graduate division requires teachers applying for entrance into the graduate special education program to hold at least one endorsement in special education or to elect a dual endorsement program leading to the completion of two endorsements in special education.

Applicants who wish to be admitted to the graduate special education program must possess a valid 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 course work, including research applications.

Learning Disabilities (elementary level, K-8). Degree requirements, in addition to the foundation courses, are: EDS 636, 637, 638, and 640; nine semester hours of course work from the following: EDS 626, 627, 628, 666, 670, EDG 618, 619, or other options with advisor approval; EDS 685H (6 credits); and the capstone course EDS 695A. Students seeking elementary L.D. endorsement only complete the following: ED 653, EDS 636, 637, 638, and 640; graduate six credit hour practicum EDS 685H; and nine semester hours of course work selected from the following: EDS 626, 627, 628, 666, 670, EDG 618, 619, or other options with advisor approval. Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Learning Disabilities (secondary level, 7-12). Degree requirements, in addition to the foundation courses, are EDS 627, 629, 636, 639, and 640; six semester hours of course work from the following: EDS 626, 628, 666, 670, EDG 618, 619 or other options with advisor approval; EDS 685I (6 credits); EDS 695A. Students seeking secondary endorsement only, complete the following: ED 653, EDS 627, 629, 636, 639, 640, 685I (6 credits), and nine semester hours of course work selected from

the following: EDS 626, 628, 637, 666, 670, EDG 618, 619, or other options with advisor approval. Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Preprimary Impaired Program (ZA/PPI). The Preprimary Impaired Program (PPI) 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, degree requirements include: EDS 647, EDG 610, 611, 612, 613, EDS 646; 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 460, or equivalent). Students seeking recommendation for the ZA/PPI approval must complete the following program requirements, for a total of 24 semester hours: EDG 610, 611, 612, 613, EDS 646, 647, ED 634, EDS 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 grade point average.

Special Education Administration (M.Ed.). Students may select either a special education M.Ed. program and/or an approval program for special education supervisor or director. Successful completion of this program can also lead to central office administrator certification.

Students wishing to complete the M.Ed. in special education administration must take the following, in addition to foundations courses: EDS 665, 666, 667, 675, EDG 668, 670, EDS 685 A, EDS 695 C, and three credits from EDS 668, 669, 670, 673, 674.

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's approval program requires successful completion of ED 670, EDS 665, 666, 667, 668, 669, 670, 673, 675, EDG 668, 670, EDS 685A, passing of the supervisor's competency exam, and a minimum 3.0 grade point average.

The special education director's approval program includes all courses in the special education supervisor's program plus EDS 671, 672, EDG 669, six credits of EDS 685B, director's competency exam, and a minimum 3.0 grade point average.

Special Education Single Endorsement Options. Teachers who already hold one endorsement in special education may elect to add endorsement in the areas of Elementary Emotional Impairment, Secondary Emotional Impairment, or Elementary Mental Impairment. (For LD endorsement and PPI approval programs, see sections above.)

Emotional Impairment (elementary level, K-8). Students seeking elementary EI endorsement complete the following: Prerequisites are Introduction to Education, Child Development, Psychology of the Exceptional Child, and EDS 550 or equivalents. Required courses include: ED 650 or PSY 310, PSY 303 or SW 622, ED 660, 661, EDS 610, 636, 638, two electives from: ED 653, EDS 628, 637, EDG 618; and EDS 685C. Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Emotional Impairment (secondary level). Students seeking secondary level endorsement complete the following: Prerequisites are Introduction to Education,

Education

Child Development, Psychology of the Exceptional Child, and EDS 550 or equivalents. Required courses include: ED 650 or PSY 310, PSY 303 or SW 622, ED 660 or 661; EDS 610, 611, 627, 629, 636 and EDS 685C. Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Mental Impairment (elementary level, K-8). Students seeking elementary level endorsement complete the following; Prerequisites are Mental Retardation, School Learning, Psychology of the Exceptional Child, ED 661 or EDG 611, EDG 610 or Child Development, and EDS 550, or equivalents. Required courses include: EDS 601, 618, 620, ED 634, EDS 685E or 685F. Candidates adding a new endorsement must pass the Michigan Subject Area Test.

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. Students take EDS 638 and 686 for a total of 15 semester hours. Interns may apply 15 hours of credit, generated from this internship, to the L.D. master's degree program. Students involved in the master's level internship program will be required to complete an additional 24 hours of course work, planned with an advisor, for the master's degree program in learning disabilities.

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 GVSU faculty in order to be accepted as intern teachers. Students must pay tuition and fees for this program.

Elementary and Secondary Special Education Dual Endorsement Retraining Programs 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. Special education differs by level (elementary or secondary*) and endorsement or approval (LD, EI, PPL, MI).

Students must select both the level and two endorsement areas they desire and have a planned program prepared by an advisor. Students are advised to take ED 652, EDS 636 if required, and EDS 550 first. To be admitted to the following dual sequences, the applicant must possess a valid Michigan teaching certificate and have completed at least one year of successful classroom experience in a public school.

Students entering this program are advised that their initial special education practicum must be successfully completed during the regular school year, for a minimum of ten weeks, under an appropriately endorsed supervising teacher. It will not be possible to complete the initial program in a summer placement that is less than ten weeks. It will be possible to complete EDS 550 (Preteaching) and the second EDS 685 in a summer experience, if such placements are available.

*K-12 special education endorsements are currently under state board consideration. Students should consult with their advisors for further information.

Students must have all prerequisite course work completed and meet practicum application deadlines.

Students in this program must apply and be accepted as degree-seeking students no later than the completion of 12 semester hours, even though this program need not lead to a master's degree.

Mental Impairment and Learning Disabilities—Elementary. Prerequisite: PSY 301. Courses include PSY 326, EDS 601, ED 652, 653, 661 or EDG 611, EDS 618, 636, 637, 638, 640, EDS 550 (6 credits), ED 634, EDS 685E (6 credits), EDS 685H (6 credits). Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Mental Impairment and Emotional Impairment—Elementary. Prerequisites: PSY 301, 326. Courses include PSY 303 or SW 622, EDS 601, ED 650 or PSY 310, ED 652, 653, 661, EDG 611, EDS 610, 618, 636, 638, 550 (6 credits), ED 634, EDS 685E (6 credits), EDS 685C (6 credits). Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Emotional Impairment and Learning Disabilities—Elementary. Prerequisites: ED 300 and PSY 301. Courses include ED 653, PSY 303 or SW 622, PSY 310 or ED 650, 652, 660 or 661, EDS 610, 636, 637, 638, 640, 550 (6 credits), 685C (6 credits), 685H (6 credits). Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Emotional Impairment and Learning Disabilities—Secondary. Prerequisites: ED 300 and PSY 301. Courses include ED 650 or PSY 310, 652, 653, 660 or 661, EDS 610, 611, 627, 629, 636, 639, 640, 550 (6 credits), PSY 303 or SW 622, EDS 685I (6 credits), 685D (6 credits). Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Preprimary Impaired and Emotional Impairment—Elementary. Prerequisites: Elementary certification, EDS 637 or equivalent. Courses include: PSY 310 or ED 650, 652, 660 or 661, EDS 610, 636, 638, 647, 550 (6 credits), EDG 610, 611, 612, 613, EDS 646, 685C and 685J, PSY 303 or SW 622. Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Preprimary Impaired and Learning Disabilities—Elementary. Prerequisite: Elementary certification. Courses include: ED 652, 653, EDS 636, 637, 638, 640, 647, 550 (6 credits), EDG 610, 611, 612, 613, EDS 646, 685H (6 credits) and 685J (6 credits). Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Preprimary Impaired and Mental Impairment—Elementary. Prerequisites: Elementary certification, PSY 326, EDS 637 or equivalent. Courses include: EDS 601, ED 652, 653, EDS 618, 647 550 (6 credits), EDS 620, EDG 610, 611, 612, 613, 646, ED 634, EDS 685E (6 credits) or 685F (6 credits), and 685J (6 credits). Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

Michigan Professional Certification

Candidates for Michigan Professional Certification must fulfill the following:

1. Hold a Michigan Provisional Certificate.
2. Teach successfully for three years after the issuance of the provisional certificate and according to its validity.

Education

3. Show evidence of course work 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.

Applying for Certification and Endorsements. Candidates should make application with the Records Office at the beginning of the semester 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.

Validity of Professional Certification. 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 Professional Certification need not be in a planned program but must be taken at an approved education institution.

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 School 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 course work 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 School 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

Elementary endorsement candidates must complete the elementary teaching minor, computer education technology, six credits in elementary reading methods, and a six credit supervised general elementary field experience, and pass the Michigan Elementary test.

Secondary endorsement candidates must possess or complete a secondary teaching major or minor, pass the Michigan Subject Area Test if adding endorsement, computer education technology, three credits in secondary reading methods, and a six-credit supervised secondary field experience.

Middle school endorsement candidates must complete a teaching major or minor, appropriate subject area tests if applicable, and course work in middle school education, middle level student development, middle level methods and materials, appropriate reading methodology, and a supervised middle level field experience. (Middle school endorsement permits the holder to teach major and/or minor subjects in grades five through nine.)

Option 4. Professional Development.

Candidates choosing an 18-credit professional development program should choose courses from the following areas and plan their program with the School of Education Certification Coordinator:

- a. Courses in subject matter related to the applicant's teaching major or minor.
- b. Courses in professional education such as administration, curriculum, guidance, methods, etc.

No more than one elective course outside of the above areas may be taken without advisor approval.

Reading Requirement

All candidates for provisional or professional certification must show evidence of course work in reading methods. It is recommended that students have their School of Education advisor establish these courses when planning their official program of study if they have not yet met the requirement.

Candidates recommended for elementary provisional or professional certificates must have completed six semester hours in reading methods course work. Graduate courses that satisfy requirements for elementary teachers are EDR 621 and 622. Undergraduate courses that satisfy the reading requirement for elementary teachers are ENG 308 and ED 320.

Candidates recommended for secondary provisional or professional certificates must have completed three semester hours in methods of teaching reading. The reading requirement for secondary teachers may be satisfied by completing ED 321 at the undergraduate level or EDR 623 or 627 at the graduate level.

Candidates for certification in Special Education may substitute ED 460, 495 and 496 (nine undergraduate hours) or EDS 636, 637, and 638 (nine graduate hours) for ENG 308 or EDR 621 required for elementary provisional or professional certification.

Candidates for professional certification from institutions other than Grand Valley State should plan their course work with an advisor from the recommending institution, as course requirements may differ at the various institutions. Whereas the above reading courses have been approved by the State of Michigan for Grand Valley State, some institutions may not apply these courses to their planned program requirements.

Graduate Assistantships

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

Eligibility requirements include admission as a degree-seeking student and outstanding academic achievement. Priority will be given to those enrolled in more

Education

than six graduate credits. Applications and further information on eligibility requirements are available from the graduate office in the School of Education.

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 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. Three credits. Offered fall and winter semesters.

ED 303 Methods and Strategies of Teaching—Elementary Teacher Assisting. Half-day experience as a teacher assistant and four hours of weekly seminars. The seminars compare a variety of methods of teaching, planning instruction, and classroom management. Prerequisites: Admission to the School of Education and Assistantship, ENG 308 and MTH 221 or 222 or 223. Students seeking K-12 endorsement in art, music and physical education must take content seminars concurrently. Taken concurrently with ED 320. Six credits. Last offered Winter 1998.

ED 304 Mainstreaming in the Public Schools. A study of administrative and instructional procedures for integrating and maintaining handicapped students in the regular classroom setting. Specific roles and responsibilities of school personnel involved in the mainstreaming process are defined and discussed. Prerequisite: admission to the School of Education. One credit. Last offered Winter 1998.

ED 307 Methods and Strategies of Teaching—Secondary Teacher Assisting. Half-day experience as a teacher assistant and two two-hour weekly seminars. One seminar compares a variety of methods of teaching, planning instruction, and classroom management. The second is taken with the major field advisor and deals with methods and planning in the major. Prerequisites: Admission to the School of Education and Teacher Assisting. Taken concurrently with ED 321. Six credits. Note: Some major areas offer the ED 307 methods seminar only in alternate semesters. See your advisor and the information on the seminar in your area. Last offered Winter 1998.

ED 310 Organizing and Managing Classroom Environments. Current theory and methodology involved in establishing order and facilitating learning are 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: ED 200, PSY 301, admission to the School of Education. Taken concurrently with ED 320 or 321 (if general education), and 350/350 or 331 or 332. Three credits. Offered fall and winter semesters.

ED 320 Materials and Methods in Elementary Reading. Materials and sequence of reading curricula in elementary schools. Assists students in their ability to identify materials as to function, i.e., emergent literacy, vocabulary and comprehension development, word analysis, and content skills. Includes lectures, discussion, practicum, and workshop. Prerequisite: admission to the School of Education. Three credits. Offered fall and winter semesters. To be taken concurrently with ED 310 and 303 (350/350) or with ED 405 (430/480) for special education students.

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 School of Education. Three credits. Offered fall and winter semesters. To be taken concurrently with ED 307 (351) and ED 310.

ED 330 Methods and Strategies of Elementary Teaching. Half-day field experiences as a teacher assistant in an elementary classroom for a minimum of twelve weeks; additional weeks provided for professional development and training to total fifteen weeks. Includes a two hour weekly seminar covering content area methodology and instructional strategies.

Prerequisites: admittance to School of Education. Corequisites: ED 310, 320, 350. Five credits. Offered fall and winter semesters. First offered fall 1998.

ED 331 Methods and Strategies of Secondary Teaching. Half-day field experiences as a teacher assistant in a secondary classroom for a minimum of thirteen weeks; additional weeks provided for professional development and training to total fifteen 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 School of Education. Corequisites: ED 310, 321. Six credits. Offered fall and winter semesters. First offered fall 1998.

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 twelve weeks, additional weeks provided for professional development and training to total fifteen weeks. Includes a two hour weekly seminar covering content area methodology and instructional strategies. Prerequisites: admission to School of Education. Corequisites: ED 310, 361, 460, 495. Six credits. Offered fall and winter semesters. First offered fall 1998.

ED 350 Current Practices in Elementary Education. Introductory workshops and presentations which 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 School of Education. Corequisites: ED 310, 320, 330. One credit. Offered fall and winter semesters. First offered fall 1998.

ED 351 Preteaching and Methods in Special Education. A 270-clock hour experience consisting of a minimum of 240 hours of field experience with exceptional children and 30 hours of course work in the theoretical foundation and methods of teaching M.I., E.I., L.D., and H.I. Prerequisites: admission to the School of Education and Preteaching. Co-requisites: ED 361, 460, 495. Six credits. Last offered Winter 1998.

ED 352 Language and Communication. Theoretical and practical aspects of the development and improvement of the hearing impaired learner's receptive and expressive language and communication skills. Use of various and combined modes of communication are introduced. Taken concurrently with ED 362, 450, 460. Prerequisite: admission to the School of Education in special education. Three credits. Offered fall semester only.

ED 361 Principles, Processes, and Methods in Special Education. Processes and methods involved in identification, assessment, placement, programming, instruction and evaluation of handicapped learning. Prerequisite: admission to the School of Education. Corequisite: 310, 460, and 495 (beginning fall 1998). Three credits. Offered fall and winter semesters.

ED 362 Preteaching, Hearing Impaired. 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 School of Education. Concurrent with ED 352, 450, 460. Six credits. Offered fall semester only.

ED 399 Special Topics in Education. Independent supervised study on selected topics which are not dealt with in depth in other courses. One to three credits. Offered upon sufficient demand.

ED 403 Student Teaching, Elementary. Full-time student teaching with a two-hour seminar each week. Prerequisites: Advancement to Student Teaching, and positive recommendations from prior field work; for special education students: 300, 351, 361, 495, 496 and MTH 221 or 222 or 223. Co-requisite: ED 320 for special education students or music majors. Twelve credits. Last offered Winter 1998.

ED 407 Student Teaching, Secondary. Full-time student teaching with a two-hour seminar each week. Prerequisites: Advancement to Student Teaching and positive recommendations from prior field work. Co-requisite: ED 321 for music majors. Twelve credits. Last offered Winter 1998.

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 field work. Corequisite: 320 (for special education). Ten credits. Offered fall and winter semesters. First offered fall 1998.

Education

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 field work. Twelve credits. Offered fall and winter semesters. First offered fall 1998.

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 audiological testing, and implications for classroom instruction. Prerequisite: admission to the School of Education. Co-requisite: ED 352, 362, 460. Three credits. Offered fall semester.

ED 460 Language and Reading Development. Study of materials and curricula for use in assisting the handicapped child in development of speech, language, reading, and writing. Prerequisite: admission to the School of Education. Corequisite: 310, 361, and 495 (beginning fall 1998). Three credits. Offered fall and winter semesters.

ED 461 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: admission to the School of Education, ED 403 and permission of advisor. Three credits. Offered winter semester. Section A: Mentally Impaired (to be taken concurrently with ED 471); Section B: Emotionally Impaired (to be taken concurrently with ED 472); Section C: Hearing Impaired (to be taken concurrently with ED 470)

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: ED 403 (430/480), and positive recommendations from prior field work. Co-requisite: ED 461C. Nine credits. Offered winter semester.

ED 471 Directed Teaching in Mental Impairment. Student teaching in a classroom with mentally impaired students with accompanying seminars on methods of teaching and the organization and development of curriculum for the mentally impaired. Prerequisites: ED 403 (430/480), and positive recommendations from prior field work. Co-requisite: ED 461A. Nine credits. Offered winter semester.

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 the emotionally impaired. Prerequisites: ED 403 (430/480), and positive recommendations from prior field work. Co-requisite: ED 461B. Nine credits. Offered winter semester.

ED 480 Professional Development in Teacher Education. Content area seminars and classroom issues. Topics include technology, diversity, collaboration, content area integration. Corequisite: 320, 430 (special education only). Two credits. Offered fall and winter semesters. First offered fall 1998.

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. Corequisite: 310, 361, and 460 (beginning fall 1998). Three credits. Offered fall and winter semesters.

ED 496 Remedial Procedures. Study emphasizing the use of remedial methods and materials for designing educational programs for exceptional students. Prerequisites: 351, 361, and 495. Three credits. Offered spring semester.

A. Mentally Impaired.

B. Emotionally Impaired.

C. Hearing Impaired.

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 (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 (ED 550-586) Content/Curriculum Workshops. Advanced-level workshops which provide 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 (ED 611) 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 (ED 618) 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 (ED 620) 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 (ED 689) 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 (ED 696) 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 (ED 694) Survey of Urban Education. Study of the historical, sociological, and educational bases of urban education.

ED 650 (ED 605) 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 which combine to complicate the problem. Three credits. Offered at least once a year.

ED 651 (ED 604) 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 (ED 606) 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 (ED 603) 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 (ED 608) 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, evaluation of existing practices, and the interpretation of major educational research studies. Three credits. Offered at least once a year.

ED 661 (ED 609) 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 (ED 613) 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 (ED 610) Current Issues in Education. Emphasis on investigation of current issues and trends in the administration of schools, school practice, school law, school finance, and

Education

other topics will be introduced. May be combined with ED 670. Three credits. Offered at least once a year.

ED 672 (ED 614) 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 (ED 588) Special Topics in Education. Study of selected topics in education. One, two, or three credits. Offered upon sufficient demand.

ED 685 (ED 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 of the appropriate program personnel. All practical will require seminars. Not to be used for initial certification. Three and six credits. Offered at least once a year.

ED 685A (ED 598L) Advanced Graduate Field Experience.

Candidates must apply separately to the School of Education by February 1 for summer and fall semesters and by September 15 for winter semester.

ED 699 (ED 699) Directed Readings. This course involves a research or reading project, program proposal, or other approved activity which 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.

General Education

EDG 599 (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.

EDG 600-601 (ED 550-586) Content/Curriculum Workshops. Advanced-level workshops which provide 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 (ED 657) 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 (ED 670) 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 (ED 660) 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 615 (ED 661) 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 (ED 684) Introduction to Microcomputers and Education. For teachers with little or no computing experience. Use of the microcomputer as an educational tool. Extensive hands-on experience in BASIC, LOGO, software evaluation. Use of computers in K-12 classrooms. Three credits. Offered at least once a year.

EDG 619 (ED 688) Classroom Uses for the Microcomputer. Advanced course for computer applications to education. The course focuses on computer products, human learning, content-area issues and computer-based activities. Prerequisite: EDG 618 or permission of instructor. Three credits. Offered at least once a year.

EDG 620 (ED 685) Courseware Development: Microcomputers and Education. Design, development, and evaluation of CAI courseware. Assessment of intended users and content; instructional design of text displays; use of graphics, animation, color, sound; user direction, and help sequences; question and feedback sequences; drill and practice, tutorials,

simulation and problem-solving. Prerequisite: EDG 618. Three credits. Offered at least once a year.

EDG 621 (ED 686) Topics in Educational Technologies. Concentrates on more advanced technologies in education. Video-related technologies as well as computer-related technologies are explored, and research results about their educational impact are presented and discussed. One to three credits. Offered at least once a year.

EDG 622-625 (ED 687) Topics in School Library/Media Services. Theory and practice in school library/media services. Students will have the opportunity to engage in one or more of the following topics: administration of the school media center, information resources: selection and management, referencing, and cataloging/processing. One to three credits. Offered at least every other year.

EDG 622 (ED 687A) Information Resource: Selection and Management. Designed to prepare the school library media specialist to select, evaluate, and manage print and nonprint materials in the school library media center. Emphasis is on supporting, supplementing, and expanding the school's curriculum while providing media services to students and staff.

EDG 623 (ED 687B) Reference. Designed to provide the school library media specialist with an understanding and mastery of the reference function of the school library media center and familiarity with the use and application of titles appearing in a basic school library media center collection.

EDG 624 (ED 687C) Cataloging and Processing. Designed to train the school library media specialist to catalog and process print and nonprint materials in the school library media center. Topics include cataloging rules, filing rules, subject headings, and computerized cataloging.

EDG 625 (ED 687D) 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; budgeting; public relations; collection and facilities design and development; and personnel supervision.

EDG 630 (ED 587) Discovering Meanings in Elementary School Mathematics. Study of content and instruction pedagogies used in teaching elementary 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 (ED 589) Methods and Materials of Elementary Science. Designed to prepare students to teach elementary science. Emphasis on planning and teaching science, including laboratory activities. Process and content stressed. Three credits. Offered at least once per year.

EDG 632 Teaching Creative and Performing Arts. This course 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.

EDG 640 (ED 634) 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 (ED 636) 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.

EDG 642 (ED 637) 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 648 (ED 680) 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 (ED 683) Career Guidance for Secondary and Adult Students. Principles and processes in providing career guidance for the secondary and adult student. Three credits. Offered at least once a year.

Education

EDG 650 (ED 681) Materials and Methods for Adult and Continuing Education. Materials and methods of teaching the adult learner in school and non-school 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 corequisite: 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 (ED 666) 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 (ED 664) 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 (ED 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, 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 (ED 656) 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 (ED 663) School Finance. The principles and theory underlying finance practice in public schools. Three credits. Offered at least once a year.

EDG 670 (ED 662) 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 including the dimensions of PL 74-142 and PA 198. Three credits. Offered at least once a year.

EDG 671 (ED 668) 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, 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 (ED 654) 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 (ED 654F) Policy Development
 EDG 673 (ED 654L) School Board Relations
 EDG 675 (ED 654K) Administrative Behavior

EDG 674 (ED 665) State and Federal Grants. Major state and federal grant-support programs in education. Examination of district qualifications, students who will benefit, rules and regulations, guidelines, program accountability, and procedures for making application. Three credits.

EDG 680 (ED 588) Special Topics in Education. Study of selected topics in education. One, two, or three credits. Offered upon sufficient demand.

EDG 685 (ED 598) 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 (ED 598B) Elementary Education
 EDG 685B (ED 598C) Secondary, Adult, and Higher Education
 EDG 685C (ED 598D) Gifted and Talented Education
 EDG 685D (ED 598H) Early Childhood Education
 EDG 685E (ED 598L) Middle School
 EDG 685F (ED 598E) Elementary Principal
 EDG 685G (ED 598R) Central Office Administrator
 EDG 685H (ED 598S) Superintendent
 EDG 685I (ED 598Q) Secondary Principal
 EDG 685J Educational Technology

Candidates must apply separately to the School of Education by February 1 for summer and fall semesters and by September 15 for winter semester.

EDG 695 (ED 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 (ED 695H) Early Childhood Education
 EDG 695B (ED 695F) Educational Technology
 EDG 695C (ED 695B) Elementary Education
 EDG 695D (ED 695D) Gifted and Talented Education
 EDG 695E (ED 695C) Secondary, Adult, and Higher Education
 EDG 695F (ED 695E) Educational Leadership

Candidates must apply separately to the School of Education by February 1 for summer and fall semesters and by September 15 for winter semester.

EDG 699 (ED 699) Directed Readings. This course involves a research or reading project, program proposal, or other approved activity which 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 (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.

EDR 600-601 (ED 550-586) Content/Curriculum Workshops. Advanced-level workshops which provide 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.

Education

EDR 621 (ED 621) Theories of Teaching Reading. An introduction to language and cognitive development in reading. Historical trends, factors affecting reading achievement, and implications for instruction. Prerequisite: teaching experience or ENG 308 or acceptance into a graduate certification program. Three credits. Offered at least once a year.

EDR 622 (ED 622) Developmental Reading—Elementary. Study of the developmental nature of the reading process and analysis of factors influencing the acquisition of reading skills. Practices and materials used in developmental reading programs are examined. Prerequisite: teaching experience or ED 320 or acceptance into a graduate certification program. Three credits. Offered at least once a year.

EDR 623 (ED 623) Developmental Reading—Secondary. Introduction to the development of reading in secondary students. Assists secondary teachers with little or no background in reading instruction. Prerequisite: teaching experience or ED 321 or acceptance into a graduate certification program. Three credits. Offered at least once a year.

EDR 624 (ED 624) Literature for Children and Adolescents. Examination of methods, materials, research, and issues related to literature for the schools. Three credits. Offered at least once a year.

EDR 626 (ED 626) Reading Problems: Diagnosis and Instruction. A study of current research, theory, assessment techniques, and teaching strategies for remedial reading. Selected reading tests, materials, and diagnostic and remedial procedures will be examined to enhance decision making for correction of reading disabilities. Prerequisites: EDR 621 and 622. Three credits. Offered at least once a year.

EDR 627 (ED 627) Teaching Reading in the Content Areas. Study of the integration of reading in the content areas. Materials and procedures for identifying the reading needs of students in science, social studies, mathematics, etc. Basic principles and techniques for improving instruction are covered. Three credits. Offered fall semester.

EDR 628 (ED 628) Curriculum and Materials for Language Arts. Study of the goals, content, and programs involved in the instruction and integration of language arts for grade K-12. Three credits. Offered at least once a year.

EDR 629 (ED 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.

EDR 680 (ED 588) Special Topics in Education. Study of selected topics in education. One, two, or three credits. Offered upon sufficient demand.

EDR 685 (ED 598) 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.

EDR 685A (ED 598G) Reading

Candidates must apply separately to the School of Education by February 1 for summer and fall semesters and by September 15 for winter semester.

EDR 695 (ED 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.

EDR 695 (ED 695G) Reading

Candidates must apply separately to the School of Education by February 1 for summer and fall semesters and by September 15 for winter semester.

EDR 699 (ED 699) Directed Readings. This course involves a research or reading project, program proposal, or other approved activity which 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 (ED 652) Preteaching and Methods of Teaching Special Education. A supervised field experience of at least six weeks with exceptional children teaching in the area of M.L., L.D., or E.L. Students must apply by February 1 for summer and fall semesters.

EDS 599 (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.

EDS 600-601 (ED 550-586) Content/Curriculum Workshops. Advanced-level workshops which provide 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 610 (ED 639) Studies in Emotional Impairment. Study of several behavior management techniques which 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. Prerequisites: ED 650 or equivalent and PSY 305 or equivalent. Three credits. Offered at least once a year.

EDS 611 (ED 651) Secondary Remedial Procedures. Emotionally Impaired. Instructional procedures, curriculum alternatives, collaborative consultation, and comprehensive program planning for secondary students with emotional impairments. Prerequisites: EDS 610 and 636 or equivalent. Three credits. Offered at least once a year.

EDS 618 (ED 638) Studies in Mental Impairment. Intermediate studies in the etiology of mental retardation and its implications for teaching strategies and materials. Recommended for students who do not have endorsement in mental impairment. Three credits. Offered in even-numbered years.

EDS 620 (ED 654F) Programs for Severely Mentally Impaired. Advanced study in special education. Three credits. Offered in odd-numbered years.

EDS 626 (ED 648) 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 (ED 644) Learning Strategies for Exceptional Students. Instructional methods and organizational competencies designed to assist educators who instruct adolescents or young adults with learning disabilities, emotional impairments, or educable mental impairments. The learning strategies approach will be taught as a functional curriculum alternative for secondary educators. Three credits. Offered at least once a year.

EDS 628 (ED 640) 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 (ED 649) Vocational Education for the Handicapped. Study of assessment procedures, establishment of goals and objectives, and development of programs for promoting the employment of handicapped adolescents. Includes lectures, discussions, and workshop activities. Three credits. Offered at least once a year.

EDS 636 (ED 645) 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 (ED 643) Language Development and Reading for the Special Needs Child. Study of language and reading for the special needs child. Theories of language development, consideration of language systems in the total communication process, and techniques for aiding in the development of language learning skills. Three credits. Offered at least twice a year.

EDS 638 (ED 646) Elementary Remedial Procedures: Learning Disabilities. Remedial techniques and materials employed with learning disabled persons. Prerequisite: EDS 636. Three credits. Offered at least twice a year.

Education

EDS 639 (ED 642) Secondary Remedial Procedures: Learning Disabilities. Instructional procedures, curriculum alternatives, collaborative consultation, and comprehensive program planning for secondary students with learning disabilities. Prerequisite: EDS 636. Three credits. Offered at least once a year.

EDS 640 (ED 647) Research in Learning Disabilities. Current research on etiology, identification, diagnosis, and programming for learning-disabled persons. Prerequisite: EDS 638 or 639. Three credits. Offered twice a year.

EDS 646 (ED 672) Counseling Parents. Remedial and preventive counseling strategies for parents of young children. 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 (ED 641) 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 (ED 632) 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 (ED 650) 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 (ED 653) 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 (ED 654) 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 (ED 654A) Budget and Accounting

EDS 669 (ED 654B) Special Education Law

EDS 670 (ED 654C) Computers in Instruction

EDS 671 (ED 654D) Computers in Management (Prerequisite: EDS 670)

EDS 672 (ED 654G) Special Education Finance

EDS 673 (ED 654H) School and Community Relations

EDS 674 (ED 654I) In-Service Education

EDS 675 (ED 654J) Facilities Planning

EDS 680 (ED 588) Special Topics in Education. Study of selected topics in education. One, two, or three credits. Offered upon sufficient demand.

EDS 685 (ED 598) 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 (ED 598M) Special Education Supervision

EDS 685B (ED 598A) Special Education Administration

EDS 685C (ED 598K) Emotional Impairment—Elementary

EDS 685D (ED 598P) Emotional Impairment—Secondary

EDS 685E (ED 598I) Mental Impairment

EDS 685F (ED 598N) Severely Mentally Impaired

EDS 685H (ED 598J) Learning Disabilities—Elementary

EDS 685I (ED 598O) Learning Disabilities—Secondary

EDS 685J (ED 598Z) Preprimary Impaired

Candidates must apply separately to the School of Education by February 1 for summer and fall semesters and by September 15 for winter semester.

EDS 686 (ED 697) Internship in Special Education. One-year paid internship in a classroom for the handicapped under supervision of an intern consultant from GVST. Nine credits. Fee required. Offered fall and winter semesters. Requires special application and admission procedure, done during winter semester.

EDS 695 (ED 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 (ED 695J) Learning Disabilities

EDS 695C (ED 695M) Special Education Supervision

EDS 695D (ED 695A) Special Education Administration

Candidates must apply separately to the School of Education by February 1 for summer and fall semesters and by September 15 for winter semester.

EDS 699 (ED 699) Directed Readings. This course involves a research or reading project, program proposal, or other approved activity which 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.

The Seymour and Esther Padnos School of Engineering

Director: Plotkowski, Professors: Fleischmann, Larson, Plotkowski; Associate Professors: Chren, Garrett, Johnson, Yackish; Assistant Professors: Jack, Mohamadzadeh, Ray.

Degree offered: Bachelor of Science in Engineering (B.S.E.) with cooperative engineering education.

Accreditation: The B.S.E. program is accredited by the Accreditation Board for Engineering and Technology (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.

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.

Engineering

It is the mission of the faculty to provide a curriculum which is relevant to current engineering practice and strongly applied in nature. The faculty provides an environment in which students develop the knowledge and skills necessary to meet the engineering design challenges of the future with flexibility and creativity. Students develop technical competency through classroom/laboratory work and through the supervised on-site work experience provided in the student's industry experience.

Our mission is fulfilled by commitment to continual improvement and refinement through critical review. Such review requires both close contact with current engineering practice and a commitment to those elements of a general education program required for a well-balanced education. For this reason faculty involvement with the student industry experience and with consulting practice is strongly encouraged. At the same time close communication with the academic community at large assures 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.

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.

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; (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, and sensitivity to, those areas in which engineering practice affects society and the environment. Such awareness, extending beyond technical knowledge to include ethical and social responsibility, must frame the continued professional and scholarly growth of the graduate.

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 the focus on environmental responsibility. This important societal issue has been integrated into all facets of the engineering curriculum.

The 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 an electrical, 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.

Engineering Design

Design is central to the practice of engineering. To prepare graduates who are well versed in contemporary design practice, the Padnos School of Engineering has developed a curriculum that integrates design education throughout all four years of the program. This experience begins in the freshman year with instruction and practice in computer-aided design, 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 background from the first two years and the experience gained from the integrated cooperative education program, substantially more mature design experience begins 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 which 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

Engineering

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 a half year of trigonometry; a half year of computer programming; four years of English; 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 Mechanical Shop Practice (or an equivalent course) during the summer prior to beginning at GVSU or during the summer between the freshman and sophomore years.

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 the engineering emphasis is built.

Students who intend to pursue the B.S.E. degree are urged to declare engineering as their major as soon as possible, preferably when 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. Students who wish to declare their major may do so at the Padnos School of Engineering Office in the Eberhard Center or in the Padnos Hall of Science.

Advancement 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 2.5 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 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 considered for advancement to major standing.

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 advancement to major standing. Application forms are available at the School of Engineering Office or in the Padnos Hall of Science and are to be returned to

and signed by the student's engineering advisor. 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 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 engineering graduates is very high and is expected to grow rapidly during the next decade. Beyond the year 2000, an even greater need for broadly educated engineers is anticipated. 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 129 credits plus cooperative education credits, (2) the general education program includes the following courses:

BIO 105 Human Ecology or BIO 103 The Biology of People
 or BIO 111 General Biology I or BIO 112 General Biology II (NS/B)
 PHI 102 Ethics or PHI 202 Ethics in the Professions (CGE/D)
 ECO 211 Principles of Microeconomics (SS/B)
 or ECO 210 Principles of Macroeconomics (SS/C),

and (3) the general education program in the humanities or social sciences includes an approved two-course sequence to provide depth as well as breadth.

2. **Fundamentals of engineering:** 64 semester credits in the following fundamentals of engineering sequence of courses (engineering, science, mathematics, and communications):

CHM 115 Principles of Chemistry I
 CS 162 Computer Science I

Engineering

EGR 101 Engineering Principles I
EGR 103 Engineering Principles II
EGR 209 Statics and Solid Mechanics
EGR 214 Circuit Analysis I
EGR 226 Introduction to Digital Systems
EGR 250 Materials Science (Manufacturing or Mechanical Emphasis)

or

EGR 255 Materials for the Electrical Sciences (Electrical Emphasis)

ENG 150 Strategies in Writing

MTH 201 Calculus and Analytic Geometry I

MTH 202 Calculus and Analytic Geometry II

MTH 203 Calculus and Analytic Geometry III

MTH 302 Linear Algebra and Differential Equations

PHY 230 Principles of Physics I

PHY 231 Principles of Physics II

STA 312 Probability and Statistics (Electrical Emphasis)

or

STA 314 Statistical Quality Methods (Manufacturing or Mechanical Emphasis)

3. **Advancement to major standing:** Advancement 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 2.5 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 preparation for placement in cooperative engineering education, EGR 289. Transfer students must complete at least eight credit hours in engineering courses taken at GVSU before they can be considered for admission to major standing.
4. **Upper-division required courses:** seven semester credits in required upper-division courses with a minimum grade of C (2.0) in each course:

EGR 360 Thermodynamics

EGR 485 Senior Engineering Project I*

EGR 486 Senior Engineering Project II*

5. **Emphasis courses:** 34–35 semester credits in the chosen emphasis sequence.

In addition to the six required courses (23 credits), a student must select 3 courses (11–12 credits) of 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.

Electrical Emphasis:

Required Courses:

EGR 314 Circuit Analysis II

EGR 315 Electronic Circuits I

EGR 316 Electronic Circuits II

EGR 326 Advanced Digital Systems

EGR 340 Electromagnetic Fields

EGR 413 Systems and Signals Analysis

Elective Courses: 12 credits (3 courses) selected from the following

*Satisfies capstone course requirement for the B.S.E. degree.

EGR 325 Electromechanics
 EGR 370 Engineering Acoustics
 EGR 414 Network Synthesis
 EGR 415 Communications Systems
 EGR 416 Design with Analog Integrated Circuits
 EGR 424 Design of Microcontroller Applications
 EGR 425 Electronic Systems
 EGR 450 Manufacturing Controls Systems
 EGR 455 Automatic Control Systems

Manufacturing Emphasis:

Required Courses:

EGR 312 Dynamics
 EGR 309 Machine Design I
 EGR 345 Dynamic System Modeling and Control
 EGR 367 Manufacturing Processes
 EGR 373 Production Scheduling and Control
 EGR 450 Manufacturing Control Systems

Elective Courses: 12 credits (3 courses) selected from the following

EGR 352 Kinematics and Dynamics of Machinery
 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 312 Dynamics
 EGR 309 Machine Design I
 EGR 345 Dynamic System Modeling & Control
 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 325 Electromechanics
 EGR 350 Vibration
 EGR 352 Kinematics and Dynamics of Machinery
 EGR 367 Manufacturing Processes
 EGR 370 Engineering Acoustics
 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 taken at GVSU 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

Engineering

Requirements for a Computer Engineering Minor

A minor in computer engineering requires a minimum GPA of 2.0 in the following Required Courses:

CS 162 Computer Science I
CS 262 Computer Science II
CS 351 Computer Organization and Assembly Language
EGR 214 Circuit Analysis I
EGR 226 Introduction to Digital Systems
EGR 326 Advanced Digital Systems
EGR 424 Design of Microcontroller Applications

Elective Courses (3–4 credits required):

CS 362 Data Structures and Algorithms
CS 452 Operating Systems Concepts
CS 457 Data Communications

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 and Analytic Geometry I
ENG 150 Strategies in Writing
EGR 101 Engineering Principles I
CHM 115 Principles of Chemistry I

Second Semester: Winter

MTH 202 Calculus and Analytic Geometry II
PHY 230 Principles of Physics I
EGR 103 Engineering Principles II
CS 162 Computer Science I

Third Semester: Fall

MTH 205 Calculus and Analytic Geometry III
PHY 231 Principles of Physics II
EGR 209 Statics and Solid Mechanics
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 or EGR 255 Materials for the Electrical Sciences
STA 312 Probability and Statistics or STA 314 Statistical Quality Methods
BIO 105 Human Ecology or BIO 103 The Biology of People or BIO 111 General Biology I
or BIO 112 General Biology II (NS/B)

(Advancement 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 & Control
EGR 326 Advanced Digital Systems or EGR 367 Manufacturing Processes or EGR 360
Thermodynamics
EGR 315 Electronic Circuits I or EGR 312 Dynamics

ECO 211 Microeconomics (SS/B) or ECO 210 Macroeconomics (SS/C)

Winter cooperative education experience: EGR 390.

Sixth Semester: Spring-Summer

EGR 340 Electromagnetic Fields or EGR 309 Machine Design I

EGR 316 Electronic Circuits II or EGR 373 Production Scheduling and Control or EGR 365 Fluid Mechanics

EGR 413 Signals and Systems Analysis or EGR 450 Manufacturing Control Systems or a General education course

PHI 102 Ethics or PHI 202 Ethics in the Professions (CGE/D)

Fall cooperative education experience: EGR 490.

Seventh Semester: Winter

EGR 360 Thermodynamics or EGR 409 Machine Design II

EGR 468 Heat Transfer or an engineering emphasis elective
Engineering emphasis elective

EGR 485 Senior Project I

General education course

Eighth Semester: Spring-Summer

Engineering emphasis elective

EGR 486 Senior Project II

Engineering emphasis elective or General education course

General education course

Courses of Instruction

Numbers in parentheses at the end of course descriptions indicate (X-Y-Z) the number of lecture, discussion, and laboratory hours per week.

EGR 100 Introduction to Engineering. An introduction to engineering as a career. The major fields of engineering and the typical responsibilities of an engineer are introduced through the use of guest speakers and field trips. Grading is on a credit/no credit basis. One credit. Offered fall semester.

EGR 101 Engineering Principles I. Introduction to the engineering profession, an introduction to graphical communication and spatial analysis, sketching and pictorial views, orthographics, auxiliary views, sectioning, dimensioning, tolerancing, and working drawings. Survey of engineering concerns. Word processing. Computer-Aided Drafting and Design exercises with laboratory. Prerequisite: MTH 122 and 123 or college preparatory algebra and trigonometry. Corequisite: MTH 201. (2-0-3). Three credits. Offered fall semester.

EGR 105 Engineering Principles II. A continuation of EGR 101. Use of computers as aids in engineering analysis, introduction to statistics, error analysis, engineering economics, engineering problem-solving techniques, and engineering design project. Prerequisite: 101. Corequisite: ENG 150 and MTH 202. Laboratory. (2-0-3). Three credits. Offered fall and winter semesters.

EGR 105 Mechanical Shop Practice. Introduction to use of hand and power tools commonly used in engineering shop practice. Function and use of tools and safety in usage. Various exercises and short projects which involve the use of the most common tools and machines. Intended for students with little or no exposure to shop practice. Laboratory. (1-0-2) Grading is on a credit/no credit basis. Two credits. Offered spring-summer semester.

EGR 209 Statics and Solid Mechanics. Vector algebra, particle and rigid body equilibrium, centroids, moments of inertia, internal loads, friction, stress-strain diagrams, generalized Hooke's law, stress and strain due to axial, torsional, shear, and flexural loads. 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.

Engineering

EGR 214 Circuit Analysis I. The first of a two-course sequence in linear circuit analysis. Topics include Ohm's Law, Kirchhoff's Laws, Thevenin's and Norton's Theorems, superposition, an introduction to the operational amplifier, AC phasor analysis, AC power, two-port network theory, and use of computer-aided circuit analysis software. Laboratory. Prerequisites: 226 and PHY 231. Corequisite: MTH 302. (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 concentrates on the analysis of digital systems, Boolean algebra, combinational and sequential logic, microprocessor architecture, assembly language programming. Laboratory. Prerequisite: CS 162 or equivalent. (3-0-3). Four credits. Offered fall and winter semesters.

EGR 250 Materials Science. An introduction to materials science. The physical properties of metal, polymers and ceramics are correlated with their (1) internal structures (atomic, molecular, crystalline, micro- and macro-) and (2) service conditions (mechanical, thermal, chemical, electrical, magnetic and radiative). Prerequisites: CHM 115 and PHY 231. (3-0-0). Three credits. Offered winter semester.

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 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. Corequisites: 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. Two credits. Offered spring-summer semester.

EGR 309 Machine Design I. Topics include combined stresses, stress and strain transformation, failure theories, statically indeterminate members, beam deflection, columns, dynamic loading, fatigue, modified Goodman diagrams, fatigue failure theories, design of shafts and springs for both static and dynamic loading. 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. Corequisite: 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, 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 325 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. (3-0-3). Four credits. Offered winter semester.

- EGR 326 Advanced Digital Systems.** An advanced course in digital logic and microprocessors. Topics include combinational logic synthesis, sequential logic synthesis, complex PLDs, FPGAs and interfacing of microprocessors to peripheral devices. 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, 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: Physics 231 and Mathematics 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, state-variable formulation, 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: MTH 302, EGR 212 and 309. (4-0-0). Four credits. Offered spring/summer semester.
- EGR 352 Kinematics and Dynamics of Machinery.** Analysis and design of mechanisms and machinery. Topics include graphical and analytical kinematics, dynamics of mechanisms, cam design, gears and gear trains, reciprocating engine dynamics, balancing of rotors and single- and multi-cylinder engines. Prerequisites: 212, 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, heat exchanger design. Prerequisite: PHY 231. (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; Laplace equation. Applications to fluid machinery. Laboratory. Prerequisites: 212, 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 which 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 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: Advancement 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.

Engineering

degree program, and employability through standard interview process. Must have permission of the co-op director. Two 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. Continuation of EGR 309. Topics include introduction to finite element method, local and global coordinates and stiffness matrices, shape function, isoparametric elements, 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 413 Signals and Systems Analysis. A course in the engineering applications of transform methods. The processing of analog, digital, deterministic and stochastic signals is discussed, as well as the analysis and design of processing systems. Topics include the Fourier Transform, signal types, signal representations, convolution, superposition, generalized functions, Parseval's theorem, Z transform, DFT, and FFT. Prerequisite: 326, STA 312. Corequisite: 316. (0-3-0). Three credits. Offered spring/summer 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 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 425 Electronic Systems. The second of two courses which cover the current state of the art in electronic systems. Topics included are passive, active, and digital filter design; A/D and D/A converters; companding; digital signal processing; and microprocessor systems. Laboratory. Prerequisites: 212, 314, 326 and 360. (3-0-3). Four credits. Offered spring/summer 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. Prerequisite: 345. (0-3-3). Four credits. Offered spring/summer semester.

EGR 455 Automatic Control. An introduction to automatic control of physical systems; mathematical models of physical systems; basic control actions and industrial automatic controls; transient response analysis; error analysis and system optimization; root locus and frequency-response methods; state-space methods; system compensation and design. Laboratory. Prerequisites: 212, 314, and 360. (3-0-3). Four credits. Offered spring/summer semester.

EGR 468 Heat Transfer. Study of the mechanisms by which heat is transferred in different media, namely, conduction, convection and radiation. One- and two-dimensional steady-state conduction, transient conduction, finite differences, methods in conduction, forced and free convections, heat exchangers, radiation processing and properties, radiation exchange between surfaces. Laboratory. 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, 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 which are robust, affordable, and easily produced. The course includes product development, process planning, tool design, and design for manufacturability. Laboratory. Corequisite: 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 Integrated Manufacturing Systems. An introduction to the integration of machines and processes into manufacturing systems. Topics include methods for interconnecting and networking devices, organizing functional groupings such as work cells, production lines, material flow, collecting and organizing production data. The technical issues involved in implementing various control schemes will be presented. Laboratory. Prerequisite: 450. (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 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 — one hour credit during the first semester and two hours 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. (1-0-4). 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. (1-0-8). 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. Two 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 upon demand.

English (ENG)

Chair: Wenner, Professors: Ford, Lockerd, Smith, Whitehill; Associate Professors: Blumreich, Chown, Clark, Dwelle, Foote, Franciosi, Levitan, Miller, Osborn, Persoon, Rayor, Swartzlander, Tyson, Webster, Wenner; Assistant Professors: Alvarez, Brehm, Gilles, Ihrman, Jones, Liu, B. Mayberry, Remlinger, Royer, Soljan, Vander Broek, Westra, Winters.

English is one of the strongest preprofessional majors, since 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

English

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. Our students 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.

Creative Writing Emphasis Objectives

Our creative writing students learn to create original works of poetry, drama, and fiction. English majors in the creative writing track learn to recognize and describe various poetic and prose forms, to analyze the creative work of others, including both professional writers and fellow students, and to reflect on their own developing personal aesthetic.

Professional Writing Emphasis Objectives

Our professional writing students are taught to generate a wide range of nonfiction prose appropriate for a wide range of rhetorical situations. English majors in the professional writing track specialize in the kinds of writing that demonstrate knowledge in professional fields outside of the academy. Students become sophisticated analysts of communication situations and self-reflective about their own rhetorical skills.

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) 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 1800
4. ENG 226 American Literature II: from 1800
5. ENG 261 Study of Modern English

Requirements for the Emphases

All English majors will choose one of the following five emphases—Language and Literature, Creative Writing, Professional Writing, Language Arts, or English Education. Each emphasis requires different options from the following course categories:

Course Categories

A. Studies in Classical and World Literature

The courses in this category focus on works written in languages other than English that have influenced English literature, or otherwise attained world recognition. All texts will be read in English translation.

1. ENG 270 Homer and the Archaic Age
2. ENG 275 Ancient Drama
3. ENG 280 The Roman Response to Greece
4. ENG 303 Studies in World Literature

B. Studies in British Literary History

The courses in this category focus on important periods in British literary history and seek to define, explore, and broaden our understanding of the literature in the context of the historical moment. Courses in this category will focus on specific topics offered on a rotating basis; see department listings for specific course content each semester. Shakespeare will be offered each semester; the other four courses 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

English

C. Studies in American Literary History

The courses in this category focus on important periods in American literary history and seek to define, explore, and broaden our understanding of the literature in the context of the historical moment. Courses in this category will focus on specific topics offered on a rotating basis; see department listings for specific course content each semester. One course 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 201 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

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. ENG 200 Introduction to Professional Writing
2. ENG 219 Creative Writing Workshop
3. ENG 352 Advanced Composition
4. ENG 359 Intermediate Creative Writing Workshop (Poetry, Drama, or Fiction)
5. ENG 459 Advanced Creative Writing Workshop (Poetry, Drama, or Fiction)

H. Pedagogy

The courses in this category focus on the teaching of English and the Language Arts in elementary and secondary schools.

1. ENG 308 Teaching Reading
2. ENG 309 Teaching Literature to Children
3. ENG 310 Teaching Writing
4. ENG 311 Teaching Literature to Adolescents
5. ENG 400 Language Arts for Teachers

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, free-lance 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, E. One additional course from any one of these categories: A, B, C, D, E, F, or G.

Capstone (3 hours)

Total: 39 hours.

Professional Writing Emphasis Requirements

This emphasis is designed for students seeking careers in writing, publishing, or other fields where specialized skills in written communication are required. Students practice literary, journalistic, and business forms of writing, then go on to participate in an internship to gain practical experience in their area of particular interest. Students typically find careers as editors, grant-writers, program administrators, technical writers, free-lance journalists, teachers, and authors.

Requirements for the Emphasis

Foundation courses (15 hours)

Track requirements (15 hours):

- ENG 200 Introduction to Professional Writing
- ENG 350 Writing in the Workplace
- ENG 352 Advanced Composition
- CJR 364 Article Writing
- ENG 490 Internship

Elective (3 hours):

One course from the following:

English

CAP 321 Public Relations Writing I

CFV 361 Scriptwriting I

CJR 316 Editing

CJR 365 Advanced Editing

CJR 390 Technical Writing

Capstone (3 hours)

Total: 36 hours

Creative Writing Emphasis Requirements

This emphasis is designed for students seeking to improve their creative writing skills, 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 a teaching career of which creative writing may be a part. Students practice several genres of creative writing at the undergraduate level, namely drama, fiction, or poetry, or, more rarely, students may choose to concentrate on a particular genre. Students typically find careers as teachers, editors, grant-writers, program administrators, free-lance journalists, or authors.

Foundation courses (15 hours)

Track requirements (12 hours)

ENG 219 Creative Writing Workshop

ENG 359 Intermediate Creative Writing Workshop (Fiction, Poetry, or Drama)

ENG 359 Intermediate Creative Writing Workshop (in another genre)

ENG 459 Advanced Writing Workshop (Fiction, Poetry, or Drama—must be in one of the genres studied above in ENG 359)

Elective requirements (6 hours)

One course from category E; any course from categories A, B, C, D, or F

Capstone (3 hours)

Total: 36 hours

Teaching Emphases

Language Arts (Elementary) Emphasis Requirements:

Foundation courses (15 hours)

Track requirements (9 hours)

ENG 309 Teaching Literature to Children

ENG 310 Teaching Writing

ENG 400 Language Arts for Teachers

Elective requirements (9 hours).

ENG 204 or one course from category A; one course from category F; one course from category A, B, C, D, E, or G

Capstone (3 hours)

Total: 36 hours

English Education (Secondary) Emphasis Requirements

Foundation courses (15 hours)

Track requirements (9 hours)

ENG 310 Teaching Writing

ENG 311 Teaching Literature to Adolescents

ENG 313 British Literature: Shakespeare

Elective requirements (9 hours)

Select any course from Category F, G, and any course from Categories A, B, C, D, or E.

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.

ENG 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

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 310, 311, 361 or 362, and either 250 and 251 or 247 and 248.

Requirements for an English Concentration in M.Ed.

The English Department offers graduate courses that may be used in cooperation with the GVSU School of Education to fulfill the requirements for an English Concentration in M.Ed. degree in Secondary Instruction.

English

Admission

Students apply to the School 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 School 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 fifteen 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

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.

Amaranthus. The literary arts magazine, *Amaranthus*, publishes creative work of students twice yearly and is edited by undergraduate students.

Oldenburg Writing Contest. A departmental writing contest, carrying cash prizes for essays and creative writing, is conducted annually.

Other Activities. In addition, a great variety of campus-wide opportunities is available to students interested in language and literature: films, poetry readings,

lectures, production of plays, and work on the student newspaper, *The Lanthorn*, and on the campus radio and television stations.

Courses of Instruction

ENG 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 in the Writing Center. Students completing ENG 098 with a grade of C (not C-) or better are placed in English 150. Four (non-graduation) credits. Offered fall and winter semesters.

ENG 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. English 150 is a prerequisite for any SWS course. Four credits. Offered fall and winter semesters.

ENG 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 semester.

ENG 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*. General education course AH B. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall and winter semesters.

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. General education course AH B. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall and winter semesters.

ENG 204 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. General education course CGE B. 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. General education course AH B. 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. General Education course AH B. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall and winter semesters.

ENG 219 Creative Writing Workshop. Introduction to the theory and practice of various forms of creative writing. Students write poetry, fiction, 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.

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

English

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. 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.

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 270 Homer and the Archaic Age. The epics of Homer and the literature of the archaic age of Greece studied in their cultural context. In addition to the *Iliad* and *Odyssey*, selections from the Homeric Hymns and works of such authors as Hesiod, Sappho, and Parnenides will be included. All works read in English translation. Cross-listed with CLA 270. Students may not receive credit for both classes. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered odd years, fall semester.

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 280 The Roman Response to Greece. A study of the major works of Roman literature and the ways in which they reveal Rome's adoption and transformation of the cultural experience of ancient Greece. Emphasis on epic, lyric, and drama, including such authors as Virgil, Ovid, Horace, and Plautus. All works read in English translation. Cross-listed with CLA 280. Students may not receive credit for both classes. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered even years, fall 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: Freshman Writing Requirement and one literature course. Three Credits. Offered odd years, winter semester.

ENG 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.

ENG 307 Seminar for Writing Tutors. A workshop for tutors employed by the GVSU 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.

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. 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 college, secondary, and elementary levels. A tutoring practicum is required, and students will also work on their own writing. Required for the language arts major and secondary teacher certification English major. 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, 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. 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

English

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. Three hours. Offered even years, winter semester.

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, historical and social issues. Prerequisite: Completion of the Freshman Writing Requirement. Three credits. Offered odd years, 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. Three hours. Offered even years, fall semester.

ENG 350 Writing in the Workplace. Training in the 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.

ENG 352 Advanced Composition. Designed for those students who want an advanced writing course for their majors, for preprofessional programs, or for entry to careers. Expository and persuasive writing is emphasized. Prerequisite: 200 or consent of instructor. Three credits. Offered winter semester. Prerequisite: Completion of the Freshman Writing Requirement. Three hours. Offered fall and winter semesters.

ENG 359 Intermediate Creative Writing Workshop. Theory and practice of a genre: drama, fiction, or poetry. Students will read literature and write stories, plays, or poetry. There will be some discussion of current publication markets. Variable topics; See class schedule. Prerequisite: 219. May be repeated for credit. Three credits. Offered fall and winter semesters.

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. Three hours. 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 non-standard

- 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 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 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 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 303. 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: 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. Offered odd years, winter semester.
- ENG 459 Advanced Creative Writing Workshop.** Advanced theory and practice of a genre: drama, fiction, or poetry. Students will read literature, work on a writing project, and discuss current publication markets and manuscript arrangement. Variable topics. See the class schedule. May be repeated for credit. Prerequisite: 359 in the same genre as 459. Three credits. Offered fall 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 work site. 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. Course focuses on the issues and problems inherent in the study of language and literature. 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

English

course upon recommendation of a faculty member. Three credits. Offered fall and winter semesters.

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. A study in depth 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 Third World Literature. 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. Offered every other 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 writing. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year.

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. Offered every other year.

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. Offered every other year.

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.

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 those 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 those 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 094 English as a Second Language (ESL): Skills I. Provides non-native speakers of English with an opportunity to systematically develop vocabulary skills necessary for the reading demands of college work. Three (non-graduation) credits.

ESL 095 English as a Second Language (ESL): Speaking and Listening Skills. Designed to improve the aural/oral skills of non-native speakers of English. Course work includes practice of sound patterns, conversational skills, and listening comprehension. Three (non-graduation) credits.

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 each fall semester called Freshman Seminar (FS 100). 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 which 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, FS 101, Career Education Class, is offered 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, which deals with such topics as intellectual development, campus services, study skills, time management,

Geography

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.

FS 101 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.

Geography (GPY) and Planning Program

Coordinator: Poitras. Associate Professor: Poitras. Assistant Professors: Cole, Hunt. Visiting Professor: Gasahl.

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 beginnings of civilization, people have wondered about the lands and people around them. Our curiosity is just as strong today. Geography seems to satisfy that curiosity, by studying 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 technology.

The geography program at GVSI gives students the opportunity to develop an understanding of geographic principles, regions, and practices. Geography students will not only study where things are located but 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.

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.

Geography Minor

Students minoring in geography are required to complete at least 22 hours of course work. All students must select one of two tracks to follow in the minor: (1) the teacher certification track, or (2) the technical track. These tracks are detailed below.

Requirements for a Geography Major

Students majoring in geography are required to complete 36 unduplicated hours, including these core courses: GPY 220, GPY 400, GEO 111 and GPY 495. 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.

Listed below are the course requirements for each concentration:

Regional Studies Concentration

Total credits for the regional studies concentration is 36, as indicated below. It is anticipated that students interested in teaching geography at the secondary or elementary levels will concentrate in Regional Studies.

1. The Core: 13 credits (GPY 220, 400, 495 and GEO 111).
2. Regional Studies: 12 credits minimum (GPY 235 plus nine additional credits from any of the following: GPY 345, 350, 351, 352, 353, 354, 355, 360, ANT 215, SS 324).
3. Geographic Methods: 11 credits minimum (GPY 307 and NRM 350 plus three additional credits from any of the following: GPY 309, 420, NRM 250).

Geographic Methods Concentration

Total credits for the geographic methods concentration is 36, as indicated below.

1. The Core: 13 credits (GPY 220, 400, 495 and GEO 111).
2. Regional Studies: nine credits minimum (GPY 235 plus six additional credits from any of the following: GPY 345, 350, 351, 352, 353, 354, 355, 360, ANT 215, SS 324).
3. Geographic Methods: 14 credits minimum (combination of GPY 307, 309, 420, NRM 250, 350).

City and Regional Planning Concentration

Total credits for the city and regional planning concentration is 39, as indicated below. In addition to the Core, SS 324 (Urbanization) is a prerequisite for this concentration.

1. The Core: 13 credits (GPY 220, 400, 495 and GEO 111).
2. Regional Studies: three credits (GPY 235).
3. Geographic Methods: 11 credits (GPY 307, NRM 350, and GPY 420).
4. City and Regional Planning: nine credits minimum (SS 324 plus six additional credits from any of the following: GPY 307, 309, 420, SOC 351, PLS 203).
5. Internship: three credits (GPY 490).

Community and Organizational Leadership Concentration

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: six credits (GPY 235 plus three additional credits from any of the following: GPY 345, 350, 351, 352, 353, 354, 355, 360, ANT 215, SS 324).
3. Geographic Methods: seven credits minimum (GPY 307 plus three additional credits from the following: GPY 309, 420, NRM 250, 350).
4. Community and Organizational Leadership: nine credits (GPY 309, 420, SS 324, SOC 351, SOC 356).
5. Internship: three credits (GPY 490).

Geography

Teacher Certification Track (22 hours)

Students seeking certification to teach geography at the secondary level are required to complete the following courses:

1. Two core courses: GPY 220 Cultural Geography and GEO 111 Physical Geology.
2. Four regional studies courses (one must be GPY 235): GPY 235 World Regional Geography, GPY 315 Geography of Michigan, GPY 350 Geography of Russia and Its Neighbors, GPY 351 Geography of Africa, or GPY 352 Geography of Latin America, GPY 353 Geography of Canada and the United States, GPY 345 Geography of Asia, or GPY 355 Geography of Southwest Asia (Middle East).
3. It is suggested that teachers include among their regional courses GPY 345 Geography of Michigan and GPY 353 Geography of Canada and the United States. One methods course from the following: GPY 307 Introduction to Computer Mapping/Geographic Information Systems, GPY 309 Introduction to City and Regional Planning, NRM 250 Resource Measurement and Maps, NRM 350 Aerial Photography and Remote Sensing.

Technical Track (24 hours)

Students following the technical track are required to complete the following courses:

1. Two core courses: GPY 220 Cultural Geography and GEO 111 Physical Geology.
2. GPY 235 World Regional Geography (required).
3. Four methods courses from the following: GPY 307 Introduction to Computer Mapping/Geographic Information Systems; GPY 309 Introduction to City and Regional Planning, NRM 250 Resource Measurement and Maps, NRM 350 Aerial Photography and Remote Sensing, SS 324 Urbanization.

Minor in City and Regional Planning

Coordinator: Poitras.

A minor in planning offer students an opportunity to prepare for careers in the profession of urban and regional planning. See City and Regional Planning.

Courses of Instruction

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. Three credits. Offered every semester.

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. General education course CGE/B. 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. No knowledge of computers is required. Prerequisite: Sophomore standing or approval of instructor. (1-0-3). Four credits. Offered fall semester of odd-numbered years.

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 345 Geography of Michigan. A study of the physical and cultural features of the Great Lakes region with emphasis on the state of Michigan. Lecture and discussion. Three credits. Offered summer 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. 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.

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 impacts and studies the cultural and physical development of Latin America. Three credits. Offered fall semester of even-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. Three credits. Offered fall semester of odd-numbered years.

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: 235 or consent 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: 235 or consent of instructor. Three credits. Offered winter semester of even-numbered years.

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.

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 each 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: 220 and GEO 111. Three credits. Offered fall semester of odd-numbered years.

GPY 407 Advanced GIS. Concepts, principles, and techniques of advanced GIS using ARC/INFO. Course is both theoretical and practical, addressing both the structure of GIS and its use for spatial analysis and data management. Four credits. Offered winter semester.

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: 220, STA 215, and SS 300. Three credits. Offered winter semester of even-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 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. General education course CGI-B. Three credits. Offered winter semester.

Geology (GEO)

Chair: Videtich. Professors: Lefebvre, Neal, TenBrink; Associate Professor: Videtich; Assistant Professors: Cole, Weber.

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. Major with elementary teaching certification offered in group science, geology emphasis. 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 School 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.

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, hydrogeologists, 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:

1. General education requirements as identified in the General Academic Regulations section of the catalog.

2. 12–19 semester hours of geology courses with a minimum GPA of C (2.0):
- GEO 111 Physical Geology (1)
 - GEO 112 Historical Geology (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, 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 125 Trigonometry (3)*
 - d. Two additional mathematics or computer science courses (one of the following pairs)
 - MTH 201 Calculus and Analytic Geometry I (5)
 - MTH 202 Calculus and Analytic Geometry II (4)
 - or
 - STA 215 Statistics I (3)
 - STA 216 Statistics II (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 Physical Geology	4	GEO 112* Historical Geology	5
ENG 150 Strategies in Writing	3	General education courses	6
General education course	3		16
	<hr style="width: 100%; border: 0.5px solid black;"/>		<hr style="width: 100%; border: 0.5px solid black;"/>
	15		

*Completion of GEO 112, 212, and MTH 125 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 122 College Algebra	3	MTH 123* Trigonometry	3
General education courses	6	General education courses	6
Geology elective	3		
	<hr/>		<hr/>
	14		14

Third Year

Fall Semester		Winter Semester	
GEO 311 Structural Geology	3	GEO 312 Sedimentation-Stratigraphy	4
GEO 320 Geomorphology	4	MTH 202 Calculus and Analytical Geometry II	4
MTH 201 Calculus and Analytical Geometry I	5	PHY 230 Principles of Physics I	5
General education course	3	General education course	3
	<hr/>		<hr/>
	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
	<hr/>	Electives	6
	12-14		<hr/>
			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 Physical Geology
GEO 112 Historical Geology
GEO 211 Mineralogy
GEO 212 Petrology
GEO 311 Structural Geology
GEO 312 Sedimentation-Stratigraphy
GEO 445 Introduction to Geochemistry**
GEO 485 Geology Seminar (1 credit hour)

3. Twenty-two (22) 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

*Completion of GEO 112, 212, and MTH 123 satisfies the general education B.S. degree cognate for geology majors.

**Capstone course for all geology majors.

CHM 357 Physical Chemistry Laboratory I
 CHM 359 Physical Chemistry Laboratory II
 CHM 421 Instrumental Methods of Analysis
 CHM 422 Instrumental Methods Laboratory
 CHM 491 Chemistry Seminar II (1 credit hour)

4. Five (5) semester credit hours of mathematics.
 MTH 201 Calculus and Analytic Geometry I**
5. A three-semester 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 School 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. 17–19 semester credit hours of geology courses with a minimum GPA of C (2.0).

GEO 111 Physical Geology
 GEO 112 Historical Geology
 GEO 320 Geomorphology†
 GEO 430 Oceanography
 GEO 485 Geology Seminar (2 credits)
 GEO Elective (one course at the 300 or 400 level)

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

*Capstone course.

**Completion of CHM 116, GEO 445, and MTH 201 satisfies the general education B.S. degree requirements for dual majors.

†Capstone course for earth science majors.

Minor Requirements: Geology

Completion of a minor in geology requires the following:

GEO 111 Physical Geology

GEO 112 Historical Geology

GEO 211 Mineralogy

GEO 212 Petrology

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.

Group Science Major with a Geology Emphasis for the B.S. Degree

The group science major with a geology emphasis is designed for students seeking certification to teach at the elementary level. It provides students with breadth of exposure in all the sciences and mathematics, and a concentration in geology. In order to be certified, students must complete this major and the elementary teaching minor. The following requirements must be completed for the major:

1. One course chosen from BIO 103, 105, or 107, CHM 102, GEO 100, PHY 106.
2. One course chosen from CS 160, PHY 105 or 201.
3. CHM 109 or 115* or 201*, and CHM 119.
4. GEO 111 or 201.
5. BIO 111 and 112.
6. GEO 320 (Capstone).
7. Electives: Eight semester credits of approved geology courses.

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. General education course NS/A. (3-0-0). Three credits. Offered each 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. General education course NS/A. (3-0-0). Three credits. Offered in fall semester and summer session.

GEO 111 Physical Geology. 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. General education course NS/A. (3-0-2). Four credits. Offered each semester.

GEO 112 Historical Geology. Introduction to geological structures, stratigraphic relations, and fossils as instruments for studying the physical and biological events of earth history.

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

Lecture, laboratories, and field trips. Prerequisite: A course in physical or general geology. (3-1-2). Five credits. Offered fall and winter semesters.

GEO 201 Earth Science in Elementary Education. A study of those aspects of earth science that are readily observable in our natural environment. Topics covered include the earth in space and the earth's atmosphere, lithosphere, and hydrosphere. Hands-on investigation of the natural world is emphasized. Recommended for prospective elementary teachers. Does not count toward a geology major. (3-0-2). Four credits. Offered fall semester of odd-numbered years.

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 fall semester of even-numbered years.

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: 111, 112, 211, and Chemistry 115. (3-1-2). Five credits. Offered winter semester.

GEO 280 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.

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 field work. Practical field exercises in making planimetric and topographic base maps are required. Laboratory. Prerequisites: 112 and permission of instructor. (1-0-5). Two credits. Offered fall semester of even-numbered years.

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. Prerequisite: 112. (3-1-2). Four credits. Offered fall semester.

GEO 380 Selected Topics in the Geological Sciences. Topics covered will reflect special interests of students or the instructor. Those subjects involving regional geology or specific field problems will involve field trips or field work in the area of interest, with preparation of appropriate guides, reports, maps, sections, etc. One to three 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. 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 fossilizations, and specimen description. Lectures and laboratory. Prerequisites: 112, 312 strongly recommended. (2-1-2). Three credits. Offered fall semester of even-numbered years.

GEO 420 Glacial and Quaternary Geology. A study of the physical characteristics of glaciers, their deposits and past history. Lectures, laboratory, and field trips. Prerequisites: 112, 312 strongly recommended. (3-1-2). Four credits. Offered winter semester of odd-numbered years.

Health Sciences

GEO 450 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 of odd-numbered years.

GEO 440 Geohydrology. A study of the geologic principles that govern the occurrence, movement, and quality of groundwater. Lectures, laboratory, and field trip. Prerequisites: 112; 312 and Math 201 strongly recommended. (3-0-0). Three credits. Offered winter semester of even-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; Math 120 and Chemistry 116 (may be taken concurrently); Math 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; Mathematics 201 or permission of instructor; Physics 220 or 230 recommended. (3-0-3). Four credits. Offered fall semester of odd-numbered years.

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; Geology 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.

Greek (GRK)

See Classics.

The School of Health Sciences (HS)

Director: Toot. Professors: Bell, Callahan, Kopperl, Strickler; Associate Professors: Bacon-Baguley, Curry, Nieuwkoop, Nochera, Taylor, Ward; Assistant Professors: Adrian, Beck, Capodilupo, Goossen; Visiting Professors: Boehne, Walcott; Research Associate: Wesorick.

Degrees offered: B.S. in health sciences; B.S. in biomedical sciences; school health education minor; master of health science.

The programs in health science prepare students for careers in the health professions. For information on the following health-related programs refer to the respective sections in this catalog: Biomedical Sciences, Nursing, Occupational Safety and Health, Physical Therapy, Physician Assistant Studies, and Therapeutic Recreation.

Students majoring in health sciences may select the general health sciences program or a health science major with an emphasis in clinical laboratory science; exercise science; or health care administration; or health education. In addition to these variations on the health sciences major, a school health education minor is offered for students seeking elementary or secondary teaching certification in another major, e.g., physical education. A Master of Health Sciences degree program offers an opportunity for practicing allied health professionals seeking career advancement or a higher level of certification.

Undergraduate Programs

Health Sciences Major

Program Advisors: Adrian, Bacon-Baguley, Bell, Kopperl, Nieuwkoop, Nocheri.

This is a general curriculum which allows students to pursue a variety of interests. Since this program does not prepare majors for any specific career, students are encouraged to work closely with an advisor in choosing course work. 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 who wishes to receive baccalaureate-level credentials.

Major Requirements

1. General university degree requirements as identified in the General Academic Regulations 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
 - HS 220 Health Care Delivery
 - HS 280 Human Physiology*
 - HS 281 Laboratory in Human Physiology*
 - HS 301 Introduction to Research in the Health Sciences
 - HS 495 Concepts in Wellness**
3. 27 semester credit hours of required science cognate courses:
 - BIO 112 General Biology II*
 - BIO 355 Human Genetics or BIO 375/376 Genetics
 - CHM 109 Introductory Chemistry

*B.S. cognate course sequence: STA 215; BIO 112; HS 280-281

**Capstone course.

Health Sciences

- 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 which 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).

Students interested in employment in health care administration should seek advising from a faculty person in public administration and select at least nine hours of course work from the following list:

- ACC 212 Principles of Financial Accounting
- ACC 213 Principles of Managerial Accounting
- MGT 331 Concepts of Management
- MGT 332 Administrative Behavior
- MGT 334 Law of Labor-Management Relations
- PA 270 Public Administration: The Bureaucracy Problem
- PA 375 Public Budgeting and Finance Administration
- SOC 351 Urban Sociology
- SOC 356 Sociology of Health Care
- SOC 382 Minority and Ethnic Relations
- SOC 386 Population Problems

Special Emphasis Areas in the Health Science Major

Clinical Laboratory Science Emphasis

Program Coordinator: Goossen. Clinical Professors: A.R. Armin, M.D., R.G. Hines, M.D.; H. Hommerson, M.D.; K. Reed, M.D. Clinical Associates: D. Klosinski, M.T. (ASCP), Ph.D., N. Lier, M.S.A., M.T. (ASCP); V. Narlock, Ph.D., MT (ASCP); S. Tomlinson, M.S., M.T. (ASCP), P. Wenk, HTL (ASCP).

Clinical laboratory science includes cytotechnology, cytogenetics technology, histotechnology, and medical technology. 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 clinical laboratory sciences may choose from three areas of specialty: cytotechnology, histotechnology, and medical technology. 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, medical technology, or histotechnology).

Career Opportunities

There are many employment opportunities for clinical laboratory scientists in laboratories in university centers, hospitals, governmental agencies, physicians'

offices, industry, research, and sales (openings may vary with geographic locations). Advanced training opportunities in specialty areas are also available.

Degree Requirements

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

1. General university degree requirements as identified in the General Academic Regulations section of the catalog.
2. The health sciences core requirements:

HS 208 Human Anatomy

HS 212, 213 Introductory Microbiology

HS 280, 281 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 112 General Biology II*

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 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. Clinical Laboratory Sciences Emphasis requirements.

HS 102 Introduction to Clinical Laboratory Sciences

HS 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 medical technology:

HS 412 and 413 Medical Bacteriology

HS 420 Analysis of Body Fluids

HS 432 Medical Mycology

HS 435 Medical Parasitology

CHM 221 Analytical Chemistry

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 which has been accredited by the appropriate agency.

*B.S. cognate course sequence: STA 215; BIO 112; HS 280-281.

**Capstone course.

Health Sciences

Exercise Science Emphasis

Program Advisors: Bacon-Baguley, Curry.

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 not part of the degree program. Clinical internships are not guaranteed and the individual clinical sites make the final selections.

Major Requirements

1. General university degree requirements as identified in the General Academic Regulations section of the catalog.
2. Health sciences core requirements:
 - HS 208 Human Anatomy
 - HS 212 Introductory Microbiology
 - HS 213 Laboratory in Microbiology
 - HS 220 Health Care Delivery
 - HS 280 Human Physiology*
 - HS 281 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 112 General Biology II*
 - 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 Applied Human Physiology
 - HS 375 Biology of Aging
 - PSY 310 Behavior Modification

School Health Education Minor

This 30-semester credit hour minor is approved by the State of Michigan for elementary or secondary education majors. Because of the relatively small number of science prerequisites, it is an appropriate minor for any student regardless of teaching major.

All students must complete the following courses:

- HS 105 Basic Nutrition
- HS 202 Anatomy and Physiology
- HS 220 Health Care Delivery
- HS 222 Introduction to Public Health
- HS 223 Public Health Concepts

*B.S. cognate course sequence: STA 215; BIO 112; HS 280-281

**Capstone course.

HS 445 Health Education Curricula
 BIO 112 General Biology II
 BIO 325 Human Sexuality
 SOC 384 Sociology of Drug Use and Abuse
 PED 102 First Aid

Secondary certification candidates should substitute for HS 445 the following:
 PED 301 Methods of Teaching Health Education

Biomedical Sciences Major (Preprofessional)

Program Advisors: Adrian, Curry, Strickler.

The biomedical sciences major consists of courses prescribed by professional schools (medical, dental, osteopathic, veterinary, 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. Since 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 requirements which the professional schools may have.

Career Opportunities

Because the primary function of the biomedical sciences major is to prepare students for postgraduate programs, the number of jobs for which a graduate of this major is immediately qualified is limited. In almost every case, graduates will be required to complete additional training after graduation to qualify for employment. The programs to which graduates may apply can be separated into those which can be completed within a two-year period and those which require a minimum of four additional years of study.

Postgraduate programs of two years or less include administrative assistant, histological technology, medical technology, occupational therapy, pharmaceutical sales, physical therapy, physician assistant, respiratory therapy, and surgeon assistant.

Postgraduate programs of four years or more include chiropractic, dentistry, human medicine, optometry, podiatry, veterinary medicine and graduate (master's and Ph.D.) programs in the biological sciences.

Since 1988, the yearly acceptance rate of our applicants to professional schools has been 67 percent or greater. Biomedical sciences graduates since 1988 have entered programs in 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; Western Michigan University (physician's assistant program); Chicago College of Osteopathic Medicine; School College of Podiatry; George Washington University School of Medicine; and Georgetown University School of Medicine.

Major Requirements

1. General university degree requirements as identified in the General Academic Regulations section of the catalog.

Health Sciences

2. Required health sciences courses:

- HS 208 Human Anatomy
- HS 212, 213 Introductory Microbiology
- HS 280, 281 Human Physiology*
- HS 501 Introduction to Research in the Health Sciences
- HS 495 Concepts in Wellness**

3. Required cognate courses:

- BIO 112 General Biology II*
- 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 I
- CHM 242 Organic Chemistry II
- CHM 252 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 and/or BIO 405/406 may be included in these six hours).

Master of Health Sciences

The graduate program of the School of Health Sciences offers the master of health science degree through which students can pursue careers in advanced clinical practice, administration, or education. The program, built on a graduate core requirement, is designed in cooperation with the student's graduate committee to meet individual career goals in the health and allied health professions.

The program is designed to accommodate either part-time or full-time students.

Admission Requirements

1. Requirements for graduate admission as identified in the Admissions section of the catalog.
2. Grade point average of 3.0 (B) from all undergraduate course work or satisfactory score from the General Test of the Graduate Record Examination.
3. Names of three references.
 - a. Completion of undergraduate courses in anatomy, physiology, microbiology, and statistics.

Degree Requirements

1. M.H.S. students must complete a minimum of 33 semester hour credits, including health science graduate core (12 credits) and formal thesis (6 credits).
Core (12 credits):
 - HS 508 Advanced Human Physiology
 - HS 523 Epidemiology

*B.S. cognate course sequence: STA 215; BIO 112; HS 280-281

**Capstone course.

HS 560 Regional Human Anatomy
 HS 601 Experimental Design
 Thesis (6 credits)
 HS 695 Master's Thesis Research

2. Completion of courses of study in a curriculum designed in cooperation with the student's graduate committee.
3. Successful completion of a comprehensive written examination after all didactic course work has been taken. Students who fail any part of the examination may take another examination within 18 months of the original effort.

The Master of Health Sciences program is intended to provide individuals with advanced knowledge in various fields of the health care delivery system and to allow them to move into administration, management, or education within the health and allied health professions.

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. Health sciences core courses
2. Additional requirements:
 HS 528 Neuropathology
 NUR 642 Teaching Health Professionals
 HS 679 Clinical Practicum

3. Clinical Tracks:

Orthopedics.
 Pediatrics.
 Geriatrics.
 Rehabilitation.

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 oriented students. Emphasis is on the interaction of technical concepts of health and disease with the political, economic, legal, and ethical aspects of American society. General education course NS-B. (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 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.

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

Health Sciences

systems are emphasized. Lecture and laboratory. General education course NS-B (A-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 as well as food wholesaling and warehousing companies. Covers food-borne illness and its etiology, safe food handling procedures, food and facility inspection, and management. May be taken for National Institute for the Food Service Industry (NIFI) and State of Michigan Certification upon prior arrangement with the instructor. 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 112, or in HS 202. (5-0-0). 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, physiology of micro-organisms producing human disease, and the human response to these agents. Prerequisites: Biology 112, Chemistry 231 and 232 or CHM 230 or permission of instructor (5-0-0). Three credits. Offered fall and winter 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 and winter semesters.

HS 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.

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 280 Human Physiology. An integrated study of physiological systems with major consideration given to the mechanisms which are involved in maintaining homeostasis. Normal function is emphasized, but clinical correlations are included where appropriate. Ordinarily, students enrolled in HS 280 should be enrolled simultaneously in HS 281. Prerequisites: HS 208 and CHM 231 or 241; prerequisite or corequisite: CHM 232 or 242. A physics course is recommended. (5-0-0). Three credits. Offered fall and winter semesters.

HS 281 Laboratory in Human Physiology. Prerequisite or corequisite: 280 or the equivalent. (0-0-3). One credit. Offered fall and winter semesters.

HS 501 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: Chemistry 231 or 241, STA 215, and one 200-level health sciences course. Three credits. Offered fall semester.

HS 505 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 nutritional needs of diseased patients. Pathophysiology of the gastrointestinal system will be considered. Prerequisites: 280, 281 and Chemistry 232. Three credits. Offered fall and winter semesters.

HS 509 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 and permission of instructor. (0-0-5). One credit. Offered every semester.

HS 510 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 280, 281. Three credits. Offered fall and winter 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 occasionally summer semesters.

HS 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.

HS 355 Anatomy of Joints. Lecture and laboratory projection 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 fall and winter semesters.

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 280, CHM 232. (2-0-2). Three credits. Offered fall and winter semesters.

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 280; credit or concurrent enrollment in SOC 388 or permission of the instructor. Three credits. Offered upon demand.

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 406 Nutrition in Pregnancy and Lactation. Provides detailed information on nutritional considerations as they relate to pregnancy and lactation. Prerequisites: 105 and 280. Three credits. Offered winter semester of odd-numbered years.

HS 408/508 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: 280/281 or permission of instructor. Three credits. Offered on sufficient demand.

HS 409 Nutrition in Aging. Provides detailed information on the nutritional needs of the elderly, the physiological and biochemical changes that occur during aging, and how these changes affect the metabolism of nutrients. Three credits. Offered winter semester of even-numbered years.

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: 212/215, and Chemistry 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: 410/510 or concurrent registration. (0-0-3). One credit. Offered on demand.

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 Chemistry 252 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: 412/512 or concurrent registration. Two credits. Offered winter semester.

HS 416 Hematology. An in-depth study of normal blood cell development, morphology, and function. Some common blood dyscrasias will be studied with emphasis on the biochemical

Health Sciences

and cytological changes involved in the disease process. Prerequisites: 208 and Chemistry 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 correlation of the data to disease. Prerequisite: 416/516 or concurrent registration. (0-0-4). Two credits. Offered fall semester.

HS 420 Analysis of Body Fluids. Lecture and laboratory study in the theory and techniques of blood banking, urinalysis, serology, and analysis of other body fluids, designed for students preparing for a career in medical technology. Prerequisites: 280/281, 410 and 416/417. Three credits. Offered winter semester.

HS 425 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.

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 on sufficient demand.

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 435 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 445 Health Education Curricula. A survey of the current health education curricula with emphasis on the Michigan Model for Comprehensive School Health Education, and Modules. Specialized curricula, including some from substance abuse and sexual abuse prevention, will be included. (3-0-0). Three credits. Offered winter semester on sufficient demand.

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, with special emphasis on the musculoskeletal system, 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/PED 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, metabolic parameters. Prerequisites: STA 215, PED 402, PED 404, or HS 365. Two credits. Offered winter semester of even-numbered years.

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 upon demand.

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 medical laboratory sciences under the direction of an affiliate program. Students register for 15 hours in the fall semester and 15 hours in the winter semester for a total of 30 credits. The 30 credits for the twelve-month clinical practicum are distributed as follows: hematology and coagulation, seven; microbiology (bacteriology, mycology, virology, parasitology), seven; clinical chemistry (chemistry, radioisotopes), seven; immunohematology (blood banking and serology), seven; urinalysis, two.

HS 495 Concepts in Wellness (Capstone). Concepts from the health sciences are applied to the study of habits and life styles which affect health. The physical effects of various behaviors are examined. Understanding of these physical effects leads to development of a personal health plan. Prerequisites: 208, 212, 280/281, and senior standing; by permit only (3-0-0). Three credits. Offered fall and winter semesters.

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.

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: 280/281 or permission of instructor. Three credits. Offered on sufficient demand.

HS 510 Immunology. An introduction to the immune response, including: the properties of antigens, immunoglobulins, the theories of antibody formation, cell-mediated immunity, and hypersensitivity reactions. Prerequisites: 212/213, and Chemistry 232 or 242 or permission of instructor. Three credits. Offered fall semester.

HS 511 Immunology Laboratory. An introduction to serological reactions, including: serum electrophoretic techniques, single and double diffusion in gels, hemagglutination reactions and complement fixation. Prerequisites: 410/510 or concurrent registration. (0-0-3). One credit. Offered on demand.

HS 512 Medical Bacteriology. A study of the host-parasite relationships in bacterial disease. The theoretical basis of isolation and identification of medically important bacteria including anaerobic and newly identified pathogens will be included. Prerequisites: 212 and Chemistry 232 or 242 or permission of instructor. Three credits. Offered winter semester.

HS 513 Medical Bacteriology Laboratory. Isolation and identification of the more common bacterial pathogens with emphasis on current clinical methods and normal flora. Prerequisites: 412/512 or concurrent registration. Two credits. Offered winter semester.

HS 516 Hematology. An in-depth study of normal blood cell development, morphology, and function. Some common blood dyscrasias will be studied with emphasis on the biochemical and cytological changes involved in the disease process. Prerequisites: 208 and Chemistry 232 or permission of instructor. Two credits. Offered fall semester.

HS 517 Clinical Hematology Laboratory. An introduction to a wide variety of clinical laboratory procedures with emphasis on accurate performance, theoretical basis of the tests and correlation of the data to disease. Prerequisite: 416/516 or concurrent registration. (0-0-4). Two 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 Math 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 531 Medical Virology. A study of the physical, morphological, and biochemical characteristics of viruses. Emphasis on the pathogenesis, pathology, and control mechanisms

Health Sciences

- of viral diseases in people. Prerequisites: 212, 213 and organic chemistry or permission of instructor. Three credits. Offered on sufficient demand.
- HS 552 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 555 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 550 Human Histology.** A lecture-laboratory course in normal human light microscopic anatomy. Students will learn the microanatomy of the primary tissue types, organs and organ systems. Includes discussion of relevant pathological conditions. Prerequisites: 208 and 309 or equivalent. (2-0-4). Four credits. Offered fall semester.
- HS 560 Regional Human Anatomy.** A regional approach to the structure of the human body, concentrating on the interrelationships of different anatomical structures in the limbs, thorax, abdomen, pelvis, and head and neck. Prerequisite: 208 and 309 and permission of instructor. (2-0-4). Four 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 winter 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.
- HS 610 Immunological Techniques.** A survey of the current immunological techniques for the detection of immune dyscrasias in the quantitation of the immune status of individuals. Laboratory and discussion. (0-1-3). Two credits. Offered on sufficient demand.
- 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 alternating winter semesters.
- HS 616 Advanced Hematology.** An in-depth study into the etiology of hematologic diseases. Case studies will be presented with emphasis on the interpretation of laboratory data and in diagnosis of the disease and laboratory tests used to follow the progress of therapy. Prerequisites: 516 or permission of instructor. Two credits. Offered on sufficient demand.
- HS 625 Clinical Cardiac Physiology.** The study and investigation of the effects of exercise on normal and abnormal cardiovascular physiology, with applications to cardiac rehabilitation. Advanced laboratory methods of physiological testing will be an important component of the course. (2-0-2). Prerequisites: HS 280, 365, and 460. Three credits. Offered winter semester.
- 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: HS 460-560 and permission of instructor. Three credits. Offered fall and winter semesters.
- 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 which 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.

History (HST)

Chair: Kelleher; Professors: Cole, Devlin, Goode, Mapes, Travis; Associate Professors: Kelleher, O'Neill, Smither, Tripp, Welch; Assistant Professors: Galbraith, Shapiro, Sommer.

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 five survey courses, a course in the writing of history, six upper-division electives, and the capstone. The seven required courses include:

- HST 105 Western Civilization to 1500
- HST 106 Western Civilization Since 1500
- HST 107 American History to 1877
- HST 108 American History Since 1877
- HST 210 Empire, Culture, and Conflict
- HST 300 Writing History
- HST 495 Varieties of History (Capstone)

The six upper-division electives must include at least one course in United States history, one course in European history, and one course in non-Western history. The remaining three upper-division courses may be in any area of history. 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 which 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 US History, 1930 to Present
- HST 312 History of American Women
- HST 314 African-American History
- HST 315 Latinos: The Forging of Ethnic Identities
- HST 317 History of American Foreign Relations
- HST 320 American Indians

History

- HST 323 Michigan History
- HST 326 Industrializing America
- HST 327 Urban History of the United States
- HST 328 Constitutional History of the US
- HST 329 Intellectual History of the United States
- HST 370 History of Medicine and Health
- HST 371 History of Gender, Family, Sexuality

Courses which 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 373 Early Modern France
- HST 384 Revolutionary Europe, 1789–1900
- HST 385 Europe 1900–1945
- HST 386 Europe Since World War II
- HST 390 Soviet History

Courses which 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 335 Africa: Past and Present
- HST 337 The Age of Islamic Empire
- HST 338 Modern Middle East
- HST 345 The Ancient Mediterranean and Orient
- 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 minoring in history must complete at least 20 credit hours, including:

- HST 105 Western Civilization to 1500
- HST 106 Western Civilization Since 1500
- HST 107 American History to 1877
- HST 108 American History Since 1877
- HST 210 Empire, Culture and Conflict

The remaining courses must be selected from 300-level offerings. Two 300-level electives, at least one in European, or 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 either a major or a minor must complete at least two upper-level courses (one U.S. and one non-U.S.) from the GVSU history offerings as must post-graduate students seeking teacher certification whose history degree was awarded over three years prior to admission to GVSU. In addition, both baccalaureate and post-graduate student majors must also complete

HST 495 unless their transfer record shows a seminar, research course, or similar equivalency.

Students planning to enter a program of graduate study in history should earn a B.A. degree. Candidates for the B. A. degree must demonstrate third semester proficiency in a foreign language, either by completing successfully a 201-level language course or by passing a proficiency examination in the language chosen. Students who choose to earn a B.S. degree must complete the following cognate sequence:

CS 150 Introduction to Computing
 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 105 Western Civilization to 1500
 HST 106 Western Civilization Since 1500
 HST 107 American History to 1877
 HST 108 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 grade point average of at least 3.0 are encouraged to apply. Contact Professor Travis, Chapter Advisor, for more information.

Graduate Work

The History Department offers graduate courses that are included in the options in the M.Ed. in General Education (Secondary and Adult Interaction Emphasis).

Students apply to the School 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 will include: graduate standing with a major or minor in History or Social Science or consent of instructor.

The program consists of a minimum of 35 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 School of Education and an advisor from the History Department.

Students who choose this concentration will, with the help of an advisor from the History Department, select courses from the following groups, as indicated (all courses carry three credits).

Historical and Research Methods (minimum of one course):

HST 600 Historiography
 HST 605 Techniques in Local and Archival History

History

U.S. History (minimum of one course):

HST 625 The United States in the Nuclear Age

Non-Western History (minimum of one course):

HST 630 The Middle East in the Twentieth Century

HST 632 A History of Brazil

HST 633 Issues in Third World History

European History (minimum of one course):

HST 643 The French Revolution

HST 648 European Origins of World Wars I and II

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 105 Western Civilization to 1500

HST 106 Western Civilization Since 1500

ENG 150 Strategies in Writing

MTH 110 Algebra

One Social Science general education course

One Arts and Humanities general education course

One College Category D general education course

Two foreign language courses (B.A. candidates)

CS 150 Introduction to Computing, and STA 215 Introductory Applied Statistics (B.S. candidates)

Second Year

HST 107 American History to 1877

HST 108 American History Since 1877

HST 300 Writing History

Two Science general education courses

One Arts and Humanities general education course

One Social Science general education course

One elective course

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

One College Category A general education course (B.A. candidates)

One College Category B general education course (B.S. candidates)

Fourth Year

Three 300-level history courses

History 495 Varieties of History (Capstone)

Seven elective courses

Courses of Instruction

Courses on the 100 and 200 level are introductory and are designed primarily for freshmen and sophomores; 300-level courses are intended for interested sophomores, juniors, and seniors. All 300- and 400-level courses have prerequisites; 600-level courses are intended for graduate students and occasionally very-well qualified seniors.

HST 105 Western Civilization to 1500 A.D. Basic content and methods of history through an introductory study of Oriental, Greek, Roman, and Medieval contributions to the Western tradition. Required for majors. General education course CGE/C. Three credits. Offered fall and winter semesters.

HST 106 Western Civilization Since 1500. Basic introductory study of the Western tradition, from the Reformation to the contemporary age. Required for majors. General education course CGE/C. Some sections offered for supplemental writing skills credit. Three credits. Offered fall and winter semesters.

HST 107 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. General education course CGE/C. Some sections offered for supplemental writing skills credit. Three credits. Offered fall and winter semesters.

HST 108 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. General education course CGE/C. Some sections offered for supplemental writing skills credit. Three credits. Offered fall and winter semesters.

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. General Education Course CGE/B. 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: 107, 108, 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: 107 or junior standing. Three credits. Offered winter semester, even-numbered years.

HST 305 The United States Transformed. An in-depth chronological survey of the United States during the years 1877-1929. 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: 108 or junior standing. Three credits. Offered fall semester, even-numbered years.

HST 306 Recent US History, 1950 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: 108 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: 107, 108 or junior standing. Three credits. Offered winter semester, even-numbered years.

History

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: 107, 108 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: 108 or junior standing. Three credits. Offered winter semester, odd-numbered years.

HST 317 History of American Foreign Relations. Historical development of United States relations with foreign powers. Concentration on significant periods of policy formation and change, with attention to factors determining policy. Prerequisite: 107 and 108 or junior standing. Three credits. Offered fall semester.

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: 107, 108, or junior standing. Three credits. Offered winter semester, even-numbered years.

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: 108 or junior standing. Three credits. Offered fall semester, odd-numbered years.

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 107, 108 or junior standing. Three credits. Offered winter semester, odd-numbered years.

HST 327 Urban History of the United States. A historical analysis of major urban developments from the walking city to the present ghetto/neighborhood/gentrification/suburban form. Prerequisite: 107 and 108 or junior standing. Three credits. Offered fall semester, even-numbered years.

HST 328 Constitutional History of the U.S. Introduction to the constitutional history of the U.S., with particular focus on the creation of the Constitution, the role of judicial review and the changing meaning of the Constitution. Prerequisite: 107 and 108 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: 107 and 108 or junior standing. Three credits. Offered fall 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 in China's two revolutions in 1911 and 1949, and the rise of Communism. Prerequisite: Junior standing. Three credits.

HST 335 Africa: Past and Present. Survey of African history, emphasizing the sub-Saharan region and its development from the Iron Age to the present. Prerequisites: 210 or junior standing. Three credits. Offered winter semester, even-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: 105 and 106 or junior standing. Three credits. Offered winter semester, odd-numbered years.
- HST 358 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: 106 and 108 or junior standing. Three credits. Offered winter semester, even-numbered years.
- 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 105. 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: 105 or junior standing. Three credits. Offered fall semester, even-numbered years.
- 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: 105 or junior standing. Three credits. Offered winter semester, even-numbered years.
- HST 360 Tudor and Stuart England.** English history from 1485 to 1714 with appropriate attention to political, constitutional, and religious issues. Prerequisite: 106 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: 106 or junior standing. Three credits. Offered winter semester, even-numbered years.
- HST 365 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: 105 or 106 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 religious, political, intellectual and social history, with emphasis on Renaissance Italy and Reformation Germany. Prerequisite: 105 or junior standing. Three credits. Offered fall semester, odd-numbered years.
- 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. General education course CGE/C. Prerequisite: 106 or junior standing. Three credits. Offered winter 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, sanity science, bacteriology, medicalization of deviance, nursing, philanthropy, gender, colonialism, environmental industrial medicine, Medicare/Medicaid, and AIDS. A supplemental writing skills course. Prerequisites: One 100 level history course or HSC 201 or junior standing. Three credits. Offered fall semester, odd-numbered years.
- 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. Prerequisite: 106 or junior standing. Three credits. Offered winter semester, odd-numbered years.
- HST 373 Early Modern France.** Survey of French history from 1500–1789. Topics include political, intellectual, social, cultural, economic, and military history. Prerequisites: 106 or junior standing. Three credits.
- HST 380 Special Topics in History.** A study of special topics, areas, or periods of history not offered in the regular curriculum. The selected focus will be described in the class schedule. Expectations of students in this course approximate those of other 300-level history courses. Prerequisite: junior standing. Three credits.

History

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: 106 or junior standing. Three credits. Offered winter semester, odd-numbered years.

HST 385 Europe 1900-1945. Examination of European history 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 1930's; and World War II. A supplemental writing skills course. Prerequisite: 106 or junior standing. Three credits. Offered winter semester, even-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. Prerequisites: 106 or junior standing. Three credits. Offered fall semester, even-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: 105 and 106 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 106 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. Prerequisites: 105 and 106 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 work-site supervisor. The student will submit a final report, and both the work-site supervisor and the faculty advisor will evaluate the internship. Prerequisite: 15 hours of course work 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 entering GVSU fall semester 1987 and afterwards. 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 which 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 645 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 (HSC)

Coordinator: Kopperl

In today's technological society no person can be considered to be truly educated unless he or she has an understanding of the role of science in the world. The history of science program offers students the opportunity to go beyond the accumulation of scientific facts and to gain an understanding of the historical roots of science and technology as well as the interaction between scientific history and social, literary, economic, and political history. Thus, scientists can understand the history of their discipline as a part of the progress of human civilization. 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, since 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, 203, 204, and 305. Courses not regularly offered may be available through independent study.

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. General education course CGE C. Occasionally offered for SWS credit. Three credits. Offered fall, winter, and 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. Emphasis on the transformation to a scientifically oriented industrial society in modern times. Occasionally offered for SWS credit. General education course CGE C. Three credits. Offered fall and winter semesters.

Honors Program

HSC 203 The Atomic Revolution. Investigates the historical roots of the atomic and molecular view of the universe. Emphasis is on the recent discoveries of subatomic particles, radioactivity, isotopes, nuclear fission and fusion, and the molecular approach to biology. Three credits. Offered on sufficient demand.

HSC 204 The Darwinian Revolution. Examines the history of the scientific ideas that have led to the replacement of the concept of a static and unchanging natural world by the concept of a dynamic and constantly changing natural world. Three credits. Offered on sufficient demand.

HSC 206 Science and Culture in the West. Examines the significant scientific discoveries and cultural developments that profoundly changed Western society's view of itself and of the universe. Begins with Greek rational thought and concludes with the implications of current scientific activity. General education course CGE/C. Three credits. Offered on sufficient demand.

HSC 305 The Freudian Revolution. Considers the origin, development, and scientific status of psychoanalysis. Special attention is given to Freud's life, to the evolution of his ideas, and to the impact of his thought on the modern mind. Offered for SWS credit. Three credits. Offered on sufficient demand.

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.

HSC 400 History of Chemistry. Examines the development of chemistry as a modern quantitative science. Emphasis is on nineteenth-century development. Prerequisite: Chemistry 251 or 241 or permission of instructor. Three credits. Offered on sufficient demand.

HSC 435 History of Mathematics. Deals with preclassical, Arabic, Renaissance, and modern mathematicians considered through their principal works and in relationship to the intellectual climates in which they lived. Prerequisite: Math 201 or permission of instructor. Three credits. Offered on sufficient demand. A supplemental writing skills course.

Honors Program (HP)

Director: Callahan. Faculty Fellows: Balfour, Bernstein, W. Baum, deYoung, Ford, Franciosi, Hoitenga, Joannisse, Kelleher, Levitan, McGee, Moes, Rayor, M. Seeger, Shapiro, J. Shontz, Swartzlander, TenBrink.

The Grand Valley State University Honors Program 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 Honors Program provides its students a program with special academic opportunities for challenges.

Honors Program course offerings are designed to enhance and integrate the intellectual curiosity of students and to enlarge their world view and personal development. The designation "Honors Program Graduate" on a Grand Valley State University diploma and transcript is intended to recognize unusual distinction in the work of honors students.

Honors Program courses and seminars are taught by uniquely qualified and carefully selected faculty drawn from all disciplines. Honors Designate courses are part of the regular offerings of departments, and the Honors Senior Project is part of, or closely related to, work in a student's major. The objective of Honors Program courses is not to make the students do more work than in regular courses but to provide a qualitatively different learning experience. These courses are never graded on a curve.

Students benefit from participation in the Honors Program in a number of ways. They are presented with intellectual and academic challenges through sharing specially designed classes with other students of outstanding potential. The small classes are composed 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 the Honors Living Centers (optional), students in the program form a community of scholars.

There are also some practical benefits from participation in the Honors Program. Each student has the assistance of a specially assigned Honors Program advisor who monitors his or her progress each semester. Advisors provide guidance in selecting courses, preparing for graduate studies, and for any additional individual planning. Students also benefit by participating in specially planned activities, lectures, and social events. Trips to the Art Institute in Chicago and to see Shakespeare plays in Stratford, Ontario, are annual occurrences. Honors Program students may be given precedence in registration for certain classes. Freshmen gain the opportunity to apply to the Honors Living Centers, if they wish, without being required to participate in the housing lottery.

Completion of the Honors Program should not be confused with "Graduation with Honors," which is determined strictly by final grade point average. The Honors Program requires not only a high grade point average, but also successful completion of a special series of challenging courses. Completion of all Honors Program requirements results in the "Honors Program Graduate" designation on both the baccalaureate diploma and the college transcript.

There are special Honors Program tracks for most students in preprofessional areas, including business and pre-health (nursing, physical therapy, premed). Students in such major areas have a preplanned course program which includes not only their Honors Program requirements but many of their basic major requirements as well, offered in separately arranged Honors Designate sections of basic courses. Graduates wear a special cord at Commencement.

The Honors Program is administered by a director and advisory committee composed of faculty members representing various disciplines. The committee determines requirements and guidelines and is involved directly in advising honors students and overseeing other aspects of the Honors Program.

Admission

Qualified students will be invited to participate in the Honors Program if they have a 3.5 high school GPA and an ACT score of at least 28. Students lacking one of these criteria may contact the program director regarding provisional admission to the program.

Transfer students and those already enrolled at Grand Valley State University who wish to enter the Honors Program may apply for admission if they have a 3.2 college GPA per year.

The Honors Program Committee will consider waiving program requirements for transfer students and students already enrolled at Grand Valley. It will, however, not waive admission criteria. Transfer and currently enrolled students who meet

Honors Program

These admission requirements or who have been in other college honors programs are encouraged to apply to the Honors Program by contacting the Honors Program director.

Students may withdraw from the Honors Program on their own initiative by notifying the director of their intent to do so. Students who do not enroll in at least one Honors Program course per year or who do not maintain a 3.2 GPA per year are not considered to be active members of the program but may continue to take Honors Program courses with the director's permission.

Students who are not members of the program but wish to participate in the honors courses are encouraged to enroll in courses whenever possible. To ensure that such students are accommodated, the director will set aside a limited number of spaces in honors courses. All students must receive permission from the director before registering for courses. Spaces will be assigned on a first-come, first-served basis. All students will be expected to meet the high standards of regular Honors Program students in these courses. It is assumed that all Honors Program courses require two hours per week of work for each hour of registered credit. Thus, Honors Program students should expect six hours of homework a week in a three-credit course.

Honors Living Center

The Ella Koeze Weed Living Center and the Paul A. Johnson Living Center have been designated as the University Honors Living Centers. Students who have been admitted to the university's Honors Program may apply to live in these centers. This arrangement allows students who have a strong commitment to academic excellence to live with other students of similar interest. The centers are administered through a cooperative agreement between the Director of Housing and the Honors Program Director. Students living in Weed and Johnson 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 Weed and Johnson is limited. Returning Honors students are encouraged to submit their housing applications as soon as possible. Incoming freshmen interested in living in Weed or Johnson must submit, along with their Honors Program application, a short paragraph explaining why they would like to live in Weed or Johnson and what they will contribute to the community. Additionally, they must indicate on their separate housing application that they wish to live in Weed or Johnson.

Program Requirements and Courses

To complete the Honors Program a student must satisfy the following course requirements, which also fulfill the general education and writing skills requirements of the college.

1. English 150.
2. A course chosen from each of the two distribution groups (CGE A & B) which fulfills the college requirements of "Study of Logical and Mathematical Quantitative Reasoning" and "Foreign Culture and Multicultural Approaches." Note: Mathematics 110 or 115 is a prerequisite for CGE A courses.

3. Integrated Honors History, Values and Ideas, Arts and Literature (CGE/C, CGE/D, AH/A, AH/B). These four general education categories are satisfied by completing one of the three integrated sequences. These sequences are:

American Civilization
 Classical World
 European Civilization

These courses *must* be taken as described below. Note: Each sequence is composed of four courses, each course being three credit hours and taken two courses or six credits per semester

Fall (CGE/C, AH/B)

HP 211 and 212 Classical World I

HP 213 and 214 American Civilization I

HP 215 and 216 European Civilization I

Winter (CGE/D, AH/A)

HP 221 and 222 Classical World II

or

HP 223 and 224 American Civilization II

or

HP 216 and 226 Renaissance Europe II

4. Honors Social Sciences (SS/A, B, C).

A two-semester sequence introduces the social sciences. Integration or methodology and content of the traditional social sciences is used to examine human behavior and experience, social and cultural phenomena, and formal institutions.

Fall

HP 231 Holocaust

HP 233 Society and Self: Psychological Perspective

Winter

HP 232 Trauma, Culture, Memory

or

HP 234 Society and Self: Psychological Perspective

5. Honors Natural Sciences (NS/A and B).

HP 241 (NS/A) The Earth's Land and Resources is offered fall semesters.

HP 242 (NS/B) Plants and People is offered winter semester.

6. HP 311 and 312 Honors Junior Seminar. Each student takes at least one Junior Seminar during the junior or senior year.
7. HP 499 Honors Senior Project. The credit is variable, ranging from one to four credits. This is taken in the senior year. See details under Course Offerings.

Course Offerings

Note: All courses require admission to the Honors Program and/or permission from the Director.

HP 211 and 212 Classical World I (CGE/C & AH/B). Courses deal with the history, literature, intellectual history, philosophy, and arts of the Classical period with emphasis on Greeks and Romans. HP 211 and 212 must be taken concurrently. LD. Six credits. Offered fall semester.

HP 221 and 222 Classical World II (CGE/D & AH/A). Courses continue the study of history, philosophy and culture of the Classical period begun in HP 211 and 212. Prerequisite: HP 211 and 212. Offered winter semester.

HP 213 and 214 American Civilization I (CGE/C & AH/B). Courses provide a survey of American history, literature, and intellectual progress from European colonization through Reconstruction. LD. Six credits. Offered fall semester.

HP 223 and 224 American Civilization II (CGE/D & AH/A). Courses continue the study of American Civilization begun in HP 213-214. Emphasis is on philosophy and arts in American culture. TD. Six credits. Offered winter semester. Prerequisites: HP 213 and 214.

Honors Program

HP 215 and 216 European Civilization I (CGE/C & AH/B). Courses deal with European history, philosophy, and culture from the Middle Ages through the early modern period. The period emphasized varies with faculty expertise. HP 215 and 216 must be taken concurrently. LD. Six credits. Offered fall semester.

HP 225 and 226 European Civilization II (CGE/D & AH/A). Courses continue the study of European history, philosophy and culture begun in HP 215 and 216. LD. Six credits. Offered winter semester. Prerequisites: HP 215 and 216.

HP 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. LD. Three credits. SS/B. Offered fall semester.

HP 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. LD. Three credits. SS/A. Offered winter semester. Prerequisite: HP 231 or permission of instructor.

HP 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. LD. Three credits. Offered fall and winter semesters. SS/B. Corequisite: HP 234.

HP 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. LD. Three credits. Offered fall and winter semesters. SS/A. Corequisite: HP 233.

HP 241 The Earth, A Global View. Course has two objectives: 1) understanding the 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. Four credits. Offered fall semester. NS/A with laboratory.

HP 242 Plants and People. Plants are the dominant organisms on the landscape and are often taken for granted. The ecology, structure, function, genetics, and variety of plants are studied in order to develop an appreciation of the dependence of humans upon them for food, oxygen, shelter, medicines, and pleasure. Offered winter semester. LD. Three credits. NS/B.

HP 311/312 Honors Junior Seminar. An intensive, in-depth study of some 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. LD. Three credits.

HP 499 Honors Senior Project. An individually designed project, which 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.

Transfer students or those who are admitted to the program beyond the freshman year who still need to fulfill distribution or general education requirements will enroll in the appropriate Honors sequence. They will take at least one Honors Seminar and complete one Honors Senior Project.

Transfer students with an associate's degree and those students who enter the program after their general education or distribution requirements have been fulfilled must select a minimum of 14 hours of Honors Program courses to complete requirements for graduating from the program. These hours must include one Honors Seminar and one Senior Project and may include honors designate courses.

Hospitality and Tourism Management (HTM)

Chair: King; Associate Professor: Page; Assistant Professors: Abdul-Ghani, Beckley, King.

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 field. The program was established in 1977 in response to the need in the region for educational support and preparing qualified managers in the profession. The integrative nature of hospitality and tourism education fits GVSU'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 GVSU graduates. Job placement rates for graduates from the HTM program have consistently been among the highest at GVSU.

Career Opportunities

Hotel and Resort Management

- Front office manager
- Executive housekeeper
- Building and grounds manager

Conference Services Manager

Convention and Visitors Bureau Management

Convention Sales and Service Manager

Hotel/Convention Sales

Conference/Meeting Planner

Food and Beverage Manager

- Hotel Food Service
- Commercial restaurants
- Institutional food service
- Beverage/lounge management
- Health care

Banquet/Catering Manager

Club Manager

Recreation/Theme Park Manager

Special Events Coordinator

Travel/Tour Planner

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. It is the goal of the HTM Department to develop skilled graduates who are professional in demeanor and respected for their integrity and humanity. This goal will be accomplished through a commitment to student learning and development marked by:

1. High expectations and standards of conduct and performance.
2. Excellence in scholarship and instruction.
3. Appropriate exposure to the industry and successful industry professionals.
4. Sequential training and experience in the student's chosen area of the industry.
5. Opportunities for ongoing community service.

Major Requirements

Students interested in majoring in hospitality and tourism management should discuss their career plans with a 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 Regulations sections 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 Systems Analysis*
 - HTM 452 Tourism Marketing and Promotion
 - HTM 495 Hospitality Administration**
 - b. **Systems courses** (two of the following, with advisor approval):
 - HTM 213 Food Service Systems
 - HTM 222 Lodging Systems
 - HTM 235 Travel Systems
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 HTM; and 11 credits of electives as part of their emphasis. The approval of the student's academic advisor is required to insure that the course choices meet the requirements of the program.
 - 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 insure that the course choices meet the requirements of the program.
 - c. Tourism/Travel emphasis. Students are required to complete HTM 235 Travel Systems (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 insure that the course choices meet the requirements of the program.
 - d. Other. An emphasis of the student's own choosing, *with prior advisor and department chair approval*. Examples of other emphases include computer applications, facilities management, health care, human resource management, resorts and clubs, and security.

*Successful completion of CS 150, STA 215, and HTM 373 satisfies the B.S. degree cognate for all HTM majors.

**Capstone course

5. Science and mathematics core (nine credits):

- CS 150 Introduction to Computing*
- MTH 110 Algebra
- STA 215 Introductory Applied Statistics*

6. Business cognate:

- ACC 212 Principles of Financial Accounting
- ACC 215 Principles of Managerial Accounting
- BUS 201 Law and Business
- MKT 350 Marketing Management

Transfer Students

In addition to the MACRAO agreements, the HTM program maintains articulation agreements or has established transfer equivalencies with many Michigan community colleges. These three options facilitate the transfer of credits for work completed toward an associate degree. Transfer students interested in an HTM major or minor should contact the department chair to review their options and develop a plan of study. Transfer students do not need to have studied hospitality or tourism in their two-year program to be eligible for an HTM major or minor.

Transfer students should meet with the department chair prior to enrolling in any HTM course to insure that the course selected is appropriate for the student and meets the program requirements.

Minor Requirements

Students in other majors may minor in hospitality and tourism management by completing a minimum of six courses in HTM, including HTM 101 Fundamentals, totaling a minimum of 21 credits, *with advisor approval*. Interested students should meet with the department chair 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. (3-0-3). Four credits. Offered fall semester.

HTM 190 Field Preparation. An orientation course preparing HTM majors and those who wish to minor in HTM by means of a cooperative education program for entry into the HTM work environment. This course must be taken prior to the student's registering for the first GVSU field experience. Prerequisite or corequisite: 101. One credit. Offered every 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 or MTH 115, 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 fall semester.

*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 235 Travel Systems. Comprehensive study of the modern travel business, including tour networking and the role of the travel agent as a component of the distribution system. Prerequisite: 101 or permission. Three credits. Offered fall semester.

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: Advisor approval. 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. Four credits. Offered fall semester.

HTM 306 Outdoor Recreation in America. Interprets the present and future significance of outdoor recreation; the responsibilities of the agencies and organizations involved; recent legislation and programs influencing outdoor recreation; current and potential problems; and selected case histories in recreational resources development and utilization. Prerequisite: 101 or REC 110 or permission. Three credits.

HTM 318 Responsible Beverage Management. A look at the responsibilities and demands made of the contemporary beverage manager and ways to address them. Attention will be given to legal aspects, liability, social concerns, product knowledge, controls and operations, and responsible service. Certification in a recognized server training program will be required. Prerequisites: 213 and 361 or concurrency, with permission. Three credits.

HTM 333 Property Management. The care of the hospitality facility with emphasis on preventive maintenance, energy, management systems, security, and sanitation. Prerequisites: 101, PHY 130, 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 winter semester.

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 Systems Analysis. The systematic gathering and analysis of data from operations and related documents for managerial decision-making. Consideration given to scientific method; emphasis on applied MIS. Prerequisites: CS 150, ACC 212, completion of previous HTM core or permission; 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. 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 402 Tourism Planning and Development. Goal setting and strategic planning for the development of the tourism area. Explores the relationship between goals and the planning

techniques needed to implement them. Prerequisites: GPY 309, HTM 235, or permission. Three credits. Offered winter semester.

HTM 452 Tourism Marketing and Promotion. 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 non-personal sales and promotional tools available to the manager of an intangible product. Prerequisites: HTM 222 or permission; 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.

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 Administration (Capstone). Integrative exploration of the administrative functions of the hospitality concept with emphasis on operations analysis and diagnosis for the purpose of developing perceptual administrative and consultative skills. Case analysis and on-site visitation. Prerequisite: 373 or permission. 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: Diven, Executive Committee: James Goode (history), Polly Diven (political science), Bennett Rudolph (marketing), Harinder Singh (economics), Alan Walczak (international affairs).

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 provides students with the opportunity to gain a broad base of knowledge about the history, economics, and politics of interaction among nation-states. Students in the international relations program examine the sources of tension which create conflict among nations. Students also study the interdependence among nations and learn about the ways in which international management and diplomacy can promote international cooperation.

International Relations is an interdisciplinary program which includes course work 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 where GVSU has institutional exchange agreements. The capstone course in international relations allows students to bring together the threads of knowledge they have gathered in interdisciplinary course work, 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

International Relations Program

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 Kingston University in England, the Fachhochschule-Worms in Germany, the ESSCA Business School in Angers, France, the Academy of Economics in Krakow, Poland, the University of Sarajevo in Bosnia, the International Christian University in Japan, the Japan Center for Michigan Universities in Japan, and National Chengchi University in Taipei, Taiwan. Students can also participate in summer study abroad programs in Belize, England, France, Germany, Mexico, Poland, and Russia. Appropriate courses taken abroad can be credited toward the requirements for the major or minor. Students are strongly advised to consult with the Office of International Affairs and the international relations program coordinator prior to their study abroad.

Requirements for Major and Minor Programs

Major Program. The international relations major leads to a B.A. degree. Students must demonstrate third-semester proficiency in a foreign language and are strongly encouraged to undertake additional language study.

Students majoring in international relations are required to complete at least 36 credit hours, including 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 course work, students should choose at least one course each from economics and marketing, history, and political science. These choices should be made in consultation with an advisor.

Minor Program. Students minoring in international relations are required to complete at least 21 credit hours in the program, including Political Science 211, either History 317 or Political Science 312, and at least one course each in economics, history, and political science.

International Relations Major Requirements

ECC 210 Introductory Macroeconomics
ECC 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 Management Courses

- ECO 365 Comparative Economic Systems
- ECO 369 International Economic Issues
- FIN 429 International Financial Management
- MGT 466 International Management and Multinational Corporations
- MKT 359 Multinational Marketing

History and Foreign Culture Courses

- GPY 350 Geography of Russia and Its Neighbors
- GPY 351 Geography of Africa
- GPY 352 Geography of Latin America
- HST 210 Empire, Culture, and Conflict
- HST 331 Modern Latin America
- HST 337 The Islamic World
- HST 338 Modern Middle East
- HST 385 Modern Europe
- HST 390 Soviet History
- LAS 301 Inter-American Relations

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 Government and Politics of China and Japan
- PLS 313 International Organization
- PLS 314 International Law
- PLS 315 International Political Economy
- PLS 327 Politics in 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 (LAT)

See Classics.

Latin American Studies Minor (LAS)

Coordinator: Welch; Professors: Neal, Travis; Associate Professors: Fernandez-Levin, Foote, Luttenton, O'Connor, Pozzi, Welch; Assistant Professors: Guevara, Hull, Malaret, Rhoads, Rodriguez-Charbonier, C. Sanchez.

Mexico and countries of Central and South America and the Caribbean are our immediate neighbors. Our economic, political, and cultural relations with these countries continue to grow in importance. Knowledge of these countries is a necessary part of a liberal arts education and crucial to students in a wide variety of majors and professional programs: the biology major who wishes to work in the Amazon region, the business major who plans to work in international trade, the literature major who plans a graduate degree in Spanish or comparative literature, any major who will be professionally involved with Latinos, soon to be the most populous ethnic group in the United States.

The Latin American studies program encourages student participation with: Latin American student organizations on campus, the local Latino community, and organizations dealing with international relations such as the Institute for Global Education and the World Affairs Council of Western Michigan. Students are also welcome to participate on the Latin American Studies coordinating committee and are encouraged to take part in faculty research. Finally, they are urged to study abroad, either in Grand Valley's summer programs in Guadalajara, Mexico, or Belize or in other appropriate programs in Latin America.

Sister university agreements with the Universidad de los Andes in Merida, Venezuela, and Puebla, Mexico, should be in place by fall 1997. These agreements will provide opportunity for study abroad as well as for student and faculty exchange. Consult the Office of International Affairs or the coordinator of LAS for information on study abroad programs in Latin America.

Students minoring 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 towards 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 301 Inter-American Relations.
- SPA 202 Intermediate Spanish (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 210 The African Diaspora
- ANT 360 Ethnology of Meso-America.
- GPY 352 Geography of Latin America.
- HST 315 Latinos: The Forging of Ethnic Identities
- HST 330 Early Latin America.
- HST 331 Modern Latin America

- HST 632 History of Brazil.
 LAS 380 Topics in Latin American Studies.
 SPA 311 Latin American Civilization and Culture
 SPA 324 Spanish American Novel in Translation.
 SPA 370 Hispanics in the USA.
 SPA 410 Spanish American Narrative.

One course (excluding Spanish below 202) from the GVSU 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 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 twenty-five 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 which often deal with Latin America:

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 350 Ethnology of Selected World Areas
 ENG 616 Third World Literature
 GPY 235 World Regional Geography
 HST 210 Third World and the West
 HST 633 Issues in Third World History
 SS 270 Gender and Family in Third World Development

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 North America. General education course CGE B. Three credits. Offered fall semester.

LAS 301 Inter-American Relations. A survey of relations among the American nations and with other world powers. Highlights contemporary U.S.-Latin American relations. Depending on the instructor, historical, political, and/or economic themes and approaches will be emphasized. Prerequisite: 210 or junior standing. Three credits. Offered winter semester of odd-numbered years.

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 of even-numbered years.

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 towards the minor. Instructor approval prior to registration. One to three credits. Offered every semester.

Legal Studies (LS)

Acting Director: Baro; Assistant Professors: Mullendore, Yared.

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,

Legal Studies

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 cognate requirements of the School of Criminal Justice, i.e., third-semester proficiency in a foreign language to earn the B.A., or Math 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: CS 150, CS 233, CS 238, ENG 350, LS 370 or either PLS 306 or CJ 305.

Minor Program Requirements

Minors must complete 21 credit hours, including 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 370 Women and the Law. Overview of the treatment of women in American law; constitutional limitations on sex discrimination in the law; and on efforts to end discrimination; marriage and divorce; relationships outside of marriage; reproductive rights; violence against women; and employment discrimination. Three credits. Offered winter semester.

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 winter semester.

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 (or taken concurrently) or permission of instructor. Three credits. Offered fall semester.

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, and LS 424 and 426 (taken before or concurrently with 490). Three credits. Offered fall and winter semesters.

LS 495 Legal Thought (Capstone). Explores the philosophy, politics, and ethics of law and legal reasoning. Study of the major schools of thought which 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)

Acting Coordinator: Stephen Rowe.

Liberal studies provides a context in which the individual educational needs of each student can be addressed, a rich intellectual heritage can be engaged, and a variety of interdisciplinary and/or career-relevant specializations can be 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 we see no conflict between liberal education and career education. 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, 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 the one hand, and a tradition of inquiry and questioning on the other. This is the conversational relationship out of which creative work in the world occurs. It is from this same relationship that we emerge as alert and effective human beings.

The liberal studies major is distinctive in its being centered on liberal education as a developmental practice, as a way of becoming 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 43 credits, distributed as follows:

The Core (12 credits)

The Emphasis (18 credits)

LIB Electives (9 credits)

Practicum and Senior Seminar (4 credits)

The Core (12 credits)

All majors are required to take four core courses, which 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

Liberal Studies

judgment. For their third core course students take either COM 202 or COM 205 to develop skills of interpretation and rhetoric. They also take LIB 400, a course in which they 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 GVSU curriculum. Typically emphasis areas are organized around either a major issue in human life or an interdisciplinary area of study. 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, Writing in a Variety of Disciplines, Childhood Development and Literature, and Management and Society.

Liberal Studies Electives (9 credits)

The program also emphasizes the importance of integration in education, of seeing how things fit together, including 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 GVSU curriculum. The Liberal Studies Committee recommends that younger students especially 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 (4 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 Kamarek 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

Until students considering liberal studies as a major are admitted to the program, they are designated pre-liberal studies majors. To be admitted to the major, students must (1) have earned at least a B (3.0) average in four courses: English 150, LIB 100, PHI 102, and one course in the proposed emphasis, (2) have achieved sophomore standing, and (3) have submitted an approved Study Plan. Although prospective majors are encouraged to complete the LIB 100 course first, they may enroll in other courses in the program.

Submission of the Study Plan

With the advisor, students construct their study plans. These consist of listings of courses selected for emphasis area and electives, and a narrative statement which describes the student's course of study, its coherence and significance. Study plans are submitted to the program's 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. General education course CGE/D. Three credits. Offered every semester.

LIB 210 The Immigrant Experience in the U.S. This study of immigrant groups, their "home" cultures, adaptations to the new world, contributions to the shaping of U.S. culture includes student research on a particular immigrant, often a family member. Emphasis on fine arts, literature, biography, film, history, sociology. Concentration on at least two cultures, one non-European. General education course CGE/B. Three credits. Offered once a year.

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. Offered every other year.

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 other year.

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 such other expressions of various cultures as mythology, philosophy, art, film, and music. General education course AH/B. Three credits. Offered every semester.

LIB 320 Social Autobiography. An inquiry, through reading and writing, into the dynamics of cultural change and personal development in the genre of social autobiography. Three credits. Offered every other 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. Three credits. Offered once a year.

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.

Mathematics

LIB 340 Utopias, Ideal Worlds. A study of the attempts to envision ideal societies, both theoretical, imaginary utopias and dystopias as well as serious plans for real communities. Readings include such works as Plato's *Republic*, More's *Utopia*, Gilman's *Herland*, and Orwell's *1984*. To encourage personal interest in moving towards an ideal society, the course offers students opportunities for service in the local community. Prerequisite: Junior standing. General education course CGE/D. Three credits. Offered winter semester.

LIB 345 War in the Nuclear Age. Causes, dynamics, and consequences of war, emphasizing nuclear war. Exploration of the roots of aggression, deterrence, disarmament, and prospects for avoiding war. Perspectives of sciences, humanities, and social sciences. General education course CGE/D. Three credits. Offered fall semester.

LIB 373 American Society Through Film. Using a series of films, this course explores the way we have seen ourselves over the past fifty years and the connections between these changes and the circumstances of our lives. Three credits. Offered every other 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. Depending on topic offered, course may fulfill one of the liberal studies electives required for the major. 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 which 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 fall semester.

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. Past lecturers include economist Kenneth Boulding, film makers Leo Hurwitz and Ken Burns, writers Tillie Olsen and Chaim Potok, cultural critics Ivan Illich and Alan Ryan, and philosophers Jacob Needleman and John McDermott. Students meet in discussion groups before and after lecturer's visit. One credit. May be repeated for credit. Offered every year.

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. Variable credit. Offered every semester. 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 attending a conference, and should result in a statement evaluating the theory and practice of the liberal studies. Variable credit. Offered every semester.

Mathematics (MTH)

Chair: Pratt. Professors: Arendsen, Champion, Kindschi, Pratt, Sundstrom, Vanderjagt; Associate Professors: Beckmann, Hong, Jinn, Novotny, Rivera-Muniz, Schlicker, Shroyer; Assistant Professors: Aboufadel, Fishback, Gardner, Gavlus, Haidar, G. Klein, Klingler, Lesnick, Palmer, Ritchie, Rivers, Rogness, Stephenson, Wells; Instructors: Alexander, Friar; Visiting Instructors: Mays, Meyering; Math Lab Director: Rivers.

Degrees offered: B.S., B.A., in mathematics; minors in mathematics. Teaching certification in both major (elementary and secondary) and minor (elementary and secondary). Major with elementary teaching certification also offered in group science, mathematics emphasis. The statistics major and minor are described in the Statistics section of the catalog.

The mathematics major is offered within the Department of Mathematics and Statistics. 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 Regulations section of the catalog.
2. Mathematics Core.

A minimum of 36 credit hours in mathematics planned with the approval of a department faculty advisor. The 36 hours must include:

MTH 201 Calculus and Analytic Geometry I*

(Note: 122 and 123 are not included in the 36 hours but are prerequisites for 201.)

MTH 202 Calculus and Analytic Geometry II*

MTH 203 Calculus and Analytic Geometry III

MTH 210 Communicating in Mathematics

MTH 227 Linear Algebra I

MTH 420 Abstract Algebra I** or MTH 415 Mathematical Statistics II**

MTH 203 is not required for the Elementary Certification Emphasis (see 4a below).

The following cognate courses are required of all students majoring in mathematics:

PHY 230 Principles of Physics I

CS 162 Computer Science I

3. Additional Requirements in Mathematics.

In addition to the mathematics core listed above, a major must complete additional credit hours in mathematics to accumulate the required 36 credit hours. These additional credit hours must meet the following conditions:

- a. At least four additional courses in the major must be mathematics or statistics courses at Grand Valley State at the 300–400 level (excluding 302, 307, 321, 322, 323, 399, 490, and 499), and at least two of these must be mathematics courses. There is one exception: 321, 322, and 323 may be included for a major who obtains an elementary teaching certificate.
- b. Credit in the following courses may not be applied toward the mathematics major or minor: 110, 122, 123, 125, 131, 215, 221, 222, 225, 302, 307, 321, 322, and 323. There is one exception: 321, 322, and 323 may be included for a major who obtains the elementary teaching certificate.

*Completion of MTH 201, 202, and PHY 230 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.

Mathematics

4. Emphases in Mathematics (optional).

Following are four (optional) emphases which a major may select. Courses selected in this category must satisfy the mathematics electives described in the previous paragraph.

a. Elementary Certification Emphasis.

A minimum GPA of 2.8 is required in the major for recommendation for teacher certification. Students with this emphasis need not take MTH 203.

Majors seeking elementary certification are also required to complete:

MTH 321 Number Systems and Structures

MTH 322 Geometry for Elementary Teachers

MTH 323 Statistics and Probability for Elementary Teachers

MTH 341 Euclidean Geometry

MTH 345 Discrete Mathematics

MTH 420 Abstract Algebra I

One additional approved course.

School of Education requirements for elementary certification must also be met.

To be approved for student teaching, students must complete at least 24 semester hours of courses in the major, including 210, and at least two of 321, 322, and 323.

Students may substitute PHY 220 for PHY 230, and CS 160 may be substituted for CS 162 in the cognate requirements.

b. Secondary Certification Emphasis.

A minimum GPA of 2.8 is required in the major for recommendation for teacher certification.

Majors seeking secondary certification are also required to complete:

MTH 229 Mathematical Activities for Secondary Teachers

STA 312 Probability and Statistics

MTH 341 Euclidean Geometry

MTH 345 Discrete Mathematics

MTH 420 Abstract Algebra I

One additional course at the 300–400 level.

School of Education requirements for secondary certification must also be met.

To be approved for student teaching, students must complete the computer science cognate and at least 24 semester hours of courses in the major, including 210, 229, and 341.

Students who have graduated from other accredited institutions with a completed major or minor in mathematics and who now seek only teaching certification in mathematics from Grand Valley must satisfy the following criteria:

1. Transfer or complete at GVSU all mathematics and cognate courses required for the certification major or minor.
2. A minimum cumulative GPA of 2.8 (on a 4.0 scale) in mathematics courses from the accredited institution.
3. Completion of the School of Education requirements for certification.

c. Applied Mathematics Emphasis.

Majors seeking careers as mathematicians in industry or governmental agencies must include:

STA 216 Intermediate Applied Statistics
 MTH 300 Applied Analysis I
 MTH 304 Analysis of Differential Equations
 STA 312 Probability and Statistics
 MTH 400 Applied Analysis II
 MTH 405 Numerical Analysis
 Students must also complete the necessary prerequisites for the appropriate capstone course.

d. Pregraduate Mathematics Emphasis.

Majors who plan to do graduate work in mathematics are encouraged to take as many upper-division mathematics courses from the following list as possible, including at least one of the two one-year-long sequences in Advanced Calculus or Abstract Algebra.

MTH 408 Advanced Calculus I and MTH 409 Advanced Calculus II
 MTH 304 Analysis of Differential Equations
 MTH 327 Linear Algebra II
 MTH 345 Discrete Mathematics
 MTH 402 Complex Variables
 MTH 420 Abstract Algebra I and MTH 422 Abstract Algebra II
 MTH 441 Topology

Majors with this emphasis should consult their advisor about other courses that might be appropriate for their interests and about procedures for applying to graduate school. For this emphasis, it is also recommended that students complete a B.A. degree by completing the third semester of French, German, or Russian.

Requirements for a Major in Group Science: Mathematics Emphasis

A group science major with an emphasis in mathematics is available for students seeking certification to teach at the elementary level. Because this major receives a science endorsement, the mathematics courses taken for this major may not be applied to a separate mathematics endorsement. The following requirements must be completed for the major:

One course chosen from BIO 103, 105, 107, CHM 102, GEO 100, PHY 106
 One course chosen from CS 160, PHY 105, 201
 BIO 111 and BIO 112
 CHM 109 or 201*, and CHM 119
 GEO 111 or 201
 MTH 201 Calculus and Analytic Geometry I
 MTH 210 Communicating in Mathematics (capstone)
 MTH 321 Number Systems and Structures
 MTH 322 Geometry for Elementary Teachers
 MTH 323 Probability and Statistics for Elementary Teachers

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, 215, 221, 225, 302, 307, 321, 322, and 323. There is one exception: 321, 322, and 323 may be included in the mathematics minor for elementary teacher certification.

*Satisfies the B.S. degree cognate (along with MTH 221 and MTH 222).

Mathematics

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 and Analytic Geometry I
MTH 202 Calculus and Analytic Geometry II
MTH 203 Calculus and Analytic Geometry II 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 a minimum of 28 hours with a minimum GPA of 2.8 as required for teacher certification. Courses must include:

MTH 201 Calculus and Analytic Geometry I
MTH 202 Calculus and Analytic Geometry II
MTH 210 Communicating in Mathematics
MTH 227 Linear Algebra I
MTH 229 Mathematical Activities for Secondary Teachers
MTH 541 Euclidean Geometry
MTH 420 Abstract Algebra I
CS 162 Computer Science I

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 and Analytic Geometry I
MTH 202 Calculus and Analytic Geometry II
MTH 210 Communicating in Mathematics
MTH 321 Number Systems and Structures
MTH 322 Geometry for Elementary Teachers
MTH 323 Statistics and Probability 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 096, 097, 110, or waive MTH 110 based on the individual's ACT math score and high school units of mathematics earned. If this placement is disputed, the student may take the Mathematics Placement Test once.

If the ACT math score or units of high school mathematics earned is not available, the student must complete the Mathematics Placement Test. This test covers pre-algebra and algebra. A sample is available in the library. 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 and Statistics 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.

Secondary Certification Emphasis

First Year

MTH 201 Calculus and Analytic
Geometry I
MTH 202 Calculus and Analytic
Geometry II
MTH 210 Communicating in Mathematics
CS 162 Computer Science I
PSY 101 Introductory Psychology
Appropriate courses in minor and in
general education

Second Year

MTH 203 Calculus and Analytic
Geometry III
MTH 227 Linear Algebra I
MTH 229 Mathematical Activities for
Secondary Teachers
PHY 230 Principles of Physics I
CS 205 Computers in Education
ED 300 Introduction to Education
ED 305 Educational Technology
PSY 301 Child Development
Appropriate courses in minor and in
general education

Third Year

MTH 307 Mathematics Teacher Seminar
MTH 341 Euclidean Geometry
STA 312 Probability and Statistics
Appropriate 300- or 400-level
mathematics course
PSY 325 Psychology Applied to
Teaching
Appropriate School of Education
requirements
Appropriate courses in minor and in
general education

Fourth Year

Student Teaching
MTH 345 Discrete Mathematics
MTH 420 Abstract Algebra I
Completion of major
Completion of graduation requirements

Other Emphases

First Year

MTH 201 Calculus and Analytic
Geometry I
MTH 202 Calculus and Analytic
Geometry II
MTH 210 Communicating in Mathematics
CS 162 Computer Science I
Appropriate courses in general
education

Second Year

MTH 203 Calculus and Analytic
Geometry III
MTH 227 Linear Algebra I
PHY 230 Principles of Physics I
Appropriate 300-level mathematics
courses
Appropriate electives or general
education courses

Third Year

Appropriate 300- and 400-level
mathematics courses
Appropriate electives or general
education courses

Fourth Year

Capstone course and completion of major
Completion of graduation requirements

Master of Education Degree

A Master of Education degree with a concentration in mathematics is offered by the School of Education in cooperation with the Department of Mathematics and Statistics. 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.

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 course work, and copies of teaching certificates. Students must have at least a 3.0 cumulative grade point average. For additional details, see the School 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 and Statistics will evaluate all previous course work 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 Structures for Computer Science

At most three credits from:

MTH 685 Mathematics Workshop for Teachers

MTH 686 High School Mathematics Workshop

All students must take MTH 629 Secondary Mathematics Students.

Courses of Instruction

To fulfill a prerequisite, a student should obtain a grade of C or higher in the prerequisite course.

MTH 096 Pre-Algebra. A review of arithmetic using integers, decimals, percents, and fractions. Numerical geometry and basic concepts of algebra are introduced. Credits earned for this course do not count toward the number of credits required for graduation. Offered fall and winter semesters. Three credits.

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: 096 or assignment through GVSU math placement. Four credits. Offered fall and winter semesters.

*See information regarding placement test.

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 GVSU 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 non-linear equations. Prerequisite: 110 or assignment through GVSU math placement. General education course CGE/A. 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; Corequisite: 122 or satisfactory score on the placement test. General education course CGE/A. 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. General education course CGE/A. 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. General education course CGE/A. 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 and Analytic Geometry 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. General education course CGE/A. Five credits. Offered fall and winter semesters.

MTH 202 Calculus and Analytic Geometry 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 and Analytic Geometry III. Continuation of MTH 202 using graphical, numerical, and analytic methods to study parametric equations, polar coordinates, vector algebra in two and three dimension, differentiation and integration of vector functions of a single variable and scalar functions of several variables. 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 will be selected from the area of logic, set theory, number theory, relations, and functions. 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 225) required of all elementary teachers applying to the School of Education for winter 1996 or later. Does not count toward a major or minor in mathematics. Prerequisites: 110 and at least sophomore standing. General education course CGE/A. Four credits. Offered fall and winter semesters.

*See information regarding placement test.

Mathematics

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 School of Education for winter 1996 or later. Prerequisites: 110 and at least sophomore standing; 221 strongly recommended. 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. Five credits. Offered fall 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. General education course CGE/A. 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 GVSU Mathematics Laboratory. Prerequisites: 122 and 123 and sophomore standing. Three credits. Offered fall semester.

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 of odd-numbered years.

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 non-linear equations. Applications in physical, biological, and social sciences. Prerequisite: 203. Four credits. Offered winter semester.

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 non-linear systems: phase plane; existence and uniqueness; stability, applications in physical, biological, and social sciences. Prerequisites: 203 and 227. Three credits. Offered winter semester.

MTH 307 Mathematics Teacher Assisting Seminar. Strategies for teaching mathematics in junior and senior high school. Coordinated and taken concurrently with Education 307. Prerequisites: CS 205 or 309, PSY 301 and at least 12 hours in the major, including 229. Three credits. Offered fall semester.

MTH 321 Number Systems and Structures. Sets, logic, number systems, patterns, functions, and algebraic structures. Does not count toward a major or minor in mathematics except for the Elementary Certification Emphasis. Prerequisite: 221. Three credits. Offered winter semester.

MTH 322 Geometry for Elementary Teachers. Classification and study of two- and three-dimensional shapes. Transformations, congruent and similar shapes. Measurement and formulas. A language such as LOGO as a learning tool. Geometric patterns, mathematical reasoning. Does not count toward a major or minor in mathematics except for the Elementary Certification Emphasis. Prerequisite: 221. Three credits. Offered fall semester.

MTH 323 Statistics and Probability for Elementary Teachers. Gathering, organizing, and describing data. Constructing, reading, and interpreting data displays. Data analysis, inferences, and evaluating arguments using data analysis. Experimental and theoretical probability. Counting techniques. Exploring outcomes of experiments. Does not count toward a major or minor in mathematics except for the Elementary Certification Emphasis. Prerequisite: 221. Three credits. Offered fall semester.

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 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 winter semester.

MTH 345 Discrete Mathematics. Basic and advanced counting techniques, including the Pigeonhole Principle and inclusion-exclusion; recurrence relations; partial orderings; graph theory, special paths, planarity, chromatic number, networks, trees, traversals, digraphs. Algorithms and proof techniques. 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 odd-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: 205. Three credits. Offered winter semester of even-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: 205 and 210. Three credits. Offered fall semester of even-numbered years.

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 odd-numbered years.

MTH 420 Abstract Algebra I (Capstone). A study of modern algebraic structures such as groups, rings, integral domains, and fields. Applications of abstract algebra such as cryptography and coding theory. Prerequisites: 210, 227 or 225, and a 300-level course. Three credits. Offered fall and winter semesters.

MTH 422 Abstract Algebra II. A continuation of MTH 420. Advanced topics in group theory and ring theory such as quotient groups, the Sylow theorems, symmetry groups, factor rings, and prime and maximal ideals, Extension fields, finite fields, and an introduction to Galois theory. Prerequisite: 420. Three credits. Offered winter semester of even-numbered years.

Mathematics

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 winter 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: 345 and either CS 162. 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.

MTH 490 Mathematics Internship Seminar. Prerequisite: Approval of the department; senior status. Two credits. Offered fall and winter semesters.

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. Offered on demand.

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 Mathematics Students. 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, includes related. Prerequisites: Certification in mathematics. Three credits. Offered fall semester.

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.

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.

Modern Languages and Literatures

Professors: Olivier, Rydel, M. Seeger, W. Seeger; Associate Professors: Fernandez-Levin, Pozzi; Assistant Professors: Agawu-Kakraba, Caillaud, Drees, Gros, Krakusin, Wright; Instructors: Lamb, Watts.

In today's global society the importance of foreign language study has never been more obvious. Leaders in business, government, and throughout the community are calling for increased awareness of the interrelatedness and interdependence of all nations and societies. One of the traditional barriers to understanding, and to the free flow of communication, has been a lack of informed citizens with competence in at least one foreign language. There is no better way to understand and appreciate cultures other than your own than to communicate with other peoples in their own language. What is more, the mastery of a foreign language inevitably improves your command of your native language. With such a high premium on communication skills in the world today, foreign language study is not a luxury; it is a necessity.

Career Opportunities

A bachelor of arts degree in a modern foreign language is a true liberal arts degree, with all the breadth of cultural understanding and communication skills that have always characterized liberal arts study. The demand for teachers of foreign languages is increasing both in the 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, here 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 course work (300 or above) with the Modern Languages Department at Grand Valley to qualify for a major.

For those transfer students who wish to minor in a foreign language, a minimum of six credit hours of advanced course work (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) 307, 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. (See below for exceptions in French and Spanish.) Students must enroll in the course in which they place on the examination. Instructors who determine that students are inappropriately enrolled may direct them to move to the appropriate level.

Transfer students with prior college language study are not eligible to take the placement examination in that language, and must enroll in a course at the next appropriate level.

Students with non-college language learning may be able to earn college credit by achieving an appropriate score on an approved national test, such as Advanced Placement (see "Credit by Examination," below).

Students who have studied French or Spanish in high school may not need to take the placement examination. The following guidelines apply:

- 0–2 semesters of high school language: May take 101.
- 3–4 semesters of high school language: May take 150 or 102. May *not* take 101.
- 5 or more semesters of high school language: Must take placement test and may not take 101.

Native speakers are not eligible to take the placement exam, nor to enroll in 100- or 200-level courses. The students should talk to an advisor in the Modern Language 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 course work 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 virtually every major region of the world, including major business schools in Worms, Germany, and Angers, France.

For more information, students should contact the Office of International Affairs at 895-3898.

Regular accompanied programs include:

Bosnia — A summer study program in economics, culture, history, and Serbo-Croatian language. Students may also apply for a full year of study at the University of Sarajevo. As of this writing, study abroad activity in Bosnia is suspended.

China — A summer study program in current events, culture, history, and Chinese language, located at the East China University of Science and Technology in Shanghai.

France — A summer school program in French language and culture, located in Aix-en-Provence, in southern France.

Germany — A summer school program in German language and culture, located in Rendsburg, in northern 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 the Spanish language, literature, culture, and civilization, located in Guadalajara, Mexico.

Poland — Summer and academic year programs in economics, management, and the Polish language, located at the Akademia Ekonomiczna in Krakow.

Russia — An intensive summer program in Russian language and culture, located in St. Petersburg and other selected cities.

Chinese, Japanese and Polish Language Instruction

Grand Valley offers two full years (16 credits) of instruction in Chinese and Japanese; 101, 102, 201, and 202. The 102 course satisfies general education category CGE.B, and the 201 course satisfies the B.A. degree cognate. Courses in both Chinese and Japanese language are also part of the East Asian Studies

Modern Languages

minor. Polish 101 is offered only once a year, during the winter semester, and is particularly recommended for students who plan to take advantage of GVSU's summer study program in Poland. Plans are under way to increase offerings in these and other less-commonly taught languages.

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. General education course CGE/B. Prerequisite: C (not C-) or better in 101. Four credits. Offered winter semester.

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.

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.

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. General education course CGE/B. Prerequisite: C (not C-) or better in 101. Four credits. Offered winter semester.

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.

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.

French (FRE)

Requirements for Major and Minor Programs

Students majoring in French are required to take a minimum of 33 hours of study in this language beyond 102 (credits for 201 and 202 or equivalent may be counted toward the major or minor), and FRE 495 (Capstone). In addition, they must take English 361 if they are seeking elementary and secondary teacher certification.

Students choosing French as a minor program must complete 20 hours of French beyond the French 102 course, including 201 and 202 (or its equivalent) and 12 hours of 300- or 400-level courses.

Courses of Instruction

Classes are conducted primarily in French.

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 101 and 102. General education course CGE/B. 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 French 101 or 102 or their equivalent. General education course CGE/B. Prerequisite: Appropriate high school background or placement test score. Four credits. Offered fall and winter semesters.

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. Four credits. Offered fall and winter semesters.

FRE 225 Exploring France. An introduction to the concept of culture through an exploration of the cultural heritage of France, its regions, history, politics; its art, music, literature; its influence in the world at large and in American culture in particular. Does not count as credit toward French major or minor. General education course CGE/B. Three credits.

FRE 300 Survey of French Literature I. A survey of French literature of the Middle Ages and the Renaissance. Prerequisite: 202 or permission of instructor. Three credits. Offered winter semester in even-numbered years.

FRE 301 Modern French Literature in Translation. A study of selected French authors of the 19th and 20th centuries. Taught in English. A supplemental writing skills course. Three credits. Not open for credit to students who have had FRE 303, 414, 416, 420.

FRE 302 Survey of French Literature II. A survey of French literature of the seventeenth and eighteenth centuries. Prerequisite: 202 or permission of instructor. Three credits. Offered winter semester in odd-numbered years.

FRE 303 Survey of French Literature III. A survey of French literature of the nineteenth and twentieth centuries. Prerequisite: 202 or permission of instructor. Three credits. Offered fall semester in odd-numbered years.

FRE 304 French Conversation. Extensive practice in oral communication; some translation from English to French; attention to finer points of grammar and style. Prerequisite: 202 or consent of the instructor. Three credits. Offered winter semester in 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: 202. Three credits. Offered fall 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: 202. Three credits. Offered fall semester in odd-numbered years.

FRE 310 Contemporary France. French civilization and culture as seen through books, periodicals and films; discussion of current events. Prerequisite: 308 or permission of instructor. Three credits. Offered fall semester in even-numbered years.

FRE 380 Special Topics in French. Offered on sufficient demand.

FRE 399 Independent Reading. One to four credits. Offered fall and winter semesters.

FRE 410 Medieval French Literature. Study of representative French works of poetry, prose, and theatre from the Middle Ages. Readings include epic and lyric poetry, courtly literature, fables, farces, and religious theatre. Prerequisite: 300 or permission of instructor. Three credits. Offered fall semester in even-numbered years.

FRE 414 French Literature of the Nineteenth Century. Study of drama, criticism, poetry, and the novel of the nineteenth century. Prerequisite: 303 or permission of instructor. Three credits. Offered winter semester in even-numbered years.

FRE 416 French Literature of the Twentieth Century. Study of contemporary literature with representative works in prose, poetry, drama, and scenarios. Prerequisite: 303 or permission of instructor. Three credits. Offered winter semester in odd-numbered years.

FRE 420 French Literature After 1945. Study of contemporary literature with representative works in prose, poetry, drama, and scenarios since World War II. Prerequisite: 303. Two credits. Offered fall semester in even-numbered years.

Modern Languages

FRE 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: Senior standing with a major in French. Required of all French majors. Three credits. Offered winter semester.

FRE 499 Independent Study and Research. One to four credits. Offered fall and winter semesters.

German (GER)

Requirements for Major and Minor Programs

Students majoring in German are required to take a minimum of 33 hours of study in this language beyond German 102, including eight hours of intermediate German (or its equivalent), 301 and 302, 15 hours of literature and/or culture courses, and GER 495 (Capstone).

Students seeking secondary teacher certification must take English 361, preferably before enrolling in teacher assisting. In addition, majors are urged to pursue studies in history, philosophy, and world literature.

Students choosing German as a minor program must complete 20 hours of German beyond German 102, including eight hours of intermediate German (or its equivalent) and 301, 302, and six hours of courses numbered 300 and above.

Courses of Instruction

Advanced courses are conducted primarily in German.

GER 101 Elementary German I. Introduction to the language and culture of the German-speaking countries (Germany, Austria, Switzerland), with an emphasis on practical application of speaking, listening, reading and writing skills. The course is conducted largely in German to advance students' communication and cultural competency to function in real-life situations and any professional field. Four credits. Offered fall and winter semesters.

GER 102 Elementary German II. Continuation of 101. The course completes the introduction to the language and culture of the German-speaking countries (Germany, Austria, Switzerland). The course is conducted largely in German and enhances the students' knowledge and competency in real-life communication (speaking, listening, reading, writing,) for application in a profession. General education course CGE/B. Prerequisite: C (not C-) or better in 101, or Credit, or appropriate placement test score. Four credits. Offered fall and winter semesters.

GER 201 Intermediate German I. Continuation of German 102. The course enhances students' competency in the German language (listening, speaking, reading, writing) and culture skills, with an emphasis on real-life communication for application in professional fields. Conducted almost exclusively in German, with extensive use of authentic materials: literature, newspapers, videos, tapes, and the Internet. Prerequisite: C (not C-) or better in 102, or Credit, or appropriate placement test score. Four credits. Offered fall and winter semesters.

GER 202 Intermediate German II. Continuation of German 201. Review, practice, and advancement of all the acquired language (speaking, listening, reading, writing) and cultural skills from 101–201 in real-life situations toward language proficiency. Conducted in German and exposes students to more difficult texts relevant to students' professional interests, literature, films, music, and the Internet. Prerequisite: C (not C-) or better in 201, or Credit, or appropriate placement test score. Four credits. Offered fall and winter semesters.

GER 225 Exploring Germany. An introduction to the cultural heritage of Germany. Topics include music, philosophy, literature, and science. Course is taught in English and does not count toward a major in German. Three credits. Offered winter semester.

GER 301 Conversation and Composition I. Extensive practice and real-life application of oral and written communication to advance proficiency in German language and culture. Attention to advanced stylistic and grammatical concepts. Taught in German using authentic materials: newspapers, professional texts, literary readings, video and audio tapes, the

Internet and classroom discussions. Prerequisite: 202 or equivalent. Three credits. Offered fall semester.

GER 302 Conversation and Composition II. Continuation of 301. Extensive practice and real-life application of oral and written communication to advance proficiency in German language and culture. Attention to advanced stylistic and grammatical concepts and their professional application. Taught in German using newspapers, professional texts, literary readings, video and audio tapes, the Internet and classroom discussions. Prerequisite: 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 eighteenth century. Prerequisite: 202. Three credits. Offered winter semester in odd-numbered years.

GER 304 Introduction to German Literature II. A brief survey of German literature from the eighteenth century to the present. Prerequisite: 202. 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 early beginning to the Baroque. Course is conducted in German and continues to emphasize and advance all areas of language competency (listening, speaking, reading, writing). Prerequisite: 202. Three credits. Offered fall semester in even-numbered years.

GER 311 German Civilization and Culture II. Continuation of 310. A study of the cultural, social, and economic history and development of the German-speaking peoples from the Baroque to the present day. Course is conducted in German and continues to emphasize and advance all areas of language competency (listening, speaking, reading, writing). Prerequisite: 202. Three credits. Offered fall semester in odd-numbered years.

GER 321 Germanic Literature in Translation. Germanic literature to the high Middle Ages, including the Edda, the Nibelungenlied and Beowulf. Background readings in Germanic mythology. Not open for credit to students who have had German 303. Credit does not count toward major. Three credits. Offered on sufficient demand.

GER 322 Modern German Literature in Translation. German literature of the twentieth century with emphasis on the novel. Secondary readings in nineteenth-century backgrounds. Authors include Mann, Kafka, Hesse, Brecht, and Grass. Open for credit to German majors, but credit does not count toward the major. Three credits. Offered on sufficient demand.

GER 380 Special Topics in German. Offered on sufficient demand.

GER 399 Independent Reading. One to four credits. Offered fall and winter semesters.

GER 401 German Literary Movements. Reading and analysis of individual or selected German literary movements within their cultural and historical context and relevance. Conducted in German. Class discussions and written assignments advance students' language and cultural competency in German. Prerequisite: Two 300-level courses or permission of instructor. Three credits.

GER 402 German Authors. Reading and analysis of German authors within their cultural and historical context and relevance. Conducted in German. Class discussions and written assignments advance students' language and cultural competency in German. Prerequisite: Two 300-level courses or permission of instructor. Three credits.

GER 495 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 which culminates the study of German as a major. Conducted in German. Prerequisite: Senior standing with a major in German. Required of all German majors. 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 beyond 102. Russian literature in translation may be used as a part of this requirement. Students interested in Russian literature in translation should refer

Modern Languages

to course listings under Russian Studies. Recommended courses for students interested in securing a strong minor in Russian are History 389, 390, and 391 and Russian Studies 225. 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. General education course CGE B. Four credits. Offered winter semester.

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. Four credits. Offered winter semester.

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 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 11 courses in this language beyond 102/150, including SPA 300, 330, one 400-level course, and SPA 495 (capstone). Credits for 201 (and 202 or equivalent) may be counted toward the major or minor, but credits for 399/499 may not, unless they are earned in Grand Valley's Mexico Study Program. In addition, students must take English 361 if they are seeking elementary or secondary certification.

Students choosing Spanish as a minor program must complete a minimum of 20 hours of Spanish beyond 102.

Special sections of elementary Spanish may be offered for various professions, including law enforcement and medical care, with sufficient demand.

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. General education course CGE B. 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. General education course CGE B. Prerequisite: Appropriate high school background or placement test score. Four credits. Offered fall and winter semesters.

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. Four credits. Offered winter semester.

SPA 300 Reading Strategies in Spanish. Designed to develop reading proficiency while stimulating and reinforcing oral and written skills. Its approach is thematic rather than purely literary or historical. Topics are chosen for the cultural insight they offer into Spanish and Spanish American civilization, culture, literature, and fine arts. Prerequisite: 202 or equivalent. Three credits. Offered fall and winter semesters.

SPA 301 Spanish Conversation. Extensive practice to achieve oral proficiency in Spanish. Oral review of the more complex aspects of Spanish grammar. Expansion of formal and colloquial vocabulary. Prerequisite: C or better in 202 or permission of instructor. May be taken concurrently with 302. Three credits. Offered fall semester.

SPA 302 Spanish Composition. Written competence in Spanish. Elements of advanced grammar and problems of style. Prerequisite: C or better in 202 or permission of instructor. May be taken concurrently with 301. Three credits. Offered fall and winter semesters.

SPA 308 Spanish Phonetics. Introduction to the sound system of Spanish. Phonetic transcription of texts in Spanish. Prerequisite: 202 or equivalent. 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: 202 or equivalent. Three credits. Offered winter semester.

SPA 310 Spanish Civilization and Culture. An introduction to the political, social, economic, and cultural history of Spain. Prerequisite: 300 plus three credits at the 300 level. Three credits. Offered winter semester.

SPA 311 Latin American Civilization and Culture. An introduction to the political, social, economic, and cultural history of Latin America. Prerequisite: 300 plus three credits at the 300 level. Three credits. Offered fall 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 fall and winter semesters.

SPA 330 Introduction to Literature. Introduction to the literary analysis of the narrative, poetry, and drama of Spain and Spanish America. Prerequisite: Completion of 300, 302 with a grade of C (not C-) or better, plus three additional Spanish credits at the 300 level. Three credits.

Music

SPA 370 Hispanics in the U.S. Study of the major Hispanic groups in the United States. Representative literary works will be read which will lead to an appreciation and awareness of the cultural roots and current life styles of these groups. Prerequisite: 330 or permission of instructor. Three credits. Offered on demand.

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: 330 or permission of instructor. Three credits. Offered fall semesters in even-numbered years.

SPA 420 Spanish Literature I. Survey of Spanish literature from *El Cid* through the Golden Age. Prerequisite: 330 or permission of instructor. Three credits. Offered winter semesters in odd-numbered years.

SPA 440 Cervantes. Survey of Cervantes' masterwork, *Don Quixote de la Mancha*. Prerequisite: 330 or permission of instructor. Three credits. Offered winter semester in odd-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 or permission of instructor. 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: 330. Three credits. Offered fall semester in odd-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: 330 or permission of instructor. Three credits. Offered on 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: Senior standing with a major in Spanish. Required of all Spanish majors. Three credits. Offered winter semester.

SPA 499 Independent Study and Research. One to four credits. Offered fall and winter semesters.

Music (MUS)

Chair: Van Solkema; Professor: Van Solkema; Associate Professors: Shechtman, Vanden Wyngaert; Assistant Professors: Campbell, Copenhaver, Martin, Pool, Schriemer.

In addition to the above full-time faculty members, more than 20 others teach special courses and applied music lessons to our students on a part-time basis. Many of these are members of the Grand Rapids Symphony Orchestra or are distinguished musicians and educators with years of teaching experience at other fine colleges and universities.

The faculty is committed to the following objectives:

1. To provide a course of study that will prepare students for careers in music education.
2. To provide a course of study for the exceptionally gifted student who is interested in performance, private studio teaching, or graduate study.
3. To provide a course of study for students interested in a liberal arts degree with a major in music.
4. To provide musical opportunities for non-music majors through private lessons, ensembles, and classes.

5. To provide cultural leadership and enrichment for the campus community at large.
6. To serve the GVSU community by providing appropriate musical support for all facets of academic life.
7. To provide opportunities for the guided development of creative abilities.

Grand Valley State University is an accredited institutional member of the National Association of Schools of Music.

Career Opportunities

Music is an attractive field and 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 the popular careers in teaching and performance, 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 ten days in advance. Entering freshmen and transfer students will be required to take a theory 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 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

The Music Department offers curricula leading to the B.A., B.M., and B.M.E. degrees. These programs present music in the context of a broad liberal education, prepare vocal and instrumental teachers for elementary and secondary schools, provide individual and/or group study in all performance media, offer cultural enrichment to students in all disciplines, and provide training necessary to prepare students for concentrated graduate studies.

In addition to requirements outlined below, all majors must fulfill the department recital and Music Major Seminar attendance requirements, pass the piano proficiency examination, and perform one or two faculty-approved recitals, as appropriate to the degree program selected. Music majors and minors should

Music

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 is designed for the study of music within a liberal arts context. This degree, with its foreign language component, offers an appropriate background for prospective advanced-degree candidates who are preparing for careers in musicology, 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 proving to be necessary in the current technical environment. Students electing a B.A. in music must complete a minimum of 53 credit hours in music, planned with the approval of a faculty advisor in the department. Course requirements are as follows:

	B.A.
General education/basic skills	37
Music theory	16
Applied music	16
Music history and literature	8
Conducting	3
Major ensembles (normally six different semesters)	7
Electives	18
Foreign language (third-semester proficiency)	12
Half senior recital	0
Analytical Techniques/Capstone	3
	<hr/>
	120 credits

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 81 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:

General education courses*	43
Music theory	16
Music history and literature	8
Applied major	28
Other applied music	2
Conducting	6
Major ensembles (normally six different semesters)	6
Analytical Techniques/Capstone	3
Half junior recital	0
Full senior recital	0
Music electives**	12
	<hr/>
	124 credits

*Includes eight hours of foreign language for voice majors.

**Must include appropriate pedagogy, literature, and diction courses.

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 72 hours in music and 33 hours in professional education. General studies and electives complete the 136 hours required for the degree.

Vocal/choral majors normally will choose an applied emphasis in voice and an applied minor in keyboard, or vice versa. 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 class or private piano until the proficiency exam is passed and 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:

	Vocal/Choral	Instrumental
General education basic skills (must include Psych 101)	31	31
Major applied	16	16
Other applied	9	10
Music theory	16	16
Music history and literature	8	8
Conducting and repertory	8	8
Major ensembles (one each semester except semester of directed teaching)	7	7
Half senior recital	0	0
Music education	5	4
Professional education courses and directed teaching	33	33
Capstone	3	3
	<u>136 credits</u>	<u>136 credits</u>

B.M.E. students must satisfactorily complete the piano proficiency requirement, the full-faculty jury, conducting, music education course work, and Psychology 101 and 301 before electing the directed teaching program (refer to the Education section in this catalog for specific entrance requirements and deadlines). It also is recommended that instrumental majors complete their course series of class instrument instruction before this time.

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 26 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 355 or 365 (for elementary and secondary choral emphasis respectively) or Music 356 and 360 (for elementary or secondary instrumental emphasis respectively). Conducting 320 is a highly recommended addition to this program. Music minors are required to pass a piano proficiency examination.

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. General education course AH/A. Three credits. Offered fall and winter semesters.

MUS 119 Survey of Music Literature I. A survey of music literature from the fifteenth through the 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 nineteenth and twentieth centuries. 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. General education course AH/A. 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. Corequisite: 135. 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. Corequisite: 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. Corequisite: 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. Corequisite: 131. One credit. Offered winter semester.

MUS 170 Evolution of Jazz (1900-1945). A fundamental course in the evolution of jazz styles with emphasis on interpretation and aural comprehension. The ability to read music and/or perform instrumentally or vocally is helpful but not mandatory. Two credits. Offered fall semester on sufficient demand.

MUS 171 Evolution of Jazz (1945 to the present). A second course in the evolution of jazz styles with emphasis upon interpretation and aural comprehension. The ability to read music and/or perform instrumentally or vocally is helpful but not mandatory. Two credits. Offered winter semester on sufficient demand.

MUS 172, 173. Jazz Improvisation. Improvisation in contemporary jazz styles. Uses recordings, original and written improvisations. Requires a knowledge of scales, modes, and chords as well as the ability to improvise on a standard orchestral instrument. Prerequisite: Permission of instructor. One credit. Offered fall and winter semesters.

MUS 180 Lunchbreak Series. An exploration of theatre, dance, and musical arts through lectures and attendance of professional performances. One credit. Offered fall and winter semesters.

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. Two credits. 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. Two credits. Offered winter semester.

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 232 Music, MIDI, and Technology. The application of practical musical skills to digital electronic instruments and components. Covers synthesizer programming and performance, digital sequence recording and Musical Instrument Digital Interface (MIDI). Audio realization of student compositions and familiarity with current electronic instruments is emphasized. Two credits. Offered fall and winter semesters.

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. Corequisite: 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 272, 273 Advanced Jazz Improvisation. Improvisation in contemporary jazz styles. Uses recordings, original and written improvisations. Requires a knowledge of scales, modes, and chords as well as the ability to improvise on a standard orchestral instrument. Prerequisite: Permission of instructor. One credit.

MUS 290 Composition Seminar. Original composition projects. Individual tutorials devoted to discussion of works in progress and group sessions devoted to exploring various topics of mutual concern to composers. 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 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.

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.

Music

MUS 306 Music: Twentieth Century. A study of twentieth-century music written by men and women of Europe and North America considering Impressionism, Expressionism, Neo-Classicism, Minimalism, Second Viennese School, and the influences of jazz and electronic technology. Development of listening skills in weekly labs. 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, using score reading and terminology. Prerequisite: Permission of department. Three 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 324 Creative Movement and Eurhythmics for Musicians. A course designed to develop an acute awareness of sound and space concepts through the explanation of creative and improvisational movement and the evolution of rhythmic involvement through the discipline and techniques of Eurhythmics. Designed for musicians, instrumental and vocal only. Two credits. Offered upon demand.

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 332 Advanced Electronics Studio. Advanced electronic composition techniques. Prerequisite: 232. Two credits. Offered fall and winter semesters.

MUS 334 Analysis of Twentieth-Century Music. A study of the composition techniques, styles, and literature of music written since 1900. Prerequisite: 231. Three credits. Offered winter semester alternate years.

MUS 335 Modal Counterpoint. Study and composition based on sixteenth-century contrapuntal practices. Prerequisite: 231. Three credits. Offered fall semester alternate years.

MUS 336 Eighteenth-Century Counterpoint/Contrapuntal Forms. Study and composition of contrapuntal pieces based on structures taken from various models, including J.S. Bach's Two-Part Inventions. Prerequisites: 231 and permission of instructor. It is also strongly suggested that students complete 335 before enrolling in 336. Three credits. Offered winter semester alternate years.

MUS 337 Jazz Theory I. 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 338 Jazz Theory II. A continuation of 337. Further analytical studies in chord construction, harmonic progression, and analysis, along with creative work in original song writing, concentrating on harmonic progression and melodic construction. Prerequisite: 337 or permission of instructor. Two credits. Offered once a year.

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 355 Teaching Music Creatively in Elementary Grades. A creative approach involving new techniques and methods in teaching music to children in elementary school classrooms. Designed for vocal music majors and minors only. Students may not earn credit in both 355 and 356. Three credits. Offered fall semester.

MUS 356 Vocal/General Music in the Elementary School. Similar to 355 but designed to give prospective instrumental teachers an overview of vocal general music in the elementary school. For instrumental music majors and minors only. Students may not earn credit in both 355 and 356. Two credits. Offered fall 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 360 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 361 Piano Pedagogy. A study of methods and materials necessary for teaching piano. Designed for piano majors and minors. Prerequisite: Piano 242 or 245. Two credits. Offered on sufficient demand.

MUS 362 Marching Band Techniques. Designed to acquaint B.M.E. majors with all aspects of today's marching band. 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 365 Choral/General Music in the Secondary School. Techniques, trends, and materials in junior and senior high school general and choral music. The adolescent voice, choral programming, the budget process, musicals, and contests and elective music classes. Restricted to music majors and to vocal minors who want a music teaching minor for secondary certification; open to others by special permission only. Two credits. Offered winter 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 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 403-407 Directed Teaching Seminar. Accompanying music seminar to the directed teaching experience (see Education 403-407). Prerequisites: Satisfactory completion of piano proficiency requirement, full-faculty jury, education, conducting, and music education course work, Psychology 301, and 2.5 GPA in all music courses. It is also recommended that instrumental majors complete their course series of class instrument instruction before this time. Offered both semesters. Part of 12 credits.

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 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.

Music

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 fall and winter semesters.

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**.

MUS 263, 264 **Class Piano**. One credit each. Offered fall and winter semesters.

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.

MUS 121 **Applied Jazz Instruction**. Private lesson on jazz piano, guitar, bass, percussion, and other instruments according to student interest and staffing availability. Not offered every semester. May be repeated for credit. Prerequisite: Permission of department chairman. Two 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.

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.

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. Students interested in a music major or minor should consult with a member of the music faculty as early as possible so that further study can be planned if it is needed.

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 GVSU Singers.* The principal university choir. Prerequisite: Successful audition and permission of instructor. One credit.

MUS 102 GVSU Concert Band.* Offered winter semester. One credit.

MUS 103 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. Corequisite: 101, 102, 103, or 109. One credit.

MUS 105 Studio Jazz Orchestra. 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 GVSU 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 108 Music in Motion. Small vocal ensemble incorporating movement with singing. Prerequisite: Permission of instructor. One credit.

MUS 109 Festival Chorale. A women's ensemble open to campus and community singers. This chorale learns a variety of repertoire and participates in two concerts on campus each semester. One credit.

MUS 110 Collegium Musicum. Performance of older music (mainly before 1700) by students, either singing or playing on period instruments. Prerequisite: Permission of instructor. One credit.

MUS 111 GVSU 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 GVSU. Performs most challenging traditional and contemporary band literature. Prerequisite: Audition and permission of instructor. One credit.

MUS 113 GVSU Percussion Ensemble. The GVSU 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.

*Fulfills degree requirements for major ensemble participation.

Natural Resources Management

MUS 114 GVSU Cello Ensemble. A chamber music experience for cellists which develop skills necessary for ensemble performance. Prerequisite: Prior approval of the instructor. One credit.

MUS 115 GVSU 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 GVSU Madrigal Ensemble. Sixteen-voice SATB ensemble performing a cappella madrigals and motets of the early periods of music. One credit.

MUS 117 GVSU Chamber Choir. Twenty-voice SATB ensemble performing 19th- and 20th-century choral music, a cappella and accompanied. 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: Rogers, Professor; Northrup; Assistant Professors: Griffin, MacDonald.

Degree offered: B.S. in natural resources management.

The program in natural resources management 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 computer science. Upon this foundation, interdisciplinary courses are designed to integrate whole systems concepts with practical applications in the study of real world problems. Management alternatives are emphasized for meeting contemporary societal needs. The curriculum is designed to provide students with the skills to promote the intelligent use and preservation of our natural resources in professional as well as volunteer service and advocate capacities.

Workers in the complex field of resource management need to understand local, state, and national economic and environmental values, priorities, and policies. The graduates of the NRM program will be prepared to assume responsibility for the management of natural resources on either private or public lands. They will be prepared to deal with optimizing and balancing the use and production of commodities such as soils, water, timber, range land, and minerals with the less tangible values of scenery, air and water quality, recreation, wildlife, and social well-being. Our graduates will realize the importance of being responsive and alert to the changing economic needs of a dynamic society, yet sensitive to environmental quality problems. Students in 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 the faculty on topics of current concern, ranging from the means of predicting and increasing farm and forest productivity to the utilization of wetlands for wastewater polishing.

There are select project opportunities. Students chosen to participate in a select project will be awarded NRM 499 credit for work at some location outside the home department. The project will be well defined, and the required product may be a report, a physical model, or a computer program.

Requirements for a Major

The program offers courses leading to the B.S. degree in natural resources management.

Completion of a major in natural resources management requires the following: All students complete a minimum of 40 hours of major course work and 32–37 additional hours of cognate courses selected from other science and mathematics offerings. All natural resources management majors must complete the B.S. cognate sequence: CS 140 or 162 and NRM 320 and BIO 460 and the capstone course NRM 486.

Emphasis (optional): Land and Soils Resources Management

Students who choose the Land and Soils Resources Management emphasis must meet the following requirements:

Major (40 hours): NRM 250, 281, 320, 350, 451, 452 or 484, 480, 481, 486, BIO 460, and BIO 408.

Cognates (32–37 hours): CS 160 or 162, MTH 122 or 125, BIO 111, CHM 109 or 115*, GEO 111, plus any two of the following sequences:

1. BIO 112, 215, 222, 342, 323, 333, 362, 440 (take four from list).
2. CHM 116; 221 or 222; and one of these three courses: CHM 230, 231, or 322.
3. GEO 112, 320, 420,
4. MTH 201 and 202, STA 215 and 216.

Sample Curriculum

First Year

MTH 110 Algebra
 MTH 122 College Algebra
 or MTH 125 Survey of Calculus
 CS 140 Computer Programming in BASIC
 or CS 162 Computer Science I
 ENG 150 Strategies in Writing
 BIO 111 General Biology I
 GEO 111 Physical Geology
 CHM 109 or 115
 General education courses

Third Year

General education courses
 Science/mathematics options
 NRM 320 Introduction to Resource Systems
 NRM 350 Aerial Photography and Remote
 Sensing of the Environment
 NRM 451 Resource Management Policy
 Elective

Second Year

General education courses
 Science/mathematics options
 NRM 250 Resource Measurement
 and Maps
 NRM 281 Principles of Soil Science
 Electives

Fourth Year

Science/mathematics options
 BIO 460 Productivity of Ecosystems
 BIO 408 Wildlife Management
 NRM 452 Watershed and Wetland
 Management
 or NRM 484 Land Reclamation
 NRM 480 Senior Seminar
 NRM 481 Soilscapes and Soil Classification
 NRM 486 Soils and Landforms Evaluation
 (capstone)
 Electives

Requirements for a Minor

Students who wish to minor in natural resources management must complete a minimum of 24 hours in the program, including ten hours of 300–400-level courses and no more than three credits of 490 and 499.

*Students who choose the chemistry cognate sequence must take CHM 115.

Courses of Instruction

Lecture 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, the geography of climate and effects on terrain, vegetation, and people. General education course NS/A. (3-2). Four credits. Offered fall, winter, and occasional summer semesters.

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. (2-6). Four credits. Offered fall semester.

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. (3-3). Four credits. Offered alternate years, 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: A science general education course and CS 140, 150 or 162. (2-3). 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: 250, GEO 111, or permission of the instructor. (2-4). Four credits. Offered winter semester alternate years.

NRM 380 Special Topics. Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisite: Junior or senior status in biology, geology, resource management, or permission of instructor. One to four credits. Offered on sufficient demand.

NRM 410 Environmental Impact Assessment. Historical, legal, and administrative aspects of impact statements. Development of methods to gather and analyze data for impact statements. Prerequisite: Senior status in natural resources management, biology, geology, political science, or public administration. Four credits. Offered fall semester alternate years. (3-2).

NRM 451 Resource Management Policy. Focuses on techniques and strategies aimed at improving the policies and resource management capabilities of governmental agencies. Describes ways of diagnosing problems, implementing solutions, and transferring results from agencies to the public. Case histories in resource management are extensively documented. Prerequisite: Senior status in resource management, biology, chemistry, or geology. (4-0). Four credits. Offered winter semester alternate years.

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. (3-3). Four credits. Offered fall semester alternate years.

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 Senior Seminae. Student presentation and discussion and guest speakers on current interest areas in resource management. Open to senior majors, and to others by permission of the instructor. (2-0). One credit, following completion of two sequential semesters of student participation. Offered each semester.

NRM 481 Soilscapes and Soil Classification. Processes of soil formation, the occurrence of soils of the landscape, and soil classification. Prerequisite: 281. (3-3). Four credits. Offered fall semester alternate years.

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: 281 and BIO 215. (5-5). Four credits. Offered winter semester.

NRM 486 Soils and Landforms Evaluation (Capstone). A study of the recognition and complexity of landforms and methods for determining land capability and utilization. Topics include methods of total site evaluation, scenic and visual landscape appraisal, the data base for land use decision models, and the presentation of the results of land suitability evaluation. Prerequisites: 281; 250 or GPY 307; 350 recommended. (2-0). Four credits. Offered fall 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 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: Three credits toward major or minor; five credits of 490 plus 499 toward major or three toward minor.

The Kirkhof School of Nursing (NUR)

Dean: Rodrigues-Fisher; Professors: Kim; Associate Professors: Bond, Bostrom, Droste-Bielak, Gendler, Grinstead, Kline, Leder, Nagelkerk, Torres, Underwood; Assistant Professors: Brintnall, Britton, Coviak, French, Jewell, Martin, Merrill, Reick, Wambach; Instructor: Ryan. Visiting Instructors: Coplin, Dunlap, Griffiths, Jablonski, Kaufman, Pebley, Wietor; Learning Laboratory Coordinator: Buist. Advisor/Recruiter: Pratt.

Degrees offered: B.S.N., M.S.N.; B.S.N. completion with an option for a B.S.N./M.S.N. articulated program for Registered Nurses and a B.S.N. with a B.S.N./M.S.N. articulated option for students with degrees in other disciplines.

Accreditation: National League for Nursing.

The Kirkhof School 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.

The baccalaureate program is fully accredited by the National League for Nursing and is approved by the Michigan State Board of Nursing. Graduates are prepared to take the licensure examination for registered nurses. The master's program is fully accredited by the National League for Nursing.

The Nursing Profession

The recent focus on health promotion and maintenance, as well as technological advancements in the treatment of illness, has placed different demands on health care providers. Professional nurses are needed to provide the skilled nursing care and knowledgeable judgment necessary to meet current health care needs.

Pursuing a career in nursing can be very rewarding. Prepayment programs for hospitalization and medical care, expansion of medical services as a result of

new medical techniques, increased interest in preventive medicine, care of the aging, and rehabilitation of the handicapped are all factors that will support the continued demand for nurses with baccalaureate and master's degrees. Nurses with master's degrees are in demand to fill leadership positions in the profession.

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.

The baccalaureate program is an upper-division major, accepting students with at least junior status. During the freshman and sophomore years of study, prospective students must complete a core of prenursing 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, through the systematic application of the nursing process. Students are scheduled for clinical practice at a variety of community hospitals and health care agencies.

The program stresses illness prevention as well as care of the sick. The ability 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.

Admission

All undergraduate students interested in a health-related program at Grand Valley register as prehealth majors for their freshman year and complete core courses required of all prehealth students.

Students who intend to pursue a degree in nursing must formally declare nursing as their major early in the sophomore year. Those students are assigned to a faculty member in nursing who will serve as their academic advisor for the remainder of their program. Students who have not declared their major may do so at the School of Nursing Office, Henry Hall.

Admission to the program is competitive and requires a secondary application. Applicants must meet the following criteria: (1) GPA of 2.7 (or above) and (2) completion of prenursing courses with a grade of C or above. Admission will be based on GPA in selected courses. The School of Nursing course repeat policy is as follows: Admission GPA will be calculated on no more than one repeat per required prenursing course. Faculty may use additional determinates to maintain a diversity within the class. Priority is given to students completing course work at Grand Valley State University and students completing the program "Nursing at Grand Valley State University" at Grand Rapids Community College. Achievement of the minimum GPA does not guarantee admission to the Kirkhof School of Nursing.

Students must apply directly to the School of Nursing in the last semester of the sophomore year for admission to the school for the junior year of study. Application forms are available in the School of Nursing Office, Henry Hall, and are to be returned to and signed by the student's academic advisor.

August class: Applications should be submitted by February 28. *January class:* Applications should be submitted by September 30.

The following items are required after acceptance into the School of Nursing and before the student begins Nursing 331:

1. Health and immunization reports.
2. Certification in cardiopulmonary resuscitation (CPR).
3. Health insurance.

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.

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, which also include physicians, physical and occupational therapists, respiratory therapists, social workers, psychologists, dietitians, and others. They may work as hospital nurses, private duty nurses, office nurses, community health nurses, nurse educators, and occupational or industrial nurses.

Major Requirements

Completion of the baccalaureate in nursing requires:

1. General university requirements as identified in the General Academic Regulations section in this catalog.
2. Required prenursing courses with a minimum grade of C (2.0):
 - BIO 112 General Biology II
 - PSY 101 Introductory Psychology
 - CHM 109 Introductory Chemistry
 - HS 208 Human Anatomy
 - CHM 231 Introductory Organic Chemistry
 - HS 212 Introductory Microbiology
 - HS 213 Laboratory in Microbiology
 - SS 323 The Family
 - CHM 232 Biological Chemistry
 - PSY 364 Life Span Developmental Psychology
 - HS 280 Human Physiology
 - HS 281 Human Physiology Lab
 - HS 305 Clinical Nutrition
 - HS 309 Laboratory in Human Anatomy
3. Required nursing and cognate courses with a minimum grade of C (2.0):
 - NUR 330 Theoretical Aspects of Nursing I
 - NUR 331 Clinical Nursing I
 - NUR 330 Theoretical Aspects of Nursing II

Nursing

NUR 341 Clinical Nursing II
NUR 430 Theoretical Aspects of Nursing III
NUR 431 Clinical Nursing III
NUR 435 Research Application in Nursing Practice
NUR 440 Theoretical Aspects of Nursing IV*
NUR 441 Clinical Nursing IV
STA 215 Introductory Applied Statistics
HS 310 Basic Pathophysiology
HS 311 Pharmacological Aspects of Health Science
HS 340 Health Care Management

Sample Curriculum

		First Year	
Fall	Credits	Winter	Credits
MTH 110 Algebra**	4	ENG 150 Strategies in Writing	4
BIO 112 General Biology	4	HS 208 Human Anatomy	3
PSY 101 Introductory Psychology	3	CHM 231 Introductory Organic Chemistry	4
CHM 109 Introductory Chemistry	5	General education courses	6
	<u>16</u>		<u>17</u>

		Second Year	
Fall	Credits	Winter	Credits
HS 280 Human Physiology	3	HS 212 Introductory Microbiology	3
HS 281 Human Physiology Laboratory	1	HS 213 Microbiology Lab	1
SS 323 The Family	3	HS 305 Clinical Nutrition	3
CHM 232 Biological Chemistry	4	HS 309 Anatomy Lab	1
STA 215 Statistics	3	PSY 364 Developmental Psychology	3
General education course	3	General education course	3
	<u>17</u>		<u>17</u>

Spring/Summer	Credits
ENG 305 Writing in the Disciplines**	3
General education elective	2/3
	<u>5/6</u>

		Third Year	
Fall	Credits	Winter	Credits
NUR 330 Theoretical Aspects of Nursing I	5	NUR 340 Theoretical Aspect of Nursing II	4
NUR 331 Clinical Nursing I	5	NUR 341 Clinical Nursing II	6
HS 310 Basic Pathophysiology	3	HS 311 Pharmacological Aspects of Health Science	3
	<u>13</u>		<u>13</u>

		Fourth Year	
Fall	Credits	Winter	Credits
NUR 430 Theoretical Aspects of Nursing III (SWS)	4	NUR 435 Research Applications	2
NUR 431 Clinical Nursing III	6	NUR 440* Theoretical Aspects of Nursing IV	4
HS 340 Health Care Management	2	NUR 441 Clinical Nursing IV	6
General education course	3		<u>12</u>
	<u>15</u>		

*B.S.N. capstone course.

**Placement test available.

Registered Nurses

The School of Nursing offers a B.S.N. completion program with an option for a B.S.N./M.S.N. articulated program for R.N.s who are graduates of diploma or associate degree programs. 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.

Registered nurses are given advanced standing in the program through the following mechanisms:

1. Direct transfer of credits.
2. Escrow credit (up to 40 transfer credits will be granted for prenursing and nursing courses).
3. Credit by examination.

Students must be admitted to Grand Valley State University before seeking admission to the School of Nursing. Students are accepted on the basis of GPA and completion of required prenursing courses.

Most registered nurses have already completed courses in anatomy and physiology, psychology, growth and development, microbiology, and English composition. Additional course requirements may include:

MTH 110 Algebra
 STA 215 Statistics I
 CHM 109 Introductory Chemistry
 CHM 230 Introduction to Organic and Biochemistry
 SS 323 The Family
 General education courses
 Electives

Nursing courses:

NUR 310 Professional Nursing Seminar
 NUR 400 Health Assessment Skills for Nurses
 NUR 410 Role Transition
 NUR 430 Theoretical Aspects of Nursing III
 NUR 431 Clinical Nursing III
 NUR 435 Research Application in Nursing Practice
 NUR 440 Theoretical Aspects of Nursing IV
 NUR 441 Clinical Nursing IV

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.

Registered nurses who elect the B.S.N./M.S.N. articulated option will enroll in a selected number of graduate courses while completing the B.S.N.

R.N.s who plan an M.S.N. exit must:

1. Achieve a B (3.0) in NUR 690.
2. Achieve a scholastic GPA of 3.0 or higher in upper-division course work.

*Capstone course.

Nursing

3. Satisfactorily complete the Graduate Record Exam's (GRE) general aptitude section.
4. Submit an essay describing professional and educational goals.

Second Degree Students

The School 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 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 School of Nursing. Students are accepted on the basis of GPA and completion of required prenursing courses.

Nursing and cognate courses required for the B.S.N.:

- NUR 330 Theoretical Aspects of Nursing I
- NUR 331 Clinical Nursing I
- NUR 340 Theoretical Aspects of Nursing II
- NUR 341 Clinical Nursing II
- NUR 430 Theoretical Aspects of Nursing III
- NUR 431 Clinical Nursing III
- NUR 435 Research Application in Nursing
- NUR 440 Theoretical Aspects of Nursing IV
- NUR 441 Clinical Nursing IV
- HS 310 Basic Pathophysiology
- HS 311 Pharmacological Aspects of Health Science
- STA 215 Statistics I

Second degree students who elect the B.S.N./M.S.N. articulated option may enroll in a selected number of graduate courses while completing the B.S.N.

Students who plan an M.S.N. exit must:

1. Achieve a B (3.0) in NUR 690.
2. Achieve a scholastic GPA of 3.0 or higher in upper-division baccalaureate course work.
3. Satisfactorily complete the Graduate Record Exam's (GRE) general aptitude section.
4. Submit an essay describing professional and educational goals.
5. Satisfactorily complete the National Council Licensure Examination for R.N.s (N-CLEX-RN).

Graduate Program

The Kirkhof School of Nursing offers a program of graduate study leading to a master of science in nursing degree (M.S.N.). Six areas of clinical emphases are offered: Adult, Child, Elderly, Family, Women, and Mental Health. The program also prepares students for roles in nursing administration, nursing education, or advanced practice. The advanced practice nurse (APN) option prepares students for clinical nurse specialist roles or nurse practitioner roles in primary or acute care. All students must complete a thesis.

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 practice which encourage individuality, critical analysis, and collaboration with other members of the health care team.

Admission

1. Baccalaureate degree from a National League for Nursing (NLN) accredited program.
2. Undergraduate scholastic GPA of 3.0 or higher in upper-division course work.
3. Completion of introductory course in statistics which includes both descriptive and inferential statistics (through t-tests).
4. Satisfactory performance on the Graduate Record Examination (GRE), general aptitude section.
5. Current licensure as a registered nurse in the state of Michigan.
6. Professional competence as documented by three academic and/or employment references.
7. Submission of a 300–500-word essay describing professional and educational goals.
8. A personal interview may be required. Applicants will be selected for admission on a priority system based on the above criteria.

Career Opportunities

The M.S.N. program is designed to prepare nurses for advanced clinical practice and entry level leadership roles in nursing education and nursing administration. 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 course work:

Research — Theory: (14 credits)

- NUR 520 Theory Development in Nursing
- NUR 540 Health Care Delivery
- NUR 690 Research Development in Nursing*
- STA 610 Applied Statistics for Health Professions
- NUR 694 Thesis Preparation
- NUR 695 Master's Thesis

Clinical Emphasis:

Nursing Care of the Adult (16 credits)

- NUR 523 Clinical Judgment*
- NUR 533 Health Perspectives
- NUR 623 Nursing Therapeutics**
- NUR 633 Clinical Applications*
- NUR 639 Professional Effectiveness*
- HS 608 Pathologic Physiology

Nursing Care of the Child (16 credits)

- NUR 524 Clinical Judgment*
- NUR 534 Health Perspectives
- NUR 624 Nursing Therapeutics**
- NUR 634 Clinical Applications*

*A grade of at least a B (3.0) must be achieved.

**Nursing Therapeutics required only for Advanced Practice Nurse (APN) Functional Role.

Nursing

NUR 639 Professional Effectiveness*

HS 608 Pathologic Physiology

Nursing Care of the Elderly (16 credits)

NUR 525 Clinical Judgment*

NUR 535 Health Perspectives

NUR 625 Nursing Therapeutics**

NUR 635 Clinical Applications*

NUR 639 Professional Effectiveness*

HS 608 Pathologic Physiology

Nursing Care of the Family (19 credits)

NUR 526 Clinical Judgment*

NUR 536 Health Perspectives

NUR 626 Nursing Therapeutics**

NUR 636 Clinical Applications*

NUR 639 Professional Effectiveness*

HS 608 Pathologic Physiology

Nursing Care of Women (16 credits)

NUR 527 Clinical Judgment*

NUR 537 Health Perspectives

NUR 627 Nursing Therapeutics**

NUR 637 Clinical Applications*

NUR 639 Professional Effectiveness*

HS 608 Pathologic Physiology

Mental Health Nursing (16 credits)

NUR 528 Clinical Judgment*

NUR 538 Health Perspectives

NUR 628 Nursing Therapeutics**

NUR 638 Clinical Applications*

NUR 639 Professional Effectiveness*

HS 528 Neuropathology

Functional Role Component:

Nursing Education (13–15 credits)

NUR 640 Curricula in Schools of Nursing

NUR 642 Teaching Health Professionals

NUR 644 Teaching Practicum*

Educational Cognate

Elective

Nursing Administration (14–15 credits)

NUR 646 Nursing Administration

NUR 648 Nursing Administration Practicum*

PA 614 Organization Theory

PA 615 Public Financial Administration

Elective

Advanced Practice Nursing (10–12 credits)

NUR 651 Roles in Advanced Practice

*A grade of at least a B (5.0) must be achieved.

**Nursing Therapeutics required only for Advanced Practice Nurse (APN) Functional Role

NUR 652 Advanced Practice Nursing I*
 NUR 653 Advanced Practice Nursing II*

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.

The program of study includes the following courses: Clinical Judgment, Roles in Advanced Practice, Clinical Applications, and Advanced Practice Nursing I and II. 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 one calendar year of study.

Courses of Instruction

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 curricula. Students will be provided opportunities to explore resources of the academic setting. Prerequisite: R.N. status. One credit. Offered fall and winter semesters.

NUR 350 Theoretical Aspects of Nursing I. Introduction to professional nurses' roles of provider and coordinator of care and member of the discipline, with emphasis on health promotion, disease prevention, and coping with minor limitations in functional capacity for individuals of all ages and families. Legal, ethical, sociocultural, environmental, research, and professional issues are included. Prerequisite: Admission to the School of Nursing; pre- or corequisite: HS 310. Five credits. Offered fall and winter semesters.

NUR 351 Clinical Nursing 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 skills in critical thinking, therapeutic nursing interventions, and communication through seminars, laboratory practice, and experience in clinics, maternal-newborn units, and client's homes. Pre- or corequisite: 350. Five credits. Offered fall and winter semesters.

NUR 340 Theoretical Aspects of Nursing II. Professional nurse roles of provider and coordinator of care, and member of a discipline are expanded. Emphasis is on health restoration and coping with short-term, major limitations in capacity for individuals of all ages and families. Legal, ethical, sociocultural, environmental, research, and professional issues are included. Prerequisite: 350 and 351; pre- or corequisite: HS 311. Four credits. Offered fall and winter semesters.

NUR 341 Clinical Nursing II. Knowledge from core courses, liberal arts, and nursing is used to formulate clinical judgments about individuals and families. In consultation with members of the health care team, students refine skills in critical thinking, therapeutic nursing interventions, and communication through seminars, laboratory practice, and experience in primarily in-patient settings. Pre- or corequisite: 340. Six credits. Offered fall and winter semesters.

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. Prerequisite: R.N. status. Three credits. Offered first six weeks of spring/summer, fall, and winter semesters.

*A grade of at least a B (3.0) must be achieved.

NUR 410 Role Transition. Assists students with advanced standing to become socialized to nursing at the baccalaureate level and to attain cognitive, psychomotor, communication, teaching, and research skills required in using the nursing process in primary health care. Prerequisites: R.N. status and admission to the School of Nursing. Three credits. Offered spring/summer semester.

NUR 430 Theoretical Aspects of Nursing III. Professional nurse roles of provider and coordinator of care, and member of a discipline are expanded. Emphasis is health maintenance and coping with long-term mental and physical limitations in functional capacity for individuals of all ages, families and groups. Legal, ethical, sociocultural, environmental research, and professional issues are included. Prerequisites: 340 and 341. Prerequisites for R.N.s: 410, HS 310 and 311. Four credits. Offered fall and winter semesters.

NUR 431 Clinical Nursing 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, therapeutic nursing interventions, and communication through seminars, laboratory practice, and experiences in hospitals, clinical, and community settings. Pre- or corequisite: 430. Six credits. Offered fall and winter semesters.

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. Prerequisite: STA 215. Prerequisite or co-requisite: NUR 430 and 431. Two credits. Offered fall and winter semesters.

NUR 440 Theoretical Aspects of Nursing IV (Capstone). Professional nurse roles of provider and coordinator of care and member of a discipline are refined in more complex situations. Focus on community health, management, collaboration, leadership, teaching, research utilization, standard setting, evaluation, and advancement of the profession is provided. Legal, ethical, sociocultural, environmental, and professional issues are included. Prerequisites: 430, 431, and HS 310. Four credits. Offered fall and winter semesters.

NUR 441 Clinical Nursing IV. Knowledge from core courses, liberal arts, and nursing is used to formulate clinical judgments about groups of all ages in a variety of settings. Skills in critical thinking, therapeutic nursing interventions, and communication are applied to coordination of care in complex situations in collaboration with health care team members. Pre- or corequisite: 440. Six credits. Offered fall and winter semesters.

NUR 450 Nursing Care of the Elderly. An overview of issues basic to gerontological nursing. Topics include attitudes toward the elderly, biopsychosocial changes influencing the aging process, nursing care needs of the elderly, and sociopolitical issues which impact on the care of the elderly. Prerequisite: Senior student or R.N. Three credits. Offered upon sufficient demand.

NUR 460 Critical Care Nursing. This course is based on the core curriculum of the American Association of Critical Care Nursing. Designed for the registered nurse who plans to take the A.A.C.N. credentialing examination or wishes to update his or her knowledge base of the nursing process in the intensive care setting. Limited enrollment is available to senior nursing students. Three credits. Offered winter semester.

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. Prerequisite: R.N. status or permission of instructor. Three credits. Offered once a year.

NUR 462 Trauma Nurse Specialty. Education in the full range of trauma care. Develops knowledge and skill in emergency management and critical care management of traumatized clients. Observational experiences in a variety of emergency or critical care clinical settings are required. Four credits. Offered fall semester.

NUR 480 Computer Applications in Nursing. In-depth exploration of nursing informatics. Focus is on specific computer applications to clinical nursing practice, education, research, and administration. "Computer comfort" for students is attained, while knowledge and strategies are developed to enhance decision-making about selection, implementation, and modification of health care information systems. Elective course. Prerequisites: 341 or R.N. status or permission of instructor. Three credits. Offered 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 520 Theory Development in Nursing. Exploration and identification of various frameworks for nursing practice. Includes philosophical theories, nursing theories (development), implementation, and evaluation. Prerequisites: Graduate standing and permission of instructor. Three credits. Offered fall semester.

NUR 523 Clinical Judgment: Adults. Designed to provide graduate students in nursing with the opportunity to develop health assessment skills and to interpret client data using a selected theoretical framework. Specific foci will be the development of data collection and nursing diagnostic skills for clinical emphasis related to adults. Prerequisites: Officially admitted to the graduate program and NUR 520; HS 608 (can also be taken concurrently). Three credits. Offered winter semester.

NUR 524 Clinical Judgment: Children. Designed to provide graduate students in nursing with the opportunity to develop health assessment skills and to interpret client data using a selected theoretical framework. Specific foci will be the development of data collection and nursing diagnostic skills for clinical emphasis related to children. Prerequisites: Officially admitted to the graduate program and NUR 520; HS 608 (can be taken concurrently). Three credits. Offered winter semester.

NUR 525 Clinical Judgment: Elderly. Designed to provide graduate students in nursing with the opportunity to develop health assessment skills and to interpret client data using a selected theoretical framework. Specific foci will be the development of data collection and nursing diagnostic skills for clinical emphasis related to the elderly. Prerequisites: Officially admitted to the graduate program and NUR 520; HS 608 (can be taken concurrently). Three credits. Offered winter semester.

NUR 526 Clinical Judgment: Families. Designed to provide graduate students in nursing with the opportunity to develop health assessment skills and to interpret client data using a selected theoretical framework. Specific foci will be the development of data collection and nursing diagnostic skills for clinical emphasis related to families. Prerequisites: Officially admitted to the graduate program and NUR 520; HS 608 (can be taken concurrently). Four credits. Offered winter semester.

NUR 527 Clinical Judgment: Women. Designed to provide graduate students in nursing with the opportunity to develop health assessment skills and to interpret client data using a selected theoretical framework. Specific foci will be the development of data collection and nursing diagnostic skills for clinical emphasis related to women. Prerequisites: Officially admitted to the graduate program and NUR 520; HS 608 (can be taken concurrently). Three credits. Offered winter semester.

NUR 528 Clinical Judgment: Mental Health. Designed to provide graduate students in nursing with the opportunity to develop health assessment skills and to interpret client data using a selected theoretical framework. Specific foci will be the development of data collection and nursing diagnostic skills for clinical emphasis related to mental health. Prerequisites: Officially admitted to the graduate program and NUR 520; HS 528 (can be taken concurrently). Three credits. Offered winter semester.

NUR 533 Health Perspectives: Adults. Theoretical concepts related to the health of individuals and families. Focus is on the application of theories to clinical practice of adults. Students will examine psychosocial theories which provide explanation for individual and family responses which affect health. Prerequisites: 520 and official admission to the graduate program. Two credits. Offered winter semester.

NUR 534 Health Perspectives: Children. Theoretical concepts related to the health of individuals and families. Focus is on the application of theories to clinical practice of children. Students will examine psychosocial theories which provide explanation for individual and family responses which affect health. Prerequisites: 520 and official admission to the graduate program. Two credits. Offered winter semester.

NUR 535 Health Perspectives: Elderly. Theoretical concepts related to the health of individuals and families. Focus is on the application of theories to clinical practice of the elderly. Students will examine psychosocial theories which provide explanation for individual and family responses which affect health. Prerequisites: 520 and official admission to the graduate program. Two credits. Offered winter semester.

NUR 536 Health Perspectives: Families. Theoretical concepts related to the health of individuals and families. Focus is on the application of theories to clinical practice of families.

Nursing

Students will examine psychosocial theories which provide explanation for individual and family responses which affect health. Prerequisites: 520 and official admission to the graduate program. Two credits. Offered winter semester.

NUR 537 Health Perspectives: Women. Theoretical concepts related to the health of individuals and families. Focus is on the application of theories to clinical practice of women. Students will examine psychosocial theories which provide explanation for individual and family responses which affect health. Prerequisites: 520 and official admission to the graduate program. Two credits. Offered winter semester.

NUR 538 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 which provide explanation for individual and family responses which affect health. Prerequisites: 520 and official admission to the graduate program. Two credits. Offered winter semester.

NUR 540 Health Care Delivery. Analysis of American health care systems, related social policy, and political processes pertinent to organization, structure, goals, legislation, policy and decision-making, evaluation, cost factors, health care teams, consultation, collaboration, provider-consumer roles in the system, urban-rural health care needs, and cultural impact. Prerequisites: Graduate standing and permission of instructor. Two credits. Offered fall semester.

NUR 623 Nursing Therapeutics: Adults. Provides a framework to study the pathophysiology and the therapeutic use of medications in the management of the health care of commonly occurring health problems for adults. Prerequisites: 523. Three credits. Offered summer semester.

NUR 624 Nursing Therapeutics: Children. Provides a framework to study the pathophysiology and the therapeutic use of medications in the management of the health care of commonly occurring health problems for children. Prerequisites: 524. Three credits. Offered summer semester.

NUR 625 Nursing Therapeutics: Elderly. Provides a framework to study the pathophysiology and the therapeutic use of medications in the management of the health care of commonly occurring health problems for elderly. Prerequisites: 525. Three credits. Offered summer semester.

NUR 626 Nursing Therapeutics: Families. Provides a framework to study the pathophysiology and the therapeutic use of medications in the management of the health care of commonly occurring health problems for family members. Prerequisites: 526. Four credits. Offered summer semester.

NUR 627 Nursing Therapeutics: Women. Provides a framework to study the pathophysiology and the therapeutic use of medications in the management of the health care of commonly occurring health problems for women. Prerequisites: 527. Three credits. Offered summer semester.

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 health problems. Prerequisites: 528. Three credits. Offered summer semester.

NUR 633 Clinical Applications: Adults. Students develop ability to apply advanced nursing care strategies for promotion of health, risk reduction and management of common health problems of adults. Prerequisites: 523 or, for APN, NUR 623. Three credits. Offered fall semester.

NUR 634 Clinical Applications: Children. Students develop ability to apply advanced nursing care strategies for promotion of health, risk reduction and management of common health problems of children. Prerequisites: 524 or, for APN, NUR 624. Three credits. Offered fall semester.

NUR 635 Clinical Applications: Elderly. Students develop ability to apply advanced nursing care strategies for promotion of health, risk reduction and management of common health problems of the elderly. Prerequisites: 525 or, for APN, NUR 625. Three credits. Offered fall semester.

NUR 636 Clinical Applications: Families. Students develop ability to apply advanced nursing care strategies for promotion of health, risk reduction and management of common health

- problems of family members. Prerequisites: 526 or, for APN, NUR 626. Four credits. Offered fall semester.
- NUR 637 Clinical Applications: Women.** Students develop ability to apply advanced nursing care strategies for promotion of health, risk reduction and management of common health problems of women. Prerequisites: 527 or, for APN, NUR 627. Three credits. Offered fall semester.
- NUR 638 Clinical Applications: Mental Health.** Students develop ability to apply advanced nursing care strategies for promotion of health, risk reduction and management of common mental health problems. Prerequisites: 528 or, for APN, NUR 628. Three credits. Offered fall semester.
- NUR 639 Professional Effectiveness.** Development and implementation of influential skills in applying advanced nursing strategies for a specific population group. Students work in a variety of clinical settings. Clinical seminars integrate theoretical concepts. Prerequisites: 633, 634, 635, 636, 637, or 638. Two credits. Offered winter semester.
- NUR 640 Curricula in Schools of Nursing.** Principles of curriculum development and their application to constructing and revising the nursing school curriculum. Includes educational philosophies, patterns of curriculum organization, social and political influences, and significant proposals for reform. Prerequisite: Official admission to the graduate program. 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. 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 the curriculum of the setting in which the practicum is being done and provide clinical instruction and evaluation for a group of nursing students. Prerequisites: 640, 642, and 639. Three credits. Offered winter semester.
- NUR 646 Nursing Administration.** Application of theory to nursing administration; Includes theory, process, planning, directing and monitoring health care, financial and personnel management with emphasis on administrative strategies appropriate to the health care setting. Prerequisite: PA 614 and 615 pre- or corequisites 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. Prerequisites: 639, 646. Three credits. Offered winter semester.
- NUR 651 Roles in Advanced Practice.** Forum for examining the role of the nurse in advanced practice. Application of theoretical knowledge occurs in the clinical setting with identified preceptors. Prerequisites: 633, 634, 635, 636, 637 or 638. Two credits. Offered winter semester.
- NUR 652 Advanced Practice Nursing: Practicum I.** Application of advanced nursing strategies in managing acute and chronic alterations in health with specific client populations. Focuses on development, implementation, and evaluation of the comprehensive APN role. Clinical conference case presentations focus on scope of practice and collaboration in managing acute and chronic alterations in health. Prerequisites: 651. Four-five credits. Offered fall semester.
- NUR 653 Advanced Practice Nursing: Practicum II.** Students gain independence in managing selected acute and chronic alterations in health. Focus is on continued development, implementation and evaluation of comprehensive APN role. Clinical conference case presentations focus on interdisciplinary role of APN in managing health care for selected client populations. Prerequisites: 652. Four-five credits. Offered winter semester.
- 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. Prerequisites: 520 and official admission to the graduate program. Two credits. Offered fall semester.

Occupational Safety and Health

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 pre-corequisite. 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). Two credits. 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. Visiting Assistant Professor: Boehne.

Degree offered: B.S. in occupational safety and health.

The occupational safety and health program is designed to fulfill the undergraduate educational requirements of professionals in the field. During the past decade, considerable federal and state legislation has been enacted which has firmly established occupational 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 required in the field. The program prepares graduates for careers in either the private or the public sector.

Career Opportunities

With the 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 people working in the safety area. In addition, many smaller employers (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 a major in occupational safety and health must complete the following:

1. General university degree requirements as identified in the General Academic Regulations section of the catalog.
2. Forty hours in occupational safety and health:
 - OSH 110 Introduction to Occupational Safety and Health
 - OSH 130 Hazard Control
 - OSH 140 Safety Health and Program Development
 - OSH 210 Principles of Loss Control
 - OSH 214 Health and Safety Techniques
 - OSH 224 Principles of Industrial Hygiene

- OSH 314 Toxicological Hazards
- OSH 320 Behavioral Aspects of Safety
- OSH 400 Critical Incident Analysis
- OSH 410 Safety Engineering and Ergonomics
- OSH 414 Environmental Safety and Health Regulations
- OSH 480 OSH Field Case Study*
- or
- OSH 490 Internship in Occupational Safety and Health Management*
- OSH 495 Safety and Health Administration
- OSH 499 Independent Study in Occupational Safety and Health**

3. Thirty-two semester credit hours of science cognate

- BIO 112 General Biology II
- CHM 109 Introductory Chemistry
- CHM 231 Introductory Organic Chemistry
- CHM 232 Biological Chemistry
- HIS 208 Human Anatomy
- HIS 212 Introductory Microbiology
- HIS 213 Laboratory in Microbiology
- HIS 280 Human Physiology
- HIS 281 Laboratory in Human Physiology
- PHY 200 Physics for the Health Sciences

Minor Requirements

A minor in occupational safety and health consists of 21 semester credits chosen with the consent of the instructor.

Sample Curriculum

First Year First Semester

- ENG 150 Strategies in Writing
- MTH 110 Algebra
- PSY 101 Introductory Psychology
- CHM 109 Introductory Chemistry
- Electives

Second Year, First Semester

- MTH 125 Survey of Calculus†or
- STA 215 Introductory Applied Statistics‡
- CHM 231 Introductory Organic Chemistry‡
- OSH 130 Hazard Control
- OSH 214 Health and Safety Techniques
- Electives

First Year, Second Semester

- BIO 112 General Biology II
- PHY 200 Physics for the Health Sciences
- OSH 110 Introduction to Occupational Safety and Health
- Electives

Second Year, Second Semester

- CHM 232 Biological Chemistry‡
- HIS 208 Human Anatomy
- OSH 140 Safety and Health Program Development
- Electives

*OSH majors must select OSH 480 Occupational Safety and Health Field Case Study for three semester hours or OSH 490 Internship in Occupational Safety and Health Management, for a minimum of three semester hours, as part of their degree requirements.

**OSH majors must take one semester hour of OSH 499 Independent Study in Occupational Safety and Health as part of their degree requirements.

‡Successful completion of MTH 125 or STA 215, CHM 231 and 232 satisfies the B.S. cognate for all OSH majors.

Third Year, First Semester

HS 212 Introductory Microbiology
HS 213 Laboratory in Microbiology
OSH 210 Principles of Loss Control Electives
OSH 224 Principles of Industrial Hygiene
OSH 320 Behavioral Aspects of Safety

Fourth Year, First Semester

OSH 410 Safety Engineering & Ergonomics
OSH 480 Field Case Study*
or OSH 490 Internship in OSH
Management*
Electives

Third Year, Second Semester

HS 280 Human Physiology
HS 281 Laboratory in Human Physiology
OSH 314 Toxicological Hazards
OSH 411 Environmental Safety and Health
Regulations
Electives

Fourth Year, Second Semester

OSH 400 Critical Incident Analysis
OSH 495 Safety and Health Administration**
OSH 499 Independent Study OSH†
Electives

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. Offered fall and winter semesters.

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. Offered fall semester.

OSH 140 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). Three credits. Offered winter semester.

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. Offered fall semester.

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. (1-0-1). Three credits. Offered fall semester.

OSH 224 Principles of Industrial Hygiene. A study of industrial hygiene methods, measurement, and equipment. Prerequisite: Chemistry 111 and OSH 214, or permission of instructor. (2-0-2). Three credits. Offered fall semester.

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. Offered winter semester.

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 140 or permission of the instructor. (3-0-0). Three credits. Offered fall semester.

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

*All OSH majors must select OSH 480 OSH Field Case Study for three semester hours or OSH 490 Internship in Occupational Safety and Health Management for a minimum of three semester hours, as part of their degree requirements.

**Capstone course.

†All OSH majors must take one semester hour of OSH 499 Independent Study in Occupational Safety and Health as part of their degree requirements.

investigation in occupational settings. Prerequisites: Successful completion of OSH 110, 130 and 140 or instructor approval. (3-0-0) Three credits. Offered winter semester.

OSH 410 Safety Engineering and Ergonomics. A study of engineering methods used by safety specialists. Topics covered include systems safety analysis, fault tree analysis, MORT, and ergonomics. Prerequisite: HS 208 and successful completion of 12 semester hours of OSH prefix courses, or approval of instructor. (3-0-0) Three credits. Offered fall semester.

OSH 414 Environmental Safety and Health Regulations. A study of laws addressing environmental pollution and hazardous waste management. Prerequisites: Chemistry 232 and Physics 200, or instructor approval. (3-0-0) Three credits. Offered winter semester.

OSH 480 OSH Field Case Study. A field study conducted in a selected industry. Students will be expected to identify a cooperating company and conduct an investigation addressing a safety problem, to include development of appropriate countermeasures. The study will produce a paper following a modified research format. Prerequisite: Permission of OSH advisor. Three credits. Offered spring/summer semester.

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. Offered spring/summer semester.

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. Offered fall and winter semesters.

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. Offered spring/summer semester.

Occupational Therapy (OT)

Director: Grapczynski. Assistant Professors: Grapczynski, Williams; Adjunct Faculty: Eastman, MS, OTR, Meier, MA, OTR, Sietsema, MS, OTR, Zantjer, MS, OTR.

Degree offered: Master of Science in Occupational Therapy.

Accreditation Status

The occupational therapy program has applied for accreditation 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. Once accreditation of the program has been obtained, its graduates will be able to sit for the national certification examination for the occupational therapist, administered by the National Board for Certification in Occupational Therapy (NBCOT). 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 includes habilitation and rehabilitation treatment that uses meaningful and purposeful activity as a therapeutic intervention to help an injured or disabled individual to reach his/her highest level of independent functioning. These meaningful and purposeful activities are referred to as "occupations."

Occupational Therapy

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. There are numerous job opportunities 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 program is a six year endeavor which leads to a master of science (M.S.) degree. The program is divided into two parts. For incoming freshmen, the first part consists of three years of preprofessional course work, 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.

Upon completion of the preprofessional part of the program, 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. Because this program is still in development, all of the professional course descriptions are not listed here. Please contact the Occupational Therapy Program for more complete information.

All courses during the professional part of the program must be taken for earned grade, unless otherwise specified by the Occupational Therapy Program. These requirements include a final research project and two full-time fieldwork assignments, which must total a minimum of 940 hours. These fieldwork assignments may be local or they may be in other areas of the country.

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. *Students must be in the process of completing preprofessional and undergraduate degree requirements in order to be considered for acceptance into the program.* Applications may be obtained from the university Admissions Office. The completed application and all supplementary materials must be submitted to the Admissions Office by October 1 of the calendar year *prior* to the year students wish to begin the professional program.

Professional Program 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 undergraduate major requirements.
2. Recommendation letters (two), including a registered occupational therapist and a professor who can comment on your academic performance.
3. An interview and an extemporaneous writing sample.
4. Documented volunteer experience for a minimum of 50 hours, under the supervision of an occupational therapist.
5. Completion of form detailing activities of student which reflect core goals of the program.

Maximum class size for 1997 and 1998 will be 24; thereafter it will be 30. Admission decisions will be made in the first semester of the calendar year.

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 can be found in the Academic Regulations section of the catalog, and the requirements for majors in the appropriate academic programs section.

Ninety-six 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.

Occupational Therapy

Preprofessional Program Course Requirements

- One course in introductory biology (BIO 112)
- One course in human anatomy with laboratory (HS 208/309)
- One course in human physiology with laboratory (HS 280/281)
- One course in neuroanatomy (HS 427)
- Two courses in chemistry (CHM 109 and CHM 230)
- One course in kinesiology (PEI 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 305)
- 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)
- 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)

Professional Program 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 Occupation
- OT 405 Limitations on Occupations
- OT 406 Therapist Roles in Health Care Systems
- OT 407 Professional Issues in Rehabilitation
- OT 410 Professional Competencies — Play/Leisure
- OT 419 Motor Learning in Human Development
- 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
- 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 621 Management in Rehabilitation
- OT 622 Case Studies in Rehabilitation
- OT 625 Leadership: Interdisciplinary Team Building
- OT 630 Level II Fieldwork (Part 1)*
- OT 631 Level II Fieldwork (Part 2)*
- OT 688 or 690 Research
- OT 689 or 695 Research
- HS 428 Neurosciences
- HS 601 Experimental Design
- EDG 648 Adult Learner
- NUR 642 Teaching Health Professionals

*Level II fieldwork must be completed within 24 months of completion of the academic program.

Sample Curriculum for Preprofessional Program

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 program.

Freshman Year

Fall

General education or major electives	8
MTH 110/122 Algebra (B.S. or CGE/A)	3
CHM 109 Introductory Chemistry (NS/A)	5
ES 100 Freshman Studies	1
	<hr/> 17

Winter

BIO 112 General Biology II/Lab (NS/B)	4
PSY 101 Introduction to Psychology (SS/A)	3
CHM 230 Introduction to Organic and Biochemistry	5
General education or major elective	2
ANT 204 Introduction to Cultural Anthropology (SS/B)	3
	<hr/> 17

Sophomore Year

Fall

HIS 208 Human Anatomy	3
PHY 200 Physics for the Health Sciences	4
General education or major electives	10
	<hr/> 17

Winter

HIS 280/281 Human Physiology/Lab	4
STA 215 Introductory Applied Statistics (CGE/A)	3
General education or major electives	10
	<hr/> 17

Junior Year

Fall

SOC 255 Sociology of Work	3
HIS 375 or SOC 388 Course on Aging	3
General education or major electives	6
PSY 305 Abnormal Behavior	3
HIS 427 Neuroanatomy	1
	<hr/> 16

Winter

PSY 368 Psychology of Disability	3
PED 300 Kinesiology	3
PSY 361 Lifespan Developmental Psychology	3
SOC 360 Social Psychology	3
HIS 309 Anatomy Laboratory	1
General education or major elective	4
	<hr/> 17

Professional Curriculum

Summer

OT 400 Occupational Science for Therapy	3
OT 401 Role of Occupation in Human Development	3
HIS 428 Neurosciences	3
OT 414 Occupational Analysis	3
General education or major elective	3
	<hr/> 15

Occupational Therapy

Senior Year

Fall

OT 402 Theoretical Foundations of Occupational Therapy	4
OT 405 Limitations on Occupations	4
OT 406 Therapist Roles in Care Systems	2
General education or major electives	7
	<hr/>
	17

Winter

OT 410 Professional Competencies—Play/Leisure	3
OT 415 Interventions Using Play Occupations	4
OT 420 Clinical Reasoning I—Level I FW	2
General education or major electives	8
	<hr/>
	17

Baccalaureate total credits allowed: 120–126 (completed in May or August of fourth year).

Summer (10 weeks)

OT 419 Motor Learning in Human Development	3
OT 403 Foundations of Group Occupation	4
OT 407 Professional Issues in Rehabilitation	2
OT 525 Occupational Therapy Curriculum Design	3
General Education or major elective (<i>if needed</i>)	5
	<hr/>
	12–17

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
NUR 612 Teaching Health Professionals	3
HS 601 Experimental Design*	3
	<hr/>
	15

Winter

OT 610 Professional Competencies—Mechanics	3
OT 615 Interventions Using Work Occupations	4
OT 620 Clinical Reasoning III—Level I FW	2
OT 621 Management in Rehabilitation	2
OT 688 Resident Practicum or OT 690 Proposal	3
EDG 608 The Adult Learner	3
	<hr/>
	17

Summer (two six-week sessions)

OT 630 Level II Fieldwork (Part 1)	6
------------------------------------	---

Sixth Year

Fall

OT 631 Level II Fieldwork (Part 2)	6
------------------------------------	---

Winter

OT 622 Case Studies in Rehabilitation	3
OT 625 Leadership: Interdisciplinary Team Building	3
OT 689 Resident Practicum or OT 695 Master's Thesis	3
	<hr/>
	9

Occupational therapy professional program credits 96

Courses of Instruction

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

Note: This listing of courses covers only the first year of the professional program. Please contact the Occupational Therapy Program for information regarding courses remaining.

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 406 Therapist Roles in Health Care Systems. Introduces the role of the health care professional, and the major tasks of those working in a rapidly changing system. Introduces systems theory and its application to health care. Discusses organization of the professions, and individual professional responsibility in terms of teaching/learning, research, and reflective practice. (2-0-0). Two credits. Offered fall semester.

OT 407 Professional Issues in Rehabilitation. Interdisciplinary perspective on practice issues in the changing health care system. Introduces students to the development of reimbursement and delivery systems in the United States, controversies surrounding cost containment in medicine, and legal and ethical issues in rehabilitation, particularly in physical and occupational therapy. (1-1-0). Two credits. Offered summer semester.

OT 410 Professional Competencies — Play/Leisure. First in a series designed to develop the technical skills which 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.

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, and incorporates 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.

Philosophy (PHI)

Chair: Rowe; Professors: Cunningham, Hottenga, Rowe; Associate Professors: Ni, Pestana; Assistant Professors: Beedle, Castelaño-Lawless, Jiang, Moes, Parker, Tyler. 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 Philosophy 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, 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.

Rotation of Course Offerings in Philosophy

Below is the schedule of rotation of non-general education courses offered by the Philosophy Department.

Fall — even year

- PHI 301 Ancient Great Philosophers
 PHI 310 Philosophy of Religion
 PHI 330 Legal Philosophy
 PHI 360 Philosophy of Science

Fall — odd year

- PHI 230 American Philosophy
 PHI 303 Modern Great Philosophers
 PHI 350 Philosophy of History
 PHI 450 Metaphysics

PHI 101 (Introduction to Philosophy), PHI 102 (Ethics), PHI 103 (Logic), PHI 202 (Ethics in the Professions) are offered every fall and winter semester. In addition to the courses listed above, Philosophy 380 (Topics in Philosophy) will be offered periodically.

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 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. General education course AH B. 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. General education course CGE D. 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. General education course CGE A. Three credits. Offered fall and winter semesters.

PHI 202 Ethics in the Professions. 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. General education course CGE D. Three credits. Offered fall and winter semesters.

PHI 210 Eastern Philosophy. Since 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. Three credits. Offered winter semester, even-numbered years.

Winter — odd year

- PHI 302 Medieval Great Philosophers
 PHI 370 Feminist Philosophy
 PHI 440 Epistemology
 PHI 495 Capstone

Winter — even year

- PHI 210 Eastern Philosophy
 PHI 304 Recent Great Philosophers
 PHI 320 Social and Political Philosophy
 PHI 495 Capstone

Philosophy

PHI 220 Aesthetics. An inquiry into the nature, criteria, and significance of the fine arts and/or artistic creation and response. General education course AH/A. Three credits. Offered winter semester.

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, even-numbered years.

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. Three credits. Offered winter semester, odd-numbered years.

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, odd-numbered years.

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, even-numbered years.

PHI 310 Philosophy of Religion. Does God exist? Is there a life after death? How did evil enter the world? Is there any place for reason in religion, or is religious faith only a matter of subjective experience? Questions like these will be considered, as well as the answers that have been given to them by some important religious philosophers. Prerequisite: Prior work in philosophy, or permission of instructor. Three credits. Offered fall semester, even-numbered years.

PHI 320 Social and Political Philosophy. Fundamental alternatives regarding the human condition and the best community, as treated by great political writers. The underlying theme is that of Ancients and Moderns. The aim is to illuminate present crises and predicaments by comparing such thinkers as Plato, Aristotle, Hobbes, Locke, Rousseau, Montesquieu, Burke, Hegel, Marx, Nietzsche, Arendt. Prerequisite: Prior work in philosophy, or permission of instructor. Three credits. Offered winter semester, even-numbered years.

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 prelaw students. Prerequisite: Prior work in philosophy, or permission of instructor. Three credits. Offered fall semester, even-numbered years.

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: Prior work in philosophy, or permission of instructor. Three credits. Offered winter semester, odd-numbered years.

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, odd-numbered years.

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 winter semester.

Physical Education (PED)

Associate Professor: Scott; Assistant Professors: Irwin Rowe; Visiting Assistant Professors: Reeves, Weideman; Athletic Trainer: Woods; Athletic Training Curriculum Director: Springer.

Degrees offered: B.S. in physical education; teachable minor in physical education. Teacher certification K-12 in the physical education major and the secondary teachable minor.

Accreditation: The Athletic Training program is fully accredited by the Commission on Accreditation of Allied Health Education Programs (C.A.A.H.E.P.).

The Department of Physical Education serves the diverse preprofessional needs of Grand Valley State University students who are accepted as majors or minors in physical education. The department also provides skills development courses in fitness, wellness, and leisure sport activities for the personal enrichment of Grand Valley State University students, faculty, and staff.

The goal of the physical education core curriculum 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 the physical education major to complete at least one of four emphasis areas within the major: K-12 Professional Instruction, Fitness/Wellness, Athletic Training 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, athletic trainers, and fitness/wellness leaders. Opportunities in physical

Physical Education

education 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, athletic trainers, and personal trainers.

Major Requirements: Physical Education

Students seeking a major in physical education must complete the following:

1. University degree requirements as identified in the General Academic Regulations section of the catalog.
2. Core curriculum for the major in Physical Education (19 credit hours)

PED 101 Foundations of Physical Education and Sport	3 credits
PED 102 First Aid	2 credits
PED 201 Psychosocial Aspects of Physical Education and Sport	3 credits
PED 300 Kinesiology	3 credits
PED 309 Measurement and Evaluation	2 credits
PED 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 School of Education if they intend to pursue teacher certification. PED 306/307 should be taken before ED 303/307 for teacher assisting. **Emphasis A may also be taken by students who do not intend to enter the School 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
PED 520 Aerobic Exercise Leadership (with PED 168)	3 credits

PED 202 is required for PED majors by the School of Education for teacher certification candidates. Emphasis A students should take PED 168 corequisite with PED 520 toward fulfillment of the five-credit skills development course requirements.

B. Fitness/Wellness (32–35 credit hours).

Physical education majors selecting Emphasis B, 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
PED 320 Aerobic Exercise Leadership (with PED 168)	3 credits
PED 404 Static Human Performance Capacity	2 credits
PED/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, elect three courses from the following:

HS 208/309 Human Anatomy Lab	4 credits
HS 280/281 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
PED 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
OSL/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 students should 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
PED 168 Aerobic Dance Exercise (with PED 320)	1 credit

C. Athletic Training (41–42 credit hours)

The undergraduate curriculum in Emphasis C, Athletic Training, is a Commission on Accreditation of Allied Health Education Programs accredited program (there are only two accredited C.A.A.H.E.P. programs in the State of Michigan).

Students are admitted to the program after their freshman year or first year of attendance at Grand Valley through a formal application process. The prerequisites for admission into the curriculum program are:

1. PED 102 with a grade of B (3.0).
2. PED 217 with a grade of B (3.0).
3. Overall GPA of 2.5 with at least one semester attendance at GVSU.
4. Observation hours in the Grand Valley training room.

Since the Athletic Training program is a secondary admit program, students should schedule observation hours with a staff trainer as soon as possible, usually during their freshman year. Once admitted into the program, students are required to spend a minimum of four semesters completing the clinical experience.

Successful completion of the Athletic Training curriculum allows the student to take the N.A.T.A. certification test upon graduation.

Employment opportunities for graduates in athletic training are available at many different sports medicine levels. Teacher-athletic trainers are hired

*Students may use only one of these two courses to fulfill requirements.

Physical Education

by high schools, and there are also employment opportunities in colleges, private clinics, and hospitals.

Majors who select Emphasis C, Athletic Training, 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
HS 202 Anatomy and Physiology or HS 280/281 Human Physiology Lab	4 credits
HS 208 Human Anatomy	3 credits
HS 309 Human Anatomy Lab	1 credit
HS 355 Dissection of Commonly Injured Joints	2 credits
PSY 101 Introductory Psychology	3 credits
PSY 301 Child Development or PSY 364 Life Span Developmental Psychology	3 credits
PED 102 First Aid*	2 credits
PED 217 Modern Principles of Athletic Training*	3 credits
PED 300 Kinesiology	3 credits
PED 301 Methods of Teaching Health Education** or	3 credits
HS 220 Health Care Delivery** or	2 credits
HS 222 Introduction to Public Health**	3 credits
PED 304 Physiology of Activity	3 credits
HS 365 Applied Human Physiology	
PED 314 Advanced Athletic Training*	3 credits
PED 316 Rehabilitation of Athletic Injuries*	2 credits
PED 325 Administration of Athletic Training*	2 credits
PED 405 Clinical Athletic Training*	2 credits

D. 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
PSY 320 Psychology of Sport and Recreation	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 Pool and Beach Administration	3 credits

5. Cognate Electives.

Students in certain emphasis areas are required to take selected prerequisites, as follows:

*Students must receive a "B" or better.

**Students may choose one of the two courses.

Cognate Elective	Emphasis Area	Credits
PSY 101 Introductory Psychology (GenEd SS/A) Prerequisite for PED 310.	A B C D	3 credits
HS 202 Anatomy and Physiology Prerequisite for PED 300 and PED 304.	A B C D	4 credits
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 PED 314.	C	1 credit
PSY 301 Child Development Prerequisite for ED 305, ED 305 and ED 307	A	3 credits

6. B.S. degree cognates (10 credit hours).

PED 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 and Degree Cognates and emphasis areas. Attention should be paid to prerequisite requirements. Courses are designed so that material to be 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

- PED 101 before any/all other PED courses.
- HS 202 before PED 300, 304, and 320.
- PED 300, 304 before PED 320.
- MTH 110 before STA 215.
- STA 215 before PED 309.
- PSY 101 is recommended before PED 201.

For Emphasis A, K-12 Professional Instruction:

- PED 200, 210, 220, 230, 309, and 310 before PED 306.
- PED 306 before PED 307 (for Emphasis A students).
- PED 306 and PED 307 before School of Education fieldwork (ED 305, 307, 403/407)

For Emphasis B, Fitness/Wellness

- PED 300, 304, 309, 320 before PED 404
- PED 404 before PED 466
- Must maintain current CPR certification

For Emphasis C, Athletic Training

- PED 102, 217, 300, HS 202 208 (or 280, 281), 309 before PED 313
- PED 314 before PED 316
- PED 314 and 316 before PED 405

Physical Education

For Emphasis D, 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:

PED 101 Foundations of Physical Education and Sport	3 credits
PED 201 Psychosocial Aspects of Physical Education and Sport	3 credits
PED 220 Individual Sports	3 credits
PED 230 Team Sports	3 credits
PED 300 Kinesiology	3 credits
(Prerequisite: HS 202, General Education NS-B)	
PED 304 Physiology of Activity	3 credits
(Prerequisite: HS 202, General Education NS-B)	

Students seeking a minor in physical education must elect six credit hours from the following, 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
PED 309 Measurement and Evaluation	2 credits
PED 310 Motor Skills Development	3 credits
PED 320 Aerobic Exercise Leadership	3 credits
(Prerequisites: PED 300 and 304)	

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.
- 125 Cross Country Skiing.
- 126 Conditioning and Flexibility—Beginning.
- 127 Conditioning and Flexibility—Advanced.

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.
- 145 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.

Professional Courses

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

PED 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. Offered fall and winter semesters.

PED 102 First Aid. Red Cross First Aid and CPR Certification. First aid care for the teacher and recreation leader. (1-1-0). Two credits. Offered fall, winter, and spring semesters.

PED 106 Swimming and Lifeguarding. Skills and techniques of life saving and water safety, ARC Certification, Instructor approval. Two credits. Offered fall and winter semesters.

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. Offered fall and winter semesters.

PED 201 Psycho-social Aspects of Physical Education and Sport. A study of the psycho-social and cultural context of sports and physical education in North America. 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. Offered fall and winter semesters.

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. Offered fall and winter semesters.

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. Offered on demand.

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. Offered fall and winter semesters.

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. Offered fall semester.

PED 211 Modern Dance I. Basic concepts of movement, the development of strength, flexibility, and range of movement possible for each individual. The study of dance composition. (2-1-0). Three credits.

PED 215 Water Safety Instruction. Prepares students for water safety instruction certification. Includes skill improvements and techniques of teaching swimming and life saving. American Red Cross certification possible upon successful completion. Prerequisite: American Red Cross current advanced life-saving certification, Instructor approval. (2-1-0). Three credits. Offered winter semester.

PED 217 Modern Principles of Athletic Training. Lecture and laboratory course pertaining to the prevention, care, and treatment of all athletic injuries. The course is divided into one half lecture and one half laboratory, including all preventive wrapping and taping. Prerequisite: 102. (2-1-0). Three credits. Offered fall and winter semesters.

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. Offered fall and winter semesters.

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. Offered fall and winter semesters.

PED 221 Modern Dance II. Increasing the mastery of technical skills and deepening the dancer's conceptual awareness. Prerequisites: 211 or permission of instructor. (2-1-0). Three credits. Offered fall semester. Offered on demand.

Physical Education

PED 230 Team Sports. Technique and procedures for teaching and coaching soccer, speedball, team handball, and other selected team sports. Three credits. Offered fall semester.

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.

PED 250 Baseball Coaching Theory. Offered fall semester.

PED 251 Basketball Coaching Theory. Offered fall and winter semesters.

PED 252 Football Coaching Theory. Offered fall and winter semesters.

PED 253 Tennis Coaching Theory. Offered on demand.

PED 254 Track and Cross Country Coaching Theory. Offered winter semester.

PED 255 Volleyball Coaching Theory. Offered fall semester.

PED 256 Wrestling Coaching Theory. Offered on demand.

PED 257 Swimming and Diving Coaching Theory. Offered on demand.

PED 258 Softball Coaching Theory. Offered fall semester.

PED 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. Offered fall and winter semesters.

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. Offered winter semester.

PED 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. Offered fall and winter semesters.

PED 305 Movement Education. Movement education is a discipline within the field of physical education in which the student explores how the body can move in space. This course is aimed at developing an awareness of the field of movement education and a command for the techniques necessary to lead a child in this type of exploration. (2-1-0). Three credits. Offered fall, winter, and summer semesters.

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. Offered fall semester.

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: 306 and COM 201. (2-1-0). Three credits. Offered fall and winter semesters.

PED 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. Offered fall and winter semesters.

PED 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.

PED 314 Advanced Athletic Training. Prevention, care, and treatment of all athletic injuries. Anatomical consideration and physiological responses involved in sports medicine. Prerequisites: 102, 217, 300 and Health Sciences 202 and 208 or 280, 281. (2-1-0). Three credits. Offered winter semester.

PED 316 Rehabilitation of Athletic Injuries. Deals with the skills needed for the rehabilitation of athletic injuries and various therapeutic exercises as they relate to prevention and rehabilitation of injuries. Class time divided between lecture and lab. Prerequisites: 102, 217, 300; HS 202, 208-309; admission to the athletic training program. Two credits. Offered fall semester.

PED 320 Aerobic Exercise Leadership. Prepares students to design, lead, and supervise aerobic exercise programs. Course content is drawn from dance, sport activities, kinesiology, exercise physiology, and psychology to provide the skills and knowledge needed by leaders in fitness and wellness settings. To be taken concurrently with PED 168 Aerobic Dance. Prerequisite: 304. Three credits. Offered fall semester.

PED 325 Administration of Athletic Training. Deals with the administrative skills that the entry level certified athletic trainer needs to possess to practice effectively in the profession. The course will deal with administrative skills needed in both the educational and clinical setting. Two credits. Offered fall semester.

PED 359 Pool and Beach Administration. Management, planning and maintenance of pools and beaches. Three credits. Offered on demand.

PED 380 Special Topics in Dance. Study of special problems in dance history or dance practice. One to three credits. Offered on demand.

PED 399 Independent Readings and Special Activities. Special studies in physical education upon consultation with faculty advisor and approval of department chairman. One or two credits. Offered fall, winter, and summer semesters.

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. Offered fall and winter semesters.

PED 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. Offered on demand.

PED 405 Clinical Athletic Training. Deals with various physical agents that are used in the treatment of athletic injuries. Also included are the specific topics unique to the practice of athletic training in the hospital or clinic setting. Prerequisites: 314 and 316. Two credits. Offered winter semester.

PED 418 Field Experience in Adapted Physical Education. Adapted field experience to provide practical experience while working in a program which is designed to meet the needs of special population persons. Prerequisite: 202. Three credits. Offered on demand.

PED/HIS 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, metabolic parameters. Prerequisites: STA 215, PED 309, 404, or HS 365. Two credits. Offered winter semester.

PED 499 Independent Study and Research. Special studies in physical education upon consultation with advisor and approval of department chairman. One or two credits. Offered fall, winter, and summer semesters.

Physical Therapy (PT)

Chair: Peck, Professor: Toot; Assistant Professors: Alderink, Allaben, Baker, Green, Özga, Vaughn; Visiting: Harro, Hoogenboom; Adjunct Faculty: Bennett, M.A., P.T., O.C.S., A.T.C.; Ritch, M.S., P.T.; Strasburg, M.S., P.T.; Rotational Clinical Faculty: Schwarcz, Ph.D., P.T., A.T.C.; Clinical Faculty: Horsley, M.S., Marchinda, M.S.; Pippenger, Ph.D.; Clinical Associates: Carlson, P.T.; Grill-Ewing, M.H.S., P.T.; Lesch, P.T.; McGee, P.T.; McGuire, P.T. Palazzo, M.S., P.T., E.C.S.

Degree offered: M.S. in physical therapy.

Physical Therapy

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 patients with services at the preventive, acute, and rehabilitative stages directed toward achieving increased functional independence and decreased functional impairment. Physical therapists interact and practice in collaboration with a variety of health professionals. They educate and inform others about the services they offer and their effective and cost-efficient delivery. Physical therapists are required to be licensed by the states in which they practice.

Career Opportunities

Physical therapy provides good employment potential. The field continues to show growth in clinical responsibilities and in new areas of clinical practice. Some examples of settings where 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

The master's in physical therapy is a six-year program which leads to a master of science (M.S.) degree. The program is divided into two parts. For incoming freshmen the first part consists of three years of preprofessional course work, which includes courses in the natural, health, and social sciences and Grand Valley State University general education requirements.

Students select an undergraduate major in their first year (suggested majors include health sciences, biology, biomedical sciences, or biopsychology) and work with an advisor from that department. All required prerequisite courses must be taken for earned grade. Students will be awarded a B.S. degree in their chosen major upon successful completion of their fourth year of the six-year program.

Students begin the professional part of the curriculum at the beginning of their fourth year, after they have been accepted into the program (see "Application Procedures"). During the next three years they take additional courses in human anatomy and physiology, pathology, neurosciences, clinical medicine, biomechanics, therapeutic exercise, physical therapy procedures, and research methods. All courses during the last three years must be taken for earned grade unless otherwise designated by the Physical Therapy Department. Students must complete a master's research project. They must also complete several full-time clinical affiliations throughout Michigan and/or the continental United States.

Application Procedures

High school seniors interested in physical therapy must complete an undergraduate application to Grand Valley State University. They will begin their preprofessional studies and declare a major during their freshman year.

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 Physical Therapy Department 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 GVSU before applying to physical therapy must submit an undergraduate application; (2) those who have completed all preprofessional course work must complete a graduate application. Students should meet with a representative from the Physical Therapy Department regarding the preprofessional courses in anticipation of any problems.

Admission to the physical therapy program requires completion of a Grand Valley State University graduate application. Students must be in the process of completing all of their preprofessional and undergraduate degree requirements to be considered. Applications may be obtained from the Admissions Office. The completed application and supplementary materials, including recommendation forms, must be submitted to the Admissions Office before February 1 of the calendar year in which the student wishes to begin the professional program.

Professional Program Admission Criteria

Admission to the physical therapy program is competitive. The criteria for acceptance include:

1. Academic achievement. Students must have a minimum 3.0 prerequisite and in the last 60 hours of course work completed to be considered for admission.
2. Two recommendations, one of which must be from a licensed physical therapist, must be submitted on university forms.
3. Interviews and on-site writing assignment.
4. Experience. A minimum of 50 hours of observational experience in physical therapy is required.

An annual class size of 60 students is admitted. Students are accepted for fall entrance only. You will be informed of the Admission Committee's decision by May 1.

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 can be found in the Academic Regulations section of the catalog and the requirements for majors in the appropriate Academic Programs section.

Sixty-seven additional credits are required for completion of the master's degree in physical therapy. General graduate academic policies and regulations can be found in the graduate bulletin.

Physical Therapy

Preprofessional Program Course Requirements

- One course in human anatomy.
- One course in human physiology.
- One course in human pathophysiology.
- One course in introductory biology.
- One course in introductory chemistry.
- One course in introductory organic chemistry.
- One course in biological chemistry.
- One course in research design.
- One course in college algebra, trigonometry or calculus.
- One course in statistics.
- Two courses in physics.
- One course in introductory psychology.
- One course in life-span developmental psychology.
- One course in introductory sociology or social problems.

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 Program Requirements for M.S. Degree

- PT 406 Therapist Roles in Health Care Systems
- PT 407 Professional Issues in Rehabilitation
- PT 418 Physical Therapy Procedures I
- PT 419 Human Physical Development 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
- 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 Human Physical Development II
- PT 571 Cardiopulmonary Rehabilitation
- PT 620 Clinical Education IV
- PT 621 Management in Rehabilitation
- PT 622 Case Studies in Rehabilitation
- PT 670 Advanced Topics: Pediatrics (optional)
- PT 672 Advanced Topics: Advanced Spinal Manual Therapy (optional)
- PT 673 Advanced Topics: Manual Therapy II (optional)
- PT 674 Advanced Topics: Sports Medicine (optional)
- PT 676 Advanced Topics: Rehabilitation (optional)
- PT 688 and 689 Research Practicum I and II
or PT 690 Master's Thesis Proposal and PT 695 Master's Thesis
- PT 699 Independent Study in Physical Therapy (optional)
- HS 355 Anatomy of Joints
- HS 365 Applied Human Physiology
- HS 428 Neurosciences
- HS 461 Projected Regional Anatomy

HS 601 Experimental Design
 HS 625 Clinical Cardiac Physiology (optional)
 PSY 368 Psychology of Physical Disabilities
 NUR 612 Teaching Health Professionals

Sample Curriculum for Preprofessional Program

Note: This is a sample schedule. Each undergraduate major will have slightly different requirements.

Freshman Year

Fall		Winter	
BIO 112 General Biology II (NS/B)	4	PSY 101 Introductory Psychology (SS/A)	3
MTH 122 College Algebra or MTH 110 (BS or CGE/A)	3	MTH 123 Trigonometry (or MTH 122 or elective (CGE/A))	3
ENG 150 Strategies in Writing	4	CHM 231 Introductory Organic Chemistry	4
CHM 109 Introductory Chemistry (NS/A)	5	Major requirement	3
	<hr/>	General education elective (AH/A)	3
	16		<hr/>
			16

Sophomore Year

Fall		Winter	
HS 208 Human Anatomy	3	STA 215 Introductory Applied Statistics	3
CHM 232 Biological Chemistry	4	PSY 364 Developmental Psychology	3
SOC 280 Social Problems (SS/B)	3	General education elective (CGE/C)	3
Major requirement	3	General education elective (CGE/D)	3
	<hr/>	Major requirement	3
	13		<hr/>
			15

Junior Year

Fall		Winter	
HS 280 Human Physiology	3	PHY 221 General Physics II	5
HS 281 Human Physiology Lab	1	HS 309 Human Anatomy Lab	1
PHY 220 General Physics I	5	HS 310 Basic Pathophysiology	5
HS 301 Introduction to Research in the Health Sciences	5	Elective or major requirements	6
Elective or major requirement	5		<hr/>
	<hr/>		15
	15		

Professional Curriculum

Senior Year

Fall		Winter	
PSY 368 Psychology of Physical Disabilities	3	HS 365 Applied Human Physiology	3
HS 355 Anatomy of Joints	2	PT 420 Differential Diagnosis in Orthopedic PT	4
HS 461 Prosected Regional Anatomy	1	PT 421 Clinical Education I	2
PT 406 Therapist Roles in Health Care Systems	2	PT 422 Physical Therapy Procedures II	2
PT 418 Physical Therapy Procedures I	1	PT 425 Clinical Medicine I	2
	<hr/>	PT 482 Clinical Biomechanics	3
	15		<hr/>
			16

Physical Therapy

Spring/Summer

First four weeks:			
PT 428 Clinical Education II	3		
Last ten weeks:			
PT 419 Human Physical Development I	3		
PT 427 Neuroanatomy	1	PT 430 Introduction to Sports Physical Therapy	2
HS 328 Neurosciences	3		
PT 407 Professional Issues in Rehabilitation	2		
			<hr/>
		Total	135

Fifth Year

Fall		Winter	
PT 524 Neurologic Evaluation and Treatment	4	First four weeks:	
PT 525 Clinical Medicine II	2	PT 520 Clinical Education III	3
PT 527 Neurologic Techniques	4	Last ten weeks:	
HS 601 Experimental Design	3	PT 518 Rehabilitation Procedures	3
<hr/>	<hr/>	PT 565 Human Physical Development II	3
13		PT 571 Cardiopulmonary Rehabilitation	3
		NR 642 Teaching Health Professionals	3
		PT 699 Independent Study in Physical Therapy (optional)	3
			<hr/>
			15

Summer (eight weeks)

PT 514 Rehabilitation for Chronic Conditions	3	PT 670 Advanced Topics: Pediatrics (optional)	(3)
PT 519 Spinal Manual Therapy	2	PT 688 Research Practicum I or	3
		PT 690 Master's Thesis Proposal	3
			<hr/>
			8

Sixth Year

Fall		Winter	
PT 620 Clinical Education IV	12	PT 621 Management in Rehabilitation	2
		PT 622 Case Studies in Rehabilitation	2
		PT 689 Research Practicum II or	3
		PT 695 Master's Thesis	3
			<hr/>
			7
Fifth and Sixth Year Credits	55		
Advanced Topics (optional):			
HS 625 Clinical Cardiac Physiology	(3)	PT 673 Manual Therapy II	(3)
PT 672 Advanced Spinal Manual Therapy	(3)	PT 674 Sports Medicine	(3)
		PT 676 Rehabilitation	(3)

Courses of Instruction

Note: Courses must be taken in sequential order 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-406 Introduction to Rehabilitation Practice. Introduces the role of the health care professional and the major tasks of those working in a rapidly changing system. Introduces systems theory and its application to health care. Discusses organization of the professions and individual professional responsibility in terms of teaching, learning, research, and reflective practice. Prerequisite: Admission to physical therapy department. (2-0-0). Two credits. Offered fall semester.

PT-407 Professional Issues in Rehabilitation. Interdisciplinary perspective on practice issues in the changing health care system. Introduces students to the development of reimbursement and delivery systems in the United States; controversies surrounding cost containment in medicine; and legal and ethical issues in rehabilitation, particularly among physical and occupational therapists. Prerequisite: Admission to physical therapy department. (2-0-0). Two credits. Offered summer semester.

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 Department. (3-0-3). Four credits. Offered fall semester.

PT-419 Human Physical Development I. An outline of the process of human development from conception to adulthood. Emphasis on neurologic and musculoskeletal development and how this development relates to function. A discussion of disease processes and disabilities which influence development and their relationship to the developmental stages most affected. Prerequisite: Admission to physical therapy department. (1-0-0). Three credits. Offered summer semester.

PT-420 Differential Diagnosis in Orthopedic PT. Orthopedic evaluation procedures, including: patient interviewing, posture analysis, palpation, manual testing, 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 department. (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 field work. Prerequisite: Admission to physical therapy department. (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 department. (2-0-2). Two 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 department. (2-1-0). Two credits. Offered winter semester.

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 P.T. 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 department. (1.5-0-3). Two credits. Offered summer semester.

PT-482 Clinical Biomechanics. Focus on normal and pathological human motion. Static and dynamic forces which 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 department. (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

Physical Therapy

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 department. (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 department. (1-0-0). 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 Department. (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 P.T. curriculum to date. (0-0-10). 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 department. (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 department. (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 department. (3-0-3). Four credits. Offered fall semester.

PT 565 Human Physical Development II. 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. This course is a continuation of PT 419. Prerequisite: Admission to physical therapy department or degree in physical therapy. Successful completion of PT 419. (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 Department. (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. (0-0-10). Twelve credits. Offered fall semester. Graded credit/no credit.

PT 621 Management in Rehabilitation. Interdisciplinary study of management behaviors and processes for effective leadership in clinical rehabilitation settings. Emphasizes organizational behaviors, structures and systems. Examines staffing, personnel evaluation, fiscal management, quality assurance, and ethics. Prerequisite: Admission to the physical therapy department. (2-0-0). Two credits. Offered winter semester.

PT 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: Admission to physical therapy department. (1-2-0). Two credits. Offered winter semester.

PT 670 Advanced Topics: Pediatrics. In-depth study of theory, practice, and research in pediatric physical therapy. Prerequisite: Admission to physical therapy department 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 department 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 department or degree in physical therapy. (2-0-3). Three credits. Offered winter semester.

PT 673 Advanced Topics: Manual Therapy II. Advanced clinical experience and research project. Prerequisite: Admission to physical therapy department or degree in physical therapy; PT 672 or permission of instructor. (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 department 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 department or degree in physical therapy. (2-0-3). Three credits. Offered winter semester.

PT 688 Research Practicum I. Teams of two or three students will define a research question pertinent to physical therapy, conduct a literature review, design a study addressing a research question, and submit a proposal to a faculty committee. Each student will sign a contract delineating involvement in a team project. Prerequisite: Satisfactory completion of the physical therapy professional curriculum through winter of the first graduate year. Three credits. Offered spring/summer semester.

PT 689 Research Practicum II. Students will conduct and complete a research project as proposed in PT 688, including data collection, reduction, analysis, and interpretation. Formal written and oral reports will be prepared and presented. Student teams will be guided by faculty committee. Signed contracts will be reviewed prior to the course. Prerequisites: Satisfactory completion of PT 688 and the physical therapy professional curriculum through fall of the second graduate year. Three credits. Offered winter semester.

PT 690 Master's Thesis Proposal. Student will select research question pertinent to physical therapy with the guidance of a faculty committee and will submit a written proposal according to established guidelines. Prerequisite: Satisfactory completion of physical therapy professional curriculum through winter of first graduate year. Three credits. Offered every semester.

PT 695 Master's Thesis. Continuation of research activity described in PT 690. Student will conduct proposed study and produce written discussion of findings under guidance of faculty committee. Prerequisite: Satisfactory completion of physical therapy professional curriculum through summer of first graduate year. Three credits. Offered every 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 department. One to three credits. Offered fall, winter, and spring/summer semesters.

Physician Assistant Studies (PAS)

Director: Ward. Medical Director: Clodfelder. Associate Professors: Ward, Weersing; Visiting Clinical Instructor: Van Rhee, PA-C. Adjunct Faculty: Cimbalik, PA-C, Martin, PA-C, Vangsnos, PA-C.

Degree offered: M.P.A.S. (Master's in Physician Assistant Studies).

Physician assistants (PAs) practice medicine with supervision by licensed physicians. PAs are qualified to take histories, order and administer tests, and diagnose and treat illnesses. A physician assistant is educated to provide services that would otherwise be performed by a physician. In many states, PAs write prescriptions. The responsibilities of a physician assistant depend on the practice setting, education, experience, and the state's laws and regulations. They also depend on the

Physician Assistant Studies (PAS)

specialty of the physician who supervises the PA. No matter what the setting — in clinics, doctors' offices, hospitals — PAs perform many tasks that have in the past been provided by physicians. A physician assistant can take medical histories, treat illnesses, counsel patients, diagnose common illnesses, order laboratory tests, give medical advice, perform physical exams, assist in surgery, and set fractures.

Career Opportunities

The growth of the profession has been substantial. Demand for physician assistants exceeds supply. The job market is very strong in almost every part of the United States. Current national statistics show there are approximately six to seven jobs for every new physician assistant graduate. This trend is expected to increase over the next decade. The U.S. Department of Labor lists physician assistants among the top 15 career choices and projects a 44% increase in the number of physician assistant jobs through the year 2005. Physician assistants work wherever physicians or health care organizations employ them. They can be found in virtually all health care settings. Physician assistants work in hospitals, HMOs, military installations, nursing homes, industrial medicine clinics, physician's offices, VA medical centers, public health agencies, and research centers.

Grand Valley Physician Assistant Program

The physician assistant program at GVSU is a six-year program leading to a master of physician assistant studies (M.P.A.S.) degree. The program is divided into two parts: preprofessional and professional. Incoming freshmen begin with three years of preprofessional course work, including courses in the natural, health, and social sciences and Grand Valley State University general education requirements.

Students select an undergraduate major in their first year (suggested majors include health sciences, biology, or biomedical sciences) and work with an advisor from that department. Students will be awarded a B.S. degree in their chosen major upon completion of their fourth year of the six-year program. Students who have already completed a bachelor's degree need to complete only the preprofessional program course requirements.

Students begin the professional part of the curriculum at the beginning of their fourth year, after they have been accepted into the program (see "Application Procedures"). During the next three years they take additional courses in human anatomy and physiology, clinical pathophysiology, clinical medicine, neuroscience, pharmacology, laboratory medicine, and research methods. Students will also spend four semesters rotating through various clinical specialties. As part of the master's program, students must complete a research project.

Accreditation Statement

Physician Assistant programs are accredited through the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The Grand Valley State University Physician Assistant Studies Program has petitioned CAAHEP regarding accreditation status and is scheduled for an accreditation site visit in the summer of 1997.

Application Procedures

Admission to the PAS program is competitive. Admission will require completion of a GVSU graduate application. 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.

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 GVSU before applying to the physician assistant program must submit an undergraduate application; and (2) those who have completed preprofessional course work must complete a graduate application. Students should meet with a faculty member of the Physician Assistant Program regarding the preprofessional courses.

Admission to the physician assistant program requires the completion of the university graduate application. Students must be in the process of completing all of their preprofessional and undergraduate degree requirements to be considered. All preprofessional requirements must be completed by the start of the professional phase of the program. Applications may be obtained by calling the Physician Assistant Program office at (616) 895-3356. The completed application and supplementary materials must be submitted to the GVSU Admissions Office before **February 1** of the calendar year in which the student wishes to begin the professional program.

Professional Program Admission Criteria

Admission to the physician assistant program is competitive. The criteria for acceptance include:

1. Academic achievement. Satisfactory completion of all prerequisite course work. A minimum 3.0 prerequisite science and last 60 hours GPA to be considered for admission. Students with a minimum 3.25 GPA will be the most competitive.
2. Two formal letters of recommendation from appropriate health professionals. Letters from practicing Physician Assistants would be most appropriate.
3. Interviews.
4. Writing samples.
5. Experience. Applicants should show evidence of 250-plus hours of significant volunteer, work, or observational experience in a health care environment.

Students are accepted for fall entrance only. Students will be informed of the Admission Committee's decision by **May 1**.

Selection Factors

Applicants are considered without regard to age, sex, race, color, national origin, religion, political beliefs, or disability. Motivational factors, life experiences, patient care experience, maturity and personality 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 program. Applicants must meet certain health and

Physician Assistant Studies (PAS)

technical standards which demonstrate their capacity to function as a physician assistant. Copies of these standards may be obtained from the program.

Degree Requirements

A minimum of 125 credits is required for completion of the bachelor's degree. Seventy-eight additional credits are required for completion of the Master's Degree of Physician Assistant Studies. General graduate academic policies and regulations can be found in the GVSU graduate bulletin.

Preprofessional Program 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)^P.
- One course in human physiology (including laboratory)^P.
- One course in statistics.
- One course in introductory psychology.
- One course in developmental psychology.
- One course in introductory microbiology (including laboratory)^P.
- 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.

Professional Program Course Requirements for MPAS Degree

- PAS 420 Introduction to Physician Assistant Studies
- 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 601 Family Medicine Clinical Rotation
- PAS 602 Internal Medicine Clinical Rotation
- PAS 603 Obstetrics and Gynecology Clinical Rotation
- PAS 604 Geriatric Medicine Clinical Rotation
- PAS 605 Pediatrics Clinical Rotation
- PAS 606 Psychiatry/Mental Health Clinical Rotation
- PAS 607 Emergency Medicine Clinical Rotation

*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.

PAS 608 Surgery Clinical Rotation
 PAS 612 Rural Medicine Clinical Rotation
 PAS 614 Underserved Medicine — Clinical Rotation
 PAS 615 Primary Care Practicum
 HS 412/413 Medical Bacteriology
 HS 427 Neuroanatomy
 HS 428 Neuroscience
 HS 461 Regional Human Anatomy
 HS 475 The Pathology of Aging
 HS 495 Concepts in Wellness
 HS 510 Immunology
 HS 523 Epidemiology
 HS 601 Experimental Design
 HS 695 Project in Health Science
 PSY 368 Psychology of Physical Disabilities

Additional required graduate-level course work includes Clinical Pharmacology.

Sample Curriculum — Preprofessional Level

Freshman Year

Fall		Winter	
ENG 150 Strategies in Writing	4	CHM 109 Introductory Chemistry	5
ES 100 Freshman Seminar	1	SOC 201 Introduction to Sociology	3
BIO 112 General Biology II	4	HS 111 Medical Terminology	2
PSY 101 Introductory Psychology	3	General Education Electives	6
General Education Elective	3		
	<u>15</u>		<u>16</u>

Sophomore Year

Fall		Winter	
CHM 231 Introductory Organic Chemistry	4	CHM 232 Biological Chemistry	4
BIO 355 Human Genetics	3	SOC 356 Sociology of Health Care	3
HS 208 Human Anatomy	3	HS 280, 281 Human Physiology	4
HS 220 Health Care Delivery	2	HS 222 Introduction to Public Health	3
STA 215 Introductory Applied Statistics	3	General Education Elective	3
	<u>15</u>		<u>17</u>

Junior Year

Fall		Winter	
PHY 200 Physics for the Health Sciences*	4	HS 311 Pharmacological Aspects of Health Science	3
PSY 364 Life Span Developmental Psychology	3	HS 305 Clinical Nutrition	3
HS 212/215 Introductory Microbiology	4	HS 309 Laboratory in Human Anatomy	1
BIO 336 Bioethics	3	HS 301 Introduction to Research in Health Sciences	3
	<u>14</u>	HS 310 Basic Pathophysiology	3
		General Education Elective	3
			<u>16</u>

Total Credits for Preprofessional Component: 93

*PHY 220/221 may be substituted for PHY 200. It is assumed that students will meet math requirement (MTH 110) and upper level English requirement.

Physician Assistant Studies (PAS)

Professional Level Curriculum*

Senior Year

Fall		Winter	
HS 410 Immunology	3	HS 475 The Pathology of Aging	3
PSY 368 Psychology of Physical Disabilities	3	HS 495 Concepts in Wellness	3
HS 427 Neuroanatomy	1	HS 412 413 Medical Bacteriology	5
HS 540 Health Care Management	2	PAS 500 Clinical Medicine I	3
HS 461 Regional Human Anatomy	4	PAS 501 Patient Evaluation II	2
PAS 420 Introduction to Physician Assistant Studies	2		<hr/> 10
PAS 501 Patient Evaluation I	2	Spring/Summer	
	<hr/> 17	HS 428 Neuroscience	4
		PAS 505 Clinical Medicine II	6
			<hr/> 9

Total Credits for B.S. Degree in Health Science: 126

Fifth Year

Fall		Winter	
HS 525 Epidemiology	3	PAS 601 Family Medicine	4
PAS 510 Clinical Pathophysiology	3	PAS 602 Internal Medicine	3
PAS 511 Clinical Laboratory Medicine	1	PAS 603 Obstetrics and Gynecology	3
PAS 515 Clinical Medicine III	4	HS 601 Experimental Design	3
PAS 514 Clinical Modality Skills	2		<hr/> 13
	<hr/> 13	Spring/Summer	
		PAS 604 Geriatric Medicine	3
		PAS 605 Pediatrics	3
		PAS 606 Psychiatry/Mental Health	3
		HS 693 Project in Health Science	3
			<hr/> 12

Sixth Year

Fall		Winter	
PAS 607 Emergency Medicine	4	PAS 615 Primary Care Practicum	12
PAS 608 Surgery	3		
PAS 612 Rural Medicine	3	Total for M.P.A.S. Degree: 75**	
PAS 614 Underserved Medicine	3	Total credits: 201**	
	<hr/> 13		

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 420 Introduction to Physician Assistant Studies. A survey course for the development of Physician Assistant students' awareness and understanding of their profession. Professional ethics, customs, and roles, medico-legal issues, student concerns and questions regarding the profession will be discussed. Issues introduced in this course will continue in subsequent semesters. Prerequisite: Admission to Physician Assistant Studies. (2-0-0) Two credits. Offered Fall semester.

*Senior year course work reflects courses not necessarily taken by all students.

**Additional course work in Clinical Pharmacology is also required.

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-year (professional) Physician Assistant students. Focuses upon acquisition of foundational knowledge required for complete patient evaluation. Students develop communication and interviewing skills necessary to conduct accurate patient histories. Prerequisite: 420. (1-0-2). Two credits. Offered fall semester.

PAS 502 Patient Evaluation II. Sequential course for first-year (professional) Physician Assistant students. Emphasizes rudimentary physical examination skills used in conjunction with appropriate patient history. Students practice competencies necessary to perform complete physical examinations and identify relevant physical signs and symptoms. Prerequisites: 501. (1-0-2). 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.) Prerequisites: 500/501. (6-0-0). 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 PAS 500/505. (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 601 Family Medicine Clinical Rotation. Clinical rotation that provides instruction in the basic knowledge, attitudes, and skills essential to primary care physician assistants. Students study comprehensive primary health care in a variety of clinical situations, primarily in ambulatory settings. Learning will also take place through discussions, readings, seminars, and ward rounds. Prerequisite: Successful completion of all professional didactic course work. Four credits. Offered winter semester.

PAS 602 Internal Medicine Clinical Rotation. Clinical rotation focusing upon the application of basic medical knowledge to medical problems and patient care situations. Students develop methods of collection and analysis of clinical information and actively participate in patient care. Students will have opportunities to evaluate patients and develop clinical management skills. Prerequisite: Successful completion of all professional didactic course work. Three credits. Offered winter semester.

PAS 603 Obstetrics and Gynecology Clinical Rotation. Clinical rotation designed to provide students with knowledge and skills required to address women's health needs. Students

Physician Assistant Studies (PAS)

rotate through traditional inpatient/outpatient services with emphasis on prenatal monitoring and care, recognition of complications of pregnancy, common gynecological problems, and management of normal labor and delivery. Prerequisite: Successful completion of all professional didactic course work. Three credits. Offered winter semester.

PAS 604 Geriatric Medicine Clinical Rotation. Clinical rotation focusing upon common acute and chronic health problems of elderly patients. Evaluation will take place in both inpatient and outpatient settings. Clinical problem solving will be emphasized and skills in disease prevention, compliance issues, and communication will be stressed. Prerequisite: Successful completion of all professional didactic course work. Three credits. Offered spring/summer session.

PAS 605 Pediatric Clinical Rotation. Clinical rotation designed to provide students with experience in the treatment of hospitalized children, well-child care, and acute minor illnesses. Throughout the rotation, the pediatric history and physical exam are stressed, as are normal and abnormal child growth and development, communication, and other pediatric medical needs. Prerequisite: Successful completion of all professional didactic course work. Three credits. Offered spring/summer session.

PAS 606 Psychiatry/Mental Health Clinical Rotation. Clinical rotation which emphasizes the behavioral and biopsychosocial aspects of common mental disorders. In-patient and outpatient settings allow students to participate in practical clinical work, seminars, and case presentations. The development of clinical interviewing, diagnostic, and treatment planning skills are stressed. Prerequisite: Successful completion of all professional didactic course work. Three credits. Offered spring/summer session.

PAS 607 Emergency Medicine Clinical Rotation. Clinical rotation that provides an opportunity to participate in the delivery of urgent and emergent patient care. Focus is on triage, evaluation, and management of injury and acute illness in emergency situations. Students learn to evaluate and manage patients from presentation to disposition. Students develop proficiency in emergency technical procedures. Prerequisite: Successful completion of all professional didactic course work. Four credits. Offered fall semester.

PAS 608 Surgery Clinical Rotation. Clinical rotation in which students will integrate with surgical teams and supervising surgical staff. Students will participate in clinic, ward rounds, operating room cases, and any staff meetings related to the care of surgical patients. Lectures, case presentations, seminars, and practical application are stressed throughout the rotation. Prerequisite: Successful completion of all professional didactic course work. Three credits. Offered fall semester.

PAS 612 Rural Medicine Clinical Rotation. Clinical rotation focusing upon acute and chronic health problems encountered in rural health settings. Evaluation will take place in a variety of inpatient and outpatient settings. Clinical problem solving will be emphasized and skills in disease prevention, compliance issues, and communication will be stressed. Prerequisite: Successful completion of all professional didactic course work. Three credits. Offered fall semester.

PAS 614 Underserved Medicine Clinical Rotation. Clinical rotation focusing upon acute and chronic health problems that are commonly found in underserved populations. Evaluation will take place in outpatient settings. Clinical problem solving will be emphasized and skills in disease prevention, compliance issues, and communication will be stressed. Prerequisite: Successful completion of all professional didactic course work. Three credits. Offered fall semester.

PAS 615 Primary Care Practicum. Final clinical rotation embracing a heavy emphasis on clinical problem solving. Students study comprehensive primary health care on a continuing basis. The educational goal of this clinical rotation is to provide the student with a comprehensive learning experience. Prerequisites: Successful completion of all professional didactic course work. Twelve credits. Offered winter semester.

Physics (PHY)

Chair: Reynolds. Associate Professors: Estrada, Reynolds; Assistant Professors: Eligon, Perozzo, Thacker; Visiting Assistant Professor: Sivron; Visiting Instructor: Brower.

Degrees offered: B.S. in physics; minor in physics; major or minor for physics secondary teacher certification.

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. Since many of these courses are offered only once a year and several 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 enter the 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 an enormous need for properly prepared secondary school physics teachers.

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 Regulations section of the catalog.
2. 39 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 GVSU 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. 36 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
or CS 152 Computer Programming in FORTRAN
MTH 201 Calculus and Analytical Geometry I*
MTH 202 Calculus and Analytical Geometry II*
MTH 203 Calculus and Analytical Geometry III
MTH 227 Linear Algebra
MTH 300 Applied Analysis I
MTH 304 Analysis of Differential Equations
or MTH 302 Linear Algebra and Differential Equations

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 School of Education as outlined in this catalog. Note that the extra course work necessary for teaching certification normally requires a full fifth year of work.
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 330 Bioethics).
BIO 111 or 112 General Biology I or II.

*Completion of MTH 201, 202 and PHY 230 satisfies the B.S. degree cognate for the physics major.

**Capstone sequence.

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 fourteen 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.

First Year

MTH 201 Calculus and Analytical Geometry I

MTH 202 Calculus and Analytical Geometry II

PHY 230 Principles of Physics I

CHM 115 Principles of Chemistry I (NS/A)

CHM 116 Principles of Chemistry II

ENG 150 Strategies in Writing

General Education course: CGE C

Second Year

MTH 205 Calculus and Analytical Geometry III

MTH 227 Linear Algebra I

MTH 304 Analysis of Differential Equations or

MTH 302 Linear Algebra and Differential Equations

PHY 231 Principles of Physics II

PHY 302 Introduction to Modern Physics

CS 162 Computer Science I

General education course: CGE D

General education course: SS B

Third Year

MTH 300 Applied Analysis I

PHY 309 Experimental Methods in Physics

PHY 311 Advanced Laboratory II

PHY 330 Intermediate Mechanics and Dynamics

PHY 310 Intermediate Electricity and Magnetism

General education course: AH A

Physics

General education course: SS/C

General education course: CGE/B

Electives

Fourth Year

PHY 350 Intermediate Modern Physics

PHY 360 Thermodynamics

PHY 485 Senior Project I

PHY 486 Senior Project II

General education: NS/B

General education: AH/B

Electives

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. General education course NS-A. (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 107 Light, Lasers, and Holography. Most of our information about the world comes to us by way of light. This course will explore concepts surrounding light. Reflection, refraction, the eye and vision correction, sources of light, its speed, photography, lasers, holography, etc. Lab allows hands-on study, build telescopes/microscopes, investigate the spectrum, create holograms, others. (2-0-2). Three credits. Offered Winter 1998.

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 120 Einstein's Universe. Study of the impact of Einstein's theories of relativity on our understanding of the birth, structure and change, ultimate state of the universe; the expanding universe, curved space, evidence in support of relativity theory. General education course CGE/D. (3-0-0). Three credits. Normally offered fall and winter semesters.

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 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 Foundations of Physical Science I. 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 laboratory setting. Topics include: mass, volume, density, buoyancy, heat, temperature, electric circuits. Ideal for students preparing for careers in education. General education course NS-A. Four credits. Offered fall semester.

PHY 202 Foundations of Physical Science II. Study of concepts based on readily observable phenomena in electricity, magnetism, and optics. Focuses: Understanding fundamental

concepts, 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.) General education course NS.A. Four credits. Offered winter semester.

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 corequisite). (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. (2-2-2). 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. (2-2-2). 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 at least a corequisite). (3-2-2). 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. (3-2-2). Five credits. Offered fall and winter semesters.

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 301 as a corequisite. (3-0-3). Four credits. Offered winter semester.

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 and MTH 302 or 301. A supplemental writing skills course (2-0-4). Four credits. Offered fall semester.

Physics

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 and MTH 302 or 304. A supplemental writing skills course (0-0-6). Two credits. Offered fall semester.

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. 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 semester 1997.

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 of 1998.

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 1999.

PHY 360 Statistical Thermodynamics. Basic concepts of heat, thermodynamics and statistical physics for students of applied and theoretical physics. Temperature, equations of state, laws of thermodynamics, properties and behavior of pure substances, ideal gases, and mixtures. Introduction to statistical physics including statistical ensembles, probability, kinetic theory, heat capacity, and ideal gas velocity distributions. Prerequisite: 231. (4-0-0). Four credits. Offered fall semester 1998.

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 even-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 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.

Political Science (PLS)

Chair: King. Professors: Armstrong, Baum, King; Assistant Professors: Constantelos, Davis, Diven, Orth.

The central aim of the political science program is to achieve a well-rounded undergraduate knowledge of the discipline. The program is important for those majors whose career goals include: a profession directly related to government and politics; graduate and professional study in political science and/or related area, 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, 231 or 232 or 339, 495, and seven additional courses, two of which must be in American politics, one in comparative politics, 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, SS 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.

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 — with a large percentage of persons employed in business.

Nevertheless, political science as a major or minor field can 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

Courses in political science are generally regarded as among those which students preparing for a career in law should take. Also important are courses in history, economics, and philosophy. Students are reminded that law schools prefer students with a solid background covering a variety of disciplines and that law school courses are quite specific in content (which means that the undergraduate program should provide a solid framework of general knowledge). For example, writing and study skills, the ability to think logically, knowledge of government organization and processes and the economic-social environment of the law should be acquired before entering law school.

Recommended courses for prelaw students might properly include American and English history, economics and accounting, logic (philosophy), and writing skills courses, as well as courses in political science. Prewlaw students may count Philosophy 330 (legal) as part of their political science major.

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, etc. 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 which is firmly founded on, and tied to, strong academic curricula.

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 200-500 level
STA 215 and SS 500 (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

Courses of Instruction**Introduction to the Study of Political Science**

PLS 102 American Government and Politics. This course is 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 process. General education course SS/C. 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 which influence world politics. General education course SS/C. 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. An examination of state political systems, with an emphasis on Michigan. Topics include governmental organization, gubernatorial leadership, legislative interaction, state court systems, interest groups, and political party activity. Prerequisite: 102. 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 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 United States political system, some comparative material will be presented. Prerequisite: 102 or junior standing. Three credits. Offered fall 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 winter semester.

PLS 306 American Constitutional Law I. Federalism and separation of powers. Examination of 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 leading decisions of the Supreme Court. Prerequisite: 102 or junior standing. Three credits. Offered fall semester.

PLS 307 American Constitutional Law II. Civil liberties and civil rights. Analysis of constitutional principles, judicial rulings, Congressional statutes, and administrative development of civil liberties and civil rights. Emphasis on case studies. 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,

Political Science

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 340 American Public Opinion and the Mass Media. An examination of the nature, measurement, formation, manipulation, and policy consequences of public opinion and political ideology in contemporary America, with particular emphasis on the role of the mass media in agenda-setting and persuasion. Prerequisite: 102 or junior standing. Three credits. Offered winter semester.

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 SS 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 economics. Course provides introductory analysis of international organizations, international law, and political economy in preparation for upper-level courses in international relations. 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 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 semester.

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.

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 fall semester of even-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. Three credits. Offered fall semester.

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 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. General education course CGE B. Three credits. Offered winter semester.

PLS 282 Government and Politics of Russia and Eastern Europe. An analysis of the socioeconomic factors which influence the political processes, through a comparison of the political system in the United States with Russia and Eastern Europe. General education course CGE B. Three credits. Offered fall semester.

PLS 283 Government and Politics of China and Japan. An analysis of the socioeconomic factors which influence the political processes, through a comparison of the political system in the United States with China and Japan. General education course CGE-B. Three credits. Offered fall semester of odd-numbered years.

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.

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 339 The Changing Face of Democracy. A seminar inquiry into such questions as: What is democracy? What are the arguments for and against democracy? What does it take to make democracy work? What are the new democratic forms emerging internationally? How do we categorize democracies? What are its prospects in the 21st century? Prerequisite: 102 or any comparative politics course. Three credits. Offered fall semester of even-numbered years.

Special Topics, Independent Study, Internship, Capstone

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. Normally offered at least once a year.

PLS 399 Readings in Political Science. Independent advanced readings on selected topics. Prerequisites: Previous course work 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 each semester. Offered on a credit-no credit basis.

PLS 490 Internship. Supervised field experience with a legislative office, executive agency, political campaign organization, interest group, lobbying organization, legal office, or international organization. The purpose is to allow the student to apply academic knowledge to a work experience. 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 each semester. Offered on a credit-no credit basis.

PLS 495 Seminar in the Study of Politics (the 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 once a year.

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 each semester. Offered on a credit-no credit basis.

Prehealth Curriculum

Advisor: Droste-Bielak

Freshman students intending to major in biomedical sciences, health sciences, therapeutic recreation, occupational safety and health, nursing, pre-occupational therapy, pre-physical therapy, or pre-physician assistant studies are advised to seek initial academic advising from the Prehealth Advisor. A program of first-year study will be configured for each student to support optimal progression and potential mobility between the programs of study.

Premedical and Predental Studies

Program advisor: T. Striekler.

Allopathic medical (M.D.), osteopathic medical (D.O.), and dental schools are seeking 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). Since these courses are part of the requirements for a number of majors at GVSU, no one specific major is recommended for premedical and predental students. Most premedical students at GVSU 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 Premedical and Predental Program Advisor to ensure that all necessary information is available to them. All premedical and predental students should enroll in HIS 480, The Preprofessional Seminar, in the winter of their junior year. This course reviews testing and application procedures for medical and dental schools.

Both medical and dental schools require applicants to take a standardized admissions exam. Students normally take the Medical College Admissions Test (MCAT) or the Dental Admissions Test (DAT) in April of their junior year, although both of these exams are also offered in the fall. 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, health sciences, and the Office of Cooperative Education and Placement, aids premedical and predental students in their preparations for professional school application.

For more specific information, please refer to the sections on biology, biomedical sciences, and chemistry.

Psychology (PSY)

Chair: Hendersen; Professors: Adamopoulos, Bernstein, Hendersen, Herzog, O'Connor, Paschke, Portko; Associate Professors: Blakey, Chen, McGhee, Paszek, Schaughency; Assistant Professors: Beale, Burns, Costello, Rodriguez-Charbonier, Smith, Xu; Visiting Instructor: Caseni.

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, educational psychology, experimental psychology, cognitive psychology, social psychology,

and cross-cultural psychology. The interests and training of the faculty members in the department cover all of these areas, so we are able to offer a wide range of courses in the undergraduate curriculum.

Requirements for Major Programs

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 Statistics 215, Social Science 300, and Psychology 400.

The major may be completed by following one of three tracks: General, Applied, or Preprofessional depending on your interests and goals. Each track has a different set of requirements and includes 36 to 39 hours of psychology courses. Psychology 101, Social Science 300 and Psychology 400 and 492 are required for all three tracks.

No more than six credit hours in Psychology 399 and 499 may be counted towards the major. Psychology majors must take at least one third of the psychology credits constituting their major from the Psychology Department.

Only one of 301 or 364 may be counted toward a major.

General Track

The General Track is intended for students who wish to gain knowledge of the widest range of psychological areas or who are preparing for graduate education in more applied fields such as counseling or social work. Additionally, with careful planning, the General Track may provide appropriate preparation for graduate education in psychology.

General requirements include a minimum of 12 courses in psychology totaling 36 hours of credit, including Psychology 101, Social Science 300, Psychology 400 and 492. In addition, one course must be taken from each of the six following categories:

1. Biological: 430, 431.
2. Developmental: 301, 331, 332, 364.
3. Personality/Clinical: 302, 303, 452.
4. Social Context: 355, 360, 362, 445.
5. Experimental/Labs: 361, 365, 410.
6. Integrative: 363, 405, 420.

Lastly, six hours of psychology courses may be of the student's choosing. (One of the following may be counted towards the major: SS 260, SS 261, SS 381, SS 382.)

Applied Track

Admittance to the applied track is not automatic. Students are eligible to apply during their sophomore year and, for those accepted, a practicum placement will be arranged during their junior or senior year. Students must have a major grade point average and an overall grade point average of 2.5 or better to be admitted to the applied track and be placed in a practicum setting.

The Applied Track is appropriate for psychology majors preparing for graduate education in the more applied areas of psychology (rather than research-science oriented), especially at the master's level, and for graduate education in applied fields such as social work, counseling, and rehabilitation. This track is also appropriate for students who may wish to seek initial employment as paraprofessionals in human services at the bachelor's level.

Psychology

Courses are mostly prescribed, emphasize the clinical and applied areas of psychology, and include a practicum or field placement in a human services agency which provides some firsthand experience.

A total of 36 hours is required, including 101, 303, 309, 400, 490, 492, and Social Science 300; one of 301, 304, 326, 331, 364; one of 361, 363, 365; one of 310, 410, 452; one of 430, 431. Depending on specific interests, students should, in consultation with their advisors, consider the following suggested cognates: Biology 355, Criminal Justice 301, and Sociology 280, 382, and 384. (One of the following may be counted towards the major: SS 260, SS 261, SS 381, SS 382.)

Preprofessional Track

The goal of the Preprofessional Track is to provide students with a background that will appeal to graduate schools in psychology and/or to a variety of potential employers. The track consists of a core of traditional courses in all areas of psychology plus a set of cognate courses in the sciences, mathematics, the social sciences, and philosophy/history of science. Interested students are urged to select a faculty advisor as early as possible in their college careers.

The disciplinary component of the Preprofessional Track consists of 13 courses totaling at least 39 hours, including Psychology 101, Social Sciences 300, and in the senior year, Psychology 399, 400, 470, and 492. In addition, the following courses from the categories of the General Track must be taken:

1. Biological: 430.
2. Developmental: 364.
3. Personality/Clinical: 303.
4. Social Context: 360.
5. Experimental Labs: Any course from 361, 365, 410.
6. Integrative: Any two courses from 363, 405, 420.

Psychology 399 and 470 should be elected as a sequence in the senior year, 399 in the fall semester and 470 in the winter semester. The two-course sequence will culminate in the student's writing a senior thesis under the direction of a faculty member, who must be chosen before the student enrolls in Psychology 399.

The cognate component of the Preprofessional Track consists of nine courses from the areas described below. Students should note that several of the recommended courses (indicated by *) also satisfy general education requirements. Note also that courses other than those recommended may be used to satisfy cognate requirements provided that prior approval of a faculty advisor is obtained.

The cognate areas are as follows:

1. Science: Three courses. One must be a biology course. Recommended: Biology 105*, 111*, 112*, 336*, 352, 355; Chemistry 115*, 116; Physics 200, 220, 221; Health Sciences 100*, 202*.
2. Math/Computer Science: Two courses. One must be a mathematics course. Statistics 215 may *not* be elected. Recommended: Math 122*, 123*, 125*, Statistics 216, 319; Computer Science 162*.
3. Social Science: Two courses from the following disciplines: anthropology, economics, political science, sociology, and social science. Sociology 360 may *not* be elected.

*Also satisfies general education requirements.

4. Philosophy/History of Science: Two courses. One must be a philosophy course. Recommended: Philosophy 101*, 103, 202, 210, 230, 360; History of Science 201*, 204, 305.

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/anthropology cooperate to offer a major in behavioral science for those students who want a broad background in the behavioral sciences. (See Behavioral Science Major, 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 Statistics 215, Social Science 300, and Psychology 430 or 431; or Biology 112, 375, and 376, and Computer Science 160 or 162.

The following psychology and cognate courses are required for biopsychology majors: Psychology 101, 363, 364, 400, 420, 430, and:

Biology 112 General Biology II
 Biology 355 Human Genetics, or
 Biology 375-376 Genetics and Genetics Lab
 Biology 302 Comparative Vertebrate Anatomy
 Biology 352 Animal Behavior
 Biology 432 Comparative Animal Physiology
 Computer Science 150 Introduction to Computing
 Mathematics 201 Calculus and Analytic Geometry I
 Statistics 215 Introductory Applied Statistics
 Chemistry 109 Introductory Chemistry
 Chemistry 231 Introductory Organic Chemistry
 Chemistry 252 Biological Chemistry
 Physics 220 General Physics I
 Physics 221 General Physics II
 Social Science 300 Research Methods in the Social Sciences

In addition, students must take the capstone course from either the Biology (495) or Psychology (492) Departments.

Social Sciences Group Major

See group social science requirements listed separately in the catalog under Social Sciences: Group Major Programs.

Psychology-Special Education Major

A psychology-special education major is offered through the cooperation of the Psychology Department and the School of Education for those students who are preparing for a teaching career in special education. Because of the complexity

*Also satisfies general education requirements.

Psychology

of the program, students are advised to declare their major early and consult with their advisors regularly.

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 Statistics 215, Social Science 300 and Education 495.

Psychology-special education majors should take at least one-third of the credits constituting the major from the Psychology Department and the School of Education. The required 33 hours of courses for the major are: Psychology; 301, 302, 303, 304, 325, and 452; and Education; 351, 361, 495, and 496.

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. Psychology 101 and Social Science 300 are required. Minors must take one course from three of the six categories listed above for General Track majors. No more than three credit hours in Psychology 399 and 499 may be counted towards the minor. Psychology minors must take at least one-third of the credits constituting their minor from the Psychology Department. Only one of 301 or 361 may be counted toward a minor.

Minor in Aging and Adult Life

The Psychology Department participates in the multidisciplinary minor in aging and adult life. See "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. Jobs as a psychologist require 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 may 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. Entrance level positions are at the paraprofessional level and compensation is modest, but with perseverance and experience advancement is possible.

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 also be part of a major for obtaining teaching certification at the elementary level. Alternatively, it may be a minor combined with another major leading to secondary certification and the teaching of psychology at the high school 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. General education course SS-A. Three credits. Offered fall and winter semesters.

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 fall and winter semesters.

PSY 302 Mental Hygiene. Psychological principles involved in individual adjustment to oneself and the sociocultural environment. Attention is also given to coping with stress and to prevention of maladjustment. Prerequisite: 101. Three credits. Offered fall and winter semesters.

PSY 303 Abnormal Behavior. Description and analysis of a wide range of behaviors considered abnormal. Some consideration of theories, etiologies, and treatment approaches. Prerequisite: 101. Three credits. Offered fall and winter semesters.

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. Prerequisite: 101. Three credits. Offered fall and winter semesters.

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.

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 which provides a survey of young children's abilities to understand, think, express, and interact, and the implementation of activities which 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 fall and winter semesters.

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?" General education course CGE D. Three credits. Offered fall and winter semesters.

PSY 315 The Psychology of Sex Differences. An investigation of the extent, origin, and consequences of sex differences. The course will first review the research on sex differences, then consider the etiology of differences via psychological, biological, primate behavior, cross-cultural and social conditioning perspectives. General education course SS A. Three credits. Offered on sufficient demand.

PSY 316 The Psychology of Human Intimacy and Sexuality. Approaches the study of human intimacy and sexuality within the context of the relevant value systems of this society. Emphasis will be upon the most recent research data concerning the psychological, socio-anthropological, and physiological variables significantly related to the dynamics of human intimacy and sexuality. Prerequisite: 101. Three credits. Offered once a year.

PSY 317 Human Relations. Readings and classroom experiences designed to develop and improve helping skills (active listening, paraphrasing, empathy, open-ended questions), assertiveness, and conflict resolution. Consideration will be given to application of these skills in various personal and professional settings such as health care, social work, and criminal justice. Three credits. Offered fall and winter semesters.

PSY 320 Psychology of Sport and Recreation. The study and analysis of the psychology of sport. Consideration will be given to motivation, personality characteristics, neuropsychological development and learning, and psychological preparation of athletes. Prerequisite: 101. Three credits. Offered on sufficient demand.

Psychology

PSY 325 Psychology Applied to Teaching. 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 fall and winter semesters.

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. Prerequisite: 101. Three credits. Offered fall and winter semesters.

PSY 327 Individual Differences. A study of human behavior with emphasis on the differences within and among individuals who are considered normal as well as those who are not. Prerequisite: 101. Three credits. Offered on sufficient demand.

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 once a year.

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.

PSY 333 Existential Psychology. Exploration of the "third force" in contemporary psychology as contrasted with behaviorism and psychoanalysis. Discussion of major American and European writers attempting to investigate what is uniquely human in experience of normal and disturbed people. Consideration of philosophical, theoretical, and empirical approaches. Prerequisite: 101. Three credits. Offered on sufficient demand.

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. 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, interpersonal and intergroup behavior, and psychopathology. Prerequisite: 101. Three credits. Offered once a year.

PSY 360 Social Psychology. 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: Psychology 101 or Sociology 201. Psychology 360 is equivalent to Sociology 360. Students may not receive credit for both Psychology 360 and Sociology 360. 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. Prerequisite: 101. Laboratory. Three credits. Offered every other year.

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 on sufficient demand.

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 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. Only one of 301 and 364 may be counted towards a major or minor. Prerequisite: 101. One to three credits. Offered fall and winter semesters.

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 once a year.

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. Prerequisite: 101. Three credits. Offered fall and winter semesters.

PSY 369 Problem Solving. General problem-solving techniques and strategies for defining the problem, with emphasis on their use and application. Strategies for remembering, reasoning, generating ideas, simplifying complex problems, and making decisions will be covered. Prerequisite: 101. Three credits. Offered on sufficient demand.

PSY 370 Primate Behavior/Field Study. Study of primate behavior in Costa Rica. Students will live and work in the field, develop project, collect data on one of two primate species, present results at course finale conference, and participate in discussion. Lecture, discussion, and field study. Prerequisite: 101 or consent of instructor. Six credits. Offered spring or summer semester.

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 fall semester.

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.

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: Psychology 101 or Sociology 201. Three credits. Offered on sufficient demand.

PSY 385 Psychology of Religion. The study of both the data gathered and the theories evolved throughout the history of the psychology of religion. Specific consideration will be given to various definitions of religion, the many theoretical explanations of religious behavior, the psychological dynamics of religious thought and action, the relationships between religion, positive mental health, and psychopathology, and some of the functions served by religion. Three credits. Offered on sufficient demand.

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 fall and winter semesters.

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, SS 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 SS 300. Three credits. Offered once a year.

PSY 410 Tests and Measurements. A survey of test construction principles and psychological-educational measurement. Problems of reliability, interpretation, ethics, and the consequences of testing will be explored. A wide variety of commonly used tests will be reviewed and experienced. Laboratory. Prerequisite: 101. Three credits. Offered once a year.

Psychology

PSY 413 Psychology of Gender Archetypes. Introduces students to the concepts of archetypes in general and gender archetypes in particular. Study will include the psychological, historical, and anthropological manifestations of the archetypes and the underlying theoretical perspectives. Prerequisite: Junior standing or permission of instructor. Three credits. Offered 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 fall and winter semesters.

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 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 SS 300. Three credits. Offered fall and winter semesters.

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.

PSY 470 Senior Seminar. Research investigation, and class discussion conducted in a seminar format. Prerequisites: 101 and SS 300 and 400, and permission of instructor. Three credits. Offered on sufficient demand.

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, and acceptance into the applied track in psychology. Six credits (three credits under special circumstances). Credit/no credit. Offered fall and winter semesters only.

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 in fall of senior year. Three credits. Offered fall and winter semesters.

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 fall and winter semesters.

Social Science Courses

The following are interdisciplinary social science courses. Some count for general education. SS 300 may be counted towards a psychology major or minor. In addition, one of the following may be counted towards a psychology major: SS 260, 261, 381, or 382. See your advisor for further information.

SS 101 The Idea of a Social Science. Focuses on the development of modern social science from the seventeenth century to the present. Some of the major approaches and conclusions regarding the study of human behavior will be critically evaluated. Controversies within the social sciences will also be addressed. May not be counted toward a psychology major. General education course GCE-D. Three credits. Offered every semester.

SS 260 Human Aggression and Cooperation I. Investigates the psychological, social, political, historical, cultural, religious, and economic sources of human aggression and cooperation. Special focus on issues and contexts of aggression and cooperation, e.g., innate versus learning theories and the behavior of people in families, clans, communities, institutions, societies, and international organizations. General education course SS-B. Three credits. Offered fall semester.

SS 261 Human Aggression and Cooperation II. Continuation of 260. General education course SS-C. Three credits. Offered winter semester.

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 fall and winter semesters.

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. General education course GGE/D. Prerequisite: Junior standing. Three credits. Offered every year.

SS 382 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. General education course GGE/D. Prerequisite: Junior standing. Three credits. Offered fall semester.

The School of Public and Nonprofit Administration (PA)

Director: Balfour; Professors: Mast, Payne; Associate Professors: Balfour, Freeman, VanIwaarden; Assistant Professors: Adams, Golensky, Jelier, Sellers Walker.

Grand Valley offers both baccalaureate and master's level programs in public administration. The programs are housed in the Social Sciences Division.

The School of Public Administration promotes and maintains educational quality at the bachelor's and graduate levels by providing general competencies required for the effective and ethical management of a wide array of public and nonprofit agencies.

Career Opportunities

Public administration graduates find employment in government, health administration, criminal justice, nonprofit, and private areas of the economy. Advancement into higher 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, administrative assistant, program or agency director, department head, management or program analyst, budget officer, personnel manager, classification specialist or technician, labor relations specialist, program evaluation specialist, or equal opportunity officer. Positions in criminal justice include court administrator and, for those who qualify as sworn officers, police chief, federal, state, or local law enforcement officer, or positions in the management of agencies dealing with security, corrections, parole, and probation, or narcotics and dangerous drugs. Similarly titled positions are available in private areas of employment, in business, higher education, journalism, consulting firms, nursing homes and hospitals, planning agencies, and in neighborhood and community organizations.

Internships

Students without responsible degree-related experience or those seeking new careers are strongly encouraged 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 which 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 along with a sound liberal arts foundation. It is an interdisciplinary program designed to provide students with the skills and knowledge necessary for success in public, private, and nonprofit organizations. The curriculum emphasizes general public administration knowledge but also allows 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 Political Science 102. The public administration major consists of 48 credit hours, which includes three credit hours of required internship (PA 490). Students must complete 27 credit hours of courses by taking PA 307; Social Science 300; and PA 270, 360, 375, 376, 420, and 495. 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 two emphasis areas and take at least nine credit hours from each, a total of 18 credit hours. PA 380 Special Topics in Public Administration, PA 490 and PA 491 Public Administration Internship I and II may count in any area with your advisor's approval.

I. Public Management and Planning

- PA 380 Special Topics
- PA 439 Community Analysis*
- PA 491 Internship II
- GPY 309 City and Regional Planning
- MKT 350 Marketing Management

*Required course

2. Computer Applications.

- CS 150 Introduction to Computing
- CS 251 Problem Solving Using Spreadsheets
- CS 255 Microcomputer Data Base Management
- MGT 368 Management Information Systems

3. Economics and Accounting.

- ACC 212 Principles of Financial Accounting
- ACC 213 Principles of Managerial Accounting
- ECO 210 Principles of Macroeconomics
- ECO 211 Principles of Microeconomics

4. Organization Diversity.

- SOC 382 Minority and Ethnic Relations
- WS 204 Feminist View of Culture
- WS 300 Gender Perspectives on Values
- WS 590 Topics in Women's Studies (by permission)

5. Public Health.

- HS 220 Health Care Delivery
- HS 222 Introduction to Public Health
- HS 223 Public Health Concepts
- HS 340 Health Care Management

Minor in Public Administration

Students minoring in public administration are required to complete the following 21 credits: PA 307 or PLS 203; SS 300; PA 270, 375, 376, 495 and 360 or 420.

Minor in Planning

Students minoring in planning are required to complete the following 21 credits: PA 307 or PLS 203; GPY 235, 309; PA 270, 439, SOC 351; and SS 324.

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. Three credits. Offered fall and winter semesters.

PA 307 Local Politics and Administration. Comparative study of government systems, rural and urban. Students specialize in their own governments. Three credits. Offered fall and winter semesters.

PA 360 Voluntarism and the Nonprofit Sector. A survey of voluntarism and the nonprofit sector in America. Historical development, policy questions, funding issues and trends of major subsectors (religion, education, health, social services, the arts) are examined. The sector's interdependence with government and business and its basis in philanthropy and democracy are interwoven throughout the topics. Three credits. Offered fall and winter semesters.

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.

Public and Nonprofit Administration

such as collective bargaining and equal opportunity employment. Three credits. Offered winter semester.

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 399 Independent Readings in Public Administration. Independent, supervised readings on selected topics which are not dealt with in depth in another course. Prerequisite: Junior or senior status and permission of instructor. One to three credits. Offered each semester. Offered on a credit/no credit basis.

PA 420 Organization Theory and Dynamics. An exploration of the various theories which inform the structures of organizations and the resulting dynamics of accommodation, direction, control, permission, and ethical dilemmas which are set in place within and between the public structures of our society. Prerequisites: 270 and senior standing. Three credits. Offered fall semester.

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 winter 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 every semester. Offered on a credit/no credit basis.

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 field work experience. Prerequisites: Senior status, permission of instructor, and completion of an application form obtained during the semester before the internship. Three credits. Offered every semester. Offered on a credit/no credit basis.

PA 495 Public Policy (Capstone). Using a cross-disciplinary approach, this course uses a policy studies framework to examine systematically the nature, causes, and effects of alternative public policies, with an emphasis on determining those policies that achieve specific goals. 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 every semester. Offered on a credit/no credit basis.

Master of Public Administration

The mission of the graduate programs in public administration is to develop both general and specialized competencies required for effective public management. The curriculum is designed to prepare students for leadership and management roles by enhancing public service values, knowledge, and skills to act both ethically and effectively in the administration of public, independent sector, criminal justice, and health care related agencies and institutions. The program competencies are designed to produce professionals capable of intelligent and creative analysis, communication, and action in the public sector.

Purpose

As a professional school in an urban university, the School of Public Administration seeks to be engaged with the community in professional service activities which enhance the awareness of the community, the student body, and the faculty of the continuing requirements of the polis for applied study. The program offers flexibility and innovation in curriculum design, offering specialized concentration areas and means of delivery, to meet the diverse educational needs of part-time

and full-time students, in-career students, those seeking a change in careers, and pre-entry students.

The M.P.A. degree equips individuals who are already employed as professionals in the field of public administration and prepares individuals to enter the field with the professional competencies necessary to enhance their knowledge of, and abilities to provide, quality public service. Because careers in administration are varied and include the public, private, and nonprofit sectors, the curriculum is designed to develop both general and specialized 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 master of public administration (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 (one to three credits) or non-credit basis. The format and scheduling of the workshops as well as other course work 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 for mid-career students.

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.

Public and Nonprofit Administration

M.P.A. Degree Requirements

The M.P.A. degree consists of a minimum of 42 credit hours. The program core includes 21 credit hours, as follows:

- PA 520 Foundations of Public Management
- PA 611 Quantitative Methods
- PA 612 Human Resources in Organizations
- PA 614 Organization Theory
- PA 615 Public Financial Administration
- PA 616 Public Policy Analysis
- PA 619 Management Seminar

Students must also select one concentration specialization of 18 credit hours. In addition, students may choose six credit hours from an array of electives. Students must meet with an advisor upon entry into the program to develop a program of study.

Concentrations (15 credit hours)

Public Management

- PA 531 Accounting for Public Managers
- PA 535 Grant Writing
- PA 610 Economic Analysis for Public Administrators
- PA 620 Metro Politics and Administration
- PA 621 Administrative and Regulatory Law
- PA 641 Economic Development
- PA 642 Conflict Resolution
- PA 643 Strategic Planning
- PA 680 Special Topics Seminar
- BU S 565 Computers and Information Systems
or MGT 662 Management Information Systems

Electives (up to six credits) may be selected from General Management or Additional Options areas.

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*

Electives (up to six credits) may be selected from Public Management, General Management, or Additional Options areas or from Health Electives which will be offered on a limited basis at most once a year, or in response to demand.

- PA 635 Hospital Organization and Management
- PA 636 Strategic Envisioning Seminar
- PA 637 Ambulatory Care Organization and Management
- PA 638 Long-Term Care Organization and Management
- PA 639 Issues in Occupational Health
- PS 640 Marketing Health and Human Services

Nonprofit Management and Leadership

- PA 535 Grant Writing
- PA 613 Strategic Planning
- BA 660 The Nonprofit Sector**
- PA 661 Nonprofit Management: Practice and Reflection**

*Required course.

- PA 662 Nonprofit Resource Development and Management*
- PA 663 Nonprofit Organization and Public Policy*
- PA 664 Management of Religious Organizations
- PA 665 Nonprofit Boards, Trustees, and Governance
- PA 680 Special Topics Seminar

Electives (up to six credits) may be selected from the nonrequired courses or from the following electives or from other Public Administration concentrations or appropriate offerings from other programs and schools, including the Schools of Business, Communication, Education, Nursing, and Social Work, or others as interests dictate and with approval of advisor.

Criminal Justice

- CJ 630 Modeling Criminal Justice Systems*
- CJ 641 Criminal Justice Policy and Management
- CJ 641 Emergency Response Planning
- CJ 642 Corrections Process: Theory and Practice
or CJ 646 Police Policies and Operations
- CJ 645 Administering Criminal Justice Training
- PA 680 Special Topics Seminar

Electives (up to six credits) may be selected from Public Management, General Management, or Additional Options areas.

Additional Options

Students may take up to three hours from the following workshops with approval of an advisor (a maximum of three credits may be applied to the degree):

- PA 550-559 Public Administration Workshops (1-3 credits)
- PA 560-569 Special Topics Workshops (1-3 credits)

Students may take up to three hours of the following:

- PA 699 Directed Readings

All pre-career students are strongly encouraged to take at least three internship credits 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 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. Primary focus will be on agencies and issues in the public sector. Three credits. Offered fall and winter semesters.

PA 531 Accounting for Public Managers. A study of fund accounting principles used in government and non-profit institutions. Course specifically offered for students who have had no prior accounting. Three credits. Offered spring/summer semester.

*Required course

Public and Nonprofit Administration

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 550-559 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 upon sufficient demand.

PA 560-569 Special Topics Workshops. Advanced-level workshops directed toward generic, topical problems affecting public affairs. Format and scheduling are flexible and may include weekend sessions. Topics will vary and prerequisites may be established. One to three credits. Offered upon 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 every other year.

PA 611 Quantitative 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 winter 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 winter semester.

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 insure 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 and winter semesters.

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 fall 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 multicentered 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 fall semester.

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 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 winter semester.

PA 632 Health Services Financial Management. Provides detailed understanding of the health services financial framework for decision making. Microcomputer applications which 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: Admission to the M.P.A. program or permit. Three credits. Offered fall 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 fall 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 636 Strategic Envisioning Seminar. Develops strategy processes for long-range goal setting and planning based on the social, political, and individual factors associated with health utilization, including social change, epidemiological trends, and fluctuating availability of limited resources. Last three weeks is an overview bringing together concentration faculty and using case study methods. 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 out-patient services. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered on sufficient demand.

PA 638 Long-Term Care Organization and Management. Overview of organization and management of long term care continuum, including nursing homes, hospices, psychiatric institutions, and non-institutional alternatives — home health care and adult day care. Examines principles in the management of institutional and non-institutional facilities for the chronically, terminally, or mentally ill and the disabled elderly. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered on sufficient demand.

PA 639 Issues in Occupational Health. Study of occupational safety and health issues, including legal requirements, organization structure, management functions, and service delivery. In-depth exploration of issues in workplace injury and disease, including the source, incidence and recognition of occupational health problems, compensation for workplace injury, and disease and regulatory developments. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered on sufficient demand.

Public and Nonprofit Administration

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 Development. Describes and evaluates ways to coordinate the efforts of public agencies, private businesses, and non-profit organizations to address planning, economic development, and employment issues more comprehensively. Included in this analysis are public and private programs basic to economic development; state and federal enabling legislation and regulations; local ordinance and public-private partnership alternatives. Prerequisite: Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered winter semester.

PA 642 Conflict Resolution. 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 fall semester.

PA 645 Strategic 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: Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered winter semester.

PA 660 The Nonprofit Sector: 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: Practice and Reflection. 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 Management. After a brief review of nonprofit finance and accounting, course examines resource development and fund raising. Presents a philanthropic view that fund raising should be "mission driven and volunteer-centered." Topics include direct mail fund raising, planned giving, grant seeking, philosophies and ethics of fund raising. 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 NPO's. Explores how NPO's 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 NPO's are addressed. Prerequisites: 520, 660, and admission to the M.P.A. program or permission. Three credits. Offered fall semester.

PA 664 Management of Religious Organizations. Examines religious institutions (including congregations) as nonprofit organizations and asks critical questions about the roles they play in the nonprofit sector and explores their unique management and leadership needs. Prerequisites: 520, 660, and admission to the M.P.A. program or permit. Three credits. Offered every other year.

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 in response to special departmental interests of faculty and students.

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 every semester. Offered on a credit/no credit basis.

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 field work experience. Prerequisites: 690. Permission of instructor. Three credits. Offered every semester. Offered on a credit/no credit basis.

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.

PA 699 Directed Readings. A research or reading project, program proposal, or other approved activity which builds in the student's area of specialization. Prerequisite: Permission of advisor. Three credits. Offered every semester. Offered on a credit/no credit basis.

Russian Studies (RST)

Coordinator: Rydel.

A major in Russian studies leads to a B.A. 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 while participating in Grand Valley's cooperative summer program with Indiana University in St. Petersburg and thus earn six additional Russian credits.

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. Since 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 which help Russian émigrés adjust to life in America.

Students interested in pursuing careers which 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

To receive a major in Russian studies, at least three years of Russian are required (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, 333; Russian Studies 225, 380, 499. These three may not all be RST courses, but must include at least one from geography, political science, or economics. Students must also complete a senior thesis and pass an oral comprehensive examination, both 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, 391; Russian Studies 331, 332, 333, or 380 (when the topic deals with Russian literature); Political Science 282 and 333; 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. General education course CGE-B. Three credits. Offered winter semester of even-numbered years.

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. General education course AH-B. Prerequisite: Fulfillment of the composition requirement for SWS credit. 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 odd-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. General education course AH-B. Prerequisite: Fulfillment of the composition requirement for SWS credit. Three credits. Offered fall semester of odd-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 "ac-cursed questions" which 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: Group Major Program For Elementary Teacher Certification

Coordinator: Huizenga.

Elementary Certification

The Group Science major with an emphasis in biology, chemistry, geology, or mathematics is designed for students seeking certification to teach at the elementary school level. This program of study provides students with breadth of exposure in all the sciences and permits concentration in one area. In order to be certified to teach, students must complete this major and the elementary teaching minor listed below.

Major Requirements

Refer to the departments (biology, chemistry, geology, or mathematics) for departmental requirements.

Elementary Teaching Minor

1. ENG 308; MTH 221* and 222,* or 223.
2. ART 230 or MUS 350.
3. One course chosen from ENG 219, ENG 309, ENG 310, or any foreign language course.
4. PED 305 or CTH 366.
5. One course chosen from ECO 210, ECO 211, HST 105, HST 106, HST 107, HST 108, 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.

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.

SS 101 The Idea of a Social Science. Focuses on the development of modern social science from the seventeenth century to the present. Some of the major approaches and conclusions regarding the study of human behavior will be critically evaluated. Controversies within the social sciences will also be addressed. May not be counted toward a psychology major. General education course CGE/D. Three credits. Offered every semester.

SS 211 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 contained within nation states. General education course CGE/B. Three credits. Offered fall and winter semesters.

SS 260 Human Aggression and Cooperation I. Investigates the psychological, social, political, historical, cultural, religious, and economic sources of human aggression and cooperation. Special focus on issues and contexts of aggression and cooperation, e.g., innate versus learning theories and the behavior of people in families, clans, communities, institutions, societies, and international organizations. General education course SS/B. Three credits. Offered fall semester.

*Satisfies B.S. degree cognate requirement

Social Science

- SS 261 Human Aggression and Cooperation II.** Continuation of 260. General education course SS-C. Three credits. Offered winter semester.
- SS 270 Gender and Family in Third World Development.** An examination of how gender and family affect and are affected by third world development, including a consideration of relevant theory, of practice and problems, and of efforts to improve development projects, e.g., in the areas of agriculture, the global economy, and U.S. foreign aid. Three credits. Offered on demand.
- SS 280 Comparative Religions.** A cross-cultural study of the development and function of religious beliefs and magical practices in primitive and contemporary society: sects, denominations, and crisis cult movements. General education course CGE/B. Three credits. Offered fall and winter semesters.
- 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 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. General education course CGE/B. Three credits. Offered winter semester.
- SS 315 The Africans.** An intensive study of the three traditions (Native, Christian, and Islamic) which have shaped Africa's past and which will have 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 winter semester.
- SS 321 Crime and Punishment.** Examines primary theoretical orientations toward crime and punishment that have been evident throughout history. Also, how different societies, at different points in time, have attempted to define crime and how these definitions have created social reactions and legal punishments. Three credits. Offered each semester.
- SS 322 Militarism.** Examines militarism, its structures and functions across cultures. Includes a case study of Germany, 1648-1945, and pays special attention to nationalism, imperialism, industrialization, and social control. General education course CGE/B. Three credits. Offered every year.
- SS 325 The Family.** An examination of the basic concepts of culture and their application, first to the American family and then to the family in other cultures. General education course CGE/B. Three credits. Offered every semester.
- 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. General education course CGE/B. 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. General education course CGE/D. Prerequisite: Junior standing. Three credits. Offered fall semester.
- SS 382 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. General education course CGE/D. Prerequisite: Junior standing. Three credits. Offered fall semester.
- SS 383 Education and American Society.** Consideration of the way in which ideas and values are socially constructed and contextually grounded. Specific focus on the historical, socioeconomic, and political construction of education in the United States. General education course CGE/D. Prerequisite: Junior standing. Three credits. Offered every year.
- SS 384 Social Inequalities.** Consideration of the way in which ideas and values are socially constructed and contextually grounded. Specific focus on the historical, socioeconomic and political construction of inequality in the United States. A comparative aspect is also

provided. General education course (GE D). Prerequisite: Junior standing. Three credits. Offered every year.

SS 390 Leadership Dynamics. Examines leadership issues, concepts, and situations that are evident in various community and organizational contexts. Prerequisites: Sophomore standing. Three credits. Offered once a year.

SS 495 Education in Plural Societies (Capstone). Examines the models used to interpret and explain the system of public education in the U.S. 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 major; one semester fieldwork in school. Three credits. Offered every semester.

Social Studies

Coordinator: Poitras.

The majors in social studies are designed for students seeking teacher certification in secondary school social studies or elementary education. Students seeking secondary certification in social studies complete Option 1. Those seeking elementary certification with a major in social studies complete Option 2.

The major consists of a minimum of 42 credit hours in economics, geography, history, and political science. Students may earn the B.A. or the B.S. degree. The B.A. degree requires that a student demonstrate third-semester proficiency in a foreign language. The B.S. degree requires that a student complete STA 215, SS 300, and ED 495.

Option 1: Secondary Certification in Social Studies

All students must complete the core courses listed below. In addition, each student will choose an area of concentration in economics, geography, history or political science. The student must take six courses in the area of concentration (the six courses may include those taken as part of the required sequence).

Core Required of all Students

ECO 210, 211

GPY 220 and 235

HST 105, 106, 107, and 108

PLS 102, 304, and 307

SS 495 (Capstone)

Students who wish to concentrate in geography or economics should consult with their academic advisor about the possibility of core course substitution.

Concentrations:

Each student will choose an area of concentration from among one of the four disciplines (economics, geography, history, political science). A total of six courses (18 credits) must be completed in the area of concentration. The six courses may include those in the required core. The requirements for each concentration are:

Economics Sequence: Core plus four additional economics courses, selected in consultation with the chair of the Economics Department.

Geography Sequence: Core plus four of the following: GPY 345, 350, 351, 352, 353, 354, or 355.

History Sequence: Core plus two 300-level courses, at least one in European or world history (see History Department entry for a list of European and world history courses).

Social Work

Political Science Sequence: Core plus three of the following: PLS 211, 221, 305, 306.

Option 2: Elementary Certification

The state requirements call for course work in four areas — economics, geography, history, or political science. These four areas are reflected in the required core, which also includes a course in anthropology. In addition, students must choose a concentration of at least six courses in one of three areas — geography, history, or political science (two of the six courses may include those taken as part of the required sequence).

Core Required of All Students:

ANT 204
ECO 210, 211
GPY 220, 235
HST 107, 108
PLS 102, 306
SS 495 (Capstone)

Concentration:

Each student will choose an area of concentration from among one of three disciplines (geography, history, political science). A total of six courses (18 credits) must be completed in the area of concentration. Two of the six courses may include those taken as part of the required sequence. At least three courses in the area of concentration must be at the 300 level; at least two must focus on regions outside the United States. The requirements for each concentration are:

Geography Sequence: Core plus four of the following: GPY 345, 350, 351, 352, 353, 354, 355. GPY 345 and 353 are strongly recommended.

History Sequence: Core plus either A or B.

A. History 105 and three 300-level courses, including at least one from among History 365, 384, 385, or 386.

B. History 106 and 345, plus two additional 300-level courses.

Political Science Sequence: Core plus PLS 203, 221, and two additional 300-level courses.

The School of Social Work (SW)

Dean: Mulder. Professors: Chung, Haynes, McFadden, Mulder, Singh, Swanson, Ylvisaker; Associate Professors: Guevara, Perry, Rosander, Schott; Assistant Professors: Glynn, Gordon, Grant, Silvey; Visiting Professors: Johnson, Lehker, Noordyk, Rabidue.

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 Bachelor of Social Work Program

Coordinator: Guevara.

The Bachelor of Social Work Program is accredited by the Council on Social Work Education.

Objectives

The overriding objective of the Bachelor of Social Work Program is to prepare students for the beginning level of social work practice. Specific objectives are compatible with, and flow from, the mission, philosophy and objectives of Grand Valley State University and the School of Social Work. They are as follows:

1. To prepare students to enter the beginning level of the profession as generalist social work practitioners.
2. To bring about a basic understanding of the common human needs of people and the communities in which they live and/or work.
3. To identify those problems affecting persons and their environment and how these problems influence individuals, families, groups, and communities.
4. To raise the level of awareness and sensitivity to issues of race, ethnicity, religion, and gender in our pluralistic society.
5. To prepare students to use their knowledge, skills, and values to enhance the quality and delivery of services in the community.
6. To prepare students 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 at the end of their sophomore year. Application materials must be completed and submitted by September 30 for winter admission.

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 grade point average of 2.0 (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, 280 or 384, and SS 384.
4. Complete the application and process for Candidacy for the B.S.W. degree.

Completed candidacy applications are reviewed by the School of Social Work faculty. Accepted applicants are awarded candidacy for the B.S.W. degree and are eligible for enrollment in specified third- and fourth-year professional social work courses. Applicants who are not accepted are advised and referred to pursue opportunities in other areas.

Advising

Students interested in social work as a major should complete the "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.

Social Work

The B.S.W. degree requires successful completion of 120 semester hours of college credit. The program is built on a foundation of liberal arts and 31 hours of required cognate courses. These courses provide a base for the 44 credit hours of professional course work in the major. Social work course work includes the areas of Human Behavior and the Social Environment, Social Welfare Policy and Services, Generalist Social Work Practice, Social Research, and Field Education.

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. Also required are three credits from the list of International Program Courses. Cognate requirements include: BIO 103, ECO 210 or 211 or SS 384, PLS 102, PSY 101 and 303, PSY/SOC 360, SOC 201, 280 or 384, 382, 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.

Required cognate courses include BIO 103, PLS 102, PSY 101, 303, and PSY/SOC 360; SOC 201, 382, and 280, or 384; ECO 210 or 211 or SS 384. During the senior year, the student must be full-time.

In order to ensure the fulfillment of all Grand Valley State University B.S.W. degree requirements, students are urged to follow the schedule of courses indicated in the following four-year curriculum:

Sample Curriculum

First Year

First Semester—Fall

Physical Sciences (NS/A)	5
ENG 150 Strategies in Writing	
MTH 110 Algebra	4
SW 150 Human Needs in Complex Societies (SS/C)	3
Foreign Culture and Multicultural Approaches (CGE/B)	3
	<hr/>
	17 credits

Second Semester—Winter

Exploration of Art, Music, and Theatre (AH/A)	3
History of Western Civilization (CGE/C)	3
BIO 103 Biology of People (NS/B)	4
PSY 101 Introduction to Psychology (SS/A)	3
SOC 201 Introduction to Sociology (SS/B)	3
	<hr/>
	16 credits

Second Year

Third Semester—Fall

Exploration of Literature (AH/B)	3
PHI 201 Ethics or PHI 202 Ethics in the Professions (CGE/D)	3
PLS 102 American Government and Politics	3
PSY/SOC 360 Social Psychology	3
Free elective (see recommended list)	3
	<hr/>
	15 credits

Fourth Semester—Winter

PSY 303 Abnormal Psychology	3
SOC 280 Social Problems or SOC 384 Drug Use and Abuse	3
SOC 382 Minority and Ethnic Relations SS 384 Social Inequalities or ECO 210 or ECO 211 Macro- or Microeconomics	3
Free elective (see International Relations Program list)	3
	<hr/> 15 credits

Third Year**Fifth Semester—Fall**

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	3
ENG 305 Writing in the Disciplines	3
	<hr/> 15 credits

Students must have candidacy for B.S.W. degree to take the social work courses listed below.

Sixth Semester—Winter

STA 215 Introductory Applied Statistics (CGE/A)	3
SW 318 Generalist Practice II	3
SW 341 Human Behavior and the Social Environment II	3
SW 348 Field Practicum Laboratory	2
Free electives (see Recommended List)	4
	<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
Free elective (see Recommended List)	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
Free elective (see Recommended List)	3
	<hr/> 15 credits

Social Work Electives (six credits required)

SW 320 Children and Child Welfare Services
SW 322 Health Care and Social Services
SW 380 Special Topics in Social Work
SW 439 The Family and Social Work Practice
SW 450 Law and Social Work
SW 453 Case Management
SW 461 Multicultural Issues in Social Work
SW 470 Contemporary Social Policy Issues
SW 499 Independent Study in Social Work

Social Work

International Relations Program (three credits required)

GPY 235 World Regional Geography
HST 210 Empire, Culture, and Conflict
HST 331 Modern Latin America
HST 337 The Islamic World
HST 338 Modern Middle East
HST 385 Modern Europe
HST 390 Soviet History
SS 313 African Studies
PLS 211 Introduction to International Relations
PLS 312 American Foreign Policy
PLS 313 International Organization
PLS 327 Politics of Developing Countries

Recommended Free Electives

Note: Students are not restricted to this list.

PA 270 Public Administration
PA 439 Community Analysis
PHI 201 Ethics
PHI 202 Ethics in the Professions
PSY 310 Behavior Modification
PSY 315 The Psychology of Sex Differences
PSY 316 The Psychology of Human Intimacy and Sexuality
PSY 317 Human Relations
PSY 366 Stress, Personality, and Perception
SS 381 Death and Dying
SS 382 Love, Sex, and Gender
SOC 383 Sociology of Women
SOC 390 Advanced Seminar in Social Issues
WS 201 Introduction to Women's Studies
WS 204 Feminist View of Culture
WS 300 Gender Perspectives on Values
WS 380 Special Topics in Women's Studies

Field Practicum

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 2.0 GPA.
2. A 2.7 GPA in specified cognate and 3.0 GPA in social work courses.
3. Maintenance of official "candidacy status."
4. Completion of all first, second, and third year required courses.
5. A schedule which allows two full days of field work 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. General education course SS/C. Three credits. Offered fall and winter semesters.

SW 316 Interviewing in Social Work. Principles and techniques associated with the successful interview. Consideration is given to understanding the interviewee, oneself as the interviewer, and the implications of sociocultural backgrounds for the interview and its participants. Recording and reporting skills specifically related to social work practice are taught and case materials from different fields of practice are employed. 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 SS 384. 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 which affect children and families and considers related multicultural issues. Prerequisites: 317, 319, 340. Three credits. Offered fall semester.

SW 322 Health Care and Social Services. Provides an overview of the health care and social services delivery systems in America. Examines values, and multicultural, political, and economic issues that impact the development and implementation of health care policy and practices. The impact of illness, environment, nutrition, and the roles of the generalist social work practitioner are included. Prerequisite: 317, 319, 340. Three credits. Offered every other winter semester.

SW 340 Human Behavior and the Social Environment I. Provides basic knowledge about human behavior from birth through young adulthood. Included are environmental factors, social systems theory, various psychological theories, human and cultural diversity, social problems and their effect on individuals, families, groups, organizations, and communities. Prerequisites: BIO 103, SOC 382, 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 basic knowledge about human behavior from middle adulthood through the elderly. Included are environmental factors, social systems theory, various psychological theories, human and cultural diversity, social problems and the effect on individuals, families, groups, organizations, and communities. 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 content

Social Work

of Field Practicum Manual; its contract through evaluation. Course must be completed with grade of B- or better within one year of taking SW 490/492 or be repeated. Prerequisite: Concurrent with 318. Two credits. Offered winter 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, 341, and 351. One to four credits. Offered every other fall semester.

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 which 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. Three credits. Offered once a year.

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. 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: Concurrent with field. 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 which explore some aspect of social work theory or practice. A maximum of four credits in independent study may be taken during undergraduate social work education. Prerequisites: Senior standing and advanced permission of instructor. One to four credits.

The Master of Social Work Program

Coordinator: Perry.

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 which 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 Objectives

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:

1. Attain a level of analytical, interactional and technical competency essential for qualitative, effective, and self-directed professional practice and meaningful careers in human service.

Social Work

2. Contribute to the development and improvement of the profession through participation in research, education, practice, and professional organizations.
3. Meet the needs, responsibilities, and professional (personnel) requirements of human and social services agencies and programs in west Michigan, around the State of Michigan, and across the country.
4. Pursue post-graduate training in a doctoral program in social work or other related fields.

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 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 \$20.00 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 with a minimum of 18 credit hours of social, behavioral science courses, with a good representation in sociology, psychology, and/or social work. Students with specific academic deficiencies may be asked to complete compensatory undergraduate work prior to admission.
7. 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.
8. Prepare and submit a 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.

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 April 1. Early application is strongly encouraged. When all materials have been received, the applicant's file is reviewed by the school's Admissions 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.

Students who do not meet all the 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. 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

Coordinator: Schott

The field work 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.

Fifteen 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 a "concurrent model" of field education. Under this model, admitted students will participate in a three-credit field laboratory course followed by 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.

Students who would like a school practicum placement must take SW 648 Field Education during the fall semester and SW 650 Field Education I/SW 651 Field Education Seminar I during the winter semester.

Advanced Standing: Full Time

The School of Social Work recognizes superior academic performance by students who have graduated from an accredited undergraduate social work or social welfare department or program. A minimum grade point average of 3.5 in social work courses from a Council on Social Work Education (CSWE) accredited baccalaureate program may qualify prospective students for advanced standing. Advanced standing students are exempted from 18 hours of first-year core or foundation courses and may therefore accelerate their graduate study by completing the remaining 42 hours of degree requirements in one calendar year. All Advanced Standing students must 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 39 hours the degree requirements remaining for completion. Students admitted to the advanced standing program must begin their studies during the summer session and continue full time during the subsequent fall and winter semesters. All advanced standing students will begin their field practicum in the summer semester. (The school

may, in certain instances, prescribe additional course work in areas of particular weakness or need.) Interviews before admission will be arranged for all advanced standing applicants. Course requirements in the advanced standing program are set forth below.

Advanced Standing: Part Time

The School of Social Work recognizes superior academic performance by students who have graduated from an accredited undergraduate social work or social welfare department or program. A minimum grade point average of 3.5 in social work courses from a Council on Social Work Education (CSWE) accredited baccalaureate program may qualify prospective students for advanced standing. Advanced standing students are exempted from 18 hours of first-year core or foundation courses and may therefore accelerate their graduate study by completing the remaining 42 hours of degree requirements in two calendar years. All Advanced Standing students must 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 39 hours the degree requirements remaining for completion. Students admitted to the advanced standing part-time program must begin their studies during the summer session and continue part time during the subsequent two years. (The school may, in certain instances, prescribe additional course work in areas of particular weakness or need.) Interviews before admission will be arranged for all advanced standing applicants. Course requirements in the advanced standing program are set forth below.

Nondegree Seeking

Students who are not seeking a graduate degree or who have not completed all of the admissions requirements of their chosen program may be granted nondegree-seeking status. A maximum of six semester credits earned at Grand Valley State University as a nondegree-seeking student may be considered for transfer to degree-seeking status. Enrollment as a nondegree-seeking student does *not* guarantee formal admission to the M.S.W. program. Nondegree status students are limited to SW 600, 610, and 620.

Changing Status from Nondegree 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.

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 course work has started. The distribution of course requirements for both programs of study as well as Advanced Standing, are set forth below.

Full Time

First Semester (Fall) 12 hours

SW 600 Human Diversity
 SW 610 Social Welfare Policy and Services I
 SW 620 Human Behavior and the Social Environment
 SW 603 Integrated Methods

Second Semester (Winter) 12 hours

SW 648 Field Education Laboratory
 SW 690 Social Research I
 SW 622 Psychopathology and Social Deviance
 (Choice of one)
 SW 660 Grantwriting and Resource Development
 SW 662 Substance Abuse and Social Work Practice

Third Semester (Summer) 10 hours

SW 695 Social Research II
 (Choice of 1)
 SW 612 Social Policy: Families Children
 SW 614 Social Policy: Mental Health
 SW 616 Law, Ethics, and Social Welfare
 SW 650 Field Education I
 SW 651 Field Education Seminar I

Fourth Semester (Fall) 15 hours

SW 652 Field Education II
 SW 653 Field Education Seminar II
 (Choice of 2)
 SW 670 Social Work Practice: Individuals
 SW 672 Social Work Practice: Groups
 SW 674 Social Work Practice: Families Children
 (Choice of 1)
 SW 676 Community and Social Planning
 SW 678 Human Services Administration

Fifth Semester (Winter) 13 hours

SW 677 Principles of Supervision
 SW 640 Advanced Generalist Seminar
 SW 654 Field Education III
 SW 655 Field Education Seminar III
 Elective
 Total: 60 hours

Part-Time Sample Curriculum
First Semester (Fall) 6 hours

SW 610 Social Welfare Policy and Services I
 SW 620 Human Behavior and the Social Environment

Second Semester (Winter) 6 hours

SW 600 Human Diversity
 SW 690 Social Research I

Third Semester (Summer) 6 hours

SW 695 Social Research II
 SW 622 Psychopathology and Social Deviance

Fourth Semester (Fall) 9 hours

SW 648 Field Education Laboratory
 SW 603 Integrated Methods
 (Choice of one)
 SW 676 Community Social Planning
 SW 678 Human Services Administration

Fifth Semester (Winter) 6 hours

Elective
 (Choose 1)
 SW 662 Substance Abuse and Social Work Practice
 SW 660 Grantwriting and Resource Development

Sixth Semester (Summer) 7 hours

SW 650 Field Education I
 SW 651 Field Education Seminar I
 (Choose 1)
 SW 612 Social Policy: Families and Children
 SW 614 Social Policy and Mental Health
 SW 616 Law, Ethics, and Social Welfare

Social Work

Seventh Semester (Fall) 10 hours

- SW 652 Field Education II
- SW 653 Field Education Seminar II
(Choose 2)
- SW 670 Social Work Practice: Individuals
- SW 672 Social Work Practice: Groups
- SW 674 Social Work Practice:
Families/Children

Eighth Semester (Winter) 10 hours

- SW 654 Field Education III
- SW 655 Field Education Seminar III
- SW 677 Principles of Supervision
- SW 640 Advanced Generalist Seminar
- Total 60 hours

Advanced Standing Program Model — Full Time

First Semester (Summer) 16 hours

- SW 650 Field Education I
- SW 651 Field Education Seminar I
- SW 690 Social Research I
- SW 622 Psychopathology and Social
Deviance
- SW 693 Social Research II
(Choice of 1)
- SW 612 Social Policy: Families/Children
- SW 614 Social Policy: Mental Health
- SW 616 Law, Ethics, and Social Welfare

Second Semester (Fall) 15 hours

- SW 652 Field Education II
- SW 653 Field Education Seminar II
(Choice of 2)
- SW 670 Social Work Practice: Individuals
- SW 672 Social Work Practice: Groups
- SW 674 Social Work Practice:
Families/Children
(Choice of 1)
- SW 676 Community and Social Planning
- SW 678 Human Services Administration

Third Semester (Winter) 15 hours

- SW 677 Principles of Supervision
- SW 640 Advanced Generalist Seminar
- SW 654 Field Education III
- SW 655 Field Education Seminar III
(Choice of 1)
- SW 660 Grantwriting and Resource
Development
- SW 662 Substance Abuse and Social
Work Practice
- Total: 42 hours

Advanced Standing Program Model — Part Time

First Semester (Summer) 6 hours

- SW 690 Social Research I
(Choice of 1)
- SW 612 Social Policy: Families/Children
- SW 614 Social Policy: Mental Health
- SW 616 Law, Ethics, and Social Welfare

Second Semester (Fall) 6 hours

- SW 693 Social Research II
(Choice of 1)
- SW 676 Community and Social Planning
- SW 678 Human Services Administration

Third Semester (Winter) 6 hours

- (Choice of 1)
- SW 660 Grantwriting and Resource
Development
- SW 662 Substance Abuse and Social
Work Practice
- SW 622 Psychopathology and Social
Deviance

Fourth Semester (Summer) 7 hours

- SW 650 Field Education I
- SW 651 Field Education Seminar I
- SW 677 Principles of Supervision

Fifth Semester (Fall) 10 hours

SW 652 Field Education II
 SW 653 Field Education Seminar II
 (Choice of 2)
 SW 670 Social Work Practice: Individuals
 SW 621 Social Work Practice: Groups
 SW 674 Social Work Practice:
 Families/Children

Sixth Semester (Winter) 7 hours

SW 654 Field Education III
 SW 655 Field Education Seminar III
 SW 610 Advanced Generalist Seminar

Transfer Credit

The School of Social Work may accept a 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. Courses completed more than five years before enrolling at GVSU will not be approved for credit. Transfer credit will not be given for course work taken toward completion of another degree. Grades received in courses for which transfer credit is granted will not be included in the computation of a student's grade point average while enrolled at Grand Valley.

School Social Work Certification

The School of Social Work at GVSU 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. Students must consult with the school social work advisor.

Graduate Courses of Instruction

SW 600 Human Diversity in Social Work Practice. Focus is on the diversity among groups in American society; examination of their commonalities and differences. Analysis of critical ways in which ethnic, racial, sexual, and social class factors impact on the need for and the use of the social services and social work practice. Skills for cross-cultural practice are suggested. Three credits. Offered fall and winter semesters.

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 or permission of instructor. Three credits. Offered spring/summer semester.

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 or permission of instructor. Three credits. Offered spring/summer semester.

Social Work

SW 616 Law, Ethics, and Social Welfare. Examines the relation 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 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, life-style, 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) which enter into the psychodynamics of deviant and/or abnormal human behavior. Prerequisite: 620. Three credits. Offered winter and spring/summer semesters.

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.) Prerequisite: Second year status; must be taken concurrently with 654. Three credits. Offered winter semester.

SW 648 Field Education Laboratory. An experiential learning course preceding the beginning of SW 650 Field Education I. Focus on the development of skills necessary for beginning work as a student in an agency setting. Prerequisite: Must be completed with a grade of B or better one year prior to SW 650 or must be repeated. Three credits. Offered fall and winter semesters.

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, 603, 620, 648. 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. Prerequisite: Concurrent with 650. Offered on a credit no credit basis. One credit. Offered spring/summer and winter semesters.

SW 652 Field Education II. A continuation of 650. A 315-clock-hour applied field practicum which 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. Offered fall semester.

SW 654 Field Education III. A continuation of 652. A 315-clock-hour applied field practicum which has been contracted by students. Emphasis on the advanced application of assessment, intervention, and evaluation skills within the generalist framework. Prerequisites: 652 and 653 and concurrent with 655, 640, 677. 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 654, 640, 677. Offered on a credit no credit basis. One credit. Offered winter semester.

SW 660 Grantwriting 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: Second year standing or permission of instructor. Four credits. Offered spring/summer and winter semesters.

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: Second year standing and concurrent practicum. 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: Second year standing and concurrent practicum. 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 skill. Concepts from several current models of family practice are studied and drawn upon. Prerequisite: Second year standing and concurrent practicum. Three credits. Offered fall and winter semesters.

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 situation. 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: Second year standing and 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. Prerequisites: Second year standing; taken concurrently with 654. Three credits. Offered winter 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 are examined which undergird and impinge upon the effective delivery of human services. Issues and forces affecting the social welfare enterprise will be analyzed along with those factors that differentiate human service organizations from other organizational species. Prerequisites: Second year standing and 603. Three credits. Offered fall 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

Sociology

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: 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: Johnson; Professors: deYoung, Johnson, Jones, Williams; Associate Professors: Bellrichard-Perkins, Joannisse, McCrea, Rucks, Whit; Assistant Professors: Giuffre, Malaret, Rynbrandt; Visiting Instructor: Haurek.

The discipline of sociology provides concepts and skills necessary to study human behavior and social life. Sociologists emphasize and examine the diversity of human experience. They look critically and reflectively at past and present society. By combining theory with practice, the discipline of sociology encourages students to understand society as it is and to imagine it as it could be.

A major and minor program is available in sociology. A sociology emphasis is also available in the interdisciplinary behavioral science major.

Requirements for a Major or Minor in Sociology

Students majoring in sociology are required to complete 36 hours in the department, including these core course: SOC 201, 360, 382, 400 or 401, 495, SS 300, SS 384, and three hours in anthropology. Additional work in anthropology can apply toward the major with the consent of the academic advisor. 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 Statistics 215, Social Science 300, and Sociology 360.

Core Courses (24 hours)

SOC 201	SOC 495 (Capstone)
SOC 360	SS 300
SOC 382	SS 384
SOC 400 or 401	Three hours in Anthropology

Professional Emphasis

This emphasis area is recommended for those students who intend to attend graduate school in sociology after completing their baccalaureate degree.

Core (24 hours) plus 12 additional hours to be selected in consultation with major advisor and to include at least one advanced seminar course (SOC 304, 390, 401, or 499). An internship is recommended, but not required. Students might want to seriously consider doing a research internship with a faculty member.

Applied Emphasis

The concentrations described below are designed for students who will most likely seek direct employment in a field related to sociology after graduating and/or who intend to pursue advanced study in a professional area like social work, counseling, criminal justice, urban planning, or public administration.

1. **Family Services.** Core (24 hours) plus three hours of internship (SOC 490) plus nine additional hours selected in consultation with the major advisor from the following list of courses: SS 383 The Family, SOC 389 Child Abuse and Neglect in America, SOC 387 Childhood and Youth, SOC 388 Middle Age and Aging, SOC 384 Sociology of Drug Use and Abuse, SS 382 Love, Sex, and Gender, SOC 390 Advanced Seminar on Social Issues (as appropriate), SOC 399 Independent Readings.
2. **Community and Organizational Leadership.** Core (24 hours) plus three hours of internship (SOC 490) plus nine additional hours selected in consultation with the major advisor from the following list of courses: SOC 351 Urban Sociology or SS 324 Urbanization, GPY 309 Introduction to City and Regional Planning, SOC 420 Sociology of Community, SOC 356 Sociology of Health Care, GPY 307 Introduction to Computer Mapping/Geographic Information Systems, SOC 390 Advanced Seminar on Social Issues (as appropriate), SOC 399 Independent Readings.
3. **Aging and Adult Life.** Core (24 hours) plus three hours of internship (SOC 490) plus nine hours selected in consultation with the major advisor from the following list of courses: SOC 387 Childhood and Youth, SS 383 The Family, SOC 388 Middle Age and Aging, SS 381 Death and Dying, SOC 345 Social Construction, Identity Place, SOC 356 Sociology of Health Care, SOC 390 Advanced Seminar on Social Issues (as appropriate), SOC 399, Independent Readings.
4. **Deviance and Social Control.** Core (24 hours) plus three hours of internship (SOC 490) plus nine hours selected in consultation with the major advisor from the following list of courses: SOC 250 Perspectives on Madness, SOC 251/CJ 301 Criminology, SOC 280 Social Problems, SOC 384 Sociology of Drug Use and Abuse, SOC 392 Social Deviance and Social Control, SOC 390 Advanced Seminar on Social Issues (as appropriate), SOC 399, Independent Readings.

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.

Behavioral Science Major (Sociology Concentration)

Psychology and sociology/anthropology 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.)

Social Sciences Group Major

See group science requirements listed under Social Sciences Group Major Programs.

Minor in Aging and Adult Life

The Anthropology and Sociology Departments participate in a multi-disciplinary minor in Aging and Adult Life. See section, "Aging and Adult Life," for further information.

Career Opportunities

Students majoring in sociology have a wide variety of career options. The discipline emphasizes an understanding of social organization and diversity and prepares students for careers in a variety of settings, including human services, human resources, business, and community organizations. Schools, churches, hospitals, courts, prisons, mental health agencies, and drug abuse agencies provide specific locations for student employment.

Sample Curriculum—Sociology

First Year

ENG 150 Strategies in Writing
MTH 110 Algebra
SOC 201 Introduction to Sociology
SOC elective
Arts/Humanities general education courses
Science general education courses
Electives (or foreign language)

Third Year

SOC 360 Social Psychology
SOC 382 Minority and Ethnic Relations
or SOC 381 Class, Race, and Gender
SOC elective
SS 323 The Family
Electives

Second Year

ANT elective
PSY 101 Introductory Psychology
STA 215 Introductory Applied Statistics
SS 300 Research Methods in the Social Sciences
Arts/Humanities general education courses
Science general education courses
Electives (or foreign language)

Fourth Year

SOC 400 History of Social Thought
SOC 490 Practicum: Career Service
SOC 495 Senior Seminar in Social Science (capstone)
Electives

Sample Curriculum—Behavioral Science

First Year

ANT 204 Introduction to Cultural Anthropology
BIO 105 Human Ecology
ENG 150 Strategies in Writing
HST 105 Western Civilization to 1500 A.D.
MTH 110 Algebra
MUS 100 Introduction to Music Literature
PHI 101 Introduction to Philosophy
PSY 101 Introductory Psychology
SOC 201 Introduction to Sociology
SOC 280 Social Problems

Third Year

BIO 200 Human Heredity
HST 327 American Social and Urban History
PSY 302 Mental Hygiene
SOC 360 Social Psychology
SOC 384 Sociology of Drug Use and Abuse
Electives

Second Year

HS 202 Anatomy and Physiology
PHI 201 Ethics
PSY 303 Abnormal Behavior
PSY 333 Existential Psychology
SOC 382 Minority and Ethnic Relations
SS 300 Research Methods in the Social Sciences
Electives

Fourth Year

STA 215 Introductory Applied Statistics
SOC 495 Senior Seminar in Social Science (capstone)
SOC 358 Bureaucracy
Electives

Courses of Instruction

SOC 201 Introduction to Sociology. Examines modern Western society in terms of social processes, organizations, institutions, and problems. Demonstrates how sociologists study these aspects of group behavior. General education course SS-B. Three credits. Offered fall and winter semesters.

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. General education course SS-A. 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 fall and winter semesters.

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 these changes. Reviews the effects of work on attitudes and behavior. Current trends in work are projected into the near future. Three credits. Offered every year.

SOC 280 Social Problems. An introduction to the sociological analysis of social problems and the application of this analysis to some of the major social problems confronting American society. General education course SS-B. Three credits. Offered every semester.

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 which 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 fall semester.

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 on demand.

SOC 345 Social Construction, Identity, Place. 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. Signs, symbols, and social processes related to the production of social reality and the siting of people within social structures. Prerequisites: 201 or ANT 201 or SS 101 or equivalent. Three credits. Offered even-numbered years.

SOC 351 Urban Sociology. Urban theory and research techniques emphasizing the demography, ecology, and social organization of American cities and the sociological aspects of urban planning and redevelopment. 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. Three credits. Offered fall and winter semesters.

SOC 360 Social Psychology. 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: Sociology 201 or Psychology 101. Sociology 360 is equivalent to Psychology 360. Students may not receive credit for both courses. Three credits. Offered every semester.

SOC 366 Sociology of Media. A study of the underlying values and ideologies of the mass media culture. How do mass media determine the facts and frame events and debates that are important to our lives? What are the constraints of news work and the resources available to news people? We will also cover the organizational makeup of newspapers and TV newsrooms and the relationship of the industry to its audience. Three credits. Offered on demand.

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 in response to special departmental interests of faculty and students.

SOC 381 Class, Race, and Gender. Focus is on the social, historical, and cultural meanings of class, race, and gender. Specifically, the intent of the course is to give students a better understanding of the interrelationship of class, race, and gender within the context of family life, schooling, and work. Prerequisite: 201 or 280. Three credits. Offered winter semester.

SOC 382 Minority and Ethnic Relations. An examination of majority-minority relations in contemporary society with attention to specific ethnic, religious, and racial minorities, particularly the African Americans. Prerequisite: 201. Three credits. Offered every semester.

SOC 384 Sociology of Drug Use and Abuse. Analysis of past and present patterns of drug (including alcohol) use and abuse. Causes, extent, legal aspects, and methods of treatment. Three credits. Offered fall and winter semesters.

SOC 387 Childhood and Youth. An examination of the process of aging in American society with an emphasis on childhood and youth. Consideration will be given to the development of childhood, the social-psychological stages of childhood and youth, the conditions giving rise to the adolescent movement, the impact of youth, and special problems of youth in America. Prerequisite: 201. Three credits. Offered fall semester of even-numbered years.

SOC 388 Middle Age and Aging. An examination of some of the myths about aging; older people are less likely to change, are less productive, etc. Major attention will be given to psychological stages of the life cycle, sociopsychological theories of aging, literary and historical portrayals of aging, and cross-cultural differences. Three credits. Offered winter semester of odd-numbered years.

SOC 389 Child Abuse and Neglect in America. 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 semester.

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 students 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 every year.

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

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 on demand.

SOC 400 History of Social Thought. A critical survey of the social thinking of outstanding students of society, from Plato to modern social scientists. Prerequisite: Six hours in sociology. Three credits. Offered fall semester.

SOC 401 Sociological Theory. A study of major theoretical viewpoints in contemporary sociology. The course is oriented toward the understanding, application, and extension of these major perspectives. Prerequisite: Six hours in sociology. Three credits. Offered winter semester.

SOC 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. SOC 420 is equivalent to GPY 420. Students may not receive credit for both courses. Prerequisites: SOC 201 or GPY 220; STA 215, SS 300. Three credits. Offered winter semester of even-numbered years.

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 fall and summer semesters.

SOC 495 Senior Seminar in Social Science (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. Prerequisite: Senior standing in the department. 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 which may be used for a sociology major or minor. Consult with your advisor for further information.

SS 101 The Idea of a Social Science. Focuses on the development of modern social science from the seventeenth century to the present. Some of the major approaches and conclusions regarding the study of human behavior will be critically evaluated. Controversies within the social sciences will also be addressed. General education course CGE/D. Three credits. Offered every semester.

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 323 The Family. An examination of the basic concepts of culture and their application, first to the American family and then to the family in other cultures. General education course CGE/B. Three credits. Offered every 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. General education course CGE/D. Prerequisite: Junior standing. Three credits. Offered fall semester.

SS 382 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. General education course CGE/D. Prerequisite: Junior standing. Three credits. Offered fall semester.

SS 384 Social Inequalities. Consideration of the way in which ideas and values are socially constructed and contextually grounded. Specific focus on the historical, socioeconomic, and political construction of inequality in the United States. A comparative aspect is also provided. General education course CGE/D. Prerequisite: Junior standing. Three credits. Offered fall and winter semesters.

Statistics (STA)

Chair: Pratt. Professors: Arendsen, Champion, Kindschi, Pratt, Sundstrom, Vanderjagt; Associate Professors: Beckmann, Hong, Jinn, Rivera-Muniz, Novotny, Schlicker, Shroyer; Assistant Professors: Aboufadel, Fishback, Gardner, Gavlus, Haidar, Klein, Klingler, Lesnick, Palmer, Ritchie, Rogness, Stephenson, Wells; Instructors: Alexander, Friar, Rivers; Visiting Instructors: Mays, Meyering; Math Lib Director: Rivers.

Degrees Offered: B.S., B.A. in statistics; minors in applied statistics and statistics. The mathematics major and minor are described in the Mathematics section of the catalog.

Career Opportunities

Successful college graduates are those who have strong mathematical, statistical, and computer skills, and are able to effectively communicate mathematical results to non-mathematical audiences. Employers are eagerly seeking men and women who have these types of skills. Grand Valley's statistics major will equip you with the needed skills 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 not only the theoretical foundations of the field, but also 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 is extremely dependent upon 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 seat-belt 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 five, ten, and twenty years. The demand for college graduates with these specialized skills is ever increasing. Our major in statistics can prepare you 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, those 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

The statistics major is offered within the Department of Mathematics and Statistics. Students must complete the following:

1. University degree requirements as identified in the General Academic Regulations section of the catalog.
2. Statistics Core.

All majors must complete the following 37 core credits:

MTH 201 Calculus and Analytic Geometry I (5 credits)

MTH 202 Calculus and Analytic Geometry II (4 credits)

MTH 203 Calculus and Analytic Geometry III (3 credits)

MTH 227 Linear Algebra I (3 credits)

STA 312 Probability and Statistics (3 credits)

STA 216 Intermediate Applied Statistics (3 credits)

STA 314 Statistical Quality Methods (3 credits)

STA 316 Advanced Applied Statistics (3 credits)

STA 319 Statistics Project (3 credits)

STA 412 Mathematical Statistics I (3 credits)

STA 415 Mathematical Statistics II (3 credits)*

3. Cognate Requirements. The following cognates are required of all students majoring in statistics.

CS 162 Computer Science I

Note: The completion of MTH 201, 202 and CS 162 satisfies the B.S. degree cognate for all statistics majors.

4. Application Cognates. Each major in statistics must select an area of application consisting of three courses from one of the following options.

a. CJR 390 and COM 375 and SS 300

b. CS 231, 233 and 331

c. MGT 331, 361 and 366

d. MGT 331 and MKT 350 and 352

e. ECO 210 and 211 and 480

f. PSY 101 and either PSY 363 or 410 and SS 300

g. FIN 331 and ACC 212 and 213

h. MTH 210 and MTH 405 and either MTH 408 or PHY 230

Substitutions are allowed with departmental approval.

Sample Curriculum

First Year

Fall

MTH 201 Calculus and Analytic
Geometry I

Winter

MTH 202 Calculus and Analytic
Geometry II
CS 162 Computer Science I

Second Year

Fall

MTH 203 Calculus and Analytic
Geometry III
STA 312 Probability and Statistics

Winter

MTH 227 Linear Algebra I
STA 216 Intermediate Applied Statistics

Third Year

Fall

STA 314 Statistical Quality Methods
STA 316 Advanced Applied Statistics

Winter

STA 319 Statistics Project

Fourth Year

Fall

STA 412 Mathematical Statistics I

Winter

STA 415 Mathematical Statistics II*

*Satisfies capstone course requirement for a statistics major.

Requirements for a Minor

1. Applied Statistics. This minor is highly recommended for students majoring in Business Administration, Computer Science, Economics, Engineering, Psychology, and the Biological, Physical, and Social Sciences. Graduates will learn how to apply statistical methods to their particular subject areas. Minors in Applied Statistics must complete 21 hours, as follows:

Statistics Courses

STA 215 Introductory Applied Statistics
STA 216 Intermediate Applied Statistics
STA 314 Statistical Quality Methods
STA 316 Advanced Applied Statistics
STA 319 Statistics Project

Application Courses (select one)

ECO 413 Forecasting
ECO 480 Econometrics
MGT 361 Management Science
MKT 352 Marketing Research
SS 300 Research Methods

Related Tools (select one)

CS 231 Spread Sheets
CS 233 Database Management
MTH 125 Survey of Calculus

Substitutions are allowed with departmental approval

2. Statistics. Minors in statistics must complete 21 hours, including:

MTH 201 Calculus and Analytic Geometry I
MTH 202 Calculus and Analytic Geometry II
STA 216 Intermediate Applied Statistics
STA 312 Probability and Statistics
STA 412 Mathematical Statistics I

plus one additional course selected with the approval of the department.

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. General education course CGE/A. 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 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 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 on-line 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 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. Offered fall semester.

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 winter semester.

STA 319 Statistics Project. Students will learn a systematic approach to statistical consulting, how to communicate with non-mathematical 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 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. Sample space, conditional probability, independence, Bayes' Theorem, Bernoulli Trials, discrete and continuous random variables and their distributions, Chebyshev's inequality, joint distribution, expectation, variance, moment generating function, Law of Large Numbers and Central Limit Theorem. Prerequisite: either 215 or 312, and MTH 203. Three credits. Offered fall semester.

STA 415 Mathematical Statistics II (Capstone). The nature of statistical inference; tests of hypotheses, sampling theory, point and interval estimation and distribution-free methods. Prerequisites: 412 and MTH 227. Three credits. Offered winter semester.

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 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 semester.

Therapeutic Recreation (TR)

Coordinator: Taylor, Associate Professor; Taylor, Assistant Professor; Beck, Clinical Adjuncts: Beukema, Sunden, Hetchler.

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, with diverse opportunities for employment. Recreation therapists may serve as counselors, community educators and organizers, administrators, supervisors, consultants, and

Therapeutic Recreation

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 which 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 which 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.

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 as required of prehealth majors and which are pertinent to therapeutic recreation.

Admission to the program is competitive and requires a secondary application. Applicants must meet the following criteria: (1) a GPA of 2.7 or above; (2) completion of prerequisites PSY 101, CHM 109, BIO 112; and (3) completion of, or concurrent enrollment in REC 110 and REC 111.

The students must apply directly to the Director of the Therapeutic Recreation programs as follows:

1. Submit application for program admission by March 1, prior to the intended entry year.
2. Provide an autobiographical sketch.
3. Provide a statement of professional goals.
4. Have completed a minimum of 50 hours of verified volunteer or paid work in therapeutic settings.
5. Provide letters of recommendation from two recreation/therapeutic recreation or related health care practitioners with whom the applicant has completed volunteer and/ or paid work.

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 course work.

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 Regulations section of the catalog.

2. Therapeutic Recreation Core:

REC 110 Foundations and Philosophy of Recreation (SWS)

REC 111 Foundations of Therapeutic Recreation

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)

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 312 Therapeutic Recreation for Mental Retardation

REC 313 Therapeutic Recreation for Physical Disability

REC 315 Therapeutic Recreation for Mental Health

REC 316 Therapeutic Recreation with the Elderly

REC 380 Special Topics

4. Cognates:

ART 351 Art in Special Education

CHM 109 Introductory Chemistry

CHM 230 Introduction to Organic and Biochemistry

HS 111 Medical Terminology

HS 208 Human Anatomy

HS 220 Health Care Delivery

HS 280 Human Physiology

HS 281 Human Physiology Laboratory

PED 300 Kinesiology

PED 304 Physiology of Activity

PSY 101 Introductory Psychology

PSY 303 Abnormal Behavior

PSY 364 Life-Span Developmental Psychology

STA 215 Introductory Applied Statistics

5. Academic Standards

To embark on the fieldwork and internship experience, students must show academic competence. The criterion for competence is 80% 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.

Therapeutic Recreation

- b. Water Safety Instructors (W.S.I.) certification is often an internship requirement in a clinical rehabilitation setting. This certification must be current before registering for REC 490 Internship.

7. Credential.

National Council for Therapeutic Recreation Certification (N.C.T.R.C.) Credential: It is the students' responsibility to make sure that N.C.T.R.C. standards have been complied with 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 as to 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

MTH 110 Algebra	4
BIO 112 General Biology	4
PSY 101 Introductory Psychology	3
CHM 109 Introductory Chemistry	5
	<hr/>
	16

Winter

ENG 150 Strategies in Writing	4
HS 208 Human Anatomy	3
CHM 250 Introduction to Organic and Biochemistry	5
STA 215 Introductory Applied Statistics	3
	<hr/>
	15

Second Year

Fall

HS 220 Health Care Delivery	2
HS 280 Human Physiology	3
HS 281 Human Physiology Laboratory	1
REC 110 Foundations of Recreation/Leisure	3
REC 111 Foundations of Therapeutic Recreation	3
General education course	3
	<hr/>
	15

Winter

HS 111 Medical Terminology	2
PSY 364 Life Span Development	3
REC 253 Diagnostic Groups in Therapeutic Recreation	3
ART 331 Art in Special Education	1
General education course	3
	<hr/>
	15

Third Year

Fall

REC 256 Therapeutic Recreation Programming	3
REC 308 Recreation Leadership	3
REC 312 Therapeutic Recreation for Mental Retardation	2
PSY 303 Abnormal Behavior	3
General education course	3
	<hr/>
	14

Winter

REC 310 Intervention in Therapeutic Recreation	3
REC 313 Therapeutic Recreation for Physical Disability	3
PED 300 Kinesiology	3
General education courses	6
	<hr/>
	15

Summer

REC 318 Fieldwork in Therapeutic Recreation (300 hours)
Eligibility: 80% competence in REC-designated courses.

Fourth Year

Fall		Winter	
REC 315 Therapeutic Recreation in Mental Health	3	REC 404 Issues in Recreation/Leisure	3
REC 407 Assessment and Evaluation in Therapeutic Recreation	3	REC 405 Administration of Therapeutic Recreation	3
PED 304 Physiology of Activity	3	REC 316 Therapeutic Recreation with the Elderly	3
	9		9

Summer

REC 490 Internship in Therapeutic Recreation (600 hours).

Eligibility: 80% 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 life-styles. (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 253 Diagnostic Groups in Therapeutic Recreation. Emphasis on the delivery of therapeutic recreation services for persons with illnesses, disabilities, and those disadvantaged. Focus on symptomology, etiology, prognosis, and remediation using therapeutic intervention; and 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.

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. Corequisite: 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 312 Therapeutic Recreation for Mental Retardation. Provides the knowledge and skills related to the delivery of therapeutic recreation services to persons with mental retardation. Prerequisite: 308 or permission of instructor. (1-1-0). Two credits.

REC 313 Therapeutic Recreation for Physical Disability. Provides students with the knowledge and skills related to the delivery of therapeutic recreation services for persons with physical disabilities and other chronic conditions. Focus 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.

Women's Studies Minor

REC 318 Fieldwork in Therapeutic Recreation. To be taken in an agency offering a therapeutic recreation program, or 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: 318(2-1-0). Three credits. Offered fall semester.

REC 490 Internship in Therapeutic Recreation. Fifteen weeks (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.

Women's Studies Minor (WS)

Coordinator: Rucks.

The women's studies minor comprises seven courses (some required and some elective) that examine questions and issues such as:

- Are there differences in the way women and men think or solve problems? In their values, emotions or in the way they handle relationships? If there are differences, what accounts for them?
- Why is there a gender "wage gap" and a gender "voting gap"?
- How does the legal system deal with crimes against women? How does it deal with sexual orientation?
- How does our culture "define" what it means to be a woman or a man? Do other cultures have different ideas about masculinity and femininity?
- What is feminism? Is there more than one kind of feminism? Does feminism take race and class into account when it speaks about the position of women?
- What roles have women played in the history of the United States? How have family, gender, and sexuality been dealt with in different historical periods?

Career Opportunities

Some students take a women's studies minor because they are interested in studying about the types of issues listed above. In addition, some students find that the women's 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 or 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 minors take three core courses: WS 201 Introduction to Women's Studies, WS 300 Gender Perspectives on Values, and WS 360 Contemporary Feminist Theory, plus four more courses from the following:

- WS 110 Women in Transition
- WS 380 Special Topics
- WS 399 Independent Readings
- WS 490 Practicum
- WS 499 Independent Research
- BIO 325 Human Sexuality
- PSY 315 Psychology of Sex Differences
- SOC 383 Sociology of Women
- SS 323 The Family
- SS 382 Love, Sex, and Gender

Or, with the approval of the women's studies coordinator, the following courses may also count toward the minor:

- AAA 351 Perspectives on African American Males
- ANT 370 Cross-Cultural Perspectives on Gender
- COM 373 Women and Minorities in Film and Television
- ENG 436 Women and Literature
- HST 312 History of American Women
- HST 371 History of Gender, Family, Sexuality
- PHI 370 Feminist Philosophy
- PSY 316 Psychology of Human Intimacy and Sexuality
- SOC 384 Class, Race, and Gender
- SOC 389 Child Abuse and Neglect in America
- SPA 460 Women Authors
- SS 270 Gender and Family in Third World Development

Courses taken for the women's studies minor may also count toward your major as long as there are 30 nonduplicated credits in the major.

For more information, contact Doris Rucks (251 AuSable Hall, telephone (616) 895-3732) or Chris O'Connor (279 AuSable Hall, telephone (616) 895-2112).

Courses of Instruction

WS 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 (taken once a year). Offered on a credit/no-credit basis.

Women's Studies Minor

WS 201 Introduction to Women's Studies. Focusing on classic and current scholarship from diverse disciplines, this course emphasizes the role of gender in structuring women's lives. Central issues include: Why study women, gender as a category of analysis, and the historical and contemporary constructions and implications of gender in Western and non-Western contexts.

WS 204 Feminist View of Culture. A survey of some of the institutions and productions of Western culture from the perspective of women: What position and view of women is assumed or demanded? We will also consider contemporary cultural phenomena and the feminist culture. Three credits.

WS 300 Gender Perspectives on Values. An exploration of the values exhibited in literature, psychology, and works of art by women and men and in research about them, to discover to what extent there is a gender-based difference in values, to explore what the consequences of those differences have been and might be, and to consider whether male and female values are complementary. General education course CGE/D.

WS 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.

WS 370 Women and the Law. Covers the treatment of women in the Anglo-American legal system. Focuses on constitutional limitations on discriminatory laws, reproductive rights, employment discrimination, sexual harassment, marriage and the family, and laws relating to sexual and domestic violence. Three credits. Offered once a year.

WS 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.

WS 399 Independent Readings. Independent supervised readings in selected topics. Prerequisite: Permission of program coordinator. One to three credits. Offered fall and winter semesters. Offered on a credit/no credit basis.

WS 490 Practicum: Career-Service. Supervised work experience in an area related to women's studies. Prerequisite: Permission of program coordinator. One to nine credits. Offered fall and winter semesters. Offered on a credit/no credit basis.

WS 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 four credits. Offered fall and winter semesters. Offered on a credit/no credit basis.

BIO 325 Human Sexuality. Introduction to the biological dimensions of human sexuality from physiological, ecological, and evolutionary perspectives. (3-0-0). 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.

PSY 315 The Psychology of Sex Differences. An investigation of the extent, origin, and consequences of sex differences. The course will first review the research on sex differences, then consider the etiology of differences via psychological, biological, primate behavior, cross-cultural and social conditioning perspectives. Three credits. Offered once a year.

SS 323 The Family. An examination of the basic concepts of culture and their application, first to the American family and then to the family in other cultures. General education course CGE B. Three credits. Offered each semester.

SS 382 Love, Sex, and Gender. Considers the way in which ideas and values are socially constructed and contextually grounded. Focus on the historical, socioeconomic, and political construction of love, sex, and gender in the United States. A comparative aspect is also provided. General education course CGE/D. Prerequisite: Junior standing. Three credits. Offered every year.

Continuing Education

Grand Valley State University believes that learning is a lifelong process that should be accessible to anyone regardless of age, work schedule, or family responsibilities. The Continuing Education division provides programs to meet the specific needs of the region and welcomes suggestions from interested individuals and organizations.

A schedule of several hundred undergraduate and graduate courses and on-site student services are provided at the university's facilities at the Eberhard Center on the Grand Rapids campus, at the Muskegon Center for Higher Education at Muskegon Community College, at the University Center in Traverse City, in Holland, and at the main campus in Allendale. To facilitate students' return to college, Grand Valley provides registration for courses under a nondegree-seeking status. Students may earn both graduate and undergraduate credits before applying for degree-seeking status.

Advisors are available to help you plan your studies in all of the programs offered through the Grand Rapids, Muskegon, Holland, Traverse City, or Allendale campuses. In Grand Rapids, you can arrange appointments with an advisor at a mutually convenient time by calling (616) 771-6610. Students wishing to make an appointment with an advisor in our Muskegon office should call (616) 777-0505. Those wishing to meet with an advisor in Holland should telephone our Holland office at (616) 394-4848. Students seeking advising in Traverse City should call (616) 922-1785. Students outside the local areas can call 1-800-253-7891.

Programs

Graduate courses offered on the Grand Rapids campus include business, communications, computer information systems, education, health science, nursing, public administration, social work, and taxation. In addition, the university offers upper-division courses in advertising and public relations, business (accounting, economics, finance, general business, management, marketing), communications, computer science, criminal justice, education, engineering, health sciences, hospitality and tourism management, liberal studies, mathematics, nursing, occupational safety and health, physics, psychology, sociology, and social sciences at the Grand Rapids campus.

At the Muskegon Center, located at the Muskegon Center for Higher Education at Muskegon Community College, the university offers selected courses in both the Master of Business Administration (M.B.A.) and the Bachelor of Business Administration (B.B.A.). Students are able to earn a graduate degree in education and nursing and undergraduate degrees in behavioral science, criminal justice, and nursing.

In Holland, selected courses in both the Master of Education (M.Ed.) and the Master of Business (M.B.A.) programs are available. Students in Holland can earn undergraduate degrees, including the general education requirements, in criminal justice, elementary education/language arts, nursing, and sociology.

Degree programs are also offered in Traverse City at the University Center. Students can earn master's degrees in education, nursing, and social work. At the undergraduate level, degrees are available in behavioral science, elementary education/language arts, and nursing.

Continuing Education

The Office of Continuing Education is committed to providing educational opportunities for adults and establishing academic programs to meet the specific needs of the community.

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, satellite telecommunications systems, videocassettes, printed materials, audio communications, and computer communications. Learners may benefit from distance education services by not having to travel to main university campuses to complete course requirements, and/or by arranging learning schedules which meet their individual needs. Three major types of courses offered include two-way interactive television (compressed video) courses, videocassette-based telecourses, and satellite 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 in which the signal is carried over long-distance telephone lines. This system allows the university to offer a wider selection of courses and degree programs to students in such locations as Traverse City and Muskegon. Learners in all sites can interact with the instructor and with each other. They are able to both see and hear all other participants, because both video and audio signals are sent and received by all sites. This system is often combined with other distance education and telecommunications systems, such as computer systems, allowing for electronic exchange of papers, projects, and other printed and graphic information systems in support of course objectives. Grand Valley State University is playing a leadership role in using two-way interactive television systems to serve students at remote locations. Since many employers are beginning to use these systems for training employees and even for interviewing prospective employees, experience with these types of telecommunications systems can benefit all students whether they are in a remote location or not. Please direct questions to the Distance Education Office at (616) 771-6616.

Videocassette-based Telecourses

The university also offers a schedule of videotaped telecourses. They include high-quality videotaped presentations, related reading assignments, faculty-led class discussions (sometimes conducted via the two-way interactive television system), and typical course completion requirements, such as exams and/or course projects. Faculty and students maintain contact through the semester by using a variety of communications technologies, including telephones, traditional mail, E-mail, etc. Students may view the videotapes either by watching a broadcast television or cable television channel, or by arranging for the videotapes to be provided directly to them for playback on a home VCR. GYST telecourses are broadcast on WGVU, WGVK-TV and area cable systems. Several library sites also host copies of the tapes. The Distance Education Office helps to coordinate telecourses and will try to answer any questions you may have. Telephone: (616) 771-6616.

Satellite Courses

Grand Valley State University was the first university in Michigan to offer complete academic programs through live, interactive satellite to locations throughout Michigan. Courses are uplinked from the Eberhard Center in Grand Rapids and downlinked at the Eberhard Center and also at a variety of sites statewide. These downlink sites often include community colleges, and/or intermediate or local school districts. Grand Valley's uplink capability is also used by corporations and other organizations for live video teleconferencing, training, national or statewide staff meetings, workshops and seminars. For more information, contact the Distance Education Office at (616) 771-6617.

Glossary of Terms

Academic advisor: A faculty member or student trained to help students select courses and plan programs.

Academic dismissal/suspension: Dismissal or suspension 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.

Co-requisite: A requirement, usually another course, which must be undertaken at the same time.

Credit/No Credit: A method used to evaluate performance in courses which is separate from the grade point system.

Credit hour: A unit of academic credit measured in semester hours or quarter hours. One credit hour usually represents one hour of class time per week.

Credit load: The total number of credits for which a student registers during a semester or session.

Deadline: The date by which certain information must be received by any given office or unit. (Current deadline dates are printed in the class schedule.)

Deans' List: A public announcement at the end of each semester listing students who have achieved a specified grade point average (GPA) or level of achievement established by the dean of the unit.

Degree Analysis: A report showing the requirement for a specific degree. The report also details the student's progress toward the degree. An analysis is mailed to each undergraduate student in February and October of each year.

Degree student: A student who has been admitted to a degree category and is seeking a bachelor's or master's degree in a planned course of study.

Drop and add: The process of making certain changes (dropping and adding classes) in a student's schedule of courses during the first five class days of the

semester (except summer). 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 which may be taken for either graduate or undergraduate credit provided the student obtains special permission.

Elective: A course which 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 grade points by grade point credits attempted.

Graduation Audit: Degree-seeking undergraduates receive an audit of course requirements for graduation twice each year.

Grant: Financial assistance awarded to students which 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 GVSU Honors Program designed to offer intellectual challenge and personal attention to particularly able students.

Incomplete: The grade "I" sometimes granted when a student is temporarily unable to complete course requirements because of unusual circumstances.

Independent study: A course of study undertaken by a student under the supervision of one or more faculty members outside the classroom.

Interdisciplinary: Designating a combination of subject matter from two or more disciplines within a course or program.

Internship: Work in a firm or agency related to a student's major program and/or career plans. Involves earning university credit and may involve receiving payment.

Loan: Financial assistance to students which must be repaid. Low interest loans are available and financial need may or may not be a factor.

Glossary of Terms

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.) which may be used to demonstrate competency in an academic area.

Prerequisite: A requirement, usually the completion of another course, which 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 or suspended.

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 course work before the bachelor's degree be completed at Grand Valley.

Scholarship: Financial assistance to students awarded on the basis of academic achievement. Financial need may or may not be a factor.

Semester: A unit of time—15 weeks long, in the academic calendar.

Semester hour: The unit of academic credit usually meaning the pursuit of a subject for one period a week for one semester.

Senior institution: An institution of higher education offering baccalaureate programs. Grand Valley is a public senior institution.

Student employment: Part-time jobs made available to students with financial need through federally funded programs (Work-Study) and to students without need through the Student Employment Office.

Teachable major: A state-approved major program for teacher certification at the secondary and/or elementary level.

Telecourse: A course offered for credit on WGVL/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.

Touch-Tone: A method of registration, drop, add, or tuition payment that uses the automated voice response machine. This method normally eliminates the need for a student to appear in person at a registration event.

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 which 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 which 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.

Academic Degree Programs

Program	Page
Accounting, B.B.A.	135
Advertising and Public Relations, B.A., B.S.	169
African/African American Studies (minor)	98
Aging and Adult Life (minor)	100
Anthropology, B.A., B.S.	101
Art and Design, B.A., B.F.A., B.S.	105
Behavioral Science, B.A., B.S.	117
Biology, B.A., B.S.	117
Biomedical Sciences, B.S.	285
Preidental	386
Premedical	386
Biopsychology, B.A., B.S.	417
Broadcasting, B.A., B.S.	170
Business, General, B.B.A.	138
Business Administration, M.B.A.	139
Chemistry, B.A., B.S.	156
City and Regional Planning (minor)	164
Communications, B.A., B.S., M.S.	173, 179
Computer Information Systems, M.S.	196
Computer Science, B.A., B.S.	191
Secondary or K—12 Certification	
Criminal Justice, B.A., B.S.	204
Earth Science, B.S.	277
East Asian Studies (minor)	208
Economics, B.A., B.S.	210
Education (teacher certification)	214
Elementary	
Secondary	
Special	
Engineering, B.S.E.	243
English, B.A.	255
Film and Video, B.A., B.S.	171
Finance, B.B.A.	136
French, B.A.	334
General Education, M.Ed.	223
Geography, B.A., B.S.	270
Geology, B.S.	274
Geochemistry, B.S.	276
German, B.A.	336
Health Communication, B.A., B.S.	174
Health Sciences, B.S., M.H.S.	281, 286
History, B.A., B.S.	293
History of Science (minor)	301
Hospitality and Tourism Management, B.A., B.S.	307
Information Systems, B.A., B.S.	194
International Business, B.B.A.	136
International Relations, B.A.	311

Journalism, B.A., B.S.	176
Latin American Studies (minor)	314
Legal Studies, B.A., B.S.	315
Liberal Studies, B.A., B.S.	317
Management, B.B.A.	137
Human Resources	
General Management	
Marketing, B.B.A.	137
Mathematics, B.A., B.S.	320
Music, B.A., B.M., B.M.E.	340
Natural Resources Management, B.S.	350
Nursing, B.S.N., M.S.N.	353, 358
Occupational Safety and Health Management, B.S.	366
Occupational Therapy, M.S.	369
Philosophy, B.A.	376
Photography, B.A., B.S.	176
Physical Education, B.S.	379
Physical Therapy, M.S.	387
Physician Assistant Studies, M.S.	395
Physics, B.S.	403
Political Science, B.A., B.S.	409
Psychology, B.A., B.S.	414
Public and Nonprofit Administration, B.A., B.S., M.P.A.	423, 426
Reading/Language Arts, M.Ed.	225
Russian (minor)	337
Russian Studies, B.A.	433
School Health Education (minor)	284
Science: Group Major, B.S.	435
Social Studies, B.A., B.S.	437
Social Work, B.S.W., M.S.W.	438, 445
Sociology, B.A., B.S.	454
Spanish, B.A.	338
Special Education, M.Ed.	226
Special Education-Psychology, B.A., B.S.	417
Learning Disabilities	
Preprimary Impaired Program	
Special Education Administration	
Emotional Impairment	
Mental Impairment	
Statistics, B.A., B.S.	159
Taxation, M.S.T.	142
Theatre, B.A., B.S.	177
Therapeutic Recreation, B.S.	463
Women's Studies (minor)	468

Directory

Board of Control

Donna K. Brooks, M.S., Chair, Holland
William C. Brooks, M.B.A., Detroit
Dick DeVos, B.B.A., Ada
Karen B. Henry, B.A., Grand Rapids
Paul Hillegonds, J.D., Plymouth
Donnalee Holton, Belmont
Dorothy A. Johnson, B.A., Grand Haven
Arend D. Lubbers, B.A., M.A., Litt.D., D.S., L.H.D., Hon'DUniv., Grand Rapids
Joseph M. Stewart, B.S., Battle Creek
Paul A. Johnson (Honorary), L.H.D., Grand Haven
Arnold C. Ott (Honorary), B.S., Ph.D., Grand Rapids
L. William Seidman (Honorary), A.B., M.B.A., L.L.B., Washington.

President

Arend D. Lubbers, B.A., Hope College; M.A., Rutgers University; Litt.D., Central College; D.S., University of Sanjevo; L.H.D., Hope College; D.S., Academy of Economics, Krakow; Hon'DUniv., Kingston.

Provost and Vice President for Academic Affairs

Glenn A. Niemeyer, A.B., Calvin College; M.A., Ph.D., Michigan State University.

Vice President for Finance and Administration And Treasurer of the Board of Control

Ronald E. VanSteeeland, B.A., Michigan State University.

Vice President for University Relations

Matthew E. McLogan, B.A., M.A., Western Michigan University.

Executive Assistant to the President And Secretary of the Board of Control

Jean W. Enright, B.A., Hendrix College; M.A., Western Michigan University.

Director of Affirmative Action

L. Michael Woods, B.S., M.P.A., Grand Valley State University.

Associate Vice President for Academic Affairs

John A. Gracki, B.Ae.E., University of Detroit; Ph.D., Brown University.

Vice Provost

Robert W. Fletcher, B.S., M.S., Northern Illinois University.

Vice Provost and Dean of Students

H. Bart Merkle, B.A., Hope College; M.A., Ed.D., Western Michigan University.

Acting Dean of Arts and Humanities

J. David McGee, B.S., University of Kansas; M.B.A., California State University at Long Beach; M.A., Ph.D., Indiana University.

Dean of the Seidman School of Business

Emery Turner, B.A., Central Missouri State University; M.B.A., Ph.D., Washington University.

Dean of the School of Education

Robert Hagerty, B.A., Western Michigan University; M.A., Ed.D., Wayne State University.

Dean of the School of Nursing

Lorraine Rodrigues-Fisher, B.S., University of Bridgeport; M.A., University of South Florida; M.S., Ed.D., Clemson University.

Dean of Science and Mathematics

P. Douglas Kindschi, B.A., Houghton College; M.A., Ph.D., University of Wisconsin.

Dean of Social Sciences

Nancy Harper, B.A., Emporia State University; M.A., University of Northern Iowa; Ph.D., University of Iowa.

Dean of the School of Social Work

Rodney Mulder, B.A., Calvin College; M.A., Michigan State University; M.S.W., Ph.D., Western Michigan University.

Dean of International Affairs

Brenda Robinson, B.S.Ed., M.Ed., Fitchburg State College; Ed.D., University of Massachusetts-Amherst.

Dean of Minority Affairs

Donald Williams, B.S., Eastern Michigan University; M.A., West Virginia 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

Calvin Stockman, B.S., M.S., Eastern Illinois University; Ed.D., Northern Illinois University.

Faculty

Abdul-Ghani, Mohamed (1995), Assistant Professor of Hospitality and Tourism Management. B.A., M.S., Helwan University; Ph.D., University of Tennessee.

Aboufadel, Edward E. (1995), Assistant Professor of Mathematics and Statistics. 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.

Adamopoulos, John (1992), Professor of Psychology. B.A., Yale University; A.M., Ph.D., University of Illinois.

Adams, Barbara A.K. (1995), Assistant Professor of Public Administration and Non-profit Leadership. B.A., University of Michigan; M.P.A., D.P.A., Western Michigan University.

Directory

Adamski, Joseph J. (1979), Associate Professor of Computer Science and Information Systems. B.A., University of Connecticut; M.S., Rensselaer Polytechnic Institute.

Adrian, Brian (1995), Assistant Professor of Health Sciences. B.A., Ph.D., Southern Illinois University.

Agawu-Kakraba, Benjamin Y. (1993), Assistant Professor of Spanish. B.A., University of Ghana; M.A., University of Alberta; Ph.D., Cornell University.

Ahuja, Sanjay P. (1996), Assistant Professor of Computer Science. B.S.E.E., University of Bombay; M.S.E.E., Ph.D., University of Louisville.

Alderink, Gordon (1984), Assistant Professor of Physical Therapy. B.A., Hope College; M.S., University of Michigan.

Alexander, Nancy (1994), Instructor of Mathematics and Statistics. 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.

Alvarez, David (1997), Assistant Professor of English. B.A., Polytechnic of Central London; M.A., Ph.D., University of Texas.

Arendsen, Carl (1973), Professor of Mathematics and Statistics. 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.

Armstrong, Forrest H. (1983), Professor of Political Science. A.B., Yale University; M.A., Ph.D., University of Michigan.

Atkinson, Richard F. (1967), Professor of Chemistry. B.S., University of Chicago; M.A., Ph.D., Harvard University.

Bacon-Baguley, Theresa (1991), Assistant Professor of Health Sciences. B.S.N., Michigan State University; Ph.D., Wayne State University.

Bailey, Kathleen (1995), Instructor of Criminal Justice. B.S., Central Michigan University; M.A., Western Michigan University.

Bair, David E. (1997), Assistant Professor of Education. B.A., The College of Wooster.

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.

Balfour, Danny L. (1996), Associate Professor of Public Administration and Non-profit Leadership. B.A., Michigan State University; Ph.D., Florida State University.

Balkema, K. Laurel, Associate Librarian. B.A., Wheaton College, Illinois; A.M.L.S., University of Michigan.

Baro, Agnes (1990), Associate Professor of Criminal Justice. B.S., Southern Oregon College; M.S., Southern Illinois University; Ph.D., Sam Houston State University.

Baum, Edward (1983), Professor of Chemistry. B.Sc., Ph.D., University of California.

- Baum, William C.** (1965), Professor of Political Science. B.A., M.A., Kalamazoo College; Ph.D., University of Iowa.
- Beale, James M.** (1996), Assistant Professor of Psychology. B.A., Ohio State University; Ph.D., Cornell University.
- Beasecker, Robert** Senior Librarian. A.B., Hillsdale College; A.M.L.S., University of Michigan.
- Beck, Theresa** (1995), Assistant Professor of Therapeutic Recreation. B.S., Indiana University; M.S., Florida State University; Ph.D., University of North Texas.
- Beckley, Suzanne** (1994), Assistant Professor of Hospitality and Tourism Management. B.S., Ferris State University; M.A., University of Notre Dame.
- Beckmann, Charlene E.** (1988), Associate Professor of Mathematics and Statistics. B.S., Marquette University; M.A., Ph.D., Western Michigan University.
- Bell, William** (1976), Professor of Health Sciences. B.S., M.S., University of Missouri at Kansas City; Ph.D., University of Michigan.
- Bellrichard-Perkins, Herbert A.** (1995), Associate Professor of Sociology and Coordinator of African/African American Studies. B.A., University of Notre Dame; M.A., University of California, Los Angeles; Ph.D., University of California, Santa Cruz.
- Benet, Suzanne B.** (1992), Assistant Professor of Marketing. B.S., Jacksonville State University; Ph.D., University of North Carolina.
- Bernstein, David A.** (1975), Professor of Psychology. B.A., Memphis State University; M.A., Ph.D., University of Virginia.
- Bhagwat, Yatin, N.** (1992), Assistant 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.
- Blakey, James** (1972), Associate Professor of Psychology. B.S., Newark State College; M.A., Montclair State College; Ed.D., Rutgers University.
- Blose, Laurence** (1997), Assistant Professor of Finance. B.S., M.B.A., Gannon University; Ph.D., University of Texas at Austin.
- Blumreich, Kathleen** (1988), Associate Professor of English. B.A., M.A., Ph.D., Michigan State University.
- Bond, Linda** (1986), Associate Professor of Nursing. B.S.Ed., M.S.N., Wayne State University; Ph.D., 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.
- Brashler, Janet G.** (1990), Professor of Anthropology. B.A., Northwestern University; M.A., Ph.D., Michigan State University.
- Brehm, Victoria** (1992), Assistant Professor of English. A.B., A.M., University of Michigan; Ph.D., University of Iowa.
- 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.

Directory

- Burns, Lawrence R.** (1996). Assistant Professor of Psychology. B.S., California Maritime Academy; M.A., Ph.D., State University of New York at Stony Brook.
- Caillaud, Anne** (1990). Assistant Professor of French. M.A., Ph.D., Michigan State University.
- Callahan, Johnine L.** (1979). Professor of Health Sciences. B.S., Eastern Illinois University; M.A., Western Michigan University; Ph.D., Bowling Green State University.
- Campbell, Arthur** (1997). Assistant Professor of Music. B.M., Mount Allison; M.M., Ph.D., Northwestern University.
- Capodilupo, John G.** (1996). Assistant Professor of 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.
- Castelão-Lawless, Teresa** (1993). Assistant Professor of Philosophy. B.A., M.A., Classic University of Lisboa, Portugal; Science of Education, Superior School of Education, Lisboa; Science and Technology Studies, M.S., Ph.D., Virginia Polytechnic and State University.
- Castro, Barry** (1973). Professor of Management. B.A., Hunter College; M.B.A., Ph.D., New York University.
- Champion, Alverna** (1987). Professor of Mathematics and Statistics. B.A., Dillard University; M.A., Wellesley College; M.B.A., University of Michigan; Ph.D., University of Michigan.
- Chapman, Frederick** (1992). Assistant Professor of Communications. A.B., Wayne State University; M.A., University of Detroit.
- Chattulani, Doulatram** (1972). Associate Professor of Education. B.A., M.S., City University of New York; Ph.D., Michigan State University.
- Chen, Hong** (1988). Associate Professor of Psychology. B.A., Fu-Jen University; M.A., Middle Tennessee State University; Ph.D., University of Oklahoma.
- Chlebo, Julie A.** (1997). Assistant Professor of Education. B.S., Taylor University; M.Ed., Grand Valley State University.
- 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.
- 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.
- Clark, Patricia** (1989). Associate Professor of English. B.A., University of Washington; M.F.A., University of Montana; Ph.D., University of Houston.
- Cole, Edward A.** (1971). Professor of History. B.A., M.A., University of Nebraska; Ph.D., University of California at Berkeley.
- Cole, Kevin C.** (1989). Assistant Professor of Geology. B.S., M.S., University of Washington; Ph.D., University of Arizona.
- Cole, Roy** (1992). Assistant Professor of Geography. B.A., Northern Michigan University; M.S., Ph.D., Michigan State University.

- Constantelos, John** (1996), Assistant Professor of Political Science. B.A., Tufts University; M.A., The Johns Hopkins University; M.S., Tufts University; Ph.D., Duke University.
- Copenhaver, Lee** (1985), Assistant Professor of Music. B.S., Mansfield State University; B.M., Ithaca College; M.A., Ph.D., University of Iowa.
- Costello, Michael B.** (1996), Assistant Professor of Psychology. B.A., University of California, Davis; M.A., San Diego State University; Ph.D., University of California, Riverside.
- Cotter, Michael J.** (1990), Associate Professor of Marketing. B.S., M.B.A., Central Michigan University; D.B.A., Mississippi State University.
- Courtney, Gregory** (1994), Assistant Professor of Biology. B.S., Oregon State University; Ph.D., University of Alberta.
- Coviak, Cynthia** (1995), Assistant Professor of Nursing. B.S.N., Michigan State University; M.S.N., Grand Valley State University.
- Crampton, Suzanne** (1994), Assistant Professor of Management. B.B.A., M.B.A., Grand Valley State University; Ph.D., Michigan State University.
- Cross, Robert** (1980), Professor of Education. B.A., M.A., Ph.D., Michigan State University.
- Cunningham, Thomas J.** (1969), Professor of Philosophy. A.B., Providence College; M.A., Aquinas Institute of Philosophy and Theology; M.S., Ph.D., University of Wisconsin; J.D., Cooley Law School.
- Curry, Brian** (1985), Associate Professor of Health Sciences. B.Sc., St. Luke's College, Exeter University; M.S., University of Massachusetts; Ph.D., Michigan State University.
- Dandridge, Thomas** (1996), Professor of Management. B.Mech.Eng'g, M.B.A., Cornell University; Ph.D., University of California at Los Angeles.
- Davis, Sue** (1996), Assistant Professor of Political Science. B.A., M.A., University of Nevada; Ph.D., Emory University.
- DeBruine, Marinus** (1991), Assistant Professor of Accounting. B.B.A., Grand Valley State University; Ph.D., The Ohio State University.
- Devlin, Dennis** (1985), Professor of History. B.A., University of Texas; Ph.D., University of Chicago.
- deYoung, Mary** (1985), Professor of Sociology. B.S., Grand Valley State University; M.A., University of Chicago; Ph.D., Western Michigan University.
- Dimkoff, Gregg K.** (1975), Professor of Finance. B.S., Michigan State University; M.B.A., Saint Louis University; Ph.D., Michigan State University.
- Diven, Polly** (1994), Assistant 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.
- Douglas, Caesar Jr.** (1997), Assistant Professor of Management. B.A., Illinois Wesleyan University; M.B.A., Grand Valley State University; Ph.D., University of Mississippi.
- Drees, Hajo** (1996), Assistant Professor of German. B.S., M.A., Ph.D., University of Nebraska-Lincoln.

Directory

- Droste-Bielak, Emily** (1985), Associate Professor of Nursing. B.S.N., Wayne State University; M.S., University of Colorado; Ph.D., University of Michigan.
- Dwelle, Ronald R.** (1969), Associate Professor of English. A.B., Augustana College; M.A., University of Kansas.
- Eligon, Ann Marie** (1994), Assistant Professor of Physics. B.S., Ph.D., The University of the West Indies.
- Ellis, Roger** (1975), Associate Professor of Communications. B.A., M.A., University of Santa Clara; Ph.D., University of California, Berkeley.
- Erickson, Carl** (1991), Associate Professor of Computer Science and Information Systems. B.S., Purdue University; M.S., Ph.D., Michigan State University.
- Estrada, Javier** (1992), Associate Professor of Physics. B.S., Universidad Nacional de Colombia; M.S., Ph.D., University of South Carolina.
- Fernandez-Levin, Rosa** (1990), Associate Professor of Modern Languages. B.A., M.A., Ph.D., University of Colorado.
- Fishback, Paul** (1993), Assistant Professor of Mathematics and Statistics. B.A., Hamilton College; Ph.D., University of Wisconsin.
- Fisher, Joseph B.** (1996), Assistant Professor of Education. B.S., M.Ed., Grand Valley State University; Ph.D., University of Kansas.
- Fleischmann, Shirley T.** (1989), Professor of Engineering. B.S., M.S., Ph.D., University of Maryland.
- Foote, Walter** (1968), Associate Professor of English. B.A., M.A., University of Illinois.
- 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.
- Franciosi, Robert** (1988), Associate Professor of English. B.A., M.A., New York University; Ph.D., University of Iowa.
- Freeman, Dorothy E.** (1996), Associate Professor of Public Administration and Nonprofit Leadership. B.S., M.A., Ball State University; Ph.D., Indiana University.
- French, Joyce A.** (1990), Assistant Professor of Nursing. B.S.N., Michigan State University; M.S.N., Wayne State University; Ph.D., Michigan State University.
- Friar, Margaret A.** (1989), Instructor of Mathematics and Statistics. B.A., Grand Valley State University; M.A., Western Michigan University.
- Galbraith, Gretchen** (1992), Assistant Professor of History. B.A., Connecticut College; Ph.D., Rutgers University.
- Gardner, Mary Catherine** (1984), Assistant Professor of Mathematics and Statistics. B.S., M.S., Ed.D., Ball State University.
- Garey, Carol.** Senior Librarian. B.A., A.M.L.S., University of Michigan.
- Garrett, Ronald** (1991), Associate Professor of Engineering. B.S.M.E., M.S.M.E., Purdue University; Ph.D., University of Cincinnati.
- Gavlas, Heather** (1996), Assistant Professor of Mathematics and Statistics. B.S., M.A., Ph.D., Western Michigan University.
- Gendler, Phyllis** (1982), Associate Professor of Nursing. B.S.N., University of Michigan; M.N., Ph.D., Michigan State University.

- Gilles, Roger** (1992), Assistant Professor of English, B.A., Carnegie-Mellon University; M.F.A., Ph.D., University of Arizona.
- Giuffre, Patti** (1996), Assistant Professor of Sociology, B.A., M.A., Ph.D., University of Texas, Austin.
- Glynn, Susanne** (1995), Assistant Professor of Social Work, B.A., University of Michigan-Flint; M.S.W., University of Michigan; Ph.D., Ohio State University.
- Godwin, Joseph** (1995), Associate Professor of Accounting, B.S., Southeast Missouri State University; B.B.A., M.B.A., MACC., Ph.D., University of Wisconsin.
- Goldberg, Stephen R.** (1996), Associate Professor of Accounting, B.Sc., DePaul University; M.B.A., University of Chicago; Ph.D., University of Wisconsin-Madison.
- Golensky, Martha** (1995), Assistant Professor of Public Administration and Non-profit Leadership, 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.
- Gonce, Richard A.** (1972), Professor of Economics, B.B.A., M.B.A., Ph.D., University of Wisconsin.
- Goode, James** (1986), Professor of History, B.S., Georgetown University; M.A., University of Massachusetts; Ph.D., University of Indiana.
- Goossen, Linda H.** (1990), Assistant Professor of Health Sciences, B.S., Ohio State University; M.H.S., Grand Valley State University.
- Gordon, Aubrie** (1994), Assistant Professor of Social Work, B.A., M.S.W., M.A., Western Michigan University.
- Gracki, John** (1970), Professor of Chemistry, B.Ae.E., University of Detroit; Ph.D., Brown University.
- Grant, George Jr.** (1996), Assistant Professor of Social Work, B.S.W., Marygrove College; M.S.W., Grand Valley State 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 Health Sciences, B.S., Wayne State University; M.S., University of Wisconsin.
- Green, Mary** (1996), Assistant Professor of Physical Therapy, B.A., LeMoyne College; M.S., Beaver College; Ph.D., University of Toledo.
- Griffin, Carol B.** (1996), Assistant Professor of Biology and Natural Resources Management, B.S., North Dakota State University; M.S., Indiana State 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** (1978), Associate Professor of Nursing, B.A., University of Wisconsin-Milwaukee; M.N., University of Florida; Ph.D., Michigan State University.
- Gros, Isabelle M.** (1993), Assistant Professor of French, M.A., University de Paris III; Ph.D., University of Southern California.
- Guevara, Julie A.** (1989), Associate Professor of Social Work, B.S., Grand Valley State University; M.S.W., Western Michigan University; Ph.D., Michigan State University.

Directory

- Hagerty, Robert** (1992), Associate Professor of Education. B.A., Western Michigan University; M.A., Ed.D., Wayne State University.
- Haidar, Salim** (1992), Assistant Professor of Mathematics and Statistics. 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.
- Harris, Richard** (1995), Associate 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.
- Haynes, Alphonso W.** (1987), Professor of Social Work. B.A., Long Island University; M.A., M.S., Ed.D., Columbia University.
- 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.
- Hendersen, Robert** (1994), Professor of Psychology. B.A., Reed College; Ph.D., University of Pennsylvania.
- 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.
- Herrera, Antonio** (1972), Professor of Education. B.A., Universidad Pedagógica y Tecnológica de Colombia; M.A., Ph.D., University of Oregon.
- Herzog, Thomas** (1970), Professor of Psychology. B.A., M.A., Ph.D., University of Michigan.
- Hodge, John** (1977), Professor of Management. B.A., M.A., Ed.D., Western Michigan University; M.L.L.R., Michigan State University.
- Hoitenga, Dewey J. Jr.** (1965), Professor of Philosophy. A.B., Calvin College; B.D., Calvin Seminary; M.A., Ph.D., Harvard University.
- Hollums, Diane L.** (1996), Visiting Assistant Professor of Education. B.A., M.A., Eastern Michigan University; Ph.D., University of Michigan.
- Hong, Soon** (1987), Associate Professor of Mathematics and Statistics. B.S., So-gang University; M.Ed., Yonsei University; M.S.T., University of Wisconsin; Ph.D., University of New Mexico.
- Huizenga, Paul A.** (1966), Associate Professor of Biology. A.B., Hope College; M.S., University of Michigan.
- Hull, Cindy** (1991), Assistant Professor of Anthropology. B.A., Grand Valley State University; M.A., Ph.D., Wayne State University.
- Hunt, Roger A.** (1995), Assistant Professor of Geography and Planning. A.B.J., M.A., University of Georgia; Ph.D., Pennsylvania State University.
- Hunt, Jodee** (1995), Assistant 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.
- Irwin Rowe, Patricia** (1987), Assistant Professor of Physical Education. B.S., M.A., Central Michigan 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), Assistant Professor of Engineering, B.E., Sc.E., M.E.Sc.M., Ph.D., University of Western Ontario.
- Jackson, Thomas E.** (1985), Professor of Education, B.S., Tennessee State University; M.A., Eastern Michigan University; Ph.D., University of Michigan.
- Jelier, Richard W.** (1995), Assistant Professor of Public Administration and Non-profit Leadership, B.A., B.S., M.A., Ph.D., Michigan State University.
- Jewell, Gayla** (1986), Assistant Professor of Nursing, B.S., West Virginia Wesleyan College; M.S., Ohio State University.
- Jiang, James** (1994), Assistant Professor of Management, B.B., Tamkang University; M.B.A., M.S., Wright State University; Ph.D., University of Cincinnati.
- Jinn, Jann-Huei** (1991), Associate Professor of Mathematics and 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), Instructor of Criminal Justice, B.A., University of Wisconsin; M.S., Michigan State University; M.L.L.R., Michigan State University.
- Johnson, Jacqueline** (1973), Professor of Sociology, B.A., Macalester College; M.S., Ph.D., Purdue University.
- Johnson, Kenneth P.** (1969), Associate Professor of Computer Science and Information Systems, B.A., Franklin and Marshall College; M.A., University of Michigan; Ph.D., Western Michigan University.
- Johnson, Paul** (1986), Associate Professor of Engineering, B.A., Houghton College; M.S., Ph.D., University of Notre Dame.
- Jones, Constance** (1974), Assistant Professor of English, B.S., Western Michigan University; M.A., Michigan State University.
- Jones, Curtis J.** (1967), Professor of Sociology, B.A., M.A., Western Michigan University; Ph.D., Michigan State University.
- Jones-Rikkers, Catherine** (1994), Assistant Professor of Business Law, B.S., M.B.A., Grand Valley State University; J.D., University of Notre Dame Law School.
- Jorgensen, Paul C.** (1988), Associate Professor of Computer Science and Information Systems, B.A., North Central College; M.A., University of Illinois; Ph.D., Arizona State University.
- Kalinich, David B.** (1997), Professor of Criminal Justice, B.A., Miami University; M.E.D., Bowling Green State University; Ph.D., Michigan State University.
- Karpen, Mary E.** (1995), Assistant Professor of Chemistry, B.S., Clarkson University; B.A., State University of New York; M.S., Ph.D., Case Western Reserve University.
- Kelleher, Frances A.** (1988), Associate Professor of History, B.A., College of New Rochelle; M.A., Ph.D., New York University.
- Kerr, Donald** (1970), Professor of Art, B.A., Michigan State University; M.F.A., University of Iowa.

Directory

- Kim, Katherine** (1987), Professor of Nursing. B.S., Hartwick College; M.Ed., University of Minnesota; M.S.N., Ph.D., University of Illinois.
- Kindschi, P. Douglas** (1976), Professor of Mathematics. B.A., Houghton College; M.A., Ph.D., University of Wisconsin.
- King, Caryn M.** (1991), Associate Professor of Education. B.A., Alfred University; M.A., Slippery Rock University; Ph.D., University of Pittsburgh.
- King, Erika** (1995), Professor of Political Science. A.B., Oberlin College; M.A., Ph.D., Northwestern University.
- King, Richard R.** (1995), Assistant Professor of Hospitality and Tourism Management. B.A., Lake Forest College; M.S., Grand Valley State University.
- Klein, Bruce J.** (1973), Associate Professor of Computer Science and Information Systems. B.S., City College of New York; M.S., Trinity College.
- Klein, Donald J.** (1973), Professor 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** (1983), Assistant Professor of Mathematics and Statistics. B.A., Berea College; M.S., Purdue University; Ph.D., Michigan State University.
- Kline, Kay** (1988), Associate 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 and Statistics. B.A., Michigan State University; M.A., Northern Michigan University; Ph.D., Michigan State University.
- Knop, Charles P.** (1965), Professor of Chemistry. B.S., Aquinas College; Ph.D., Michigan 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 Health Sciences. B.S., Case Institute of Technology; Ph.D., University of Wisconsin.
- Kotman, Larry** (1985), Associate Professor of Computer Science and Information Systems. A.B., Calvin College; M.S., Ph.D., Purdue University.
- Krakusin, Margarita** (1993), Assistant Professor of Spanish. M.A., Central Michigan University; M.A., Ph.D., Michigan State University.
- 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.
- Lai, Sufen** (1992), Assistant Professor of English. B.A., Tunghai University; M.A., Ph.D., University of Illinois.
- Lamb, Jeffrey** (1997), Instructor of Modern Languages and Literatures. B.A., California State University at Long Beach; M.A., California State University at San Diego.
- 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 Engineering. B.A., California State University; M.S., Ph.D., California Institute of Technology.
- Larson, Lars I.** (1994), Professor of Management. B.S., M.B.A., Ph.D., University of Illinois, Urbana.

- Last, Mary** (1994), Instructor of Computer Science and Information Systems. B.A., Immaculata College; M.B.A., Drexel University.
- Latif, Abdul** (1994), Assistant Professor of Education. B.A., University of Dhaka; M.A., University of Waterloo; M.Ed., University of Saskatchewan; Ph.D., University of Utah.
- Lazarus, Brenda** (1985), Professor of Education. B.A., Albion College; M.Ed., Wayne State University; M.A.T., Oakland University; Ph.D., Michigan State University.
- Ledcr, Sharon** (1994), Associate Professor of Nursing. B.S.N., M.S.N., Wayne State University; D.S.N., University of Alabama at Birmingham.
- Lefebvre, Richard H.** (1967), Professor of Geology. B.S., University of Michigan; M.S., University of Kansas; Ph.D., Northwestern University.
- Leidig, Paul** (1991), Assistant Professor of Computer Science and Information Systems. B.S., Eastern Mennonite College; M.B.A., James Madison University; Ph.D., Virginia Commonwealth University.
- Levin, Martin** (1994), Instructor of Computer Science and Information Systems. B.S., Pennsylvania State University; M.S., New York University.
- Levitan, William** (1993), Associate Professor of English. B.A., Yale University; Ph.D., University of Texas.
- Lindquist, Stanton** (1974), Professor of Accounting. B.A., Luther College; M.A., University of Iowa; Ph.D., University of Missouri, C.P.A.
- Litherland, Martha** (1996), Visiting Associate Professor of Education. B.S., Miami University; M.Ed., Bowling Green State University; Ph.D., Michigan State University.
- Lockerd, Benjamin G. Jr.** (1986), Associate Professor of English. B.S., University of Wyoming; M.A., University of Toronto; Ph.D., University of Connecticut.
- Lombardo, Michael** (1991), Associate Professor of Biology. B.S., Ohio State University; M.S., Ph.D., Rutgers University.
- 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** (1994), Assistant 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.
- Malaret, Dennis** (1995), Assistant 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.
- Martin, Barry** (1991), Assistant Professor of Music. B.M.E., University of Akron; M.S.M.E., University of Illinois.

Directory

- Martin, Jean** (1995). Assistant Professor of Nursing. B.S.N., University of Michigan; M.S., Boston University; D.N.Sc., Rush University.
- Martin, Susan W.** (1988). Associate 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.
- Mast, Myron** (1975). Professor of Public Administration and Nonprofit Leadership. B.A., Calvin College; M.A., Ph.D., University of Colorado.
- Matchett, Stephen** (1991). Assistant Professor of Chemistry. B.S., University of Miami, Florida; Ph.D., Colorado State University.
- Mayberry, Bob** (1996). Assistant Professor of English. B.A., University of Nevada; M.A., University of Utah; M.F.A., University of Iowa; Ph.D., University of Rhode Island.
- Mayberry, Robert W.** (1971). Associate Professor of Communications. B.A., Swarthmore College; M.A., Cornell University.
- McCrea, Frances B.** (1988). Associate Professor of Sociology. B.A., Grand Valley State University; M.A., Ph.D., Western Michigan University.
- McCrea, Linda D.** (1993). Assistant 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.
- McKendall, Marie A.** (1988). Associate Professor of Management. B.B.A., M.B.A., Grand Valley State University; Ph.D., Michigan State University.
- Menning, Daleene T.** (1973). Professor of Art. B.S., M.F.A., University of Michigan.
- Merrill, Steven** (1985). Assistant Professor of Nursing. B.S.N., University of Michigan; M.S.N., University of Wisconsin.
- Miller, Blair E.** (1990). Associate Professor of Chemistry. B.A., Manchester College; Ph.D., Miami University.
- Miller, Carolyn B.** (1993). Assistant Professor of Communications. B.A., Simmons College; M.S., Columbia Graduate School of Journalism; Ph.D., Michigan State University.
- Miller, Jo Ellen** (1991). Assistant Professor of English. B.A., University of Oregon; M.A., Colorado State University; Ph.D., University of Utah.
- Miller, Sandra L.** (1995). Assistant 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.
- 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., Aryamehr University; M.S., Ph.D., University of Michigan.
- Morrow, Deborah**, Associate Librarian, B.A., Earlham College; M.S., University of Illinois.
- Morse, Deanna** (1979), Professor of Communications, B.S., Iowa State University; M.A., Goddard College.; M.F.A., Art Institute of Chicago.
- Motwani, Jaideep G.** (1990), Associate Professor of Management, B.B.A., Bombay University; M.B.A., Sam Houston State University; Ph.D., University of North Texas.
- 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), Assistant Professor of Legal Studies; B.S., Michigan State University; J.D., Boston University.
- Murray, Diane**, Associate Librarian, B.A., Hope College; M.S.L., Western Michigan University; M.M., Aquinas College.
- Muskovitz, Rosalyn B.** (1972), Associate Professor of Art, B.A., Oakland University; M.A., Michigan State University.
- Nagelkerk, Jean** (1993), Associate Professor of Nursing, B.S.N., Nazareth College; M.S.N., Wayne State University; Ph.D., University of Florida.
- 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.
- Ni, Peimin** (1992), Assistant Professor of Philosophy, B.A., M.A., Fudan University; Ph.D., The University of Connecticut.
- Niemeyer, Glenn A.** (1963), Professor of History, A.B., Calvin College; M.A., Ph.D., Michigan State University.
- Nieuwkoop, Anthony** (1995), Assistant Professor of Health Sciences, A.B., Hope College; Ph.D., University of Michigan.
- Nikkel, Harvey** (1974), Professor of Chemistry, B.S., Southwestern State College; Ph.D., Purdue University.
- Nochera, Carmen L.** (1989), Associate Professor of Health Sciences, B.A., College of Notre Dame; M.A., Ph.D., University of Rhode Island.
- Noordyk, Helene** (1993), Instructor of Social Work, B.S., M.S.W., Grand Valley State University.
- 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 and Statistics, B.S., Ph.D., Western Michigan University.
- O'Connell, Phillip** (1991), Visiting Associate Professor of Education, B.S., Aquinas College; M.A., Michigan State University.
- O'Connor, M. Christine** (1974), Professor of Psychology, B.A., University of Connecticut; M.A., Ph.D., Michigan State University.
- Olivier, Louis A.** (1992), Professor of French, B.A., M.A., University of Utah; Ph.D., Johns Hopkins University.

Directory

- O'Neill, Sean** (1991), Associate Professor of History, B.A., University of California, Berkeley; M.S., Ph.D., University of California, Santa Barbara.
- Orth, Deborah** (1996), Assistant Professor of Political Science, B.S., M.P.A., Ph.D., University of Houston.
- Osborn, William P.** (1988), Associate 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.
- Osmun, Greg** (1991), Associate Professor of Education, B.A., M.A., Michigan State University; Ed.D., University of Michigan.
- Ozga, Karen L.** (1990), Assistant Professor of Physical Therapy, B.S., Wayne State University; M.M.Sc., Emory University.
- Page, Gary S.** (1981), Associate Professor of Hospitality and Tourism Management, B.S., M.S., Cornell University.
- Palmer, Ernest** (1972), Assistant Professor of Mathematics and Statistics, B.S., Morris State College; M.A., Western Michigan University.
- Parker, Kelly A.** (1992), Assistant Professor of Philosophy, B.A., Texas A & M University; M.A., Ph.D., Vanderbilt University.
- Paschke, Richard E.** (1971), Professor of Psychology, B.S., University of Illinois; M.A., Northern Illinois University; Ph.D., Purdue University.
- Paszek, Donald** (1984), Associate Professor of Psychology, B.A., University of Wisconsin-Milwaukee; M.A., Ph.D., University of Iowa.
- Payne, Michael** (1990), Professor of Public Administration and Nonprofit Leadership, B.S., University of Missouri-St. Louis; M.A., Ph.D., The Maxwell School, Syracuse University.
- Pelham, Alfred M.** (1994), Assistant Professor of Marketing, B.B.A., M.B.A., University of Michigan; J.D., Wayne State University School of Law; Ph.D., Pennsylvania State University.
- Perozzo, Peggy** (1995), Assistant Professor of Physics, B.S., University of Wisconsin; M.S., North Texas State University; Ph.D., University of Central Florida.
- 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), Associate 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.
- Plotkowski, Paul** (1991), Professor of Engineering, B.S., M.S., Ph.D., Oakland University.
- Poitras, Ronald B.** (1974), Associate Professor of Geography and Urban Planning, B.A., California State University/Northridge; M.C.P., University of Oregon.
- Pool, Ellen** (1985), Assistant Professor of Music, B.M., M.M., University of Michigan.
- 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), Associate Professor of Education. B.S., M.S., Central Missouri State University; Ph.D., Michigan State University.
- Pratt, Philip** (1970), Professor of Mathematics and Statistics. B.A., M.A., Ph.D., Michigan State University.
- Price, Joseph P.** (1987), Associate Professor of Education. B.A., University of Michigan; M.A., Eastern Michigan University; Ph.D., University of Michigan.
- Proctor, Margaret B.** (1974), Associate Professor of Communications. B.A., Wellesley College; M.A.T., Harvard University; Ph.D., University of Chicago.
- Pryor, Sherrill** (1995), Assistant Professor of Education. B.S., M.A., Sp. In Arts, Ed.D., Eastern Michigan University.
- Qi, Min** (1994), Assistant Professor of Chemistry. B.S., M.E., Beijing Polytechnic University; Ph.D., State University of New York.
- Ranger, Kim**, Associate Librarian. B.A., Western Michigan University; M.L.S., University of Michigan.
- Rathbun, David** (1981), Associate Professor of Communications. B.A., Wheaton College.
- Ray, Jeffrey L.** (1997), Assistant Professor of Engineering. B.S.M.E., M.S.M.E., Tennessee Technological University; Ph.D., Vanderbilt University.
- Rayor, Diane** (1991), Associate Professor of English. B.A., Colorado College; Ph.D., University of California, Santa Cruz.
- Reick, Kay** (1992), Assistant Professor of Nursing. B.S.N., M.S., University of Michigan.
- Reifel, John W.** (1971), Professor of Economics. B.A., University of Notre Dame; M.A., Ph.D., Michigan State University.
- Reimel, Beth** (1990), Associate Professor of Social Work. B.A., Houghton College; M.S.W., Washington University; Ph.D., University of Chicago.
- Reinken, Barbara J.** (1996), Assistant Professor of Education. B.S., Indiana University; M.S., University of Wisconsin; Ph.D., Michigan State University.
- Remenap, Randall** (1996), Visiting Assistant Professor of Education. B.S., M.A., Ed.S., Central Michigan University.
- Remlinger, Kathryn A.** (1995), Assistant Professor of English. B.A., M.A., Moorehead State University; Ph.D., Michigan Technological University.
- Reynolds, Ross A.** (1990), Associate Professor of Physics. B.S., Michigan State University; M.S., Ph.D., University of Oregon.
- Rhoads, Russell D.** (1994), Assistant Professor of Anthropology. B.A., University of Oregon; M.A., Ph.D., University of Kentucky.
- Richmond, Gary D.** (1968), Professor of Chemistry. B.A., Washington and Jefferson College; Ph.D., Ohio State University.
- Ritchie, Justine** (1995), Assistant Professor of Mathematics and Statistics. B.S., Northeast University; M.S., Ph.D., University of Arizona.
- Rivera-Muniz, Pedro I.** (1967), Associate Professor of Mathematics and Statistics. B.A., M.A., Syracuse University.

Directory

- Rivers, Mary Ellen** (1985), Assistant Professor of Mathematics and Statistics. A.B., Albion College; M.A., Central Michigan University.
- Rodriguez-Charbonier, Senez** (1992), Assistant Professor of Psychology. B.A., Antillean 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.
- Rogness, Neal** (1994), Assistant Professor of Mathematics and 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.
- Rosander, Terry Ann** (1991), Associate Professor of Social Work. B.S., Central Michigan University; M.S.W., University of Washington; D.S.W., Loyola University, Chicago.
- Rowe, Stephen C.** (1972), Professor of Philosophy. B.A., Colgate University; M.Th., A.M., Ph.D., University of Chicago.
- Royer, Daniel J.** (1995), Assistant Professor of English. B.A., Washburn University; M.A., Kansas State University; Ph.D., University of Kansas.
- Rucks, Doris G.** (1987), Associate Professor of Sociology and Coordinator of Women's Studies. B.S., Hampton University; M.S.W., Columbia University; Ph.D., Michigan State University.
- Rudolph, Bennett L.** (1973), Professor of Marketing. B.S., Roosevelt University; M.S., Ph.D., University of Illinois.
- Ryan, Maureen** (1990), Assistant Professor of Nursing. B.S.N., St. Mary's College; M.S.N., University of Michigan.
- Rydell, Christine** (1970), Professor of Russian. B.A., Mundelein College; M.A., Ph.D., Indiana University.
- Rynbrandt, Linda** (1996), Instructor of Sociology. B.A., Grand Valley State University; M.A., Western Michigan University.
- Salazar, Laura** (1966), Professor of Communications. B.S., Wisconsin State University; M.A., Kent State University; Ph.D., University of Michigan.
- Sanchez, Carol** (1995), Assistant Professor of Management. B.I.S., School for International Training; D.B.A., Southern Illinois University.
- Sanford, James** (1980), Professor of Accounting. B.S., J.D., Indiana University; C.P.A.
- Schaertel, Stephanie** (1994), Assistant Professor of Chemistry. B.A., Swarthmore College; M.S., Ph.D., Cornell University.
- Schaughency, Elizabeth** (1995), Associate Professor of Psychology. B.S., University of Pittsburgh; M.S., Ph.D., University of Georgia.
- Schichtel, B. Nan** (1995), Associate Librarian. B.A., M.S., Western Michigan University.
- Schlicker, Steven** (1991), Associate Professor of Mathematics and Statistics. B.A., Michigan State University; M.A., Ph.D., Northwestern University.

- Schott, Elaine** (1987), Associate Professor of Social Work. B.S., Bluffton College; M.S.W., University of Michigan; Special Education Supervisor Certification, Grand Valley State University.
- Schriemer, Dale** (1988), Assistant Professor of Music. B.M., North Carolina School of the Arts; B.A., Michigan State University.
- Scott, James** (1968), Associate Professor of Physical Education. B.S., M.A., P.E.S., Central Michigan 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), Associate Professor of Art. B.S., B.F.A., M.F.A., Michigan State University.
- Shapiro, Carolyn G.** (1993), Assistant Professor of History. B.A., Adelphi University; M.A., Ph.D., Yale University.
- Shechtman, Robert E.** (1971), Associate Professor of Music. A.B., Rutgers University; M.A., Sarah Lawrence College.
- Shontz, John** (1974), Professor of Biology. B.S.Ed., Edinboro State College; M.A., Miami University; Ph.D., Duke University.
- Shontz, Nancy N.** (1985), Associate Professor of Biology. A.B., Smith College; M.A., Duke University; Ph.D., Smith College.
- Shroyer, Janet** (1992), Associate Professor of Mathematics and Statistics. B.A., Knox College; M.A.T., Ph.D., Michigan State University.
- Sicilian, Paul** (1987), Assistant Professor of Economics. B.A., Tulane University; M.S., Ph.D., University of Illinois.
- Silvey, LeAnne E.** (1996), Assistant Professor of Social Work. B.S., Eastern Michigan University; M.S.W., Western Michigan University.
- Simons, Gerald** (1995), Assistant 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.
- Singh, Ram N. H.** (1988), Professor of Social Work. M.W., M.A.S., M.S., D.S.W., Columbia University.
- Smart, Robert** (1996), Assistant Professor of Chemistry. B.A., Michigan State University; Ph.D., Albion College.
- Smith, Christine** (1995), Assistant Professor of Psychology. B.A., Indiana University; M.A., Ph.D., Loyola University.
- Smith, Mack** (1994), Professor of English. B.A., M.A., University of Houston; Ph.D., Rice University.
- Smither, James** (1990), Associate Professor of History. B.A., University of Chicago; M.A., Ph.D., Brown University.
- Soljan, Ivo** (1992), Assistant Professor of English. B.A., Sarajevo University; M. Philosophy, Nottingham, England; Ph.D., Belgrade University.

Directory

- Sommer, Elisabeth** (1991), Assistant Professor of History. B.A., University of North Carolina at Greensboro; M.A., Ph.D., University of Virginia.
- Sopariwala, Parvez R.** (1992), Associate Professor of Accounting. B.A., Bombay University; M.B.A., Bowling Green State University; Ph.D., Michigan State University.
- Staves, Mark** (1996), Assistant Professor of Biology. B.S., M.S., Ph.D., University of Texas at Austin.
- Stephenson, Paul** (1995), Assistant Professor of Mathematics and Statistics. B.S., Bob Jones University; M.S., Ph.D., Clemson University.
- Storey, Elizabeth** (1987), Visiting Assistant Professor of Education. B.A., M.Ed., Arizona State University.
- Strickler, Timothy L.** (1980), Professor of Health Sciences. B.S., Pennsylvania University; Ph.D., University of Chicago.
- Subramanian, Ram** (1990), Associate 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.
- Sundstrom, Theodore** (1976), Professor of Mathematics and Statistics. B.A., Western Michigan University; M.A., Ph.D., University of Massachusetts.
- Swanson, Jane E.** (1989), Professor of Social Work. B.A., M.S.W., Ph.D., Michigan State University.
- Swartz, Mick** (1995), Assistant Professor of Finance. B.S., M.A., Western Michigan University; M.A., Ph.D., University of Iowa.
- Swartzlander, Susan** (1990), Associate Professor of English. B.S., Bloomsburg State College; M.A., Ph.D., Pennsylvania State University.
- Tanis, David** (1991), Assistant Professor of Chemistry. B.A., Calvin College; M.S., Case-Western University.
- Tao, Yonglei** (1990), Associate Professor of Computer Science and Information Systems. B.S., Beijing University; M.S., North China Institute of Computing Technology; M.S., Ph.D., University of Iowa.
- Taylor, Glenda, P.** (1987), Associate Professor of Recreation. B.A., Victoria University; M.A., Central Michigan University; Ph.D., Texas Women's University.
- Ten Brink, Norman W.** (1973), Professor of Geology. B.S., University of Michigan; M.S., Franklin and Marshall College; Ph.D., University of Washington.
- Ten Eyck, Allan** (1976), Professor 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.
- Thacker, Beth** (1994), Assistant Professor of Physics. B.S., Davidson College; M.S., Ph.D., Cornell University.
- Thomas, Lorelle** (1990), Associate Professor of Art and Design. B.A., Eastern Michigan University; M.F.A., Syracuse University.
- Thorpe, Patrick A.** (1988), Associate Professor of Biology. B.S., Texas Lutheran College; M.S., Ph.D., University of Texas.
- Torres, Charlotte** (1996), Associate Professor of Nursing. B.A., Greenville College; M.S., New York Medical College; M.S., Ed.D., University of Rochester.

- Thorsnes, Paul** (1995), Assistant Professor of Economics. B.A., Pacific Lutheran University; 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.
- Travis, Anthony** (1971), Professor of History. B.S., Loyola University of Chicago; M.A., Ph.D., Michigan State University.
- Tripp, Steven** (1990), Associate 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 African/African-American Studies. B.S., M.S., Michigan State University; Ph.D., University of Michigan.
- Turner, Emery** (1994), Professor of Accounting. B.A., Central Missouri State University; M.B.A., Ph.D., Washington University.
- Tyler, Alexandra** (1995), Assistant Professor of Philosophy. B.A., M.A., Ph.D., Binghamton University.
- Tyson, Lois** (1989), Associate Professor of English. B.A., Rutgers University; M.Ed., M.A., Ph.D., Ohio University.
- Underwood, Patricia** (1988), Associate Professor of Nursing. B.S.N., Duke University; M.S., Boston University; Ph.D., University of Michigan.
- Vanden Wyngaard, Julianne M.** (1965), Associate Professor of Music. B.F.A., University of Wisconsin-Milwaukee.
- Vander Broek, Laura** (1979), Assistant Professor of English. B.A., Hope College; M.A., Teachers College, Columbia University.
- VanderJagt, Donald** (1964), Professor of Mathematics and Statistics. A.B., Hope College; M.S., Florida State University; Ph.D., Western Michigan University.
- Vandermeer, Rita** (1996), Assistant Librarian. B.A., St. Andrews Presbyterian College; M.S.L.S., Wayne State University.
- VanDyke, David** (1994), Assistant Professor of Chemistry. B.S., Calvin College; Ph.D., University of Illinois.
- VanFleet, Eric** (1993), Associate Professor of Occupational Safety and Health. B.S., M.S., Illinois State University; Ph.D., Michigan State University.
- Van Gent, Elona** (1994), Assistant Professor of Art and Design. B.A., Hope College; M.F.A., Temple University.
- VanIwaarden, Donna D.** (1993), Associate Professor of Public Administration and Nonprofit Leadership. B.A., M.P.H., Ph.D., University of Minnesota.
- VanMeter, Clifford W.** (1992), Professor of Criminal Justice. B.S., Michigan State University; M.A., Western Illinois University; Ph.D., Southern Illinois University.
- Van Solkema, Sherman** (1995), Professor of Music. B.A., Calvin College; M.M., Ph.D., University of Michigan.
- 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.
- Victor, Jerome A.** (1995), Visiting Associate Professor of Education. B.S., M.A., University of Michigan; Ed.S., Wayne State University.

Directory

- Videtich, Patricia** (1992), Associate Professor of Geology. B.S., Grand Valley State University; M.Sc., Ph.D., Brown University.
- Vrancken, Robert** (1982), Associate Professor of Management. B.F.A., M.B.A., University of Notre Dame; Ph.D., Union Institute.
- Waggoner, Kathryn**, Senior Librarian. B.A., Ball State University; M.A.T., M.L.S., Indiana University.
- Walker, James** (1977), Associate Professor of Criminal Justice. B.S., Arkansas AM&N College; M.A., Central Michigan University; Ph.D., University of Michigan.
- Walker, Margaret Sellers** (1993), Assistant Professor of Public Administration and Nonprofit Leadership. B.A., Wayne State University; M.P.A., Western Michigan University.
- Wambach, Susan** (1990), Assistant Professor of Nursing. B.S.N., B.S.H.S., SUNY-Stoney Brook; M.S.N., Indiana University of Pennsylvania.
- Ward, Francis** (1995), Associate Professor of Health Sciences. B.S., University of Nebraska; M.S.A., Central Michigan University; Ed.D., George Washington University.
- Ward, Ronald W.** (1966), Professor of Biology. B.S., Indiana State College; M.S., Ohio University; Sc.D., Johns Hopkins University.
- Watts, Keith H.** (1996), Instructor of Spanish. B.A., Eastern Mennonite College; M.A., University of Virginia.
- Weber, John C.** (1995), Assistant 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.
- Weersing, Donald R.** (1996), Associate Professor of Physician Assistant Studies. B.S., Grand Valley State University; M.D., Wayne State University.
- 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, Pamela J.** (1995), Assistant Professor of Mathematics and Statistics. B.S., University of Wisconsin; M.S., Purdue University; Ph.D., University of Kentucky.
- Wenner, Wendy** (1989), Associate Professor of English. B.A., Carlton College; M.A.T., Northwestern University; Ph.D., Marquette University.
- Westra, Helen** (1995), Assistant Professor of English. B.A., Calvin College; M.A., University of Michigan; Ph.D., University of Notre Dame.
- Whit, William** (1995), Associate Professor of Sociology. B.A., Bowdoin College; M.Div., Andover Newton Theological School; Ph.D., Boston University.
- White, Brian** (1990), Associate 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.

- Widdis, Corinne O.** (1987), Visiting Assistant Professor of Education. B.S., State University of New York-Fredonia; M.A., Washington University.
- Williams, Donald** (1969), Professor of Sociology. B.A., Western Michigan University; M.A., Michigan State University; Ph.D., Western Michigan University.
- Williams, Joye L.** (1996), Assistant Professor of Health Sciences. B.S., M.A., Western Michigan University.
- Winters, Carol** (1996), Assistant Professor of English. B.A., Huntington College; M.A., Ph.D., Michigan State University.
- Wissink, John** (1972), Associate Professor of Education. B.A., Calvin College; M.A., Western Michigan University; Ph.D., University of Arizona.
- Wochholz, F. Weston** (1969), Associate Professor of Education. B.A., Albion College; M.A., Michigan State University; Ed.D., University of Michigan.
- Wolter, James E.** (1981), Professor of Marketing. B.A., Indiana University; M.S., Ball State University; M.B.A., Indiana University; Ph.D., Michigan State University.
- Wong-Ligda, Ed** (1996), Associate Professor of Art and Design. B.A., Art Center College of Design, Pasadena; M.F.A., University of Tulsa.
- Worman, Dianne M.** (1987), Visiting Associate Professor of Education. B.A., University of Michigan; M.A., Michigan State University.
- Wright, Diane** (1992), Assistant Professor of Spanish. B.A., Aquinas College; M.A., Ph.D., Michigan State University.
- Xu, Xiaojuan (Xandra)** (1994), Assistant Professor of Psychology. B.S., Beijing University; M.S., Ph.D., University of Michigan.
- Yackish, Thomas** (1985), Associate Professor of Engineering. B.S., Purdue University; M.S., University of Illinois.
- Yared, Christine A.** (1995), Assistant Professor of Criminal Justice. B.A., Michigan State University; J.D., Stetson University College of Law.
- Ylvisaker, Ruth S.** (1996), Professor of Social Work. B.S.W., University of Wisconsin-Eau Claire; M.S.W., University of Wisconsin-Madison; Ph.D., University of Minnesota.
- Yuh, 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.
- Ziembo-Vogl, Joanne** (1995), Assistant Professor of Criminal Justice. B.A., Saginaw Valley State University; M.S., Michigan State University.
- Zimmer, Joseph E.** (1996), Assistant Professor of English. B.A., Ed.M., Ph.D., State University of New York at Buffalo.

Professors Emeriti

- Andersen, Daniel**, Professor Emeritus of Physics. B.S., Union College; M.A., Columbia University.
- Baker, John H.**, Associate Professor Emeritus of Physics. A.B., Calvin College; M.A., University of Michigan; M.S., Michigan State University.
- Banta, Janet**, Associate Professor Emerita of Nursing. B.A., University of Michigan; M.N., Western Reserve University; M.Ed., Grand Valley State University.

Directory

- Batchelder, John**, Professor Emeritus of Political Science. A.B., Dartmouth College; M.A., 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.
- Bornhofen, John O.**, Professor Emeritus of Economics and Finance. B.S., M.S., Ph.D., University of Illinois.
- Burns, Robert**, Professor Emeritus of Communications. B.A., Johns Hopkins University.
- 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.
- 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.
- Freeman, Helen**, Associated Professor Emerita of Physical Education. B.S., Teachers College, Columbia University; M.A., University of Michigan.
- Frase, H. Weldon**, Professor Emeritus of Psychology. B.S., University of Wisconsin; M.A., Northwestern University; Ed.D., Michigan State University.
- 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.
- 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.

- Insalaco, Carl**, Professor Emeritus of Psychology. B.A., University of Arizona; Ph.D., Florida State University.
- Junn, Robert**, Professor Emeritus of Political Science. B.A., Korea University; M.A., University of Tennessee; Ph.D., University of Illinois.
- Kovats, Daniel**, Associate Professor Emeritus of Music. B.M., M.M., University of Michigan.
- Lecling, Norman**, Professor Emeritus of Biology. B.S., M.S., Oregon State University; Ph.D., University of Wisconsin.
- 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.
- Olsen, Dale**, Professor Emeritus of Education. A.B., Western Michigan University; A.M., Ph.D., University of Michigan.
- Ostroot, Nathalie M.**, Professor of Sociology. B.A., M.A., Ph.D., University of Chicago.
- Parc, Eileen**, Associate Professor Emerita. 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.
- Preston, Joseph P.**, Professor Emeritus of History. B.A., Park College; M.S., University of Wisconsin; Ph.D., University of Missouri.
- Rus, Louis**, Professor Emeritus of English. A.B., M.A., Ph.D., University of Michigan.
- Shedd, Joan**, Assistant Professor Emerita of Nursing. B.S., Eastern Mennonite College; M.S.N., University of Colorado.
- 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.
- Tevebaugh, John**, Professor Emeritus of History. A.B., M.A., Ph.D., University of Illinois.
- 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.
- Wiltse, Ralph**, Associate Professor Emeritus of Mathematics and Computer Science. B.S., Central Michigan University; M.S., Wayne State University.

Directory

Yerkes, William D. Jr., Professor Emeritus of Health Sciences, A.A., Hartnell College; B.S., Ph.D., Washington State University.

Young, Theodore A., Professor Emeritus of Philosophy; A.B., University of Denver; M.A., Ph.D., Indiana University.

Administrative Staff

President

Arend D. Lubbers.

Executive Assistant to the President

Jean Enright.

Academic Affairs and Student Services

Glenn A. Niemeyer, Provost and Vice President for Academic Affairs.

John A. Gracki, Associate Vice President for Academic Affairs.

Robert Fletcher, Vice Provost.

Affirmative Action

L. Michael Woods, Director of Affirmative Action.

Arts and Humanities Division

J. David McGee, Acting Dean of Arts and Humanities.

Beverly Seley, Chair of the Department of Art and Design.

Alexander Nesterenko, Director of the School of Communications.

Mack Smith, Chair of the Department of English.

Forrest Armstrong, Acting Chair of the Department of Modern Languages.

Frances Kelleher, Chair of the Department of History.

Stephen Rowe, Acting Director of Liberal Studies.

Sherman Van Solkema, Chair of the Department of Music.

Stephen Rowe, Chair of the Department of Philosophy.

Jill Hamilton, Program Coordinator II, B.A., Butler University; M.A., University of Cincinnati.

Scott Vanderberg, Communication Facilities Specialist, B.S., Ferris State University.

Seidman School of Business

Emery Turner, Dean of the Seidman School of Business, B.A., Central Missouri State University; M.B.A., Ph.D., Washington University.

Kathy Gulembo, Assistant Dean and Director, B.S., Michigan State University; M.B.A., Grand Valley State University.

Joseph Godwin, Chair of the Department of Accounting and Taxation, B.S., Southeast Missouri State University; B.B.A., M.B.A., M.Acc., Ph.D., University of Wisconsin.

Hariader Singh, Chair of the Department of Economics, M.A., DAV College, India; Ph.D., University of Illinois at Chicago.

Gregg Dimkoff, Chair of the Department of Finance. B.S., Michigan State University; M.B.A., St. Louis University; Ph.D., Michigan State University.

Lars L. Larson, Chair of the Department of Management. B.S., M.B.A., Ph.D., University of Illinois, Urbana.

Bennett Rudolph, Chair of the Department of Marketing. B.S., Roosevelt University; M.S., Ph.D., University of Illinois.

Claudia Bajema, M.B.A. Program Director. B.S., M.B.A., Grand Valley State University.

Paul McKimmy, Undergraduate Student Services/Records Coordinator. B.A., Hope College; M.A., Bowling Green State University; Ed.D., Western Michigan University.

Center for Entrepreneurship

Thomas Dandridge, Professor of Management and Director. B.Mech.Eng'g, M.B.A., Cornell University; Ph.D., University of California at Los Angeles.

Office for Economic Expansion

Carol Lopucki, Director, Small Business Development Center. B.A., Michigan State University; M.A., Central Michigan University.

School of Education

Robert Hagerty, Dean of the School of Education.

Cynthia E. Mader, Assistant Dean of the School of Education. B.A., M.A., Aquinas College; M.A., University of Michigan; M.A., Ph.D., Michigan State University.

Glenda Eikenberry, Certification Coordinator. B.S., Grand Valley State University.

Joy Harrison, Admissions and Placement Coordinator. B.S., Central Michigan University.

Shirley Perkins, Program Coordinator II. B.A., Michigan State University; M.A., Eastern Michigan University; Ed.S., Michigan State University.

Judith Stockman, Program Coordinator. B.S., Eastern Illinois University; M.S., Grand Valley State University.

International Affairs

Brenda Robinson, Dean of International Affairs.

Alan Walczak, Director of Overseas Programs. B.S., Grand Valley State University; M.A., Western Michigan University.

Cynthia Walter, Program Coordinator II. B.A., Western Michigan University; M.A., Michigan State University.

Kirkhof School of Nursing

Lorraine Rodrigues-Fisher, Dean of the Kirkhof School of Nursing.

Patricia Buist, Program Coordinator I. B.S.N., Grand Valley State University.

Science and Mathematics Division

P. Douglas Kindschi, Dean of Science and Mathematics.

Donna Larson, Associate Dean of Science and Mathematics.

Karel Rogers, Chair of the Department of Biology.

Directory

Harvey Nikkel, Chair of the Department of Chemistry.

Bruce Klein, Chair of the Department of Computer Science and Information Systems.

Paul Plotkowski, Director of the School of Engineering.

Patricia Videtich, Chair of the Department of Geology.

Jane Toot, Director of the School of Health Sciences.

Richard King, Acting Chair of the Department of Hospitality and Tourism Management.

Philip Pratt, Chair of the Department of Mathematics and Statistics.

Susan Allaben, Acting Director of the Department of Physical Therapy.

Ross Reynolds, Chair of the Department of Physics.

Sandra Bacon, Laboratory Supervisor, Chemistry Department. A.B., University of Rochester; M.S., Michigan State University.

Robert Bero, Laboratory Supervisor, School of Engineering.

Lana Brock, Laboratory Supervisor, B.S., Grand Valley State University.

Deborah Dencer, Assistant Athletic Trainer, Athletic Training. B.S., Bowling Green State University; M.A., Central Michigan University.

Gregory C. Wilson, Laboratory Supervisor, Geology Department. B.S., Grand Valley State University; M.S., Southern Illinois University.

Regional Math and Science Center

Mary Ann Sheline, Director. B.S., Chatham College; M.A., Carnegie Mellon University; Ed.S., University of Nebraska-Kearney.

Karen Meyers, Research Assistant II. B.S., Michigan State University.

Water Resources Institute

Ronald W. Ward, Director. Sc.D., Johns Hopkins University.

Rodney Denning, Research Assistant II. B.S., Michigan State University; M.A., Western Michigan University.

Edward Frye, Research Assistant I. B.S., Ball State University; M.P.A., Indiana University.

John Koches, Research Associate II. M.S., Miami University.

Richard Rediske, Research Associate II. B.S., Bowling Green State University; M.S., Ph.D., University of Michigan.

Kurt Thompson, Research Associate I. B.S., Grand Valley State University.

Janet Vail, Research Associate I. B.S., University of Michigan; M.A., University of California.

Social Sciences Division

Nancy Harper, Dean of Social Sciences.

Jonathan White, Assistant Dean of Social Sciences.

Jacqueline Johnson, Chair of the Department of Anthropology and Sociology.

Agnes Baro, Acting Director of the School of Criminal Justice.

Erika King, Chair of the Department of Political Science.

Robert Hendersen, Chair of the Department of Psychology.

Danny Balfour, Director of the School of Public Administration and Nonprofit Leadership. B.A., Michigan State University; Ph.D., Florida State University.

Terry Fisk, Director of Criminal Justice Training. B.S., Eastern Kentucky University; M.P.A., Western Michigan University.

Dorothy Freeman, Director of Philanthropy Center. B.S., M.A., Ball State University; Ph.D., Indiana University.

School of Social Work

Rodney Mulder, Dean.

Associate Vice President for Academic Affairs

John Gracki.

Grants Development

Robert Toft, Director. B.A., Beloit College; M.A., Ph.D., Rice Institute.

Institutional Analysis

R. Bruce Tweddle, Director of Institutional Analysis. B.A., M.A., Michigan State University.

Library

Leroy Lebbin, Director of the Library. B.A., Hope College; M.S., Western Reserve University; M.A., University of Michigan.

Research and Development Center

John Gracki, Acting Director.

Vice Provost

Robert Fletcher.

Information Technology

John Sundstrom, Director of Information Technology. B.S., Michigan State University; M.A., University of Colorado.

Sheryl Barricklow, Academic Systems Coordinator. B.S., Grand Valley State University.

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.

David Darnell, Director of Academic and Administrative Computing. B.S., Ball State University.

Dale DeLongpre, System Software Specialist. A.B., Grand Rapids Junior College.

Jeffrey Dobias, Systems Analyst. B.S., Ferris State University.

Richard Fedder, Computing Network Coordinator. B.S., Central Michigan University.

Janet Felker, Telephone Business Manager.

Directory

- William Fisher, Technical Support Manager. B.S., Grand Valley State University.
- John Klein, Systems Analyst. B.S., Grand Valley State University.
- Susan Korzinek, Academic Systems Manager. B.S., Grand Valley State University.
- Edward Lindeman, Administrative Programming Manager. B.S., Ferris State University.
- Thomas Norman, Systems Analyst. B.A., Alma College.
- Pamela Potter, Systems Analyst. B.S., Grand Valley State University.
- David Reed, Academic Systems Coordinator. B.S., Grand Valley State University.
- Mary Reimink, Programmer Analyst. B.S., Ferris State University.
- Diane Rinnan, Systems Software Specialist. B.A., Central Michigan University.
- Joy Seeley, Academic Systems Coordinator. B.S., Grand Valley State University.
- Stephen Taylor, Computing Network Coordinator. B.S., Grand Valley State University.
- Elizabeth Thompson, Computer Operations Supervisor.

Academic Resources and Special Programs

- Mary A. Seeger, Dean of Academic Resources and Special Programs.
- Johnine L. Callahan, Director of the Honors Program. B.S., Eastern Illinois University; M.A., Western Michigan University; Ph.D., Bowling Green State University.
- Anna Marie Clark, Assistant Director, Upward Bound Program. B.A., Grand Valley State University.
- June Fletcher, Counselor, Educational Connections. B.B.A., Western Michigan University; M.B.A., Grand Valley State University.
- Jacqueline Hill, Director of Educational Support Program. B.A., Michigan State University; M.Ed., California State University.
- Valerie Jones, Counselor, EXCEL Program. B.A., M.A., Western Michigan University.
- Bonnie Korn, Assistant Director, Upward Bound Program. B.S., Central Michigan University.
- Marie McKendall, Coordinator of General Education. B.A., Macalester College; M.S., Ph.D., Purdue University.
- K. John Miko, Assistant Dean. B.S., Ball State University; M.A., Western Michigan University.
- John Pedraza, Coordinator/Program Counselor, EXCEL Program. B.A., University of Illinois; M.A., Michigan State University.
- Aura Romijn, Counselor, Educational Connections. B.A., Aquinas College.
- Aracada Smith Alexander, Director, Upward Bound Program. B.A., Western Michigan University; M.P.A., Grand Valley State University.
- Denise Stephenson, Coordinator Program Counselor, Writing Center. B.A., University of Northern Iowa; Ph.D., University of New Mexico.
- Gloria Tate, Assistant Director of McNair Program. B.A., Michigan State University.
- Kathleen Vander Veen, Program Counselor. B.S., Grand Valley State University.

Jill Woller-Sullivan, Director, Educational Connections, B.A., M.A., Central Michigan University.

Santiago Zapata, Counselor, Educational Connections, B.A., Saginaw Valley State University.

Academic Services

Admissions

William Eilola, Director of Admissions, B.S., Michigan Technological University; M.B.A., Grand Valley State University.

Jodi Chysinski, Associate Director of Admissions, B.S., Davenport College; M.B.A., Western Michigan University.

Cassonya Carter, Admissions Counselor, B.S., Grand Valley State University.

Richard Howard, Assistant Director of Admissions, B.A., M.A., Michigan State University.

Darrell Johnson, Associate Director of Admissions, B.S., Michigan State University; B.A., United Bible College.

Patti Leavenworth, Admissions Counselor, B.S., Grand Valley State University.

Victoria Parsons, Assistant Director of Admissions, B.A., Central Michigan University.

Bonnie Ulmer-DeGraves, Assistant Director of Admissions, B.S., M.B.A., Grand Valley State University.

Continuing Education

Calvin Stockman, Dean of Continuing Education, B.S., M.S., Eastern Illinois University; Ed.D., Northern Illinois University.

Simone Jonaitis, Assistant Director of Continuing Education, B.A., University of Michigan.

Howard Major, Director of Distance Education, B.A., M.L.I.S., Ed.D., Western Michigan University.

Financial Aid Office

Kenneth Fridsma, Director of Financial Aid, B.S., Calvin College; M.A., Michigan State University.

Paul Doane, Assistant Director of Financial Aid, B.R.E., Grand Rapids Baptist College.

Amy Dunlap-Foley, Financial Aid Counselor, M.A., Western Michigan University.

JoAnn Foerster, Financial Aid Counselor, B.A., Ball State University; M.A., Bowling Green University.

Sheila Klemm, Financial Aid Counselor.

Koleta Moore, Financial Aid Counselor, B.A., University of California at San Diego; M.P.A., Grand Valley State University.

Christine E Scott, Associate Director of Financial Aid, B.S., M.B.A., Grand Valley State University.

Bonnie Visser, Financial Aid Counselor.

Directory

Records

Lynn Blue, Registrar. B.S., M.P.A., Grand Valley State University.

Mary Brittain, Assistant Registrar.

Elyse Glass, Assistant Registrar. B.A., State University of New York at Stony Brook.

Janet Robinson, Assistant Registrar. B.B.A., Davenport College.

Student Services

H. Bart Merkle, Vice Provost and Dean of Students.

Virginia Randall, Assistant Dean of Student Services. B.A., M.B.A., Grand Valley State University.

Career Planning and Counseling

Diana Pace, Director of Counseling and Career Services. B.A., Duke University; M.A., Ph.D., University of North Dakota.

Wayne Kinzie, Psychologist. B.A., Bridgewater College; Ph.D., University of Georgia.

Barbara Palombi, Psychologist. B.A., Luther College; M.A., Pacific Lutheran University; Ph.D., Michigan State University.

Harriet Singleton, Senior Counselor. B.A., M.A., Michigan State University.

John Zaugra, Senior Counselor. B.S., Southern Illinois University; M.S., Illinois State University; M.A., Roosevelt University; Ed.D., University of Montana.

Children's Center

Mary Ann Krause, Director, Children's Center. B.S., Western Michigan University; M.Ed., Grand Valley State University.

Career Services

Catherine Cameron-Heldt, Assistant Director of Career Services. B.A., Central Michigan University.

Charleen Hayes-Joseph, Associate Director of Career Services. B.S., Grand Valley State University; M.A., Western Michigan University.

Ginger Lange, Associate Director of Career Services. B.S., M.A., Michigan State University.

Christopher Plouff, Assistant Director of Career Services. B.S., M.S., Michigan Technological University.

Patricia Smith, Associate Director of Career Services. B.A., M.Mgt., Aquinas College.

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.

Pamela Hachet, Assistant Director of Health, Recreation, and Wellness. B.A., Alma College; M.A. Mankato State University.

Leroy Hackley, Associate Director of Health, Recreation, and Wellness. B.S., Bethany College; M.A., University of Iowa.

Kenneth James, Residence Hall Director. B.A., Kentucky State University.

Marlene Kowalski-Braun, Residence Hall Director. B.S., Central Michigan University; M.A., Ball State University.

Barry Olson, Residence Hall Director. B.S., University of Wisconsin-River Falls.

Janet Walls, Associate Director of Housing. B.S., Western Michigan University; M.A., Central Michigan University.

Minority Affairs

Donald Williams, Dean of Minority Affairs. B.S., Eastern Michigan University; M.A., West Virginia University.

Eduardo Sanchez-Rojas, Program Coordinator II. B.S., Southern Illinois University at Carbondale.

Michelle Viera, Assistant Director of the Multicultural Center. B.S., Tennessee State University; M.A., Western Michigan University.

Student Life

Robert Stoll, Director of Student Life. B.S., M.A., Northern Michigan University.

Jay Cooper, Associate Director of Student Life. B.S., Oakland University; M.S., Southern Illinois University.

Ann M. Inman, Assistant Director of Student Life. B.A., Hanover College; M.S., Eastern Illinois University.

Reshall Williams, Assistant Director of Student Life. B.A., University of Michigan; M.S., Western Michigan University.

University Relations

Matthew E. McLogan, Vice President for University Relations.

Development Office

Joyce Hecht, Director of Development. L.L.B., University of Wisconsin Law School.

Todd Buchta, Assistant Director of Development. B.A., Brown University; M.S., University of Michigan.

Alumni Relations

Nancee Miller, Director of Alumni Relations. B.A., Grand Valley State University; A.M., University of Michigan.

Kent Fisher, Assistant Director of Alumni Relations. B.A., Grand Valley State University.

Mary Neal, Assistant Director of Alumni Relations.

Office of University Communications

Stephen Ward, Director of University Communications. B.A., Michigan State University; M.A., The American University.

Clarice Geels, Director of Publications and Editorial Services. B.A., Calvin College.

Kathleen Adams, Communications Specialist. B.S., Michigan State University.

Mary Barnum, Marketing Advertising Manager. B.S., M.Acc., Ferris State University; C.P.A.

Robert Bauer, Art Director.

Directory

Timothy Penning, News and Information Services Manager, B.A., Central Michigan University; M.A., Western Michigan University.

Roy Winegar, Media Production Specialist, B.S., Central Michigan University; B.S., M.S., Grand Valley State University.

Public Broadcasting: WGVU/WGVK-TV, WGVU-AM/FM

Michael T. Walenta, General Manager for Public Broadcasting, B.S., M.S., Central Michigan University.

Charles R. Furman, Assistant General Manager for Public Broadcasting, Television, B.A., College of Wooster; M.A., Pennsylvania State University.

Gordon Bolar, Development Manager, WGVU/WGVK-TV and WGVU-AM/FM, B.A., Hendrix College; M.F.A., Ohio University; Ph.D., Louisiana State University.

Steven Chrypinski, Underwriting Manager, WGVU/WGVK-TV, B.A., University of Michigan.

Barbara Christi, Accountant, TV/Radio, B.S., DePaul University.

Diane Cisler, Corporate and Foundation Relations Representative.

Melissa Conklin, Producer-Director, WGVU/WGVK-TV, B.S., Grand Valley State University.

Carolyn Corbin, Program Manager, WGVU/WGVK-TV, B.S., Iowa State University; M.Ed., LaVerne University.

Shirley DeVoss, Corporate and Foundations Relations Representative, WGVU/WGVK-TV.

Barbara Fournier, Director of Educational Services, WGVU/WGVK-TV, B.A., M.A., Michigan State University.

Nancy Hoffman, Programmer Analyst, WGVU/WGVK-TV, B.S., Grand Valley State University.

James A. Jerkatis, Studio Supervisor, WGVU/WGVK-TV, B.S., Western Michigan University.

Gary Kesler, Promotions Manager, TV/Radio, B.S., University of Dubuque.

Ken Kolbe, News and Public Affairs Manager, WGVU-AM/FM, B.A., Central Michigan University; M.B.A., Grand Valley State University.

Phil Lane, Production Supervisor, WGVU/WGVK-TV, B.A., Indiana University.

Steffi Lemons, Corporate and Foundation Relations Representative, A.A., Oakland Community College.

Robert Lambert, Director of Engineering, WGVU/WGVK-TV and WGVU-AM/FM, B.S., Ferris State University.

David Moore, Producer-Announcer, WGVU-AM/FM.

Julie McKeiver, Producer-Announcer, WGVU-AM/FM.

David Oliver, Engineering Supervisor, WGVU/WGVK-TV, WGVU-AM/FM, A.A., University of Laverne.

Michael Packer, Producer-Announcer, B.S., Grand Valley State University.

Tim Scarpino, Producer-Director, WGVU/WGVK-TV.

Sallie Smith, Underwriting Representative, WGVU/WGVK-TV and WGVU-AM/FM, B.A., University of Michigan.

Sarah Torres, Traffic Supervisor, WGVI/WGVIK-TV and WGVI-AM/FM, B.S., Grand Valley State University.

Jacqueline Vansen, Creative Director, WGVI/WGVIK-TV and WGVI-AM/FM, B.F.A., Grand Valley State University.

Wynn Wikman, Broadcast Graphic Designer, WGVI/WGVIK-TV, B.A., Grand Valley State University.

Finance and Administration

Ronald E. VanSteeleland, Vice President for Finance and Administration.

University Counsel

Thomas A. Butcher, University Counsel, B.S., Ferris State University; J.D., Cooley Law School.

Eberhard Center

Lynn Krupansky, Business Operations Coordinator.

Nola Nielsen, Assistant Eberhard Center Manager, B.F.A., Calvin College.

Patricia Tolle, Conference Services Coordinator, B.S., Grand Valley State University; M.A., Western Michigan University.

Cynthia Winowiecki, Food Service Manager.

Business and Finance

James Bachmeier, Assistant Vice President for Business and Finance, B.B.A., Black Hills State University; M.B.A., Chadron State College.

Pamela Achtyes, Assistant Controller, B.S., Calvin College.

Ester Burns, Senior Buyer, A.A., Delta College.

Michael Doxey, Director of Business Services, B.B.A., Western Michigan University.

Star Hine, Budget and Financial Analyst, B.B.A., Grand Valley State University.

Barbara McNab, Printing Services Manager, B.A., Aquinas College.

Jeffrey Musser, Director of Budgets and Financial Analysis, B.S., Ferris State University.

Jerrod Nickels, Bookstore Manager, B.A., Aquinas College.

Valerie Rhodes, Buyer, B.S., Ferris State University; M.P.A., Grand Valley State University.

Karen Shriver, Student Accounts Manager, B.B.A., Western Michigan University.

Rolando Silva, Accountant, B.A., B.S.B.A., Aquinas College; C.M.A.

D. Kip Smalligan, Buyer, B.A., Calvin College.

James Starkweather, Controller, B.A., Wayne State University.

Terri Suess, Accountant, B.B.A., Western Michigan University.

Timothy Sullivan, Accountant, B.S., B.A., Aquinas College.

Craig Thelen, Assistant Bookstore Manager, B.S., Central Michigan University.

Brian VanDoeselaar, Payroll Manager, B.S., Aquinas College.

Marjo VanHeulen, Accountant, B.S., Ferris State University.

Directory

Athletics

Tim Selgo, Director of Athletics, B.Ed., M.Ed., University of Toledo.

Joan Board, Associate Director of Athletics, B.S., M.A., Michigan State University.

Claudette Charney, Head Women's Basketball Coach, B.S., Grand Valley State University.

Michael Denbrock, Assistant Football Coach, B.S., Grand Valley State University.

Deborah Dencer, Assistant Athletic Trainer, B.S., Bowling Green State University.

Daniel Karpanty, Assistant to the Director of Athletics, B.A., Grand Valley State University; M.A., Central Michigan University.

Brian Kelly, Head Football Coach, B.A., Assumption College.

Robert McKinney, Sports Information Director, B.A., Baker University; M.A., Pittsburg State University.

Dewey Newsome, Swimming Coach and Coordinator of Aquatics, B.S., Kent State University.

Rob Odejewski, Athletics Marketing/Promotion Director, B.S., Grand Valley State University.

Jeffrey Quinn, Assistant Football Coach, B.A., Elmhurst College; M.A., DePauw University.

Deanne Scanlon, Head Women's Volleyball Coach, B.S., Eastern Kentucky University.

Marc Scharphorn, Fieldhouse Management Assistant, B.S., Grand Valley State University.

Terry J. Smith, Head Men's Basketball Coach, B.S., Michigan State University; M.A., Central Michigan University.

Michael Stodola, Fieldhouse Building Manager, B.S., Ferris State College.

Douglas Woods, Head Athletic Trainer, B.S., University of Toledo; M.Ed., Grand Valley State University.

Joseph Woods, Assistant Football Coach, B.A., Illinois State University.

Human Resources

D. Scott Richardson, Assistant Vice President for Human Resources, B.S., M.S.A., Central Michigan University.

Sue Lindrup, Employment Representative, B.B.A., Grand Valley State University.

Amy Tennis, Benefits Manager, B.B.A., Davenport College of Business.

David Veneklas, Director of Staff Relations and Benefits, B.A., Grand Valley State University.

Linda Yuhas, Employment and Compensation Manager, B.A., Indiana University; M.A., Grand Valley State University.

Facilities

Phyllis Rossiter Forbes, Assistant Vice President for Facilities, A.B., Stanford University; M.A., Ph.D., University of Arizona.

Farley Coomber, Plant Services Supervisor, B.A., M.A., Michigan State University.

Frank Drewry, Plant Services Supervisor, B.S., University of Montana.

David Feenstra, Assistant Maintenance Supervisor.

James Flanders, Project Manager, B.S., Ferris State University.

Secundino Garcia, Plant Services Supervisor, B.A., Grand Valley State University.

Karen Ingle, Plant Engineer, B.S., Michigan State University.

Madonna Markus, Assistant Director of Plant Services, B.S., Grand Valley State University.

James Moyer, University Architect, B.A., Howard University.

John C. Scherff, Maintenance Supervisor.

Timothy Thimmesch, Director of Plant Services, B.S., Kansas Newman College.

Allen D. Wygant, Director of Public Safety Services.

Golf

Terry Sack, General Manager, Meadows Golf Club, B.S., Ferris State College; M.B.A., Grand Valley State University.

Kathy Antaya, Golf Course Superintendent, B.S., Michigan State University.

Patricia Butcher, Golf Professional, B.A., Florida Atlantic University, L.P.G.A. Teaching and Club Professional Division.

Donald Underwood, Golf Professional, B.S., Ferris State University; P.G.A. Class "A" certification.

Campus Security Information — Grand Valley State

Grand Valley State University, a community of approximately 15,000 people, consists of a 1,000-acre campus in Allendale and a 15-acre campus in downtown Grand Rapids. 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 brochure to increase your awareness of the current programs that exists 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 regarding 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 students enrolled in the fall semester by the number of incidents reported.

1994			
13,553 Students	Incidents Reported	Arrests	Crime Rate
Murder	0	0	—
Sex Offense — Forcible	2	0	.0001
Sex Offense — Non-Forcible	0	0	—
Robbery	1	0	—
Aggravated Assault	2	2	.0001
Burglary	4	2	.0003
Larceny	94	13	.0069
Motor Vehicle Theft	1	1	—
Liquor Law Incidents	19	42	.0014
Drug Abuse Incidents	12	14	.0009
Weapon Possessions	0	0	—
Total Incidents	135	—	—
Total Arrests	—	74	—
1995			
13,887 Students	Incidents Reported	Arrests	Crime Rate
Murder	0	0	—
Sex Offense — Forcible	2	1	.0001
Sex Offense — Non-Forcible	0	0	—
Robbery	0	0	—
Aggravated Assault	0	0	—
Burglary	12	1	.0008
Larceny	152	22	.0109
Motor Vehicle Theft	0	0	—
Liquor Law Incidents	50	70	.0036
Drug Abuse Incidents	38	46	.0027
Weapon Possessions	2	1	.0001
Total Incidents	253	—	—
Total Arrests	—	130	—

14,662 Students	1996		Crime Rate
	Incidents Reported	Arrests	
Murder	0	0	—
Sex Offense — Forcible	2	1	.0001
Sex Offense — Non-Forcible	0	0	—
Robbery	1	0	.0001
Aggravated Assault	1	1	.0001
Burglary	5	1	.0003
Larceny	142	11	.0099
Motor Vehicle Theft	1	1	.0001
Liquor Law Incidents	115	161	.0080
Drug Abuse Incidents	42	53	.0029
Weapon Possessions	5	3	.0003
Total Incidents	314		—
Total Arrests		232	—

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.

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.

Non-Forcible Sex Offense: Unlawful, non-forcible 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.

Burglary: The breaking and entering, with no personal threat involved and usually no confrontation between burglar and victim.

Larceny: The act of stealing, in which neither illegal entry nor the threat or use of force is present.

Motor Vehicle Theft: The theft or attempted theft of a motor vehicle.

Liquor Law Incidents: Prohibits the manufacture, sale, purchase, transportation, possession, or use of alcoholic beverages.

Drug Abuse Incidents: Prohibits the production, distribution and/or use of certain controlled substances and the equipment or devices utilized in their preparation and/or use.

Weapons Possessions: The violation of laws prohibiting the possession, concealment, and use of a firearm or other deadly weapon.

Hate Crimes: Any of the above crimes that manifest evidence of prejudice based on race, religion, sexual orientation, or ethnicity.

Sexual Assault Procedures

Victims of sexual offenses (forcible or non-forcible) 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. A GVSU Police Officer will be dispatched to assist the victim and will contact the Counseling Center.

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 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 which 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 Residential Life Office, or Public Safety Services.

The GVSU 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.

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 GVSU are served by the Grand Rapids Police Department. All GVSU Department of Public Safety Services officers are certified by the Michigan Law Enforcement Officers Training Council and are deputized by the Ottawa County Sheriff's Department. 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.

GVSU employs a fully equipped and trained university police department, providing 24-hour police services and assistance. The Department of Public Safety Services maintains limited dispatch services and office hours on the Allendale campus and relies on 24-hour service from Ottawa County Central Dispatch Authority.

The Eberhard Center's criminal incidents and emergencies are reported to the Grand Rapids Police Department 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 security personnel on a part-time basis. Student security personnel provide crowd control, monitor pedestrian crosswalks, direct traffic, and enforce traffic ordinances. Housing student security personnel are responsible for resident building security, enforcing GVSU Housing rules and regulations and providing general assistance to residents and guests.

Policies and Procedures

Approximately 1,000 faculty and staff and 15,000 students work and study at Grand Valley. Approximately 1,600 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 which 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 GVSU property or as a part of a university activity is specifically prohibited by GVSU policy and by state and federal law. GVSU 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 GVSU's Department of Public Safety Services at (616) 895-3255. Medical, police, and fire emergencies can be reported by calling 911, or 9-911 if using a campus phone. 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 GVSU 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) 895-3266.

Security on Campus

The Allendale campus has three residence halls housing approximately 900 students, nine living centers housing 642 students, and the Ravine apartments, which accommodate 350 students. Off-campus housing includes Greek houses and private apartment complexes located near the Allendale campus.

Security personnel and other employees are assigned to campus housing facilities. Approximately 120 students 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 are locked from 10 p.m. to 10 a.m. This applies to all living units except the Ravine apartments, where residents are responsible for locking their own doors. Students living in the residence halls are allowed to have visitors of the opposite sex during visiting hours, which are 10 a.m. to midnight, Sunday through Thursday, and 10 a.m. to 2 a.m. on Friday and Saturday. In other housing facilities, residents are allowed open visitation with their roommates' consent.

Campus Security

Special security procedures are in effect during low-occupancy periods. The Ravine apartments are the only on-campus facilities that stay open to residents during holiday breaks. (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 planting is arranged and maintained so that building entrances are easily visible from a distance.

Individual Responsibility

A safety program such as the one at GVSU could not reach its highest potential without the cooperation of the students. 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, residence halls, 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.

Drug and Alcohol Policy

Philosophy

Consistent with Grand Valley State University's commitment to provide the safest, most optimal environment for the highest quality education possible, 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 GVSU.

The University upholds and enforces local, state, and federal laws and the alcohol and drug policies of all collegiate governing bodies which are responsible for the activities of their GVSU 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 which 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 GVSU property or as part of a University activity is specifically prohibited by GVSU 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 which 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, being 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 manufacturing 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 the following civil penalties:

- a. First violation: up to \$25 fine;
- b. Second violation: up to \$50 fine, and/or participation in a substance abuse program;
- c. Third and subsequent violations: up to \$100 fine, and/or participation in a substance abuse program.

It is a misdemeanor for a person under 21 years of age to knowingly transport or possess alcoholic liquor *in a motor vehicle*, unless such activities are in connection with the minor's employment pursuant to a liquor license or other authorized agent of the Liquor Control Commission. Following a conviction for violation of this provision, steps may also be taken to impound the vehicle used in the offense. Alcoholic liquor may not lawfully be sold, traded, or otherwise furnished to a person who has not attained the age of 21 years. Knowingly selling or furnishing alcoholic liquor to a person under the age of 21, or failing to make a diligent inquiry as to whether the person is under the age of 21 is a misdemeanor.

C. Fraudulent Identification

A person who furnishes fraudulent identification to a person less than 21 years old or a person under the age of 21 who uses fraudulent identification to purchase alcoholic liquor is guilty of a misdemeanor. In addition to penalties pursuant to the misdemeanor, the driver's license of a person convicted of using fraudulent identification shall be suspended for 90 days.

D. Regulation of Sale Laws

Under Michigan law, the *sale, trade, or giving away* of alcoholic liquor, including alcoholic liquor for personal use, requires a license or other prior written authorization from the Liquor Control Commission. A person who conducts any activity for which a liquor license is required without first obtaining the requisite license is guilty of a felony, punishable by imprisonment for not more than one year, and/or by a fine of not more than \$1,000.

E. Open Container Laws

The consumption of alcoholic liquor on the public highways of Michigan is forbidden by law. It is unlawful to transport or possess any alcoholic liquor in a container which is open, uncapped, or upon which the seal is broken, within the passenger compartment of a motor vehicle on the highways of Michigan.

II. Health Risks Associated with the Use of Illicit Drugs and the Abuse of Alcohol

Health (and other) risks associated with the use of alcohol and other drugs include, but are not limited to: impaired academic or work performance; lost potential, absenteeism from class or work; financial problems; doing things one later regrets; conflicts with co-workers, classmates, families, friends, and others; sexual assault and other unplanned sexual relationships; unwanted pregnancies; sexually-transmitted diseases; unusual or inappropriate risk-taking which may result in physical or emotional injury, or death; blackouts; hangovers; long-term health problems, including cirrhosis of the liver, organic brain damage, high blood pressure, and heart disease; and legal problems, including imprisonment.

III. Drug and Alcohol Prevention, Counseling and Rehabilitation, and Re-entry Programs

Grand Valley State University is concerned about the effect of alcohol and/or drugs on students, faculty and staff members, their families and the University community as a whole. The University recognizes that an individual with an alcohol and/or drug problem may be rehabilitated. GVSU will continue to make efforts to increase the awareness about the dangers of drugs.

GVSU 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 (895-3220), and faculty and staff are encouraged to contact the Faculty Staff Assistance Program (EAC) at 458-8540, the Human Resources Office at 895-2215, or their insurance carrier to obtain information concerning coverage.

IV. Sanctions

GVSU 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.

Index

- A**
- Academic advisor, definition of, 474
 - Academic calendar, 4
 - Academic dismissal/suspension, 81; definition of, 474
 - Academic Excellence, 13
 - Academic grievance procedures, 77
 - Academic honesty, 75
 - Academic policies and regulations, 72; undergraduate, 81; graduate, 91
 - Academic probation, 81
 - Academic programs, list of, 478
 - Academic Resource Center, 94
 - Academic review, undergraduate, 81; graduate, 91
 - Academic suspension, 81
 - Academic waivers, 80
 - Accounting, 135
 - Accounting Alumni Advisory Board, 128
 - Accreditation, inside front cover
 - Accreditation Board for Engineering and Technology (ABET), 243
 - ACT, 32
 - Administrative officers, 480
 - Administrative staff, 504
 - Admission, undergraduate, 32; graduate, 37
 - Advanced placement, 83; definition of, 474
 - Advertising and public relations, 169
 - Advising, 83
 - Affirmative Action Office, 27
 - African/African American studies minor, 98
 - Aging and adult life, 100
 - Alexander Calder Fine Arts Center, 7
 - Amaranthus, 262
 - American Marketing Association, 129
 - American Physical Therapy Association, 388
 - Animation, 172
 - Anthropology, 101
 - Apartments, 22
 - Application for degree, 80
 - Aquatic and Fisheries-Biology (see Biology)
 - Art and design, 105
 - Art Center, 8
 - Athletics, intercollegiate, 20
 - Athletic scholarships, 51
 - Athletics Complex, 10
 - Athletic training, 381
 - Attendance, class, 82
 - Auditing, definition of, 474; policy on, 74
 - AuSable Hall, 7
 - Awards for Excellence, 48
 - Awards of Distinction, 47
- B**
- Bachelor's degree, definition of, 474
 - Badminton courts, 31
 - Bands, 349
 - Baseball, 20
 - Basketball, 20
 - Behavioral science, 117
 - Beta Beta Beta, 13
 - Biochemistry, 159
 - Biology, 117
 - Biomedical sciences, 285
 - Biopsychology, 417
 - Board of Control, 480
 - Bookstore, 29
 - Breen history prize, 295
 - Broadcasting, 170
 - Business, 126; undergraduate program, 132; graduate programs, 139
 - Bus service, 29
- C**
- Calder Fine Arts Center, 7
 - Calendar, 4
 - Campus Events Information, 19
 - Campus life, 15
 - Campus Ministry, 29
 - Campus services, 24
 - Capstone course, 90; definition of, 474
 - Career Planning, 24
 - Career Services, 25
 - Catalog limitations and guarantees, 91, 93
 - CELT, admission requirements for international students, 36
 - Ceramics, 108
 - Certification requirements, 218
 - Cheerleading, 20
 - Chemistry, 156

Index

- Children's Center, 29
Chinese, 333
Choirs, 349
City and Regional Planning, 164
Class attendance, 82
Classics, 165
Classification of students, 81
Class standing, definition of, 474
CLEP, 83
Clinical Laboratory Science Emphasis, 282
Clubs and organizations, 15
Coaching, 382
Cognate, 89; definition of, 474
Commencement, 80; dates of, 4
Committee on Professional Training of the American Chemical Society, 13, 156
Commons, 10
Communications, 167; major in, 173; master of communication, 179
Community College Scholarships, 51
Computer Center, 8
Computer information systems, 196
Computer science and information systems, 191; master's program, 196
Continuing Education, 471
Continuing Education Unit, definition of, 474
Cook Carillon Tower, 8
Cook-DeWitt Center, 8
Cooperative education, 26; in engineering, 247
Co-requisite, 474
Costs, 41, 45
Council on Social Work Education, 13, 438, 445
Counseling, 24
Creative writing, 256
Credit by examination, 56, 83
Credit hour, definition of, 73, 474
Credit load, 83, 92; definition of, 474
Credit/no credit, 73; definition of, 474
Criminal justice, 204
Cross country, 20
Cum laude, 82
- D**
Dance, 384
DANTES, 83
Day Care Center (see Children's Center)
- Dean of Students, 24
Deans' list, definition of, 474; policy on, 82
Deferred grade, 72
Degree, application for, 80
Degree audit, 83
Degree cognate, 89
Degree programs, 478
Degree requirements, 84; graduate, 92
Degrees, inside front cover
Delta Mu Delta, 13, 130
Delta Sigma Pi, 130
Design (see Art and Design)
Dining halls, 21
Directory, 480
Dismissal, 82
Distance education, 472
Dobro Slovo, 13
Dormitories, 10, 20
Double major, 90
Drop and add, 79; definition of, 474
Dual credit, 40; definition of, 475
- E**
Early childhood education, 223
Earth science, 277
East Asian studies minor, 208
Eberhard Assistantship, 56, 131
Eberhard Center, 11
Eberhard Scholarship, 55, 131
Economics, 210
Education, 214; undergraduate program, 214; graduate program, 221
Educational Connections, 94
Educational Support Program, 95
Elective, definition of, 475
Elementary teacher certification, 218
Emphasis, definition of, 475
Employment, student, 29, 64, 67, 476
Encumbrance, definition of, 475
Engineering, 245
English, 255
English Clubs, 262
English as a Second Language, 269
Enrollment, inside front cover
Environmental emphasis, 159
Environmental health (see Natural Resources Management)
EXCEL Program, 94
Executive-in-Residence program, 129
Exercise Science, 284

- F**
- Faculty, directory of, 481
 - Fees, 41
 - Fieldhouse, 10
 - Film and video production, 171
 - Finance, 136
 - Financial aid, 41–71; tuition, 41;
 - residency, 41; fees, 41; tuition and fees refund policy, 42; application procedure, 43; application dates, 45; costs, 45; financial aid for part-time students, 46; for graduate students, 46; for overseas study, 47; financial aid programs, 47; grants and scholarships, 47, 65; educational loans, 64, 66; student employment, 64, 67; special programs, 68; refunds and repayment, 69; definitions, 70; academic progress, 70; conditions for, 71.
 - Fine arts organizations, 15
 - Fine arts scholarships, 51
 - Fitness Center, 10
 - Fitness Trail, 31
 - Food service, 20
 - Food Service Management (see Hospitality and Tourism Management)
 - Football, 20
 - Foreign languages and literatures (see Modern Languages and Literatures)
 - Fraternities, 17
 - French, 334
 - Freshman Seminar, 267
 - Freshman Studies Program, 267
 - Full-time student, definition of, 475
- G**
- General academic policies and regulations, 72
 - General business, 138
 - General education, graduate program in, 223
 - General education requirements, 85; definition of, 475
 - General management, 137
 - Geography, 270
 - Geology, 274
 - Geology-chemistry, 276
 - German, 336
 - Giles Memorial Scholarships, 57, 131
 - Glossary of terms, 474
 - Golf, 11, 20
 - Good standing, 81; definition of, 475
 - Government, student, 17
 - Grade point average (GPA), requirements, 84, 92; definition of, 475
 - Grade reports, 75
 - Grading, 72
 - Graduation honors, 82
 - Graduation requirements, 84, 92
 - Grand Valley State University objectives, 2
 - Grants, 47, 65, 475
 - Graphic design, 108
 - Great Lakes Intercollegiate Athletic Conference (GLIAC), 20
 - Greek, 163
 - Greek life, 17
 - Grievance procedures, 77
 - Guest student, definition of, 475
- H**
- Health communication, 174
 - Health, Recreation, and Wellness, 31
 - Health sciences, undergraduate program, 280; graduate program, 286
 - Health Services, 30
 - Henry Hall, 8, 9
 - High School Scholars Program, 35, 475
 - History, 293
 - History of science, 301
 - Honors, definition of, 475
 - Honors courses, definition of, 475
 - Honors Program, 36, 302 admission requirements, 36
 - Honor societies, 13
 - Hospitality and tourism management, 307
 - Hotel Management (see Hospitality and Tourism Management)
 - Housing, 20; application and refunds, 22
 - Housing office, 22
 - Human Resources 137
- I**
- Illustration, 108
 - Incomplete, definition of, 475; policy on, 72
 - Independent study, definition of, 475; graduate policy on, 92
 - Information, campus events, 19

Index

- Information systems major, 194
Information Technology, 8
Insurance, medical, 30
Interactive television courses, 472
Intercollegiate athletics, 20
Interdisciplinary, definition of, 475
International Affairs Office, 96, 333
International business, 136
International relations, 311
International students, 24; admission requirements, 36, 39
Internship, definition of, 84, 475
Internships, 26
- J**
Japanese, 333
Jewelry/metalsmithing, 108
Journalism, 176
Judiciary, 24
- K**
Kirkhof Center, 7
Kirkhof School of Nursing, 353
- L**
Lake Huron Hall, 7
Lake Michigan Hall, 7
Lake Superior Hall, 7
Land and Soils Resources Management, 351
language arts, 256
Languages (see Modern Languages and Literatures)
Lantern, The, 10, 18
Latin, 163
Latin American studies, 314
Legal studies, 315
Liberal studies, 317
Library, 7
Living Centers, 10, 22
Loans, 64, 66, 475
Louis Armstrong Theatre, 7
Lubbers Stadium, 10
- M**
Mackinac Hall, 8
MACRAO, 34
Magna cum laude, 82
Major, definition of, 476
Management, 137
Manitou Hall, 8
Map, inside back cover
Marketing, 137
Math and Science Student Support, 27
Master's degree, definition of, 476
Mathematics, 320
Mathematics Placement Test, 324
McNair Scholars Program, 95
Meadows Golf Course, 11
Meijer Public Broadcast Center, 12
Michigan professional certification, 250
Michigan residence requirements, 79, 476
Midwest Intercollegiate Football Conference, 20
Ministry, campus, 29
Minor, definition of, 476
Minority Affairs, 28
Minority Business Education Center, 133; scholarships, 49
Minority Teacher Education Center Scholarships, 50
Modern Languages and Literatures, 331
M.S.T. Advisory Board, 128
Multicultural Center, 28
Music, 340; scholarships, 52
- N**
National Association of Schools of Art and Design, 13, 106
National Association of Schools of Music, 13, 341
National College Athletic Association (NCAA), 21
National Council of Teachers of English (NCTE), 262
National League for Nursing, 13, 353
Natural resources management, 350
Newspaper, student, 10, 18
Nondegree student, applicants, 35, 38; definition of, 476
North Central Association of Colleges and Schools, accredited by, inside front cover
Nursing, 353; undergraduate program, 354; graduate program, 358
- O**
Occupational safety and health, 366
Occupational therapy, 369
Office for Economic Expansion, 128
Oldenburg Writing Contest, 262
Orchestra, 349
Orientation, 84

- P**
- Padnos, Seymour and Esther, 244
- Padnos, Seymour and Esther, School of Engineering, 243
- Padnos, Seymour and Esther, Hall of Science, 8, 9
- Painting, 108
- Parking, 31
- Part-time student, definition of, 476
- Pell Grants, 65
- Performing arts organizations, 15
- Perkins loans, 66
- Phi Alpha Theta, 13, 295
- Phi Epsilon Kappa, 13
- Phi Kappa Phi, 13
- Philosophy, 376
- Photography, 176
- Physical education, 379
- Physical Education/Recreation/Athletic Complex, 10
- Physical therapy, 387
- Physical therapy emphasis, 287
- Physician assistant studies, 395
- Physics, 403
- Pi Alpha Alpha, 13
- Pi Sigma Alpha, 13
- Plagiarism, policy on, 76
- Police Academy, 201
- Polish, 333
- Political science, 409
- Portfolio, definition of, 476
- Pre dental studies, 119; 414
- Prehealth curriculum, 413
- Pre-law, 410
- Premedical studies, 119, 414
- Prerequisite, definition of, 476
- Presidential Scholarships, 48
- Price, Bert, university scholarships, 49
- Price, Bert, Memorial Scholarships, 61
- Printmaking, 108
- Probation, academic, 81
- Psi Chi, 13
- Psychology, 414
- Psychology-special education, 417
- Public and nonprofit administration, 423; undergraduate program, 421; graduate program, 426
- Public safety department, 31
- Q**
- Quality Point, definition of, 72, 476
- R**
- Racquetball courts, 31
- Radio (WGVU-FM), 11, 20
- Ravine Apartments, 10, 22
- Reading Language Arts, in M.Ed. program, 225
- Readmission, definition of, 476; policy 81
- Recitals, 348
- Records, student, 75, 80
- Recreation, 30; outdoor facilities, 31; indoor facilities, 31
- Recreation, therapeutic, 463
- Re-entry, definition of, 476
- Refunds, 12, 69
- Religious groups, 16
- Registration, 78; definition of, 476
- Repeating a course, 75
- Research and Development, Center for, 13
- Residence halls, 10, 20
- Residency requirements, 41, 79, 476
- Restaurant Management (see Hospitality and Tourism Management)
- Returning Adult Students, 24
- Russian, 337
- Russian studies, 433
- S**
- SAT, 32
- Satellite courses, 473
- Scholarships, 47, 65, 476
- School health education, 284
- Science, Group Major Program, 120, 161, 278, 323, 435
- Sculpture, 108
- Secondary teacher certification, 219
- Second bachelor's degree, 90
- Second master's degree, 39, 93
- Seidman, F.E., 127
- Seidman (L. William) Endowed Chair, 128
- Seidman House, 7
- Seidman School Advisory Board, 128
- Seidman School of Business, 126; undergraduate program, 132; graduate program, 139
- Semester hour, 476
- Sherwood Scholarship, 62, 132
- Sigma Delta Pi, 13
- Sigma Tau Delta, 13, 262

Index

- Sigma Theta Tau, 13
Sigma Xi, 13
Social science, 435
Social studies, 437
Social work, 438; bachelor of social work, 438; master of social work, 445
Sociology, 454
Softball, 20, 31
Sororities, 17
Spanish, 338
Special education, 226
Special education-psychology, 417
Sports, 31
Sports clubs, 16, 31
Squash courts, 31
Statistics, 459
Stephenson Foundation Scholarship, 63, 132
Student Code, 20
Student Employment, 29, 64, 67, 476
Student government, 17
Student life, 15
Student Life Office, 18
Student organizations, 15
Student records, policy on, 80
Student Senate, 17
Student Services Building, 8
Study abroad programs, 96, 312, 333
Study plan, definition of, 476
Summa cum laude, 82
Summer Study Abroad, 97
Supplemental Educational Opportunity Grants, 66
Supplemental writing skills, 88
Suspension, academic, 81
Swimming, 20, 31
Swimming pool, 10, 31
- T**
Taxation, master's program, 142
Teachable major, definition of, 476
Teacher certification, 218, 219, 220
Telecourses, 472; definition of, 476
Television station, 11, 19
Tennis, 20, 31
Theatre, 177
Therapeutic recreation, 463
Time limit, definition of, 477
TOEFL, admission requirements for international students, 30, 39
Tourism (see Hospitality and Tourism Management)
Track, 20, 31
Transcript, definition of, 477; policy, 75
Transfer students, 33, 89
Transfer credit, definition of, 477
Transfer credit policy, 34, 39, 89
Travel Management (see Hospitality and Tourism Management)
TRIO Programs, 94
Trotter Tri-County Scholarships, 51
Tuition, 41; refund policy, 42
Tutoring, 95
- U**
UAW Scholarships, 51
Unit of credit, 72
University and Its Objectives, 2
University scholarships, 47
Upperclass Honor Scholarships, 50
Upper division, definition of, 477
Upward Bound, 95
- V**
Veterans Administration, certification for benefits, 80
Visits by prospective students, 12
Volleyball, 20, 31
Volunteer GVSU, 18
- W**
Waivers, academic, 80
Wall Street Journal Award, 131
Washington Program, 143
Weight Room, 31
WGVL-AM and FM 11, 19
WGVL-TV, Channel 35, and WGVK, Channel 52, 11, 19
Wildlife Biology (see Natural Resources Management)
Withdrawal from college, 74, 477
Withdrawal from courses, 74, 477
Women's studies, 468
Work-study program, 61
Writing Center, 96
Writing skills requirement, definition of, 477
- Z**
Zumberge Library, 77



GRAND VALLEY
STATE UNIVERSITY

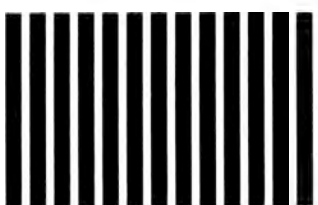
1 CAMPUS DR
ALLENDALE MI 49401-9403



BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO 1 ALLENDALE MI

ADMISSIONS OFFICE 2-20260
GRAND VALLEY STATE UNIVERSITY
1 CAMPUS DR
ALLENDALE MI 49401-9989

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



Begin Your Future at Grand Valley State University

For additional information about Grand Valley State University and the opportunity we offer, please complete and mail this card. Or call toll free: 1-800-748-0246. In the Grand Rapids area, call (616) 895-2025.

Name (please print) _____ First _____ Middle Initial _____ Last _____

Address _____ Number and Street _____ City _____ State _____ Zip Code _____ County _____

Social Security Number (optional) _____ Date of Birth (optional) _____

I'm now enrolled in (name of school) _____

I'm considering enrolling for Fall, Winter, Summer, 19 _____

I'm interested in receiving the following information:

Program brochures _____

List programs

Housing Scholarships and Financial Aid Free VHS video about Grand Valley

Diversity Career Services

Free Financial Aid Estimator:

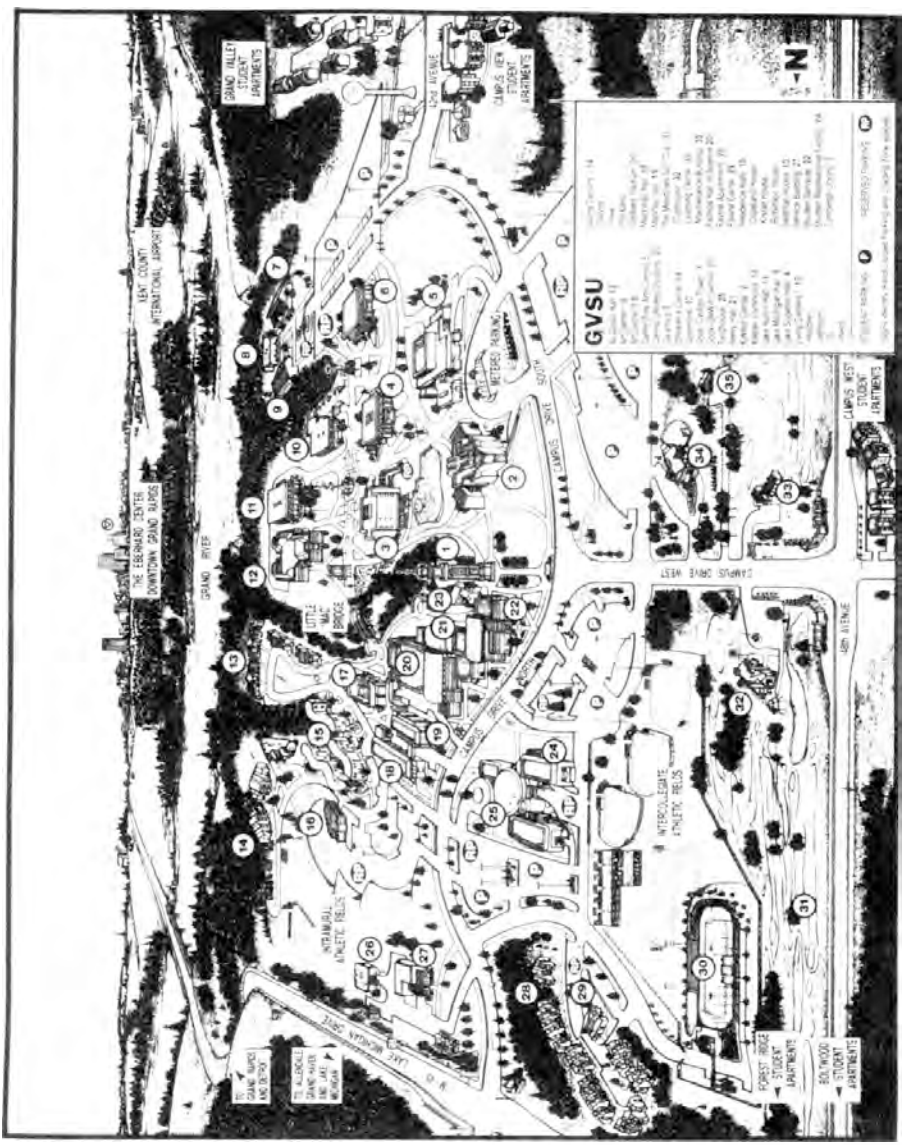
Specify Form or Diskette (for PC or Macintosh) 5/4 3/4

I would like an appointment with: Admissions Tour Financial Aid

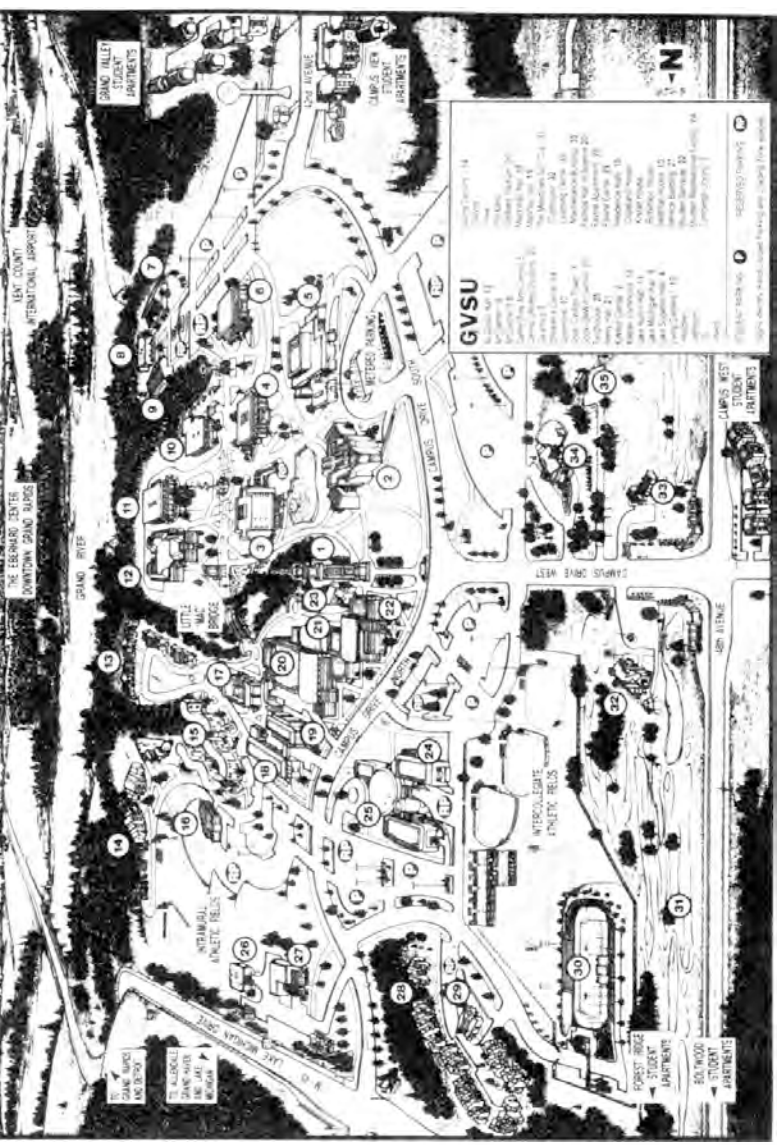
Departmental Representative

(The Admissions Office will call you to schedule the appointments. Please indicate a convenient time to reach you _____.)

Telephone _____ Best time to call _____



LEWIS COUNTY INTERNATIONAL AIRPORT
 GRAND RIVER
 THE FERRIS CENTER
 DOWNTOWN GRAND PLAZA



GRAND HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

GRAND HILL
 STUDENT
 APARTMENTS

GRAND HILL
 STUDENT
 APARTMENTS

GRAND HILL
 STUDENT
 APARTMENTS

GRAND HILL
 STUDENT
 APARTMENTS

GRAND HILL
 STUDENT
 APARTMENTS

GRAND HILL
 STUDENT
 APARTMENTS

GRAND HILL
 STUDENT
 APARTMENTS

GRAND HILL
 STUDENT
 APARTMENTS

GRAND HILL
 STUDENT
 APARTMENTS

GVSU

Location Map 11

1 Administration Center
 2 Academic Building
 3 Art Building
 4 Business Administration
 5 Chemistry
 6 Computer Science
 7 Criminal Justice
 8 Education
 9 English
 10 Environmental Science
 11 History
 12 International Studies
 13 Journalism
 14 Law
 15 Life Sciences
 16 Mathematics
 17 Music
 18 Nursing
 19 Physical Education
 20 Psychology
 21 Public Administration
 22 Public Health
 23 Social Work
 24 Speech
 25 Theater
 26 Visual Arts
 27 Writing Center
 28 Student Center
 29 Student Union
 30 Student Services
 31 Student Health Center
 32 Student Recreation Center
 33 Student Activities Center
 34 Student Government
 35 Student Leadership Center
 36 Student Leadership Center
 37 Student Leadership Center
 38 Student Leadership Center
 39 Student Leadership Center

100 Student Leadership Center
 101 Student Leadership Center
 102 Student Leadership Center
 103 Student Leadership Center
 104 Student Leadership Center

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

CAMP'S HILL
 STUDENT
 APARTMENTS

Book Rate



1997-98 Undergraduate and Graduate Catalog
Grand Valley State University / Allendale MI 49401-9403
Telephone: 1-800-748-0246
Internet: go2gvsu@gvsu.edu
World Wide Web: www.gvsu.edu

