
UNIVERSITY OF WISCONSIN-GREEN BAY

UNDERGRADUATE CATALOG

How To Use This Catalog

This catalog provides information about academic programs, facilities, services, and campus life at the University of Wisconsin-Green Bay. It describes what the University offers and what the University expects of a student in order to successfully complete an academic program.

The catalog is essential for planning a program of study, but students should not rely entirely on it. After reading appropriate sections of this catalog, students should plan their individual programs with the help of academic advisers and faculty advisers for their majors.

Current Information

Current fee and tuition information is distributed as far in advance of each session as possible through the *Timetable* or a fee information sheet, both published by the Registrar's Office. Fee information appears in the *Timetable* for each fall, spring, January, or summer session if fees have been determined by the Board of Regents before the *Timetable* is printed. If the information is received too late for the *Timetable*, it appears on a fee information sheet which is available to every student and prospective student.

Course schedules for each session are published in the *Timetable*. Changes which take place too late to be included are listed on addenda sheets given to students at the time of registration and posted at the Registrar's Office.

Other Publications

Academic Advising Handbook

(available from Academic Advising Office)

A guide to program planning, registration, and academic requirements.

Course Listing

(available from Admissions Office)

Lists schedule of courses for each spring and fall semester.

Timetable

(available to admitted students from Registrar's Office)

A schedule of courses offered for each term, along with other information on registration, descriptions of new courses, tuition and fees, etc.

Student Handbook

(available from Dean of Students Office)

Information about life on the campus and in the Green Bay community.

Prospectus

(available from Admissions Office)

A summary of information for persons interested in exploring the possibilities at UWGB.

Program of Study Flyers

(available from Admissions Office)

Individual flyers with detailed information on each academic program.

Housing Brochure

(available from Admissions Office)

A brochure describing on-campus residence halls and apartments for students.

Extended Degree Program Catalog

(available from Extended Degree Office)

Describes external degree program for adults who want to complete a college degree.

Graduate Studies Catalog

(available from Graduate Studies Office)

A catalog providing information about the University's graduate studies tracks.

Other publications are available on special services and programs.

For More Information

The University address is:

University of Wisconsin-Green Bay
2420 Nicolet Dr.
Green Bay, Wisconsin 54311-7001

Campus Information Center

414-465-2000

Academic Advice

Academic Advising Office; 414-465-2362

Adult Student Information

Adult Services Office; 414-465-2530

Applications, Brochures, Undergraduate Catalogs, Campus Visits, General Information

Admissions Office; 414-465-2111

Career Counseling

Placement and Career Development Office; 414-465-2163

Financial Aid

Financial Aid and Student Employment Office; 414-465-2075

Graduate Studies

Associate Dean for Graduate Studies; 414-465-2484

Housing Off Campus

Dean of Students; 414-465-2152

Housing On Campus

Residence Life Office; 414-465-2040

Lifelong Learning

Office of Outreach; 414-465-2102

Personal Counseling and Life Planning

Counseling and Student Development Center; 414-465-2343

Student Records, Transcripts, Residency, Credit Evaluation

Registrar's Office; 414-465-2055

Effective Dates

This catalog is in effect beginning May 1, 1990, and until it is superseded by a new catalog. Policies of the 1988-90 catalog are in effect until April 30, 1990, unless they are changed by official announcements.

University Policy

The provisions of this catalog are not to be regarded as an irrevocable contract between the student and the University of Wisconsin-Green Bay. All of the information in this book was accurate at the time of its printing, but changes are made from time to time in academic requirements, courses offered, and general regulations. Such changes are made through established procedures which protect the University's integrity and the individual student's interest and welfare. Changes are usually announced in the *Timetable* and in the form of updates mailed with grade reports at the end of each term. When a curriculum or graduation requirement is changed, it is not made retroactive unless the change is to the student's advantage and can be accommodated within the span of years normally required for graduation.

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UNIVERSITY OF WISCONSIN-GREEN BAY



The Academic Program

Students who graduate from the University of Wisconsin-Green Bay are well prepared for careers or advanced study. UW-Green Bay's distinctive academic plan enables students to acquire and integrate the knowledge and skills sought by today's employers and graduate and professional schools. Equally important, the academic program prepares students for a lifetime of learning and the ability to understand and respond productively to change.

All students at UW-Green Bay participate in a broadly defined general-education program which includes studies in the natural sciences, social sciences, humanities, and fine arts. Many general-education courses are designed to bring together different academic disciplines; others are more focused upon a particular dimension or

approach; others emphasize studies of minority cultures within American society or the cultures of other countries. The general-education program is completed in the senior year with a seminar in which the students' different intellectual perspectives are brought to bear upon a particular topic or issue.

In addition to general education, students at UW-Green Bay pursue in-depth preparation through a major in a disciplinary program, a professional program, or an interdisciplinary program. Students who pursue a major in a particular discipline have an added dimension to their preparation because they also complete a minor in an interdisciplinary program which demonstrates the applications of disciplinary and professional skills in related fields. This enables them to work productively with persons from other backgrounds as they seek to understand a broad range of issues and problems.

Many students select an interdisciplinary major, recognizing that there are many career directions in which broadly integrated preparation is better than a more specialized disciplinary background. Some of these students will also include a minor in a disciplinary program or studies in a professional program.

UW-Green Bay students have a significant advantage because of the university's emphasis upon practical applications of knowledge. By applying knowledge to real experience, they learn to define problems, evaluate them, and find solutions. They gain such experience in many ways—through class projects, independent study, professional internships, honors projects, and working with faculty and community members on research and other special projects. These activities all can count as practical experience when students enter their chosen careers. Surveys of UW-Green Bay graduates show that they feel well prepared for their chosen occupations and for further education.

Such an emphasis upon the applications of knowledge requires the support of faculty members who have a strong commitment to excellence in teaching. At UW-Green Bay, senior faculty regularly teach introductory courses as well as advanced courses and seminars. Surveys of alumni consistently show high satisfaction with faculty expertise and student-faculty relationships. Many comment on the special attention and encouragement they received from their professors. Independent study projects, research projects, and internships all require a great deal of individual time and attention and reflect the faculty's concern for the academic and personal growth of their students.

This emphasis upon integrated studies and practical problem-solving is what makes the education experience at UW-Green Bay distinctive as a strategy for learning, as preparation for productive and fulfilling careers, and as a way to develop a responsive and responsible perspective as citizens and stewards of the Earth.

Degrees

UWGB offers the Bachelor of Arts (B.A.) or Bachelor of Science (B.S.) degree, the Bachelor of Social Work (B.S.W.), the Bachelor of Science Nursing (B.S.N.), and the Bachelor of General Studies (B.G.S.). It also offers a two-year Associate of Arts (A.A.) degree, and graduate studies leading to a Master of Science (M.S.). Three graduate degrees offered are:

- Master of Science in Administrative Science
- Master of Science in Community Human Services
- Master of Science in Environmental Science and Policy

The Master of Business Administration and several master's degrees in education are offered cooperatively with University of Wisconsin campuses at Oshkosh and Milwaukee.

Accreditation

The university is accredited by the North Central Association of Colleges and Secondary Schools for the bachelor's degree, and for graduate work at the master's degree level.

The music program is accredited by the National Association of Schools of Music for undergraduate degrees emphasizing music performance and music education. The chemistry program is accredited by the American Chemical Society, the dietetics component of the nutritional sciences major by the American Dietetic Association, the nursing program by the National League of Nursing, and the social work program by the Council on Social Work Education.

History

In 1965, when the Wisconsin Legislature authorized a new campus of the University of Wisconsin System for Northeastern Wisconsin, Green Bay was already the home of a two-year University of Wisconsin Center enrolling about 1,000 students. It was integrated with the new University of Wisconsin-Green Bay in 1968. In the fall of 1969, classes opened in the first three buildings of the new campus overlooking the waters of Green Bay east of the city.

The campus today includes 12 major buildings for instruction and services to students, an arboretum linking natural areas along the campus boundary, a golf course, waterfront recreation area, student apartments and residence halls, and ample open space.

The campus is one of 13 degree-granting institutions in the University of Wisconsin System. The university's select mission is to offer an academic plan made distinctive by a strong, interdisciplinary, problem-focused liberal education reflected throughout its programs.

Students

The university enrolls about 4,600 undergraduates and 250 graduate students (fall 1989-90). The diverse student body includes students from all but six of Wisconsin's counties, 21 other states, and 27 other countries. Of the regularly admitted freshmen in 1989-90, more than 40 percent ranked in the upper one-fourth of their high school graduating class.

The Campus

The campus is a 10-minute drive from the city center of Green Bay, Wisconsin. The campus has exceptional facilities for learning in a park-like setting.

The 700-acre site is on gently rolling terrain sloping from a geological formation known as the Niagara Escarpment to the waters of Green Bay. The Cofrin Memorial Arboretum, around the campus periphery, is a resource for instruction and recreation. It has streams, ponds, wooded areas, prairie habitat, and bay shore environment, all accessible by trails. A nine-hole public golf course on campus is maintained in winter for cross-country skiing. There is a waterfront recreation area on the bay shore. Because major buildings are clustered on the university site, much of the campus is open for recreational use.

The Community and Region

Green Bay is a manufacturing city and the county seat of Brown County with a metropolitan area population of more than 175,000. Major industries are paper products, food processing, and metal working. The city is the home of the Green Bay Packers professional football team.

Community resources include theater and music organizations, a good public library system, daily and weekly newspapers, several AM and FM commercial radio stations, and five commercial television stations. The region is also served by WPNE-FM of the Wisconsin Public Radio system and WPNE-TV, Channel 38, of the Wisconsin Educational Television Network. WGBW-FM, also affiliated with Wisconsin Public Radio, broadcasts from the campus. Other schools in the community include St. Norbert College, a private Catholic college in suburban De Pere, and Northeast Wisconsin Technical College.

Although many industries are located in Green Bay and the Fox River Valley to the south, most of Northeast Wisconsin is farmland. Green Bay is the gateway to two areas of Wisconsin known for their natural beauty: Door County and the "north woods" country. The Door County peninsula juts into Lake Michigan to create the bay of Green Bay. The landscape is characterized by farms, orchards, small villages with attractive harbors, and miles of shoreline. A vacation area for decades, Door County is a center of summer cultural activities. Northern Wisconsin is known for lakes and forests and the recreational facilities of the Lake Superior region.

Major cities are within easy traveling distance from Green Bay: Milwaukee is 114 miles south; Madison is 132 miles southwest; Chicago is 220 miles south; and Minneapolis-St. Paul is 285 miles west of Green Bay. The city is served by the interstate highway system, several airlines, and two intercity bus lines.

ACADEMIC RESOURCES

Center for Public Affairs

The Center for Public Affairs at UWGB provides an opportunity for students to participate in team research, internships, and technical assistance experiences in public policy, politics, government, and public management. Students work with state and local government officials, legislators, public managers and other public professionals in such diverse areas as hazardous materials assessment, recycling and other environmental policies, health care administration, seismic risk assessment, community design and development, zoning analysis, cultural diversity, public opinion surveys and government/business relations. Some of these projects have been funded by agencies such as the National Science Foundation and the Wisconsin Department of Natural Resources; others have been inspired and supported by local hospitals and citizen groups.

The Center works closely with the University of Wisconsin General Extension to develop outreach programs in government affairs, and students have opportunities to participate in some of these activities. The goal of the Center is to provide quality experiences for students and faculty and to serve the need for research, policy analysis, and training for the local community and northeastern Wisconsin.

Cofrin Arboretum and Natural Areas

The 270-acre Cofrin Arboretum encircling the campus is a significant resource for field trips, class projects, and individual research. Other university natural areas expand the range of landforms, vegetation communities, and animal habitats available for study.

The Arboretum supports a program of grants for individual student research within the arboretum and natural areas. Students whose proposals gain support may receive up to \$1,000 to carry out their projects. Students present results of completed projects in an annual symposium.

The Arboretum has mature upland forests, a cedar swamp, several types of restored prairie communities, old fields, several ponds and wetlands, a stream, an extensive limestone outcrop of the Niagara Escarpment, and more than a half mile of shoreline on Green Bay. Other university natural areas include sites on Lake Michigan and in the interior of the Door County peninsula.

Within this diversity are opportunities to study sites that are preserved, areas undergoing restoration and development, and formerly cultivated sites in various stages of colonization by woody plants. A large number of the plant and animal species of northeastern Wisconsin exist in these natural areas.

Computing Facilities

Study and research at UW-Green Bay are well supported by computing facilities. The main computing power for the academic program is supplied by a Digital Equipment Corporation VAX 8530. This system can easily support up to 200 users as well as provide remote services and dial-in capability. It is the backbone for the campus network.

Software capabilities on the VAX 8530 include the programming languages BASIC, FORTRAN, COBOL, PASCAL, C, LISP, and OPS5. Data analysis packages include SAS, MINITAB, LINDO, and MASSBAL. Relational (RDB) and network (DBMS) databases are available, as well as a query language which supports both. Several graphics packages support statistical analysis and mapping classes. Text and graphics output are available through a central line printer, laser printer, and remote printers.

Academic computing supports four microcomputer laboratories with Apple- and IBM-compatible computers. These laboratories are variously equipped with academic software, including programming languages, worksheets, word processing, databases, and engineering and other course-specific applications. Computer lab areas have generous hours for student access. An open lab with both Apple- and IBM-compatible units and a number of mainframe terminals is available when other laboratories are in use.

Several specialized computer laboratories at other locations on campus support instruction in geographic information systems, graphic communications, photography, and the sciences.

Data, Video and Voice Network

The universal wiring system nearing completion will make Green Bay one of the first UW campuses to put into use a campus-wide network for data, video, and voice. Data and voice wiring connects all classrooms, laboratories, faculty offices, administrative areas, and on-campus student housing. Video wiring will create a campus video network among classrooms, laboratories, student residential complex, and some conference rooms.

Data access will be the most visible enhancement offered by the system. The network will enable students, faculty, and staff to use all of the campus computing resources regardless of their location. The network will be accessible by dial-in from off-campus as well as from campus locations.

Among functions provided by the network will be:

- microcomputer to campus academic mainframe;
- microcomputer to the campus library catalog;
- microcomputer to other UW System library card catalogs and to other library card catalogs, including all Big Ten schools;
- microcomputer to remote databases such as Dow Jones, Chemical Abstracts, and many others;
- microcomputer to various supercomputers;
- microcomputer to microcomputer to permit joint work, electronic hand-in of papers, electronic conferencing, and the like;
- microcomputer to campus resources such as laser printing and mainframe tape drives.

Faculty

UWGB faculty are a well-prepared academic resource. More than 95 percent of the 161 full-time faculty members have the Ph.D. or other highest credential in their fields.

Commitment to teaching is essential at Green Bay. All faculty members teach; there are no teaching assistants for lower-level classes. Faculty members are accessible to work individually with students to supervise independent studies, internships, and honors projects. Faculty members grow in their fields through scholarly activity by doing research, publishing in journals, participating in professional organizations, and engaging in other equivalent activities. This dual involvement in teaching and scholarship directly benefits students both in the classroom and through opportunities for student participation in faculty projects.

The accrediting team that most recently visited UW-Green Bay listed the faculty as one of the university's great strengths. They described the faculty as "vigorous and well qualified." The team noted that students perceive faculty as being accessible, interested in their disciplines, and committed to high quality education.

Herbarium

The UWGB Herbarium houses a collection of over 20,000 specimens of vascular plants and provides many opportunities for student research, collection, and cataloguing projects. Students have collected and prepared a large number of specimens from northeastern Wisconsin, including endangered and threatened species, and continue to catalog specimens from the Cofrin Arboretum, Toft Point, and other UWGB natural areas. With the addition of computer support, students are also able to map the distribution of plants and their responses to environmental changes. Specimens from the Herbarium are also used for classroom demonstrations and laboratories, and researchers from the Wisconsin Department of Natural Resources, other University of Wisconsin campuses, and universities in other states have frequently made use of the Herbarium collection.

Lawton Gallery

The Lawton Gallery enhances and complements the academic program by bringing to the campus and the larger community quality examples of professional work currently being produced in the state, region, and nation, and by exhibiting faculty and student work. The gallery attempts to illuminate the major aesthetic, stylistic, technical, and conceptual issues of our time by presenting a wide range of viable styles, media and content.

Of the seven to nine annual exhibits, all but one typically are curated in-house. Three or four exhibits annually feature student and faculty work.

The annual student exhibition is juried by an outside professional artist or curator and acceptance into the exhibit is a significant achievement. Arts management students earning credit and work-study students gain experience in all aspects of curatorial and gallery practice by working in the gallery. Students assist in an annual national juried or invitational exhibit, and in preparing one exhibit each year for an extended tour.

The gallery also develops and presents lectures, artists' workshops and residencies, interpretive gallery talks, and other supporting activities.

Library Learning Center

Centrally located among the academic buildings, the Library supports the academic program with a collection of over one million items and computer database access to the accumulated knowledge of humankind.

The Library holds nearly 280,000 books and bound periodicals, maintains current subscriptions to 1,400 scholarly journals, magazines, and newspapers, and has 26,000 rolls of microfilm backfiles. Extensive holdings of government documents include those acquired as a depository for the U.S. Government and the State of Wisconsin, and also collections of publications of Canada, the United Nations, and many international organizations. About half of the 900,000 government documents are on microfiche. Other specialized collections include 55,000 maps, 3,300 sound recordings, 2,000 musical scores, and 5,800 instructional materials for teachers. In addition, the Special Collections Department contains historical records of northeast Wisconsin, the Kramer Collection of socialist/radical literature, fine print books, rare materials including old maps and manuscripts, and the university archives.

Library facilities include a quiet study area, individual and group study rooms, a microcomputer area for individual word processing use, and general reading and study areas. The Library's "card catalog" is accessed by on-line computer stations.

Information available to library users goes far beyond its own holdings. Library patrons can gain access through the OCLC database to 23 million books and other materials held by 8,000 libraries in the U.S., Canada, and England. Users also can access the DIALOG system which provides entry to 300 databases in a broad scope of disciplines containing over 160 million records. Several compact disk databases are available in the library.

Richter Natural History Museum

The Richter Natural History Museum is a valuable resource for student study and research. Its collections include representative animal species from northeastern Wisconsin and an extensive collection of bird eggs, nests, and study skins derived mainly from the life's work of the late Carl H. Richter of Oconto, Wisconsin. Richter, one of North America's foremost oologists, in 1975 donated all of his specimens, including more than 10,500 egg sets. Some are dated as early as 1884. The donation included a large series of vertebrate specimens, Indian artifacts, mollusks and butterflies, geological specimens, historical documents, and photographs.

Today, the Richter Museum includes approximately 11,000 sets of bird eggs representing more than 90 percent of the North American avian species and subspecies. Valuable sets include endangered species such as whooping crane, snail kite, and Kirtland's warbler, and several extinct species, including the passenger pigeon. The egg collection is North America's 13th largest. In addition to fluid-preserved specimens, study skins, and skeletons, the Museum has a library of books, journals, and reprints in support of the collections.

The Museum collection includes nearly 100 percent of the locally breeding bird species, 95 percent of the mammals, 80 percent of the reptiles and amphibians, and 80 percent of the fishes. Specimen collections continue to grow through contributions by students, faculty, and staff, and by the Wisconsin Department of Natural Resources, U.S. Fish and Wildlife Service, and U.S. Forest Service.

Materials from the natural history collections and from the university's Herbarium are displayed in the museum in Laboratory Sciences room 201.

Theatre

UW-Green Bay theatre facilities support many facets of education both for those pursuing theatre as practitioners and those seeking learning and enjoyment as spectators.

The well-equipped facilities include a 450-seat proscenium theatre, a flexible, "black box" theatre, acting studio, dance studio, costume shop, scene shop, and computerized lighting facilities. Except for the larger University Theatre, which showcases a variety of performances, the academic theatre program has sole control of other theatre facilities. This allows for ample student access and experience.

Casting is open and by audition for about four main-stage productions directed by faculty each year. Students work on all aspects of the productions. The smaller, alternate theatre presents a number of performances each year that are entirely student-run, including direction. Sometimes the plays are original works written by students.

Students who gain proficiency in UW-Green Bay theatre facilities are prepared to move directly into professional theatre or graduate studies upon graduation. New facilities will further enhance student preparation. Computer-aided design capabilities for scene, lighting, and costume design are planned. The new Center for the Performing Arts, scheduled to open in 1992, will offer new facilities for student rehearsal and performance.

CAMPUS LIFE

Living On Campus

The University Village on campus offers two different residence options for students—residence halls and apartments. About 1,100 students live on campus.

Residence hall rooms are designed for two students and each has a private bathroom. Coin-operated laundry facilities and a kitchen for preparing snacks are available in each building.

Most of the furnished apartments have two bedrooms and are designed for four students. Each apartment has a living room, a compact kitchen-dining area, and a bathroom. Coin-operated laundry facilities and locked storage are available in each building.

Professional residence life staff administer University Village and each building has a resident assistant—an upperclass student with special training and thorough knowledge about campus and community.

The centrally-located community building has a lounge, recreation and game room, conference room, and computer room, in addition to offices for administrative staff and student housing council. Outdoor volleyball and basketball courts, picnic tables and grills are located in the park-like setting. Food service and resident-student mail boxes are located in the Student Union just a five-minute walk from the village.

Students who want to rent apartments or houses in the community can contact the Dean of Students Office for lists of rental properties and other students seeking roommates.



Eating On Campus

Students living in the residence halls must purchase a food plan. Other students may buy food plans or simply purchase meals in one of three dining facilities. The food plan does represent some savings. The dining service is managed by a professional food service vendor.

Dining areas include the Nicolet Room, the main dining room located on the plaza level of the Student Union; the Garden Cafe, a delicatessen-type facility in the lower level of the Library Learning Center; and the Rathskeller, in the lower level of the Student Union. It offers made-to-order pizzas, sandwiches, and snacks. Food plans are valid at any of the three.

Vending machine service is readily available at all hours in the lower levels of Wood Hall, Laboratory Science, Studio Arts, and the Library Learning Center.

Transportation

Many students who commute from home or rent housing in the community take advantage of city bus service for transportation to and from campus. City buses reach and depart from the campus every half hour until 6:15 p.m. and hourly until 10:15 p.m. Monday through Friday. Hourly service is provided on Saturday until early evening. There is no Sunday bus service.

Retail Services

The University-operated Phoenix Book Shop is the campus shopping center for books and classroom supplies. The store carries a large supply of clothing, gifts, UW-Green Bay souvenirs, magazines, calculators, greeting cards, art supplies and many other items.

Other on-campus services include the University of Wisconsin Credit Union, automatic teller machines, and the Second Gear resale shop where students can find clothes and housekeeping equipment at bargain prices.

The city of Green Bay is the retail trade center of Northeastern Wisconsin. A major downtown shopping mall and other outlying shopping centers can be reached from campus by city bus.

Student Services

Adult Student Counseling. The Adult Services Office provides assistance and counseling for the many UW-Green Bay students who are beyond the "traditional" college ages of 18 to 24. Staff members will help adult students enroll and become acquainted with the University's people, programs, and resources. Seminars and support groups are sources of useful hints and encouragement for older students.

Child Care. The Children's Center serves the preschool and day care needs of students and employees with young children. The center's programs, supervised by licensed nursery-kindergarten teachers, are open to children ages two through six during the school year and two through 11 during the summer session.

Counseling. Staff members in the Counseling and Student Development Center are available on a confidential, one-to-one basis to discuss students' concerns ranging from adjusting to university life to changing relationships. The center offers referral to community agencies if necessary.

Staff members encourage students to work through problems and to develop life-long coping skills. Discussion groups and workshops focus on assertiveness, communication skills, eating disorders, personal growth, stress, and other topics.

Students making career decisions may take personality and interest inventory tests to become more aware of their own strengths and limitations and how these affect relationships, work and academic choices.

Dean of Students. The Dean of Students Office coordinates the efforts of the University's student services offices. The Dean of Students is a contact person for individuals who have questions about University policies and procedures, or who may be experiencing difficulty in the classroom, or with a roommate or fellow student. The office provides advice, counsel and referral. Staff members also coordinate a free legal service for students.

Ecumenical Center. Counseling, weekly worship services, social events and growth and support groups are among the activities taking place through the Ecumenical Center campus ministry. The center is supported and operated by a community board composed of members of many denominations. Its programs are open to persons of all faiths and to those of no religious affiliation. The two campus ministers—one Catholic, one Protestant—can supervise independent studies in the field of religion.

Employment. Students who want to work part time while attending UW-Green Bay find help through the Student Employment Office. The office helps place students who are eligible for college work-study and staff members scout for part-time openings in which salaries are fully paid by employers on campus or in the community. Job openings are posted as they become available.

Handicapped Services. UW-Green Bay has numerous resources to help students who have mobility, vision or hearing impairments.

The University's concourse system provides barrier-free access. Elevators, reserved parking near buildings, nonslip floor tiles, automatic door openers and adaptations for wheelchairs in washrooms, science laboratories, and the Phoenix Sports Center are campus features.

Equipment available through the Academic Support Program includes a braille writer, an automatic page turner, a typewriter, a talking calculator, slow-speed cassette recorders, taped texts and a printing Telecommunications Device for the Deaf (TDD). A resource coordinator and counselor can arrange, upon request, for student assistants to serve as notetakers, typists, readers and aides. The coordinator, a staff member in the Counseling and Student Development Center, is also a resource for persons with learning disabilities.

Health Care. Health Services provides treatment for minor illnesses and injuries, diagnosis and referral for other conditions, information and counseling on health topics, and information on student health insurance. The staff includes three registered nurses and two part-time physicians. The nurses' services are available during daytime hours, Monday through Friday, by appointment or on a walk-in basis to students who have validated IDs and health forms on file. Most services are available free. There is a small fee for a physician appointment and for any laboratory tests.

Information. Answers to questions about faculty schedules, times and locations of campus events and a host of other topics can be found at the Information Center, located just inside the circle entrance on the concourse level of the library. Maps of the campus and community are available here. The center has bus tickets and envelopes for sale, and an out-going mail drop. The main campus switchboard and lost-and-found are here.

Intercultural Activities. The American Intercultural Center is a place to meet, talk, and study for students who choose an environment embracing Indian, Black, Asian, and Hispanic cultures and people. The center is a focal point for the Indian Student Organization, the Black Student Union, and the Hispanic Organization. Plans are underway to address interests of the Asian-American community. Center staff provides counseling and advising and organizes events to celebrate the value of cultural diversity. Annual events for Martin Luther King, Jr. Day, Black History Month, and Indian Awareness Month will soon be joined by Hispanic and Asian events.

International Student Programs. Students from nearly 30 foreign countries attend UW-Green Bay to earn degrees and gain firsthand knowledge of the United States. Activities and events at the International Student Center offer American students and those from other countries the chance to share their cultures and ideas. The center's lounge is a meeting place for relaxation, conversation and reading. Information on study-abroad programs is available here.

Placement, Career Planning. Finding a job after graduation can start as early as a student's first semester on campus with the aid of the Placement and Career Development Office.

A student undecided on a major can begin career exploration through a computerized career information program that links values, interests, and skills to career opportunities. The office also has an extensive library with career outlooks, planning guides, and employer information.

Students matched with UW-Green Bay graduates through the Career Information Network can learn firsthand of the day-to-day demands of a particular career and its long-term prospects.

As graduation draws near, students can take advantage of Placement and Career Development assistance in resume and interviewing preparation, job search strategy, job listings, on-campus interviews and employer referrals.

Security. Officers are on duty 24 hours a day to provide for the safety and security of people and property on campus. The services of the Security Office range from emergency response to every-day matters such as help with car lockouts.

Veterans' Services. Veterans and their dependents can get information on rules and eligibility as well as help in obtaining benefits from the veterans' services coordinator in the Registrar's Office.

Women's Programs. The Women's Center is a focus for programs and services directed to campus women. Conferences, speakers and special events celebrate women's achievements and examine issues of topical importance. The office helps students overcome personal or academic obstacles. It also provides staff assistance and conducts noncredit programs related to the Women's Studies academic unit.

Activities

Arts. UW-Green Bay students can enjoy Broadway plays, music, magic, mime, and dance as spectators through the Visiting Artists Series, which regularly brings professional performing groups to the stage of University Theatre. Ticket prices are reduced for students.

Campus music, theatre and dance ensembles offer entertainment as well as opportunities for student performers of all academic majors.

Auditions and enrollment in a credit course are required for most instrumental music groups including percussion, brass and woodwind ensembles, jazz ensembles, the Symphonic Band, the Collegium Musicum, and the New Music Ensemble. The same is true for choral groups including Show-Jazz Choir, Concert Choir, and University Chorus. Students may perform in the University's pep band, or receive credit for participating in the Green Bay Symphony Orchestra.

The University Theatre presents four faculty-directed mainstage productions each year, including musicals, drama, children's theatre and comedies. Alternate Theatre gives students the chance to write and direct as well as act. In both programs, students can participate in set construction, scene painting, lighting, costume design, publicity, and other tasks.

University Dancetheatre presents a major performance each spring, and dancers also take part in theatre productions.

Exhibitions in the University's Lawton Gallery feature works by artists with national and international reputations, as well as the annual faculty and juried student exhibits. Student groups such as the Art Agency, Students for Photographic Education, and Future Art Teachers of America promote interest in contemporary visual arts.

Student and faculty music recitals and poetry readings are among other events on the calendar of entertainment and cultural programs.

Athletics, Recreation. Depending on the season, outdoor recreation enthusiasts can jog along arboretum trails, play golf on a nine-hole course, sun at a waterfront park, rent a boat and sail the waters of Green Bay, or go cross-country skiing, all without leaving the UW-Green Bay campus. State parks and other outdoor recreation areas are a short drive away in scenic Door County.

The Phoenix Sports Center is the center of intramural and athletic-related activity on campus. The facility houses an eight-lane indoor swimming pool, racquetball courts, a weight room and a multi-purpose gymnasium with facilities for basketball, volleyball, and indoor tennis. Outdoors nearby are tennis courts, softball diamonds, and all-purpose playing fields.

Clubs, Organizations. In a typical year almost 80 student clubs and other organizations are active on campus. Groups such as the Communication Honor Society, Marketing Association, the Social Work Club, and the Student Council for the Humanities bring together individuals with common academic interests. Chess Club and Ski Club are examples of groups whose members share leisure-time interests.

Students are responsible for almost every phase of publication of *The Fourth Estate*, the weekly student newspaper. *Sheephead Review*, the student-edited literary magazine, carries student fiction, poems, essays, and artwork. A wide range of other organizations promote awareness of social and political issues, or provide service to the campus and community. Staff members in the Office of Student Life provide leadership and training, help students organize new groups, and refer students to existing organizations.

Entertainment. The student-run Good Times Programming Board plans a full schedule of popular and international films, coffeehouse entertainment and bands. Fall homecoming, spring week, winter ski trips, and spring break journeys to Florida are among other activities organized with the help of the Student Life Office.

Intercollegiate Sports. Major intercollegiate sports include basketball and soccer. The men's basketball team competes for a berth in the NCAA Division I tournament through its membership in the Association of Mid-Continent Universities, while the women's program is affiliated with the North Star Conference. The men's soccer program is also NCAA Division I. Cross country, golf, cross-country skiing, and tennis are non-scholarship varsity sports for men. Women compete in cross-country running, soccer, softball, swimming and diving, tennis, and volleyball, in addition to basketball. Intercollegiate sailing, a nonscholarship activity, is open to both men and women.

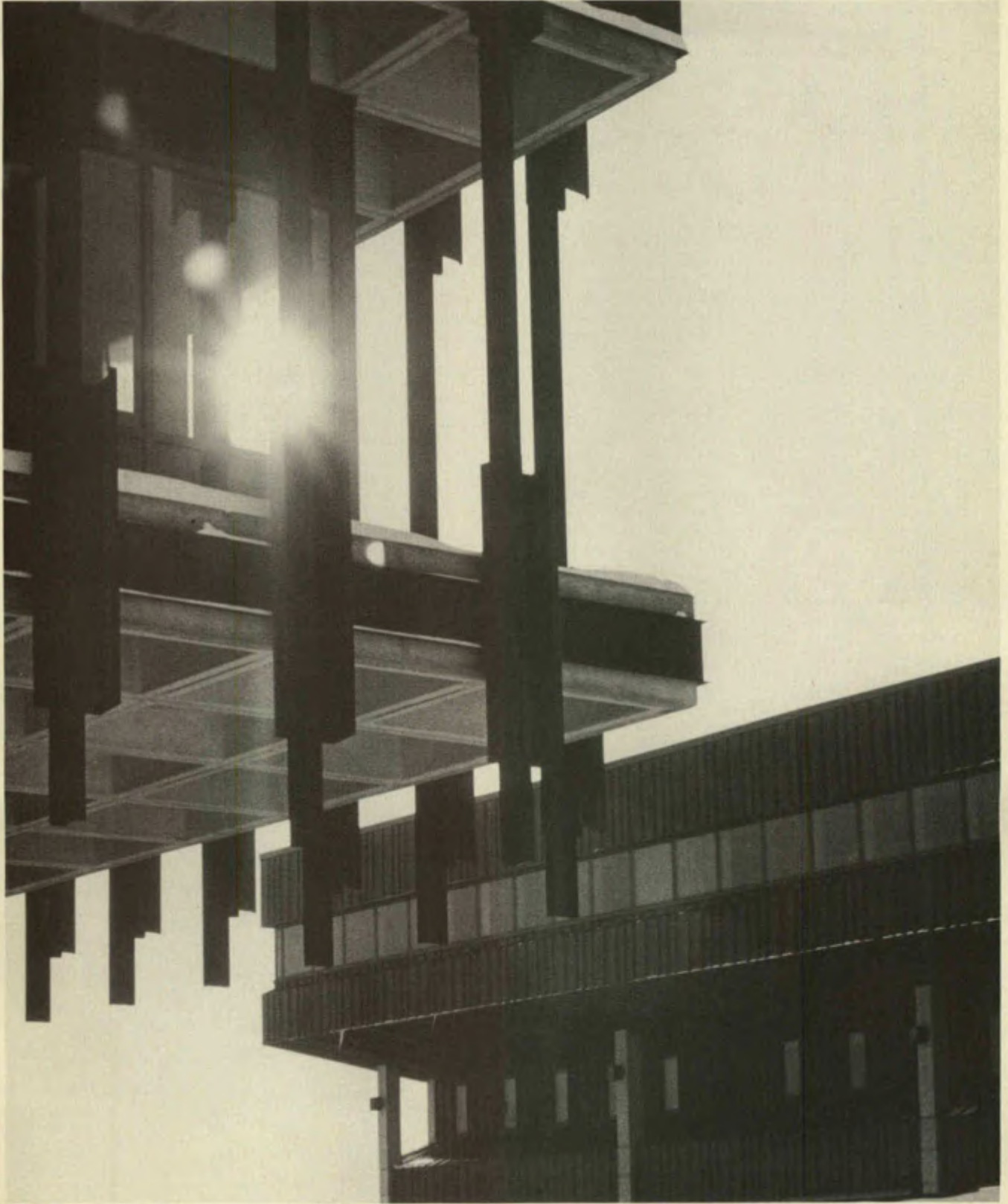
Student Government. Students share in University governance through the Student Association and its five subgroups.

Students from all academic majors are represented in the Student Senate. Senate members help to make and review policies concerning student life on campus, and they serve on University committees dealing with such concerns as services to the handicapped, health services, intercollegiate athletics, and academic actions. Senate members also lobby local, state, and national legislators on issues affecting students. Another elected group, the Segregated University Fee Allocation Committee (SUFAC), manages allocation of student fees in support of student organizations and programs.

The Student Union Policy board helps oversee the University's Student Union. The Housing Council organizes events for on-campus residents and works with University administrators to develop policies affecting campus housing.

Good Times Programming Board schedules social, cultural, recreational, and educational events for the entire campus community.

UW-GREEN BAY ACADEMIC PROGRAM



PLANNING AN ACADEMIC PROGRAM

Goals of the Academic Plan

All programs of study at UWGB are based in the liberal arts; they are aimed at providing students with a broad and comprehensive education in addition to the specialization of their majors. Two essential elements are:

1. general-education requirements, and
2. an interdisciplinary, problem-focused component.

These are the distinctive elements of our academic plan.

Undergraduates, in most universities, master a discipline such as history or mathematics; or achieve a high degree of competence in a professional program such as social work; or prepare themselves for further study in professions like law or medicine. Students can accomplish all these things at UWGB. In addition, however, they must learn how to effectively apply the knowledge they have gained, and this opportunity is what sets UWGB apart. Effective application of knowledge is the purpose of our general-education requirements, focus on problems, and interdisciplinarity. These elements allow students to apply what they are learning to "real" issues and enable them to see how all knowledge is interrelated.

Choosing a Major

It is not necessary to choose a major before coming to college; the freshman year is best spent in general education anyway. Students will have to satisfy requirements in writing. They will have to complete three three-credit courses each in the humanities and fine arts, the social sciences, and the natural sciences to satisfy breadth requirements. This provides an opportunity for the undecided student to "sample" courses from across the university and will likely be helpful in choosing a major. When they have earned 36 credits, students must choose a major. Students complete general-education requirements by fulfilling a three-credit other-culture requirement, and a three-credit ethnic studies requirement, and by taking a three-credit senior seminar. The seminar enables seniors to focus all of their education upon a single problem.

At UWGB, students can choose an interdisciplinary major such as business administration, environmental science, human development, or humanistic studies. There are 15 such majors, each drawing from many disciplines. Or, students can choose a traditional, disciplinary major—English, mathematics, or sociology, for example. There are 21 of these majors. In either case, students will have to take at least 30 credits in their chosen major, of which 24 must be at the upper level. Additionally, students who choose a disciplinary major must select an interdisciplinary minor of 18 credits, 12 of which must be taken at the upper level. Many majors require more than these minimum requirements, so students should see an adviser early.

Some students will want to pursue professional preparation. Individuals who want to earn teaching licensure will enroll the education professional program. UWGB has programs leading to a bachelor of social work degree (B.S.W.), and students who already have an R.N. qualification can earn the Bachelor of Science in Nursing. Engineering students will enroll the Northeast Wisconsin Engineering program. Students who want to prepare for law or medicine or other professional schools requiring an undergraduate degree or courses for entry will need to consult advisers in these areas early, to ensure that they choose appropriate undergraduate courses. The same is true for preparation for graduate schools.

Components of a Degree

Component I

36 credits

General-Education Requirements

- 27 credits of breadth consisting of:
- 9 credits of humanities and fine arts
 - 9 credits of social sciences
 - 9 credits of natural sciences and mathematics
 - 3 credits of other-culture studies
 - 3 credits of ethnic studies
 - 3 credits of senior seminar

Component II

credits vary with major

Supporting Courses

Preparatory and methods courses appropriate to the major (usually lower-level courses).

Component III

30-48 credits minimum

Major

The major is flexible; students choose one of these:

1. Interdisciplinary major (minimum of 30 credits in the major; 24 of these credits must be at the upper level)

OR

2. Disciplinary major (minimum of 30 credits in the major; 24 of these credits must be at the upper level)

plus

Interdisciplinary minor (minimum of 18 credits; 12 of these credits must be at the upper level)

Component IV

credits vary

Other Options

Courses to bring total credits to minimum of 124 degree credits required for graduation such as:

1. Minor or additional minor in disciplinary or interdisciplinary program
2. Teacher preparation
3. Other specific professional program
4. Electives
5. Other possibilities to be designed with an adviser

Total

124 credits (minimum requirement)

Programs of Study

Disciplinary Majors and Minors

Humanities and Fine Arts

Art
 Communication Processes
 (mass communication,
 photography, speech,
 linguistics)
 History
 Literature-Language: English
 Literature-Language: French
 Literature-Language: German
 Literature-Language: Spanish
 Music
 Philosophy
 Theatre

Natural Sciences and

Mathematics
 Biology
 Chemistry
 Earth Science
 Engineering
 Mathematics
 Physics

Social Sciences

Anthropology (minor only)
 Economics
 Geography
 Political Science
 Psychology
 Sociology

Professional Studies

Accounting

Interdisciplinary Majors and Minors

(Students who take a disciplinary major must take an 18-credit minor in one of these.)

Humanities and Fine Arts

Communication and the Arts
 Humanistic Studies

Natural Sciences

Environmental Science
 Human Biology
 Information and Computing
 Science
 Nutritional Sciences

Social Sciences

Human Development
 Public and Environmental
 Administration
 Regional Analysis
 Social Change and Development
 Urban Studies

Professional Studies

Business Administration
 Nursing (B.S.N. for R.N.s)
 Social Work

Interdepartmental Majors and Minors

American Indian Studies (minor only)
 Environmental Planning
 International Studies (minor only)
 Social Gerontology (minor only)
 Women's Studies (minor only)

Areas of Emphasis

Students can develop significant specializations by choosing areas of emphasis offered by many of our majors and minors. These can lead to specific and productive career fields. Examples of areas of emphasis include art management, ecology and biological resources management, environmental design, environmental policy and administration, exercise physiology, graphic communications, land use and regional planning, law and social change, photography, and science communications. Students can learn about other areas of emphasis by reading descriptions of related majors and minors in this catalog, and by consulting advisers.

Personal Major

Students whose goals are not met by any of the university's majors, may, with the help of advisers, design a personal major. This is a rigorous process, described in more detail elsewhere in this catalog.

Teacher Preparation

Requirements are fulfilled through the professional education program.

Military Science

This program provides specific career preparation.

Preprofessional Programs

Such programs are prepared for through UWGB majors and minors. Graduate and professional schools usually require a four-year degree or two or three years of preparatory work at UWGB prior to transfer to the professional school. Examples of preprofessional programs include:

Agriculture	Mortuary Science
Architecture	Nursing
Chiropractics	Occupational Therapy
Counseling	Optometry
Dentistry	Pharmacy
Engineering	Physical Therapy
Law	Physician Assistant
Medical Technology	Theology
Medicine	Veterinary Medicine

Other Options

External Degree Programs

Students unable to complete a degree through a regular on-campus program, or persons who already have some college credits, may wish to explore the extended degree leading to the Bachelor of Arts in General Studies. It is described elsewhere in this catalog.

Associate of Arts Degree

A two-year program of study leading to an associate of arts degree may be completed at UWGB. Interested students should read the description in this catalog and consult an adviser.

Graduate Studies

Students may continue their studies at UWGB beyond the bachelor's degree in specific master's degree tracks. These are described briefly in this catalog; a graduate studies catalog is available.

Academic Advice

The best advice is to get advice. Students should see an adviser in the Academic Advising Office early. That office advises all students on meeting general-education requirements and is the source for advising students with fewer than 36 earned credits. Once most students have earned 36 credits, they must declare a major and their advising transfers to faculty advisers in their majors. Prebusiness and preaccounting students continue their advising at the Academic Advising Office until they have earned 62 credits. Pre-elementary education students are advised by that office until formally accepted into the education program. Faculty advisers for the majors are listed in each session's *Timetable*.

New freshmen should be sure to participate in a one-day Student Orientation, Advising, and Registration (SOAR) session before beginning their studies. Students who seek advice will be surprised how quickly all the elements of their degree fall together in a coherent pattern. Advisers also will help in making particular decisions, such as whether or not to pursue a double major, what supporting courses are needed to prepare for a major, and what special opportunities exist to enable students to pursue their own interests.

For students transferring into UWGB from another university, it is doubly important to see an adviser. Most, if not all, of their credits will count toward a UWGB degree. To avoid duplication, it is important that transfer students understand which requirements their previous courses fulfill.

ACADEMIC REQUIREMENTS



General-Education Requirements

General-education requirements total 36 credits. These include 27 credits of breadth courses, a three-credit ethnic studies course, a three-credit other-culture course, and a three-credit senior seminar. Students also must demonstrate writing competency and complete four courses in any subject area designated as writing emphasis courses.

General-education requirements must be completed within five years from the date students enroll as matriculated degree candidates.

The goal of general-education requirements is to help students broaden intellectual horizons, explore new interests, examine values, strengthen academic skills, and acquire a foundation of knowledge which complements their chosen programs of study. The requirements:

- introduce them to the major academic areas of knowledge and to the different ways knowledge is generated, defined, and used;
- increase their awareness of issues and values which affect them both as individuals and as members of society, and help them to be more reflective and self-critical of the positions they choose to affirm;
- help them to understand cultures different from their own, respect and value cultural diversity, and gain knowledge of causes and effects of stereotyping, racism, and ethnocentrism;
- increase their ability to solve problems through interdisciplinary approaches.

Transfer Students

Transfer students' standing with regard to general education requirements is based on equivalent courses completed at the time of their transfer to UWGB from another institution of higher education and on the total number of credits transferred.

All transfer students must complete a three-credit senior seminar at UWGB. They may satisfy the 27-credit breadth requirement by either transferring or completing nine credits each in the humanities and fine arts, social sciences, and natural sciences.

The writing competency requirement, three-credit ethnic studies requirement, and three-credit other-culture requirement also may be satisfied by transferring equivalent courses. The number of writing emphasis courses required depends on the number of credits transferred: students classified as freshmen must take four; sophomores, three; juniors, two, and seniors, one. Students planning to transfer are advised to choose specific applicable courses to fulfill general-education requirements.

Specific requirements for transfer students are explained in the chapter on Admission, Costs, and Financial Aid. Transfer students are informed in writing by the Registrar's Office of their standing in regard to general-education requirements as soon as their credit evaluation is completed.

Writing Proficiency

To fulfill the writing proficiency requirement, all students must demonstrate writing competency by the end of their second semester at UWGB and complete four writing emphasis courses in any subject before graduation.

Writing competency is demonstrated either by achieving a specified minimum score on the ACT or other approved placement test, or by passing 552-100, College Writing, or 246-100, Writing Skills Laboratory, by the end of the second semester at UWGB.

Performance on the ACT or another approved placement test is used to place students in one of four writing skills categories:

- In need of substantial development—Student must complete the noncredit course, 552/553-093, Fundamentals of Writing, and then successfully complete the three-credit 552-100, College Writing.
- In need of further development—Student takes 552/553-100, College Writing, or 246-100, Writing Skills Laboratory, or another designated alternative course, during one of the first two semesters at UWGB.
- Adequate—Student is not required to take a writing course, but is encouraged to do so, particularly a course above the 552-100 level, such as 552-105, Expository Writing.
- Quite good—No writing courses required, but such students are encouraged to continue developing their abilities by taking 552-105, Expository Writing, or a more advanced writing course.

International, Extended Degree, special, and graduate students, and students transferring approved writing course credits into UWGB are exempted from the ACT.

Writing Emphasis Courses. In addition to demonstrating writing competency at the freshman level, students must complete four writing emphasis courses before graduating; at least two of these courses must be on the upper level. Writing emphasis courses are offered in most subject areas; they are designated with the letters "WE" in *Timetables*. These courses are designed to improve and reinforce writing skills by providing students with regular opportunities to practice those skills in courses across the curriculum.

Courses used to fulfill the writing emphasis requirement may simultaneously be used to fulfill other general education requirements or requirements for major, minor, or professional programs.

Breadth Courses

Students must complete three courses (nine credits) in each of three broad areas of knowledge: natural sciences, social sciences, and humanities and fine arts. Two of the courses in each area provide the opportunity to learn the distinctive approaches and some of the important subject matter in that area; the third course is focused on significant problems and issues and values which shape individual and social experience within that area of knowledge.

Other Culture Studies

The other-culture requirement is intended to help students understand values and ways of life outside the United States so that they will be more aware of and sensitive to global issues and problems, particularly those related to stereotyping, racism, and ethnocentrism.

The requirement can be fulfilled by completing a three-credit course approved for this purpose. Courses approved to meet the other-culture requirement are identified in *Timetables* by the abbreviation, "OC." A course used to fulfill the other-culture requirement may not be used to fulfill any other general-education requirement except the writing emphasis requirement.

The other-culture requirement can also be satisfied by:

- participating in an approved January interim trip outside the U.S.A., or other approved study abroad experience or student exchange program outside the U.S.A.;
- completing the second year of a foreign language at the college level;

—petitioning for credit for documented substantial foreign experience gained outside of the student's academic experience.

International students studying at UWGB will satisfy the other-culture requirement by their residence and course work at the university.

Ethnic Studies

All new undergraduate students who enroll at UWGB for the fall semester 1990 or thereafter must complete three credits of ethnic studies coursework. This requirement is intended to help students respect and value cultural diversity, to understand the causes and effects of stereotyping, racism, and ethnocentrism, and to help prepare them to live in an increasingly multicultural society.

Courses approved to meet the ethnic studies requirement are identified in *Timetables* by the abbreviation "ES." A course used to fulfill the ethnic studies requirement may not be used to fulfill any other general-education requirement except the writing emphasis requirement.

The requirement may also be satisfied by transferring three credits of ethnic studies coursework completed at another UW-System campus to meet the ethnic studies requirement there, or by petitioning for approval of an ethnic studies course from any other university or college.

Senior Seminars

The senior seminar is a capstone experience in a student's general-education program. Senior seminars are courses organized around significant intellectual and social issues of our time. Every seminar stresses the values and problems associated with seeking interdisciplinary solutions to such issues.

Senior seminars differ from other general-education courses in that they bring together advanced students from a variety of majors into a small classroom atmosphere that encourages them to extend and apply knowledge gained in their respective fields. Each student completes a project that fits the issue or theme of the seminar. Further development of writing and speaking skills is emphasized.

Descriptions for senior seminar courses appear in the course descriptions section of this catalog, in the sequence numbered 867.

Residence Requirement

To graduate from UWGB, at least one year of residence work (31 credits) at the junior or senior level is required. At least 15 credits of work required by the major and not less than one-half of the upper-level requirements for the major must be completed in residence at UWGB. Students who choose minors must also complete half of the advanced work in the minor at UWGB. The senior seminar requirement must be completed in residence.

A student who has completed the junior year and who meets the residence requirement, but who cannot complete the senior year in residence for reasons of employment transfer, marriage, or whatever cause, can graduate from UWGB. Appropriate courses taken at another university as a substitute for senior year residence at UWGB can be selected with an adviser and must be approved by the chairperson of the student's major and, if necessary, by the appropriate academic dean.

A transfer student must complete the 36 credit general-education requirement but the portion of that requirement that must be completed in residence will be modified according to the number of degree credits and types of courses accepted at the time of transfer. In situations where in-residence requirements are reduced, students must have completed appropriate equivalent courses at their previous college or university; transfer students should contact the Academic Advising Office as early as possible for help in planning their programs to assure that they fulfill all UWGB requirements.

SPECIAL LEARNING OPPORTUNITIES

International Education

UWGB is committed to making awareness of other cultures part of its students' education. The university accomplishes this in two ways.

The first is to enrich a UWGB education by international interactions on campus. The university helps foreign students and faculty attend UWGB. UWGB students studying in the congenial atmosphere of a small university can get to know students from Latin America, Europe, and Asia. Also, students can benefit from lectures and courses taught by international faculty members visiting and teaching in Green Bay.

The second is to enable students to increase international exposure by studying abroad. Foreign study can be a vital part of a college education. Through it, students can broaden their horizons and enhance their career opportunities. With good planning, students can incorporate foreign study into their university experience without delaying graduation. Many different programs are available to UWGB students, and the International Education Office can help them find a program almost anywhere in the world that meets their educational needs.

Foreign study programs available to UWGB students include:

Travel Courses

Students may participate in university-sponsored trips offered during January or summer that enable students to learn and earn credits abroad. Travel courses are offered to various locations, including England, Germany, Mexico, Italy/Greece, and France. New trips may be developed. These short trips offer a concentrated opportunity to experience other cultures.

Exchanges

Students may enroll in courses at UWGB, but study at universities abroad with which the university has exchange agreements. UWGB currently has exchange programs with the University of Kassel, West Germany; Aalborg University, Denmark; University of Yucatan, Mexico; and Linköping University, Sweden. Green Bay students also may study at the Sorbonne, University of Paris, through the Urban Corridor Consortium of the four UW campuses in eastern Wisconsin. Students may study for a semester or a year at these universities and take advantage of the special ties that have been cultivated.

Study-Abroad Programs

Students may enroll directly at a foreign university or through a study-abroad sponsoring entity in the United States and transfer the credits back to UWGB. Study-abroad opportunities are abundant—UWGB students can study almost anything almost anywhere. The International Education Office provides resources to help students choose the program best suited to their needs.

National Student Exchange

UW-Green Bay is one of only three UW System schools participating in National Student Exchange, a program which enables students to study for a semester or a year at one of 87 colleges and universities in 41 states. Sites in Guam, Puerto Rico, and the Virgin Islands are available, too. Students from UW-Green Bay have recently been enrolled at institutions including the University of Rhode Island, California State University-San Bernardino, the University of Northern Colorado, the University of Hawaii-Manoa and the University of New Mexico.

The program serves students who want to experience college life in another region of the country, or who are motivated by specific needs: the opportunity for an earth science student to spend a semester in a place that is geologically different from Wisconsin, for example, or to study with particular faculty members at another university, or to take advantage of special courses or programs. Participants remain within the framework of the UW-Green Bay academic plan and pay fees and

tuition at UW-Green Bay rather than higher, non-resident costs at the host institution. Students should contact the Individualized Learning Programs Office for more information.

Credit Alternatives

Advanced Placement Credit

Students who enter the university with advanced preparation in calculus, Spanish, French, or German may receive credit for that preparation by passing an advanced-level UWGB course with a grade of "C" or better. For information about advanced placement in these subjects, see program descriptions for mathematics and foreign languages.

Credit by Examination

Students may be able to qualify for credit by examination if they have studied at non-accredited institutions, pursued special interests independently, or gained experience in the community, in the armed forces, or in paid or unpaid employment that has helped to achieve learning equivalent to that which would be gained in a college course.

The university uses College Level Examination program general exams in the humanities, natural sciences and social sciences; most CLEP subject exams; and most of the ACT Proficiency Examination Program exams. The university also accepts Advanced Placement Program exams. UW-Green Bay accepts credentials earned through certain other standardized exams, including those of the International Baccalaureate program, as a basis for granting credit when scores are at an acceptable level. In addition, challenge exams are available for certain courses offered at UW-Green Bay.

Only students admitted and enrolled as degree candidates may receive credit-by-exam at UWGB. Students should contact the Individualized Learning Programs for more information.

Credit for Prior Learning

Learning based on experiences such as employment, volunteer activities, participation in workshops and seminars, travel, and publications may be used as the basis for seeking credit, if such experiences are related to courses, subject areas or programs at UWGB. Students must be prepared to describe the experience in detail, to articulate in writing the skills or learning acquired, and to submit acceptable documentation or verification.

Students who wish to apply for credit for prior learning should do so through the Individualized Learning Programs Office. Applicants complete a workshop to learn procedures for preparing a prior learning portfolio and pay a fee for the assessment process. The fee is applied toward payment of the final fee for credits.

Individualized Learning

Extended Degree Program

Adults unable to attend traditional on-campus courses may complete university degrees through the Extended Degree Program. The fully accredited bachelor's degree program leads to the Bachelor of General Studies. Extended Degree students fulfill all academic requirements and meet the standards of educational quality characteristic of the University of Wisconsin System, but complete most requirements off campus.

Extended Degree students gain skills which enable them to manage people, information, and products. They may acquire transferable skills such as information management, design and planning, research and investigation, communication, human and interpersonal relations, critical thinking and problem solving, management, and administration. Students have a limited number of on-campus meetings with faculty and staff and then work on their own, usually taking from three to six months to complete some courses.

Complete information about the extended degree is available from the Extended Degree Program Office.

Extended Degree students must achieve competency in four primary areas and develop a 15-credit individualized area of emphasis. In addition, they must earn six credits in communications, four in problem solving, two in the adult learning seminar, and 61 credits of electives.

Following is an outline of requirements.

Extended Degree Requirements

- General Electives, 61 credits
- Adult Learning Seminar, 2 credits
- Problem Solving, 4 credits
- Communications, 6 credits
 - Writing/Information Search, 2 credits
 - Speaking/Listening Skills, 2 credits
 - Numerical Skills, 2 credits
- Area of Emphasis, 15 credits (junior-senior level courses in an area of interest designed with faculty adviser)
- Primary Area Courses, 36 credits
 - Business and Economics
 - Accounting/Finance, 3 credits
 - Management/Marketing, 3 credits
 - Economic Concepts, 3 credits
 - Humanities and Fine Arts (choose nine credits)
 - Fine Arts, 3 credits
 - Philosophy, 3 credits
 - Literature, 3 credits
 - History, 3 credits
 - Natural Science (choose nine credits)
 - Human or Plant Biology, 3 credits
 - Consumer Chemistry or Applied Physics, 3 credits
 - Energy and Resource Utilization or Natural and Industrial Environment, 3 credits
 - Physical Geography, 3 credits
 - Social Science
 - Contemporary Social Thought, 3 credits
 - Research Methods, 3 credits
 - Application to Contemporary Problems, 3 credits

Honors Projects

An in-depth senior honors project, involving a thesis, special research or creative work, can serve as the culmination of a student's educational program.

Projects are as varied as the interests of the students who pursue the senior honors options. Students of the arts can work for honors by giving music recitals, theater performances or preparing individual shows in the visual arts. Students in other areas can engage in projects that result in written papers and other documentation, or in oral and electronic media presentations.

Two possibilities for senior honors projects exist—distinction in the major and all-university honors.

Some majors offer the opportunity to complete a substantial project to earn distinction in the major.

Students seeking all-university honors must complete an honors project in order to qualify for graduation with *summa cum laude* honors.

Qualifications for both are described in the academic rules and regulations.

Independent Study

Independent study allows a student to earn credit for exploring a special interest in depth outside of a classroom setting. Independent studies must be on topics not covered in regular university classes. In order to undertake an independent study, a student must identify a faculty member willing to oversee it, and prepare a statement of objectives and list of activities that will be completed to meet those objectives. Independent study is an opportunity for students to individualize their academic programs through significant learning experiences.

Internships

Through University-arranged internships, students earn academic credit for working and learning on campus or with businesses and organizations in the community. Internships are arranged with the help of faculty advisers.

Typical on-campus internships have included work in personnel, news writing, graphic design, museum anthropology, and art gallery management. Off campus, interns have worked in settings of wide diversity; in marketing research, personnel management and accounting; in social services units of hospitals and mental health centers; with the Red Cross and United Way; in radio and television and with daily newspapers; and in city and county government.

A placement that offers the opportunity for work and observation in a professional setting is required in some academic programs such as social work. Such a placement is called a "practicum" or "field experience."

Internships and field studies offer significant practical experience and opportunities to "sample" career fields while in college.

Noncredit Study

Noncredit courses, workshops, conferences, and seminars, planned by the Office of Outreach and University of Wisconsin-Extension, are scheduled around the year on campus and in several locations in the community. Noncredit programs and enrollment procedures are described in Lifelong Learning catalogs published for every fall and spring semester.

Personal Major

A personal major is a self-designed program for students who find that their educational objectives do not fit into any of the university's existing majors. Following the university's interdisciplinary approach, a personal major must incorporate several academic areas.

Constructing a personal major is a rigorous process. The student determines what it is he or she wants to do and how the opportunities at UWGB can accomplish this. With the help of a faculty member and a personal major adviser, the student formulates a proposal describing the personal major objectives. A final proposal must be approved by a personal major committee.

The personal major requires a minimum of 30 credits at the junior-senior level. Personal major students must fulfill the university's requirements for residency and English proficiency, as well as all-university requirements.

Information on the personal major is available from the Individualized Learning Programs Office.

Research

Many UW-Green Bay students gain valuable laboratory and field experience by working with faculty members who are engaged in research. Many university activities and resources which support student research opportunities are described in the chapter on academic resources.

A student interested in research may also enroll in research-oriented courses or engage in research through independent study or a senior honors project. Research experience can enhance a student's qualifications for graduate or professional school and future employment.

ACADEMIC YEAR CALENDAR

The Academic Calendar

The university operates on a 4-1-4 academic calendar, with a four-month fall semester, a one-month January interim, and a four-month spring semester. It also offers an eight-week summer session, though some summer classes are on intensive schedules of shorter duration.

The January interim is a period in which students can concentrate on special, practical courses or traditional courses in intensive formats, or take advantage of courses which include travel abroad. Students pay no additional fees for January courses if they are continuing, full-time students or if they are new full-time second semester registrants. Students pay their own expenses for off-campus programs. Taking advantage of January courses may enable students to accelerate the time it takes to earn their degrees.

Fall Semester	1990-91	1991-92	1992-93*
Registration and new student period (or register by mail earlier)	Aug. 27-Aug. 31	Aug. 26-Aug. 30	
Classes begin	Sept. 4	Sept. 3	Sept. 8
Thanksgiving recess begins	Nov. 22	Nov. 28	Nov. 26
Classes resume	Nov. 26	Dec. 2	Nov. 30
Classes end	Dec. 12	Dec. 11	Dec. 16
Study and advising days (closed period)	Dec. 13-14	Dec. 12-13	none
Examinations (closed period)	Dec. 17	Dec. 16	Dec. 17
Commencement (Sunday)	Dec. 23	Dec. 22	Dec. 20
Examinations end	Dec. 22	Dec. 21	Dec. 23
January Interim			
Classes begin	Jan. 7	Jan. 6	Jan. 4
Spring registration (registration by mail earlier)	Jan. 29-31	Jan. 28-31	Jan. 26-29
Last day of classes	Feb. 1	Jan. 31	Jan. 29
Winter recess	Feb. 2-10	Feb. 1-9	Jan. 30-Feb. 7
Martin Luther King holiday	Jan. 21	Jan. 20	Jan. 18
Spring Semester			
Classes begin	Feb. 11	Feb. 10	Feb. 8
Spring recess	March 30	April 4	April 3
Classes resume	April 8	April 13	April 12
Memorial Day recess	May 26-27	May 23-25	
Examinations begin (closed period)	May 25	May 26	May 24
Examinations end	June 1	May 30	May 29
Commencement (Saturday)	June 1	May 30	May 29
Summer Session (8 week session)			
Registration	June 13-14	June 11-12	June 10-11
First day of classes	June 17	June 15	June 14
Last day of classes	Aug. 9	Aug. 7	Aug. 6

*These dates may be subject to change. Consult the most recent *Timetable* to confirm dates.

PROGRAMS: MAJORS, MINORS AND PROFESSIONAL



Accounting

Disciplinary Major or Minor

Associate Professor: Karl Zehms (chairperson).

Assistant Professor: Jeffrey Tollers.

Lecturers: Lawrence Franke, Marilyn Sagrillo, Ann Selk.

Adjunct: Gary Christens

The UW-Green Bay accounting program provides in-depth study of specific accounting subjects with a strong emphasis on management accounting applications. Students gain the breadth needed for career progression by taking in addition, business-related courses such as management, marketing, finance, law, and insurance, and a broad array of courses in the liberal arts.

Benefits of the UW-Green Bay accounting program include an active internship program. Through internships in the community, students gain valuable practical experience in responsible positions. Many accounting students also work with businesses to solve real problems through projects of the UW-Green Bay/UW-Extension Business Development Center. Advanced students may work on applied research projects in the University's Bureau of Business and Economic Research.

An active student accounting organization has close ties with professional accounting associations, providing another link with business professionals.

The accounting program is particularly supportive of employed students. About a third of accounting classes are offered in late afternoon and evening. Typically, every accounting course is offered at night every third semester.

Graduates are qualified for careers in public accounting, management accounting, or government accounting. Job opportunities are expected to continue to be excellent.

Graduates are eligible to take professional accounting examinations, including the C.P.A. (Certified Public Accountant), C.M.A. (Certified Management Accountant), and C.I.A. (Certified Internal Auditing) examinations. A large percentage of UW-Green Bay accounting graduates attempt and pass those exams.

Entrance Requirements. To be eligible for admission to the accounting major, students must meet specific requirements. These requirements change from time-to-time. For 1989-90, requirements include a 2.3 or better grade point average, calculated on a minimum of 36 earned credits. Only the most qualified applicants are admitted.

The accounting minor is designed to provide a reasonable exposure to the field of accountancy for students majoring in an interdisciplinary program.

Students who major in the accounting disciplinary program also must complete an interdisciplinary minor. Most students choose the minor in business administration, although other choices might be appropriate, depending upon a student's own interests and career goals.

Requirements for the Major

Supporting Courses, 27 credits

- 216-217 Quantitative Methods in Administration, 3 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 266-155 Computers and Microcomputers, 3 credits
- 298-202 Macro Economic Analysis, 3 credits
- 298-203 Micro Economic Analysis, 3 credits
- 298-330 Money and Banking, 3 credits
- 552-105 Expository Writing, 3 credits
- 600-201 Calculus for Social Scientists, 3 credits
- 600-260 Elementary Statistics, 3 credits

Upper-Level Courses, 66 credits

Business Administration Courses, 31 credits:

- 107-305 Business Law I, 3 credits
- 107-306 Business Law II, 4 credits
- 107-452 Management Information and Decision Support Systems, 3 credits
- 216-322 Introductory Marketing, 3 credits
- 216-343 Corporation Finance, 3 credits
- 216-382 Introductory Management, 3 credits
- One upper-level marketing course, 3 credits
- One upper-level management course, 3 credits

Two of these:

- 107-415 Advanced Income Tax Theory and Practice, 3 credits
- 216-345 Risk Management, 3 credits
- 216-442 Principles of Investment, 3 credits

Accounting Courses, 35 credits:

- 107-300 Introductory Accounting, 3 credits
- 107-301 Intermediate Accounting, 4 credits
- 107-302 Accounting for Administrators, 3 credits
- 107-312 Managerial Accounting, 3 credits
- 107-313 Financial Accounting I, 3 credits
- 107-314 Financial Accounting II, 3 credits
- 107-316 Governmental and Institutional Accounting, 3 credits
- 107-410 Income Tax Theory and Practice, 3 credits
- 107-411 Financial Information Systems, 3 credits
- 107-412 Auditing Standards and Procedures, 4 credits
- 107-414 Advanced Managerial Accounting, 3 credits

Requirements for the Minor

Supporting Courses, 12 credits

- 266-155 Computers and Microcomputers, 3 credits
- 298-203 Microeconomic Analysis, 3 credits
- 552-105 Expository Writing, 3 credits

One of these:

- 107-305 Business Law I, 3 credits
- 216-322 Introductory Marketing, 3 credits
- 216-382 Introductory Management, 3 credits

Upper-Level Courses, 19 credits

- 107-300 Introductory Accounting, 3 credits
- 107-301 Intermediate Accounting, 4 credits
- 107-302 Accounting for Administrators, 3 credits

One of these:

- 107-312 Managerial Accounting, 3 credits
- 107-313 Financial Accounting I, 3 credits

Two of these:

- 107-314 Financial Accounting II, 3 credits
- 107-316 Governmental and Institutional Accounting, 3 credits
- 107-410 Income Tax Theory and Practice, 3 credits
- 107-411 Financial Information Systems, 3 credits
- 107-414 Advanced Managerial Accounting II, 3 credits

■ American Indian Studies

Interdepartmental Minor

Professors: Jack Frisch; Estella Lauter.

Associate Professors: Clifford Abbott; Orville Clark (chairperson); Peter Kellogg; Terence O'Grady.

American Indian studies is an interdepartmental program that offers opportunities to study the history and cultures of North American Indians emphasizing the tribes of Wisconsin and the Great Lakes region.

The minor includes courses on the arts, music, literature, history, languages, and religious traditions of Wisconsin tribes, plus a set of seminars dealing with special problems in local Indian communities. The program is of special interest to Indian students who wish to explore their own history and cultures and to non-Indians who want to learn about the native Americans.

The minor can be combined to advantage with a number of disciplines and professional studies, including anthropology, history, the arts, humanities, education, and social services, to prepare for a variety of careers or to fulfill personal interests.

Requirements for the Minor

Lower-Level Courses, 6 credits

Core courses:

- 242/493-225 American Indian Studies: Art and Ceremonial Traditions, 3 credits
242/493-226 American Indian Studies: History and Verbal Traditions, 3 credits

Upper-Level Courses, 12 credits

Minimum of 3 credits and maximum of 6 credits from:
XXX-391 American Indian Seminar, 3 credits

Repeatable seminar has variable topics such as:

- Tribal Law and Legal Rights
- Land Use and Planning
- Accounting Systems
- Health Care Administration
- Development of Industrial Parks
- Housing
- Transportation Planning
- Waste Disposal Systems
- Personnel Management
- Educational Administration
- Social Service

Minimum of 6 credits and maximum of 9 credits of electives from:

- 242-301 Communication and the Arts Projects in the Community: Oneida Language, 3 credits
493-371 American Indian Art and Artists, 3 credits
493-374 Wisconsin Indians: Historical and Cultural Perspectives, 3 credits

■ Anthropology

Disciplinary Minor

Professor: Anthony Galt.

Associate Professors: Richard Logan; Joseph Mannino; Lynn Walter (chairperson).

Anthropology is the comprehensive study of human cultures, societies, and populations. It encompasses the biology of human populations—past and present—and the study of culture, society, and change.

As one of the more "interdisciplinary" disciplines, anthropology is an important liberal arts component for students interested in international, intercultural, and ethnic studies, as well as to those concerned with the relationships among biology, the environment, language, society, culture, and history.

Skills and special perceptions gained through the study of anthropology can be applied to many different vocational and professional interests, including international business, government work, human development, Peace Corps service, social service and health-related professions, museum and field work, environmental impact analysis, cultural resource management, economic development, social studies teaching, and advanced graduate study.

Anthropology minors might be chosen by students from several different interdisciplinary majors, depending on individual interests and career goals. Most commonly combined at UW-Green Bay are anthropology with the interdisciplinary major in social change and development. This serves students interested in the discipline's social aspects—ethnicity, family and society, social change, etcetera. Students concerned with anthropology's biological aspects—human genetics, evolution, forensics, and the like—will likely pursue the human biology interdisciplinary major. Excellent programs of study can be planned by students interested in historical or cultural aspects of anthropology (folk lore, folk music, folk art, etcetera) with the interdisciplinary majors in humanistic studies or communication and the arts.

Most anthropology minors at UW-Green Bay gain experience in practical application of anthropology by completing a museum internship.

An adviser can offer suggestions about career-oriented programs to combine with anthropology. Students seeking teacher preparation should be sure to consult advisers in both anthropology and education early to make sure they meet all requirements.

Requirements for the Minor

Supporting Courses, 6 credits

- 156-100 Varieties of World Culture, 3 credits
156-110 Introduction to Physical Anthropology, 3 credits

Upper-Level Courses, 15 credits

- 156-303 Cultural Ecology, 3 credits
156-304 Family, Kin and Community, 3 credits

156-342 Human Evolution, 3 credits

OR

156-364 Human Variability, 3 credits

246-321 Sociolinguistics, 3 credits

AND

Appropriate three-credit elective chosen with anthropology adviser

■ Art

Disciplinary Major or Minor

Professor: Robert Pum

Associate Professors: Ronald Baba; David Damkoehler (chairperson); Jerry Dell; Curt Heuer; Thomas Tasch; Karon Winzenz.

Assistant Professor: Carol Emmons.

Academic Staff: Christine Davitt; Robert Ratajczak.

The visual arts provide a means of exploring the processes of making, seeing, feeling, and thinking in terms of visual systems.

Courses in studio art:

—present art making as a problem-solving process using creative methods combining intuition and imagination with critical analysis;

—provide the knowledge necessary for mastery of materials and techniques;

—provide a foundation for and continuing reference to the principles of visual organization and structure essential to works of art;

—foster a receptive attitude toward diverse forms of artistic production including fine art, applied art, and art produced outside the artistic mainstream.

Courses in art history, other cultures, and contemporary art provide a rich conceptual and philosophical context by investigating stylistic characteristics of specific periods and the dynamic relationship between art and society.

The art discipline offers three identified areas of emphasis within the art major. These are:

- studio art
- art management
- art education

A fourth career direction is open to art majors who select a minor in communication and the arts with an emphasis in graphic communication.

All four areas prepare students for viable entry-level careers or for entry into graduate school programs. Students seeking careers or graduate study in art should take as many and varied art courses as possible.

Art majors typically select interdisciplinary minors in communication and the arts with emphases in aesthetic awareness or graphic communication. Minors in human development, business administration and humanistic studies may be appropriate depending upon students' individual goals.

Timely completion of an art major requires that student seek faculty advising no later than the sophomore year.

Students in many fields may find the visual skills of an art minor an excellent supplement to their academic programs in the context of our visually oriented media-driven culture.

The art minor may serve:

—individuals fulfilling personal interest in art without professional aspirations;

—those seeking to add the visual skills of a disciplinary minor in art to career preparations in such interdisciplinary fields as communication and the arts, humanistic studies, urban and public affairs, and environmental planning;

—persons who intend the minor as a component of their professional studies in fields such as education and business (advertising and marketing).

Requirements for the Major

(vary with the area of emphasis)

Areas of Emphasis

■ Studio Art

Lower-Level Courses, 30 credits required

Art history core, 9 credits:

242-102 History of Visual Arts: Ancient to Medieval, 3 credits

242-103 History of Visual Arts: Renaissance to French Revolution, 3 credits

242-202 Concepts and Issues in Modern Art, 3 credits

Design core, 9 credits:

168-101 Tool Safety and Materials, 2 credits

168-105 Drawing, 3 credits

168-106 Design Methods, 3 credits

168-107 Two-Dimensional Design, 3 credits

Studio core, 12 credits, choose 6 credits from each group below:

Two-Dimensional Studios:

168-210 Introduction to Painting, 3 credits

168-243 Introduction to Photography, 3 credits

168-270 Introduction to Printmaking, 3 credits

Three-Dimensional Studios:

168-220 Introduction to Sculpture, 3 credits

168-230 Introduction to Ceramics, 3 credits

168-250 Introduction to Textiles, 3 credits

168-260 Introduction to Art Metals: Jewelry, 3 credits

Upper-Level Courses, 24 credits required

Art history, 6 credits:

168-390 19th and 20th Century Art, 3 credits

168-490 Contemporary Art: Post 1945, 3 credits

Studio courses, 18 credits:

A minimum of 18 credits required in one or two studio areas with no less than 9 credits and no more than 12 credits in any one studio area. Sample programs of study for each studio area follow.

Painting:

168-302 Intermediate Drawing, 3 credits

168-311 Intermediate Painting, 3 credits

168-343 Photography II, 3 credits

168-402 Advanced Drawing, 3 credits

*168-410 Advanced Painting, 3 credits

Drawing:

168-302 Intermediate Drawing, 3 credits

168-311 Intermediate Painting, 3 credits

168-373 Intermediate Intaglio, 3 credits

168-377 Intermediate Lithography, 3 credits

*168-402 Advanced Drawing, 3 credits

Sculpture:

168-302 Intermediate Drawing, 3 credits

168-321 Intermediate Sculpture, 3 credits

168-364 Intermediate Art Metals: Jewelry, 3 credits

*168-421 Advanced Sculpture, 3 credits

Ceramics:

168-302 Intermediate Drawing, 3 credits

168-321 Intermediate Sculpture, 3 credits

168-331 Intermediate Ceramics, 3 credits

168-343 Photography II, 3 credits

*168-431 Advanced Ceramics, 3 credits

Photography:

168-302 Intermediate Drawing, 3 credits

168-311 Intermediate Painting, 3 credits

168-343 Photography II, 3 credits

168-344 Photography III, 3 credits

168-375 Screen Printing, 3 credits

*168-443 Advanced Problems in Photography, 3 credits

Art metals:

- 168-302 Intermediate Drawing, 3 credits
- 168-321 Intermediate Sculpture, 3 credits
- 168-343 Photography II, 3 credits
- 168-364 Intermediate Art Metals: Jewelry, 3 credits
- *168-463 Advanced Art Metals: Jewelry, 3 credits

Fibers/Textiles:

- 168-302 Intermediate Drawing, 3 credits
- 168-311 Intermediate Painting, 3 credits
- 168-321 Intermediate Sculpture, 3 credits
- 168-353 Textiles: Fiber Techniques, 3 credits
- 168-355 Intermediate Textiles: Papermaking, 3 credits
- *168-453 Advanced Textiles, 3 credits

Printmaking:

- 168-302 Intermediate Drawing, 3 credits
 - 168-311 Intermediate Painting, 3 credits
- Choose one or two printing processes:
- 168-371 Intermediate Relief Printing, 3 credits
 - 168-373 Intermediate Intaglio, 3 credits
 - 168-375 Screen Printing, 3 credits
 - 168-377 Intermediate Lithography, 3 credits
 - 168-470 Advanced Printmaking
(Students work in technical areas for which the appropriate intermediate course has been taken.)

*Advanced studios may be taken 3 times for a total of 9 credits.

■ Art Management**Lower-Level Courses, 30 credits required**

See the major in studio art for listing of art requirements on the freshman/sophomore level.

Upper-Level Courses, 27 credits required**Art history, 6 credits:**

- 168-390 19th and 20th Century Art, 3 credits
- 168-490 Contemporary Art: Post 1945, 3 credits

Studio courses, 12 credits:

- 168-302 Intermediate Drawing, 3 credits
- Select two studio areas, preferably one in two-dimensional and one in three-dimensional areas, with no more than 9 credits in any one area.

Art management core, 9 credits:

- 168-395 Exhibition Development and Design, 2 credits
- 168-396 Gallery Practicum, 2 credits
- 168-495 Advanced Arts Management, 2 credits
(repeatable up to six credits)
- 168-497 Gallery Management Internship, 3-9 credits

Related Courses (recommended)**Communication skills:**

- 246-133 Fundamentals of Public Address, 3 credits
- 552-105 Expository Writing, 3 credits
- 552-304 Advanced Expository Writing, 3 credits

Anthropology:

- 156-100 Varieties of World Culture, 3 credits
- 156-220 Myth, Ritual and Religion, 3 credits

Management:

- 216-385 Management of the Nonprofit Organization, 3 credits

Art history:

- 168-498 Independent Study, 1-4 credits

Students should consult with faculty in art management before selecting recommended courses. These courses will be selected to meet specific career goals.

■ Art Education

Art majors may complete an emphasis in art education leading to teacher licensure from the Wisconsin Department of Public Instruction. Except for 302-316, requirements for entry into the professional education program and for fulfilling that program are not listed here. Information about teacher preparation is listed in the Education program description in this book.

Lower-Level Courses, 30 credits required**Art history core, 6 credits:**

- 242-102 History of Visual Arts: Ancient to Medieval, 3 credits
- 242-103 History of Visual Arts: Renaissance to French Revolution, 3 credits

Design core, 9 credits:

- 168-105 Drawing, 3 credits
- 168-106 Design Methods, 3 credits
- 168-107 Two-Dimensional Design, 3 credits

Studio core, 15 credits:**Two-Dimensional Studios (6 credits):**

- 168-210 Introduction to Painting, 3 credits
- 168-243 Introduction to Photography, 3 credits
- 168-270 Introduction to Printmaking, 3 credits

Three-Dimensional Studios (choose 9 credits):

- 168-220 Introduction to Sculpture, 3 credits
- 168-230 Introduction to Ceramics, 3 credits
- 168-250 Introduction to Textiles, 3 credits
- 168-260 Introduction to Art Metals: Jewelry, 3 credits

Upper-Level Courses, 24 credits required**Art history, 6 credits:**

- 168-390 19th and 20th Century Art, 3 credits
- 168-490 Contemporary Art: Post 1945, 3 credits

Education, 3 credits:

- 302-316 Teaching Middle and Secondary School Art, 3 credits
(see the art education adviser for complete requirements)

Studio art, 15 credits:

- 168-302 Intermediate Drawing, 3 credits
- Twelve elective credits including four studio courses from the 300-400 level in drawing, painting, printmaking, photography, art metals, textiles, sculpture, and ceramics for which appropriate prerequisites have been completed.

Requirements for the Minor

(vary with area of emphasis)

Areas of Emphasis**■ Two-Dimensional Emphasis****Lower-Level Courses, 15 credits****Background, 3 credits:**

- 242-202 Concepts and Issues in Modern Art, 3 credits

Design core, 6 credits:

- 168-105 Drawing, 3 credits
- 168-107 Two-Dimensional Design, 3 credits

Introductory studios, 6 credits chosen from:

- 168-210 Introduction to Painting, 3 credits
- 168-243 Introduction to Photography, 3 credits
- 168-270 Introduction to Printmaking, 3 credits

Upper-Level Courses, 6 credits

Select two courses on the 300-400 level from studios in painting, drawing, photography, and printmaking, for which appropriate prerequisites have been taken.

■ *Three-Dimensional Emphasis*

Lower-Level Courses, 15 credits

Background, 3 credits:

242-202 Concepts and Issues in Modern Art, 3 credits

Design core, 6 credits:

168-105 Drawing, 3 credits

168-106 Design Methods, 3 credits

Introductory studios, 6 credits chosen from:

168-220 Introduction to Sculpture, 3 credits

168-230 Introduction to Ceramics, 3 credits

168-250 Introduction to Textiles, 3 credits

168-260 Introduction to Art Metals: Jewelry, 3 credits

Upper-Level Courses, 6 credits

Select two courses on the 300-400 level from studios in sculpture, ceramics, textiles, and art metals, for which appropriate prerequisites have been completed.

■ *Art History*

Lower-Level Courses, 15 credits

168-105 Drawing, 3 credits

168-107 Two-Dimensional Design, 3 credits

242-102 History of Visual Arts: Ancient to Medieval, 3 credits

242-103 History of Visual Arts: Renaissance to French Revolution, 3 credits

242-202 Concepts and Issues in Modern Art, 3 credits

Upper-Level Courses, 6 credits

168-390 19th and 20th Century Art, 3 credits

168-490 Contemporary Art: Post 1945, 3 credits

■ **Biology**

Disciplinary Major or Minor

Professors: Hallett J. Harris; V.M.G. Nair; Paul E. Sager; Leander Schwartz (chairperson).

Associate Professors: Robert Howe; Charles Ihrke; Michael Morgan; Dorothea Sager; Richard Stevens.

Assistant Professors: James Marker; Donna Ritch.

The biology major prepares students for careers in biochemistry, ecology, field biology, genetics, microbiology, plant and animal biology, and physiology. Students can develop biology programs to prepare for medical, dental, veterinary, agriculture, or other professional schools, or for graduate study. The major also establishes a foundation for interdisciplinary careers in biological resources management, human biology, nutritional sciences, and science communications (technical writing, journalism, and nature interpretation).

The program has well-equipped laboratories for teaching and student/faculty research. Other teaching and research facilities include the 200-acre Cofrin Arboretum around the campus periphery, several off-campus natural areas managed by the university, the Richter Natural History Museum, small animal laboratory, herbarium, and greenhouse. Students and faculty have access to microcomputers and the university's mainframe computer, a Digital Equipment Corp. VAX system.

A particular advantage of the UW-Green Bay program is the opportunity for undergraduate students to gain practical experience. Many students work with individual faculty on independent research projects. There is an active internship program with private, state, and national agencies, and with industry. Such experiences are beneficial when entering the job market or seeking admission to graduate and professional schools.

UW-Green Bay biology graduates are employed in industry (pharmaceuticals, paper making, food processing, hospitals and clinics, agriculture, and others), government agencies (Environmental Protection Agency, U.S. Food and Drug Administration, National Park Service, U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. Bureau of Land Management, U.S. Department of Agriculture, Wisconsin Department of Natural Resources, and others), with environmental consulting firms, and in education. About 40 percent of biology graduates pursue advanced degrees in graduate and professional schools.

Biology majors combine their studies with an interdisciplinary minor. Students interested in areas such as biological resources management, solid waste management, or science communication normally will take a minor in environmental science. Human biology is the minor commonly chosen by biology majors with interests in health sciences or adult fitness. Other interdisciplinary areas that may be useful, depending upon a student's career goals, include nutritional sciences, regional analysis (land use planning, etcetera), business administration, or urban and public affairs.

Students who prefer a biology minor (rather than a major) coupled with an interdisciplinary major, will find the majors in environmental science and human biology especially attractive.

Students seeking teacher licensure in biology or broad field sciences should consult advisers in both biology and education early in their programs to insure that they meet all requirements of the Wisconsin Department of Public Instruction.

Requirements for the Major

Introductory Courses, 8 credits

- 204-202 Principles of Biology I, 4 credits
204-203 Principles of Biology II, 4 credits

Supporting Courses, 20 credits

- 225-211 Principles of Chemistry I, 5 credits
225-212 Principles of Chemistry II, 5 credits
600-260 Introductory Statistics, 4 credits

Three additional credits of mathematics from:

- 266-155 Computers and Microcomputers, 3 credits
266-255 FORTRAN, 2 credits
266-256 Introduction to Computer Science I, 3 credits
600-202 Calculus and Analytic Geometry I, 4 credits
600-242 Discrete Mathematics, 4 credits

Three credits of writing from:

- 246-390 Scientific and Technical Communication, 3 credits
552-105 Expository Writing, 3 credits

Biology majors are strongly advised to also take:

- 225-300 Bio-Organic Chemistry, 3 credits
225-301 Bio-Organic Chemistry Laboratory, 1 credit
OR
225-302 Organic Chemistry I, 3 credits
225-303 Organic Chemistry II, 3 credits
225-304 Organic Chemistry Laboratory I, 1 credit
225-305 Organic Chemistry Laboratory II, 1 credit
AND
754-103 Fundamentals of Physics I, 4 credits
754-104 Fundamentals of Physics II, 4 credits
OR
754-201 Principles of Physics I, 5 credits
754-202 Principles of Physics II, 5 credits

Upper-Level Courses, 13-14 credits

- 204-302 Principles of Microbiology, 4 credits
204-303 Genetics, 3 credits
362-302 Principles of Ecology, 3 credits
204-311 Plant Physiology, 4 credits
OR
204-346 Comparative Physiology, 3 credits

Areas of Emphasis, 10-11 credits

Biology majors must complete 10 or 11 credits in one of the following areas of emphasis to bring their total credits in upper-level biology courses to a minimum of 24.

■ Botany

- 204-305 Biological Microtechnique, 3 credits
204-310 Plant Taxonomy, 3 credits
204-312 Mycology, 3 credits
204-317 Structure of Seed Plants, 3 credits
204-320 Field Botany, 3 credits
362-363 Forest and Plant Pathology, 3 credits

■ Field Biology and Ecology

- 204-310 Plant Taxonomy, 3 credits
204-320 Field Botany, 3 credits
204-342 Ornithology, 3 credits
204-343 Mammalogy, 3 credits
362-363 Forest and Plant Pathology, 3 credits
362-401 Stream Ecology, 3 credits
362-403 Limnology, 3 credits
362-475 Ecological Dynamics, 4 credits

■ Microbiology

- 204-312 Mycology, 3 credits
204-402 Advanced Microbiology, 3 credits
204-405 Microbial Physiology, 3 credits
204-407 Molecular Biology, 3 credits
362-363 Forest and Plant Pathology, 3 credits

■ Organismal Biology

- 204-304 Genetics Laboratory, 1 credit
204-317 Structure of Seed Plants, 3 credits
204-340 Comparative Anatomy of Vertebrates, 4 credits
204-345 Animal Behavior, 3 credits
204-347 Developmental Biology, 4 credits
478-318 Mammalian Reproduction, 3 credits
478-402 Human Physiology, 3 credits
478-404 Animal Physiology Laboratory, 2 credits
478-413 Neurophysiology, 3 credits

■ Zoology

- 204-305 Biological Microtechnique, 3 credits
204-340 Comparative Anatomy of Vertebrates, 4 credits
204-342 Ornithology, 3 credits
204-343 Mammalogy, 3 credits
204-345 Animal Behavior, 3 credits
204-347 Developmental Biology, 4 credits
478-312 Evolutionary Processes, 3 credits
478-318 Mammalian Reproduction, 3 credits
478-404 Animal Physiology Laboratory, 2 credits
478-413 Neurophysiology, 3 credits

For teacher preparation in the biology major, the minimum number of credits in biology is 34.

Requirements for the Minor

For teacher preparation in the biology minor, the minimum number of credits in biology is 22.

Introductory Courses, 8 credits

These are the same as for the major.

Upper-Level Courses, 13-14 credits

These are the same as for the major.

■ Business Administration

Interdisciplinary Major or Minor

Professors: Daniel J. Alesch (chairperson); James Murray.

Associate Professors: Maurice Better (coordinator, School for Workers); William Conley; John Harris; Robert Obenberger; Michael Troyer; Karl Zehms (chairperson, accounting).

Assistant Professors: A. Sam Ghanty; James Holly; Robert Nagy; Sandhya Sridhar; Richard Tansey; Jeffrey Tollers.

Lecturers: Laurey Berk; Frank Bueth; Lawrence Franke; Neil Hensrud; Brent Hussin; Lawrence Kostroski; Daniel Spielmann; Marilyn Sagrillo; Ann Selk.

Adjunct Faculty: Gary Christens; Richard Forsythe; Alan Green; Steven Nervegna.

The business administration program provides students with the skills to enter the job market and with the life-long abilities necessary for career progression.

The program accomplishes this through a broad array of professional business courses and by emphasizing throughout basic skills such as effective writing, speaking, quantitative analysis, computer capability, decision making, and problem solving. In addition, business majors are required to gain breadth through courses in the arts and humanities, social sciences, and natural sciences. They develop additional expertise in at least one other subject by completing a nonbusiness minor.

Such a program offers several advantages for today's business student. Businesses and industries increasingly require employees who are effective communicators and problem solvers and who have broadly based liberal educations. And, the nonbusiness minor requirement enables students to gain special expertise or to prepare to work in particular businesses or industries.

The nonbusiness minor can be used in many productive ways. For example, students with skills in quantitative methods or communications might combine business with minors in mathematics or communication processes and thus offer strengths in particular skills. Students interested in information technology or computer science could prepare for profitable careers by combining business with the minor being developed in information and computing science. Human development or psychology could be other useful combinations for management or personnel work.

Another way of using the minor requirement to advantage is to prepare for careers in particular kinds of businesses. A business major combined with a chemistry minor could be good preparation for the pulp and paper industry, for example. Or, business and foreign language or humanistic studies would be strong combinations for the growing field of international business. Or, students with interests in the fine or performing arts could combine studies to prepare for careers in arts management. Many combinations are possible, and a business adviser can help students plan programs to meet their individual needs and career goals.

A business major chooses an area of emphasis in one business field. Emphases are:

- finance
- management
- marketing

Each emphasis has within it an array of courses that enables students to develop specializations. Thus, a business major completes thorough preparation in a particular business area.

Business students can expect to gain practical experience while they pursue their studies. Many business courses include a practical project component. Students are encouraged to complete internships in

businesses and industries. Upper-level students might work with real businesses through the Small Business Institute program. Other practical experience possibilities are the program's Bureau of Business and Economic Research or the Business Development Center, operated in conjunction with UW-Extension.

Active student organizations in management, personnel, marketing, and accounting provide settings for business students to associate with others with like interests and to develop ties with professional organizations in the business world.

The university's size offers another advantage. Upper-level courses frequently number fewer than 30, facilitating discussion and the opportunity to work closely with faculty.

The UW-Green Bay business administration program supports employed students by offering about one-third of its courses in late afternoon and evening. Courses rotate through those time slots at least every third semester.

Program Entrance Requirements. Students are not admitted to the business administration major until they have established an acceptable academic record. Entering freshmen should declare a prebusiness major when they register. Requirements for admission to the major change from time to time. In 1989-90, students wishing to be admitted had to have completed a minimum of 36 credits of course work with a cumulative grade point average of at least 2.3 on a 4-point scale. Specific requirements for each fall are posted the previous spring and published in the fall *Timetable*.

Students completing a business minor must meet the same credit and grade point requirements in order to enroll in the business "gateway" courses. Business courses also have registration priorities. Details about these requirements are available from Academic Advising or business administration advisers.

Requirements for the Major

Supporting Courses, 22 credits

- 216-217 Quantitative Methods in Administration, 3 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 266-155 Computers and Microcomputers, 3 credits
- 298-202 Macroeconomic Analysis, 3 credits
- 298-203 Microeconomic Analysis, 3 credits
- 552-105 Expository Writing, 3 credits
- 600-260 Introductory Statistics, 3 credits

Upper-Level Courses, 18 credits

Business core courses:

- 107-300 Introductory Accounting, 3 credits
- 107-302 Accounting for Administrators, 3 credits
- 216-305 Business Law I, 3 credits
- 216-322 Introductory Marketing, 3 credits
- 216-343 Corporation Finance, 3 credits
- 216-382 Introductory Management, 3 credits

Areas of Emphasis, 15 credits

Each student must complete the requirements for one area of emphasis. Three emphases are available, and within them, students may select groups of courses that provide further specialization. Students should plan their emphases with the aid of advisers. The three emphases and specializations within them are:

■ Finance

- Corporate finance management
- Investment management
- Financial institution management
- Comprehensive finance

■ Marketing

Sales and sales management
Advertising and advertising management
Market analysis and research
Nonprofit marketing and marketing management

■ Management

General management
Human resource management
Small business management
Organizational analysis and development

Courses from other emphasis, 6 credits:

Students must select three credits from each of the two emphasis areas not selected as their primary area of emphasis.

Minor requirement:

All business administration majors must complete a nonbusiness minor. This requirement may be met by completing a disciplinary, interdisciplinary, or interdepartmental minor. Minors may be selected to enhance the major, satisfy personal interests, or prepare for a specialized career.

Requirements for the Minor

Supporting Courses, 12-13 credits

- 216-202 Business and its Environment, 3 credits
OR
216-282 Personal Financial Planning, 3 credits
298-202 Macroeconomic Analysis, 3 credits
OR
298-203 Microeconomic Analysis, 3 credits
552-105 Expository Writing, 3 credits
255-205 Social Science Statistics, 3 credits
OR
600-260 Introductory Statistics, 3 credits

Upper-Level Courses, 18 credits

- 216-300 Introductory Accounting, 3 credits
216-305 Business Law I, 3 credits
216-322 Introductory Marketing, 3 credits
216-343 Corporation Finance, 3 credits
216-382 Introductory Management, 3 credits
And one upper-level elective.

■ Chemistry

Disciplinary Major or Minor

Professor: Jack C. Norman (chairperson)

Associate Professors: Dawson C. Deese; Ronald H. Starkey; Thomas E. Van Koevering; James H. Wiersma.

Assistant Professor: Warren V. Johnson.

Chemists have a major impact on the quality of our lives. They make significant contributions to medicine, bioengineering, geology, biology, agriculture, wastewater treatment, food chemistry, solid waste disposal, and environmental chemistry. Chemists developed many of the materials that have improved our standard of living, including pharmaceuticals, semiconductors, fuels, solvents, adhesives, paper products, and many others.

A special benefit of the UW-Green Bay chemistry program is the opportunity for undergraduates to engage in actual research. The majority of UWGB chemistry majors have opportunities to work as research assistants on faculty projects, or to do their own independent projects. UWGB faculty are active in research on pulp and paper, water quality, air pollution, radon, and molecular biology. Experience in actual research can be beneficial when entering the job market and in applying to graduate and professional schools. About half of UWGB chemistry majors do continue their studies in graduate or professional schools.

The UW-Green Bay chemistry program is accredited by the American Chemical Society and students who want to add depth to their programs and gain an additional credential may pursue an individual ACS-certified major. Students who satisfactorily complete the major are registered with the ACS and have the major recorded on their official university credentials.

Chemistry majors combine their studies with an interdisciplinary minor. Students aiming for professional schools in the health sciences—medicine, dentistry, veterinary medicine, pharmacy—would logically combine chemistry studies with the program in human biology. Environmental science would be an appropriate interdisciplinary minor for students planning careers as chemists after graduation, or pursuing graduate studies in chemistry. Nutritional sciences could be another appropriate combination, depending upon a student's career goals.

Students seeking teaching licensure should consult with advisers in both chemistry and the professional education program early, to make certain they fulfill all requirements.

Requirements for the Major

Supporting Courses, 18 credits

- 600-202 Calculus and Analytic Geometry I, 4 credits
600-203 Calculus and Analytic Geometry II, 4 credits
754-201 Principles of Physics I, 5 credits
754-202 Principles of Physics II, 5 credits

Lower-Level Courses, 10 credits

- 225-211 Principles of Chemistry I, 5 credits
225-212 Principles of Chemistry II, 5 credits

Upper-Level Courses, 28 credits

Required:

- 225-302 Organic Chemistry I, 3 credits
225-303 Organic Chemistry II, 3 credits
225-304 Organic Chemistry Laboratory I, 1 credit
225-305 Organic Chemistry Laboratory II, 1 credit
225-311 Analytical Chemistry, 4 credits
225-320 Thermodynamics and Kinetics, 3 credits

continued

- 225-321 Structure of Matter, 3 credits
 225-322 Thermodynamics and Kinetics Laboratory, 1 credit
 225-323 Structure of Matter Laboratory, 1 credit
 225-413 Instrumental Analysis, 4 credits

Electives:

- 225-330 Biochemistry, 3 credits
 225-331 Biochemistry Laboratory, 1 credit
 225-402 Advanced Organic Chemistry, 3 credits
 225-403 Advanced Organic Chemistry Laboratory, 1 credit
 225-407 Molecular Biology, 3 credits
 225-408 Molecular Biology Laboratory, 1 credit
 225-410 Inorganic Chemistry, 3 credits
 225-411 Inorganic Chemistry Laboratory, 1 credit
 225-417 Nuclear Physics and Radiochemistry, 3 credits
 225-418 Nuclear Physics and Radiochemistry Laboratory, 1 credit
 362-440 Environmental Chemistry, 3 credits
 362-441 Environmental Chemistry Laboratory, 1 credit

American Chemical Society-Certified Major**Major requirements as stated above, plus:**

- 225-410 Inorganic Chemistry, 3 credits
 225-411 Inorganic Chemistry Laboratory, 1 credit
 225-498 Independent Study, 1-4 credits
 226-155 Computers and Microcomputers, 3 credits
 OR
 Other computer language course
 600-305 Differential Equations, 3 credits

Requirements for the Minor**Lower-Level Courses, 10 credits**

- 225-211 Principles of Chemistry I, 5 credits
 225-212 Principles of Chemistry II, 5 credits

Upper-Level Courses, 12 credits**Required:**

12 credits at 300-level or higher including one course each in the areas of organic chemistry and analytical chemistry.

Electives also may include:

- 694-328 Physiological Chemistry, 3 credits
 (instead of 225-330)

■ Communication and the Arts

Interdisciplinary Major or Minor

Professors: Robert Bauer; Trinidad Chavez; Arthur Cohrs; Jack Frisch; Lovell Ives; Donald Larmouth; Timothy Meyer; Terence O'Grady; Richard Sherrell.

Visiting Professor: Louis Erdmann.

Associate Professors: Clifford Abbott; Jerome Abraham; Margaret Charnon; Phillip Clampitt; David Damkoehler; Jerry Dell; Curtis Heuer (chairperson); Wayne Jaeckel; Charles Matter; Karon Winzenz.

Assistant Professors: Jeffrey Benzow; Kevin Collins; Jeffrey Entwistle; Susan Kline; Helaine Marshall; Sarah Meredith.

Lecturers: Cheryl Grosso; Carol Hoehn.

Communication and the arts is concerned with the structure, roles, and social and aesthetic consequences of all forms of communication, particularly language, mass media, graphics, art, music, theatre, and creative writing.

The program has several areas of emphasis which can be pursued as interdisciplinary majors or minors. These often are combined with disciplinary programs such as art, music, theatre, and communication processes, among others.

Emphases for communication and the arts majors or minors:

■ **Aesthetic awareness** develops a broad understanding and appreciation of the arts with an emphasis on aesthetic perception. The emphasis is most frequently chosen as a minor and combined with disciplinary majors in art, music, theatre, or literature. It is particularly valuable for students entering teaching. As a major, aesthetic awareness is most appropriate for individuals who seek to cultivate broad aesthetic sensibilities or who intend to pursue graduate degrees in related arts studies.

■ **Broad-field communications** focuses on integrating several areas of communications, including language; spoken communication and cultural distinctions; mass media; and visual communications. As an emphasis for a minor, it is frequently combined with majors in communication processes, art, literature and language, and business. It supports career preparation for students entering mass media, graphic communication, English-communication arts teaching, communications management, English as a Second Language, or linguistics.

Emphases for majors only:

■ **Environmental design** is offered cooperatively with urban and public affairs and examines the forces that shape the settings in which humans live and act. Emphasis is on understanding and using the design process as a creative, decision-making tool. Students might combine this emphasis as a major with programs in art, psychology, sociology, pre-architecture, or pre-engineering to prepare for graduate study or for careers in architecture, engineering, environmental design, urban planning, visual arts, interior design, or industrial design.

■ **Science communication** is offered in conjunction with environmental science. Its majors prepare to convey scientific and technical information, particularly to nonprofessional audiences. Career possibilities include environmental or scientific journalism, scientific and technical communication, or environmental interpretation.

Emphasis for minors only:

■ **Graphic communication** focuses on integrating text and images into coherent communication. Combined with a major in art, communication processes (electronic media, photography, or journalism), or business administration (marketing), the emphasis prepares students for a broad array of careers including advertising, design, publishing, computer graphics, illustration, and photography. Graduate study in graphic design, visual communications, or art are other possibilities. The emphasis has an active internship program.

Requirements for the Major

Areas of Emphasis

Each area of emphasis has unique requirements for supporting and upper-level courses.

■ *Aesthetic Awareness*

Lower-Level Courses, 12 credits

Required:

242-261 Aesthetic Awareness: Foundations

The remaining 9 credits to be selected from:

- 242-102 History of the Visual Arts: Ancient to Medieval, 3 credits
- 242-103 History of the Visual Arts: Renaissance to French Revolution, 3 credits
- 242-121 Masters and Masterpieces of Music, 3 credits
- 242-141 Introduction to the Performing Arts: Theatre and Music, 3 credits
- 242-142 Performing Arts Perspectives: Experience and Evaluation, 3 credits
- 242-202 Concepts and Issues of Modern Art, 3 credits
- 242-210 Film and Society, 3 credits
- 242-221 Popular Music Since 1955, 3 credits
- 242-272 Women in the Visual or Performing Arts, 3 credits

Up to six credits of lower-level course work may be chosen from related disciplines with the approval of the faculty adviser.

Upper-Level Courses, 24 credits

Required:

- 242-361 Aesthetic Awareness: Interpretation, 3 credits
- 242-362 Aesthetic Awareness: Psychology of Aesthetic Perception, 3 credits
- 242-364 Aesthetic Awareness: Creation, 3 credits
- 242-474 Aesthetic Awareness: Traditional Art Styles, 3 credits
- 242-475 Aesthetic Awareness: Avant-Garde Art Styles, 3 credits

Nine additional credits chosen from:

- 242-329 Cross-Cultural Communication: Expressive Traditions, 3 credits (may be repeated with a different subject)
- 242-370 Modern American Culture, 3 credits
- 242-380 The Arts: London, 3 credits
- 242-430 Mass Media and Society, 3 credits
- 242-477 Women as Creative Agents, 3 credits
- 242-498 Independent Study, 1-4 credits

Up to nine credits of upper-level course work may be chosen from related disciplines with the approval of the faculty adviser.

■ *Broad-Field Communications*

Lower-Level Courses, 12 credits

Required:

242-160 Introduction to Language, 3 credits

The remaining 9 credits to be selected from:

- 242-210 Film and Society, 3 credits
- 242-221 Popular Music Since 1955, 3 credits
- 242-231 Introduction to Graphic Communication, 3 credits
- 246-102 Introduction to Mass Communication, 3 credits
- 242-243 Native American Cultures: Film and Performance I, 3 credits
- 242-244 Native American Cultures: Film and Performance II, 3 credits

Upper-Level Courses, 24 credits

Core Courses, select 4 courses from:

- 242-323 Language and Human Conflict, 3 credits
- 242-370 Modern American Culture, 3 credits
- 242-375 Communication Skills: Language of Metaphor, 3 credits
- 242-430 Mass Media and Society, 3 credits
- 242-450 The Construction of Public Images, 3 credits

Elective Courses, select 4 courses from:

- 242-329 Cross Cultural Communication: Expressive Traditions, 3 credits (repeatable with different subject)
- 242-331 Graphic Communications Studio I, 3 credits
- 242-332 Graphic Communications Studio II, 3 credits
- 242-362 Aesthetic Awareness: Psychology of Aesthetic Perception, 3 credits
- 242-480 The Arts: London, 3 credits

■ *Environmental Design*

Lower-Level Courses, 15 credits

Required:

- 168-106 Design Methods, 3 credits
- 950-210 Drawing Systems for the Designer, 3 credits

The remaining 9 credits to be selected from:

- 242-102 History of Visual Arts: Ancient to Medieval, 3 credits
- 242-103 History of Visual Arts: Renaissance to French Revolution, 3 credits
- 242-202 Concepts and Issues in Modern Art, 3 credits
- 242-231 Introduction to Graphic Communication, 3 credits
- 950-200 Introduction to Urban Studies, 3 credits

Upper-Level Courses, 24 credits

Fifteen credits chosen from:

- 242-331 Graphic Communications Studio I, 3 credits
- 242-332 Graphic Communications Studio II, 3 credits
- 242-432 Graphic Communications Workshop, 3 credits
- 242-497 Internship in Graphic Communications, 3-12 credits
- 834-325 Behavior in Designed Environments, 3 credits
- 950-363 Urban Aesthetics, 3 credits
- 950-412 Urban Planning I, 3 credits

Nine credits chosen from:

- 950-436 Environmental Design Studio I, 3 credits (individual scale)
- 242-437 Environmental Design Studio II, 3 credits (small-group scale)
- 950-438 Environmental Design Studio III, 3 credits (community scale)
- 242-439 Environmental Design Studio IV, 3 credits (senior project)

■ *Science Communication*

This is a cooperative program offered by communication and the arts and environmental science.

Lower-Level Courses, 37-39 credits

Fifteen credits in communications chosen from:

- 242-231 Introduction to Graphic Communication, 3 credits
- 246-100 Writing Skills Laboratory, 3 credits
- 246-102 Introduction to Mass Communication, 3 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 246-200 Introduction to Communication Processes, 3 credits
- 246-243 Introduction to Photography, 3 credits
- 552-105 Expository Writing, 3 credits

Twenty-two to 24 credits in basic sciences to be selected with a science adviser, including at least two courses in each of three areas of science chosen from:

Biology	Physics	Mathematics
Chemistry	Earth science	

Upper-Level Courses, 30 credits

Eighteen credits chosen from:

- 216-425 Promotional Strategy, 3 credits
- 242-331 Graphic Communications Studio I, 3 credits
- 242-332 Graphic Communications Studio II, 3 credits
- 242-430 Mass Media and Society, 3 credits
- 242-497 Internship in Graphic Communications, 3-12 credits
- 246-303 Feature Writing, 3 credits

continued

- 246-305 Elements of Electronic Media, 3 credits
- 246-306 Radio Broadcasting, 3 credits
- 246-333 Argumentation and Persuasion, 3 credits
- 246-335 Organizational Communication, 3 credits
- 246-343 Photography II, 3 credits
- 246-345 Multiple Media Applications of Photography, 3 credits
- 246-346 Photographic Design for Print Media, 3 credits
- 246-380 Communication Law, 3 credits
- 246-390 Scientific and Technical Communication, 3 credits
- 246-497 Internship in Communication Processes, 3 credits

Twelve credits in environmental science:

Ecology, 3 credits:

- 362-302 Principles of Ecology, 3 credits

Resource Management, 3 credits, chosen from:

- 362-303 Conservation of Natural Resources, 3 credits
- 362-335 Water and Waste Water Treatment, 3 credits
- 362-460 Resource Management Strategy, 3 credits
- 362-466 Vegetation Management, 3 credits

Field Speciality, 6 credits:

In an area such as aquatic studies, solid waste, air quality, natural resources, or land use.

Requirements for the Minor**Areas of Emphasis**

Each area of emphasis has unique requirements. After fulfilling required lower-level courses in a particular emphasis, remaining credits may be chosen from concentration courses with an adviser's approval.

■ Aesthetic Awareness**Lower-Level Courses, 9 credits**

Required:

- 242-261 Aesthetic Awareness: Foundations, 3 credits

Upper-Level Courses, 12 credits

Choose a minimum of 6 credits from:

- 242-361 Aesthetic Awareness: Interpretation, 3 credits
- 242-362 Aesthetic Awareness: Psychology of Aesthetic Perception, 3 credits
- 242-364 Aesthetic Awareness: Creation, 3 credits
- 242-474 Aesthetic Awareness: Traditional Art Styles, 3 credits
- 242-475 Aesthetic Awareness: Avant-Garde Art Styles, 3 credits

Choose remaining credits with faculty advice.

■ Graphic Communication**Lower-Level Courses, 9 credits**

Required:

- 242-231 Introduction to Graphic Communication, 3 credits

Upper-Level Courses, 12 credits

Choose a minimum of 6 credits from:

- 242-331 Graphic Communications Studio I, 3 credits
- 242-332 Graphic Communications Studio II, 3 credits
- 242-432 Graphic Communications Workshop, 3 credits
- 242-497 Internship in Graphic Communication, 3-12 credits

Choose remaining credits with faculty advice.

■ Broad-Field Communications**Lower-Level Courses, 9 credits**

Required:

- 242-160 Introduction to Language, 3 credits

Upper-Level Courses, 12 credits

Choose a minimum of 6 credits from:

- 242-323 Language and Human Conflict, 3 credits
- 242-375 Communication Skills: The Language of Metaphor, 3 credits
- 242-430 Mass Media and Society, 3 credits
- 242-450 The Construction of Public Images, 3 credits

Choose remaining credits with faculty advice.

■ Communication Processes

Disciplinary Major or Minor

Professors: Jack Frisch (interpersonal communication); Donald Larmouth (linguistics, scientific and technical communication); Timothy Meyer (electronic media).

Associate Professors: Clifford Abbott (linguistics); Phillip Clampitt (organizational communication); Jerry Dell (photography) [chairperson]; Charles Matter (cognitive and perceptual psychology).

Assistant Professors: Jeffrey Benzow (graphic communication); Helaine Marshall (linguistics/teaching English as a second language).

Sending and receiving messages are essential parts of everyone's life. The disciplinary program in communication processes seeks to strengthen both of these abilities in students, but more than that, it offers students ways of understanding how communication happens; how messages are put into codes visual and verbal; how they are filtered through various media; how they are interpreted in different social contexts; and in fact how they construct those contexts.

The demands of contemporary scholarship as well as professional careers make it important for students to integrate three areas of preparation:

1. a broad, comprehensive examination of the nature of communication that includes knowledge of cognitive science, information theory, linguistics, and psychology;
2. study in depth of a particular form of communication, such as journalism, electronic media, photography, organizational communication, linguistics, and public relations;
3. significant work in specific areas of communication which are allied with the particular area of emphasis.

Students who complete majors or minors in communication processes thus develop an understanding not only of their special area of emphasis but also its important links to other media, both visual and verbal, within the larger context of communication as a process.

Communication processes achieves this kind of broad-field integration through six areas of emphasis:

- In **electronic media**, students need more than just knowledge of production techniques. Professional advancement requires skills in writing, editing, advertising, and sales, market, and audience research as well as knowledge of new media and their impact upon society and culture.
- In **journalism**, students must have writing skill, the ability to dig, a concern for people, a strong sense of autonomy, and an abiding interest in public affairs, including their cultural, social, economic, and political contexts. Good journalists develop these qualities through this program and a thorough liberal arts education.
- Students in **linguistics and English as a second language** integrate a strong background in language structure and variation with substantial preparation in foreign language, cross-cultural studies, and education, both to succeed in the ESL classroom and to prepare for advanced studies at the graduate level.
- Students in **organizational communication** develop basic communication skills needed in organizations, such as speaking, interviewing, and discussion skills. They also learn about sources of communication problems in organizations, apply strategies for discovering and solving these problems, and build an understanding of current theories of organizational communication.
- Students in **photography** come to understand photography as a problem-solving process which combines imagination, intuition, critical analysis, and mastery of tools and materials. The instructional program emphasizes theoretical concepts and practical experience to prepare students for diverse applications of photography.

- Students in **public relations** complete requirements which reflect the demand for graduates who can write well, are fully acquainted with the wide range of available modes of communication (graphics, print media, electronic media, oral discourse, and their many combinations), and are particularly skillful in at least one of them.

Communication processes is also a good choice for students who seek teacher preparation in English/communication arts, journalism/mass media, speech/organizational communication, and English as a second language. Students seeking teacher licensure should consult advisers in the education program.

Internships in communication processes provide qualified students in all the areas above opportunities for faculty-supervised experience in professional settings outside the classroom. In addition, communication processes courses, among them 246-487, Communication Audits; 246-344, Photography III; and 246-460, Publications Management, involve students in research projects in the community.

Communication processes instructional facilities include television field production equipment and video editing capabilities, photography laboratory, lighting studio, and electronic photography computer studio. Courses also use computer classrooms in the university Computer Center.

Communication processes students seeking an interdisciplinary minor or major should consult with a faculty adviser. Typical combinations with communication processes include programs in communication and the arts, business administration, humanistic studies, and urban and public affairs. Other plans suited to individual goals are available.

Communication processes graduates have entered a wide variety of academic and professional areas: news reporting, photojournalism, broadcast journalism, photographic illustration, television production, printing and publications, advertising, sales and marketing, management consulting, teaching English as a second language in public schools and universities, technical writing and editing, public relations, and government service, as well as graduate study in photography, theoretical and applied linguistics, information science, library science, and telecommunications.

Requirements for the Major

Courses marked (*) cannot be double-counted with another academic major or minor.

Lower-Level Courses, 15 credits

Some areas of emphasis require more than 15 credits of supporting courses. Depending upon their emphasis, different courses from the following list will be chosen.

Required:

- 246-200 Introduction to Communication Processes, 3 credits
- 246-201 Human Information Processing, 3 credits

Choose remaining 9 credits from courses below:

- *242-160 Introduction to Language, 3 credits
- *242-231 Introduction to Graphic Communication, 3 credits
- 246-102 Introduction to Mass Communication, 3 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 246-166 Fundamentals of Interpersonal Communication, 3 credits
- 246-203 Newswriting Laboratory, 3 credits
- 246-205 Intercultural Communication, 3 credits
- 246-243 Introduction to Photography, 3 credits
- 246-253 Practicum in Print Journalism I, 1-3 credits

Upper-Level Courses

Upper-level courses vary with each area of emphasis.

Areas of Emphasis

■ *Print Journalism, 24 credits*

Required:

246-380 Communication Law, 3 credits

A minimum of nine credits from:

- 246-303 Feature Writing, 3 credits
- 246-353 Practicum in Print Journalism II, 1-3 credits
- 246-390 Scientific and Technical Communication, 3 credits
- 246-403 Advanced Reporting, 3 credits

Choose remaining credits from:

- *242-450 The Construction of Public Images, 3 credits
- 246-305 Elements of Electronic Media, 3 credits
- 246-336 Theories of the Interview, 3 credits
- 246-343 Photography II, 3 credits
- 246-344 Photography III, 3 credits
- 246-445 Human Communication Theory, 3 credits
- 246-460 Publications Management, 3 credits
- 246-497 Internship in Communication Processes, 3 credits

■ *Electronic Media, 24 credits*

Required:

- 246-305 Elements of Electronic Media, 3 credits
- 246-306 Radio Broadcasting, 3 credits
- 246-307 Television Production Techniques, 3 credits
- 246-308 Telecommunications Delivery Systems, 3 credits
- 246-309 Electronic Media Commercial Campaigns, 3 credits
- 246-380 Communication Law, 3 credits
- 246-445 Human Communication Theory, 3 credits

Choose remaining 3 credits from:

- *242-450 The Construction of Public Images, 3 credits
- 246-343 Photography II, 3 credits
- 246-403 Advanced Reporting, 3 credits
- 246-444 Time Duration Visual Media, 3 credits
- 246-497 Internship in Communication Processes, 3 credits

■ *Photography, 24 credits*

Required:

- 246-343 Photography II, 3 credits
- 246-344 Photography III, 3 credits
- 246-443 Advanced Problems in Photography, 3 credits
- 246-445 Human Communication Theory, 3 credits

Choose remaining 12 credits from:

- *242-450 The Construction of Public Images, 3 credits
- 246-305 Elements of Electronic Media, 3 credits
- 246-307 Television Production Techniques, 3 credits
- 246-308 Telecommunications Delivery Systems, 3 credits
- 246-345 Multiple Media Applications of Photography, 3 credits
- 246-346 Photographic Design for Print Media, 3 credits
- 246-444 Time Duration Visual Media, 3 credits
- 246-460 Publications Management, 3 credits
- 246-497 Internship in Communication Processes, 3 credits

■ *Organizational Communication, 24 credits*

Required:

- 246-305 Elements of Electronic Media, 3 credits
- 246-333 Persuasion and Argumentation, 3 credits
- 246-335 Organizational Communication, 3 credits
- 246-336 Theories of the Interview, 3 credits
- 246-337 Small Group Communication, 3 credits
- 246-445 Human Communication Theory, 3 credits

Choose remaining 6 credits from:

- *242-450 The Construction of Public Images, 3 credits
- 246-308 Telecommunications Delivery Systems, 3 credits
- 246-460 Publications Management, 3 credits
- 246-487 Communication Audits, 3 credits
- 246-497 Internship in Communication Processes, 3 credits

■ *Linguistics/Teaching English as a Second Language, 24 credits*

Required:

- 246-445 Human Communication Theory, 3 credits
- 16 credits in a foreign language (equivalent to two years' college-level study)

Required for teacher licensure in English as a second language:

- 246-321 Sociolinguistics, 3 credits
- 246-322 Modern Linguistics, 3 credits
- 246-325 Applied Linguistics, 3 credits
- 246-327 Error Analysis and Treatment in Second Language Learning, 3 credits

Choose remaining 9 credits from courses below:

- 246-320 History of the English language, 3 credits
- 246-326 Modern Semantics, 3 credits
- 246-337 Small Group Communication, 3 credits
- 246-497 Internship in Communication Processes, 3 credits
- *302-315 Teaching English as a Second Language, 3 credits
- 481-495 Language Acquisition in Children, 3 credits

■ *Public Relations, 30 credits*

Choose 21 credits from:

- 246-303 Feature Writing, 3 credits
- 246-305 Elements of Electronic Media, 3 credits
- 246-309 Electronic Media Commercial Campaigns, 3 credits
- 246-333 Persuasion and Argumentation, 3 credits
- 246-335 Organizational Communication, 3 credits
- 246-336 Theories of the Interview, 3 credits
- 246-337 Small Group Communication, 3 credits
- 246-343 Photography II, 3 credits
- 246-380 Communication Law, 3 credits
- 246-390 Scientific and Technical Communication, 3 credits
- 246-403 Advanced Reporting, 3 credits
- 246-444 Time Duration Visual Media, 3 credits
- 246-445 Human Communication Theory, 3 credits
- 246-460 Publications Management, 3 credits
- 246-497 Internship in Communication Processes, 3 credits

Electives, choose 9 credits from:

- *216-322 Introductory Marketing, 3 credits
- *216-325 Public Relations, 3 credits
- *216-424 Marketing Research, 3 credits
- *216-425 Promotional Strategy, 3 credits
- *242-450 The Construction of Public Images, 3 credits

Requirements for the Minor

Courses marked (*) cannot be double-counted with another academic major or minor.

Lower-Level Courses, 12 credits minimum

Some areas of emphasis require more than 12 credits of supporting courses. Depending upon their emphasis, different courses from the following list will be chosen.

Required:

- 246-200 Introduction to Communication Processes, 3 credits

Choose remaining 9 credits from the courses below:

- *242-160 Introduction to Language, 3 credits
- *242-231 Introduction to Graphic Communication, 3 credits
- 246-102 Introduction to Mass Communication, 3 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 246-166 Fundamentals of Interpersonal Communication, 3 credits
- 246-201 Human Information Processing, 3 credits
- 246-203 Newswriting Laboratory, 3 credits
- 246-205 Intercultural Communication, 3 credits
- 246-243 Introduction to Photography, 3 credits
- 246-253 Practicum in Print Journalism, 1-3 credits

Upper-Level Courses, 12 credits minimum

Upper-level courses vary with each area of emphasis.

Areas of Emphasis**■ Print Journalism**

A minimum of six credits from:

- 246-303 Feature Writing, 3 credits
- 246-353 Practicum in Print Journalism II, 1-3 credits
- 246-390 Scientific and Technical Communication, 3 credits
- 246-403 Advanced Reporting, 3 credits

Choose remaining credits from:

- *242-450 The Construction of Public Images, 3 credits
- 246-343 Photography II, 3 credits
- 246-380 Communication Law, 3 credits
- 246-460 Publications Management, 3 credits

■ Electronic Media

Required:

- 246-305 Elements of Electronic Media, 3 credits

Choose remaining 9 credits from:

- *242-450 The Construction of Public Images, 3 credits
- 246-307 Television Production Techniques, 3 credits
- 246-308 Telecommunications Delivery Systems, 3 credits
- 246-309 Electronic Media Commercial Campaigns, 3 credits
- 246-380 Communication Law, 3 credits

■ Organizational Communication

Required:

- 246-335 Organizational Communication, 3 credits
- 246-336 Theories of the Interview, 3 credits

Choose remaining 6 credits from:

- *242-450 The Construction of Public Images, 3 credits
- 246-333 Persuasion and Argumentation, 3 credits
- 246-337 Small Group Communication, 3 credits
- 246-445 Human Communication Theory, 3 credits
- 246-460 Publications Management, 3 credits
- 246-487 Communication Audits, 3 credits

■ Photography

Required:

- 246-343 Photography II, 3 credits
- 246-344 Photography III, 3 credits
- 246-443 Advanced Problems in Photography, 3 credits

Choose remaining 3 credits from:

- *242-450 The Construction of Public Images, 3 credits
- 246-345 Multiple Media Applications of Photography, 3 credits
- 246-346 Photographic Design for Print Media, 3 credits
- 246-444 Time Duration Visual Media, 3 credits
- 246-460 Publications Management, 3 credits

■ Public Relations

Required:

- 246-303 Feature Writing, 3 credits
- 246-305 Elements of Electronic Media, 3 credits

Choose remaining 6 credits from courses below:

- *216-325 Public Relations, 3 credits
- *242-450 The Construction of Public Images, 3 credits
- 246-309 Electronic Media Commercial Campaigns, 3 credits
- 246-333 Persuasion and Argumentation, 3 credits
- 246-335 Organizational Communication, 3 credits
- 246-390 Scientific and Technical Communication, 3 credits
- 246-460 Publications Management, 3 credits

■ Linguistics/Teaching English as a Second Language, 18 credits required

Required for students seeking teaching preparation minor in English as a second language:

8 credits in a foreign language, minimum
(equal to one year of college-level study)

Culture of a linguistic minority, minimum 3 credits:

- 156-301 People and Culture of a Selected Region, 3 credits
- 448-250 Traditional Asian Civilization, 3 credits
- 448-251 Modern Asian Civilization, 3 credits
- 493/558-358 Latin America Today, 3 credits
- 493-363 January Abroad: Mexico, 3 credits

Language structure, minimum 3 credits:

- 242-160 Introduction to Language, 3 credits
- 246-322 Modern Linguistics, 3 credits

Language in its social context, minimum 3 credits:

- 242-323 Language and Human Conflict, 3 credits
- 246-321 Sociolinguistics, 3 credits

Application of linguistic principles to teaching English as a second language, minimum 3 credits:

- 246-325 Applied Linguistics, 3 credits
- 246-327 Error Analysis and Treatment in Second Language Learning, 3 credits

Knowledge of the methods of teaching English as a second language, 3 credits:

- 302-315 Teaching English as a Second Language, 3 credits

Additional depth in linguistics, minimum 3 credits:

Course work selected in consultation with faculty adviser

Earth Science

Disciplinary Major or Minor

Professors: H.J. Day; Thomas H. McIntosh; Joseph M. Moran.

Associate Professors: Steven I. Dutch (chairperson); Ronald D. Stieglitz.

Earth science is the study of materials such as air, water, soil and rocks, of forces and processes such as volcanos and weather that shape the earth, and the impacts that these physical elements have upon living organisms.

Emerging awareness of the need to use natural resources wisely has increased career opportunities for knowledgeable earth scientists in industry and government agencies that deal with land use decisions. Petroleum companies and metallic mineral industries hire earth scientists. Resource conservation agencies need people who can bridge the gap between the scientific and policy aspects of land use to increase public awareness and understanding of issues. Waste disposal, water quality, and soil erosion are examples of areas in which earth scientists work.

Earth science majors choose interdisciplinary minors. Students interested in regional planning, resource management or land management typically select interdisciplinary minors in environmental science or regional analysis or, less often, in environmental planning or urban and public affairs. For those interested in business, earth science may be combined with courses in business administration. A career in science communication (technical and scientific writing, environmental and scientific journalism, environmental interpretation) with emphasis on the earth sciences may be pursued through a major linking earth science with communication and the arts.

Students seeking teacher preparation should consult with advisers in earth science and education early in their studies to make sure their programs meet all requirements.

Earth science majors usually follow one of two paths: 1) preparation for scientific and technical careers requiring advanced work at the graduate level, and 2) pursuit of the major to support another area of study or for personal satisfaction.

The **graduate studies emphasis** requires a thorough understanding of mathematics, physics, and chemistry. Calculus, basic inorganic chemistry, and basic physics are as important as courses in geology, meteorology, hydrology, or soil science. Advanced courses in mathematics, computer science, physics, and chemistry are desirable. In some areas of earth science, advanced training in biology is required.

Supporting skills are helpful to students in either emphasis. Earth scientists must be able to communicate with people in other fields, many of whom lack scientific training. Knowledge of foreign languages, history, and cultures provides access to foreign technical literature and makes it easier to work in other regions. Other technical skills such as air photo interpretation, or a knowledge of remote sensing methods are valuable tools for the professional earth scientist.

Requirements for the Major

Supporting Courses, 34 credits minimum

Required core courses, 16 credits:

- 204-202 Principles of Biology I, 4 credits
- 296-202 Physical Geology, 4 credits
- 296-203 Geological Evolution of the Earth, 3 credits
- 296-204 Geological Evolution Laboratory, 1 credit
- 600-104 Algebra and Trigonometry, 4 credits

Choose one of these:

- 266-155 Computers and Microcomputers, 3 credits
 - 600-260 Introductory Statistics, 4 credits
- 3 credits of mathematics, computer science or statistics at 200 level or above

Choose one of these:

- 246-133 Fundamentals of Public Address, 3 credits
- 246-390 Scientific and Technical Communications, 3 credits
- 552-105 Expository Writing, 3 credits

An equivalent communications course with adviser's consent
One year of a foreign language (8 credits)

Areas of Emphasis

■ General Earth Science

Additional Supporting Courses

Choose one of these:

- 225-108 General Chemistry, 5 credits
- 225-211, 212 Principles of Chemistry I, II, 5 credits each
- 754-201, 202 Principles of Physics I, II, 5 credits each

Upper-Level Courses, 24 credits

Choose 6 credits from:

- 296-340 Rock and Mineral Resources, 3 credits
- 362-320 The Soil Environment, 3 credits
- 362-330 Descriptive Hydrology, 3 credits
- 362-342 Environmental Geology, 3 credits
- 416-325 Regional Climatology, 3 credits

Choose one course from:

- 296-350 Geological Field Methods, 4 credits
- 362-454 Remote Sensing of the Environment by Satellite, 3 credits
- 416-351 Elements of Cartography, 3 credits
- 416-451 Computer Cartography, 3 credits

Plus additional earth science courses to total 24 credits

■ Graduate Study Emphasis

Additional Required Supporting Courses

- 204-202 Principles of Biology I, 4 credits
 - 225-211, 212 Principles of Chemistry I, II, 5 credits each
 - 600-202, 203 Calculus and Analytic Geometry I, II, 4 credits each
 - 754-201, 202 Principles of Physics I, II, 5 credits each
- 8 credits of some combination of 200-level or above mathematics, statistics or computer science

Upper-Level Courses

Select one emphasis and take all courses in that emphasis.

Atmospheric Science:

- 362-350 Meteorology, 3 credits
- 416-325 Regional Climatology, 3 credits

Geology:

- 296-350 Geologic Field Methods, 4 credits
- 296-366 Structural Geology, 3 credits
- 296-402 Stratigraphy and Sedimentation, 3 credits
- 296-441 Mineralogy, 4 credits

Soil and Land Resources:

- 362-320 The Soil Environment, 3 credits
- 362-321 The Soil Environment Laboratory, 1 credit
- 362-460 Resource Management Strategy, 3 credits

Water Resources:

- 362-430 Quantitative Hydrology, 3 credits
- 362-460 Resource Management Strategy, 3 credits

Requirements for the Minor

Supporting Courses, 12-17 credits

- 296-202 Physical Geology, 4 credits
600-104 Algebra and Trigonometry, 4 credits

Choose one of these:

- 225-108 General Chemistry, 5 credits

A two-semester sequence of courses in biology, chemistry or physics

Choose one of these:

- 416-250 Displays of Geographic Information, 3 credits

A course in communications, remote sensing, cartography or mathematics to include statistics and computer science (approved by an earth science adviser).

Upper-Level Courses, 12 credits

Choose one of these:

- 296-302 Geologic Evolution of the Earth, 3 credits
296-340 Rock and Mineral Resources, 3 credits

Earth science electives to total 12 credits. For teacher preparation for the minor, this must include course work in at least two of the following emphases: atmospheric sciences, soil and land resources, or water resources.

Economics

Disciplinary Major or Minor

Professors: James M. Murray; Ismail Shariff (chairperson).

Associate Professors: Kumar Kangayappan; Larry Smith; Michael D. Troyer.

Economics focuses on the allocation and distribution of scarce resources. As a social science, economics is fundamentally about people—their needs, wants and behavior, and the institutions they construct.

As a discipline focusing on scarcity, economics includes the study of organizations and institutions that influence resource allocation, including businesses, governments, households, product markets, and the markets for land, labor, capital, and innovation, among others. Understanding these organizations provides insights into problems such as inflation, unemployment, government regulation, environmental degradation, poverty, and economic growth.

Students who major or minor in economics receive training in quantitative methods, economic theory, and applied economic analysis. Students can tailor their academic programs to fit their particular strengths, interests, and career goals.

Economics majors choose an interdisciplinary minor. The majority of economics majors at UWGB choose the program in business with emphases in marketing or finance. Other interdisciplinary programs would be appropriate for other specific career goals.

The broad training received by economics students in economic decision-making creates a variety of career opportunities. Most UW-Green Bay economics majors enter careers in business, government agencies, and nonprofit organizations directly after graduation. Others go on to graduate schools, where they receive advanced training in such diverse fields as business, economics, law, public policy, and urban studies.

Students seeking teacher preparation should consult advisers in the education program.

Requirements for the Major

Supporting Courses, 9 credits required

- 600-260 Introductory Statistics, 3 credits (required)

OR

- 255-205 Social Science Statistics, 3 credits

- 600-201 Calculus for the Management and Social Sciences, 3 credits
(Other equivalent or higher level calculus course will also fulfill this requirement.)

- 266-155 Computers and Microcomputers, 3 credits

OR

- 266-256 Introduction to Computer Science I, 3 credits

Core Courses, 6 credits

- 298-202 Macro Economic Analysis, 3 credits
298-203 Micro Economic Analysis, 3 credits

Upper-Level Courses, 24 credits

- 298-302 Intermediate Macro Economic Theory, 3 credits
298-303 Intermediate Micro Economic Theory, 3 credits

Electives, 18 credits chosen from:

- 298-301 Economic and Social Security, 3 credits
298-304 Contemporary Labor Markets, 3 credits
298-306 Public Finance and Fiscal Policy, 3 credits
298-307 Sources of Contemporary Economics Concepts, 3 credits
298-308 Business Cycles, 3 credits

continued

- 298-330 Money and Banking, 3 credits
 298-402 Resource Economics Analysis, 3 credits
 298-403 International Trade, 3 credits
 298-404 Economics of Developing Areas, 3 credits
 298-406 Comparative Economic Systems and Institutions, 3 credits
 298-485 Managerial Economics, 3 credits
 834-340 Economics of Land Use, 3 credits
 834-342 Community Economic Development, 3 credits
 950-309 Urban and Regional Economic Theory, 3 credits
 950-407 Urban and Regional Economic Analysis, 3 credits

Requirements for the Minor

Supporting Courses, 3 credits required

Choose one:

- 255-205 Social Science Statistics, 3 credits
 266-155 Computers and Microcomputers, 3 credits
 266-256 Introduction to Computer Science I, 3 credits
 600-201 Calculus for the Management and Social Sciences, 3 credits
 600-260 Introductory Statistics, 3 credits

Core Courses, 6 credits

- 298-202 Macro Economic Analysis, 3 credits
 298-203 Micro Economic Analysis, 3 credits

Upper-Level Courses, 12 credits

- 298-302 Intermediate Macro Economic Theory, 3 credits
 OR
 298-303 Intermediate Micro Economic Theory, 3 credits

Electives:

9 credits of 300-400-level courses chosen from upper-level course listings in the major

Education

Professional Teacher Preparation

Professor: George O'Hearn (chairperson).

Associate Professors: Dennis Bryan; Margaret Laughlin; Richard Presnell; Philip Thompson; Thomas Van Koevering.

Assistant Professors: James Elicker; Kathryn Koch; Theodor Korithoski; Timothy Sewall.

Lecturer: Joan Thron.

The professional program in education prepares students for the teaching profession or for a variety of education-related professions. UWGB offers teacher preparation in these subjects and grade levels:

Early childhood/elementary-level (grades prekindergarten-6)

Elementary-level (grades 1-6)

Elementary/middle-level (grades 1-9)

Elementary music

Secondary-level or middle/secondary-level (grades 9-12 or 6-12)

Academic subjects listed below are for secondary or middle/secondary-level unless otherwise indicated. An (M) indicates a teaching major and (m) designates a teaching minor.

Anthropology (m)

Art (K-12) (M)

Athletic coaching

Biology (M, m)

Chemistry (M, m)

Computer science (M, m)

Earth science (M, m)

Economics (M, m)

English (6-9) (m); (6-12) (M)

English as a second language (elementary, 6-12 or K-12) (M, m)

French (6-12 or K-12) (M, m)

Geography (M, m)

German (6-12 or K-12) (M, m)

History (M, m)

Journalism/Mass Media (M, m)

Mathematics (6-9) (m); (6-12) (M, m)

Music—choral (6-12) (M)

Music—instrumental (6-12 or K-12) (M)

Music—general (K-9 or K-12) (M)

Native American Languages: Oneida (6-12 or K-12) (M, m)

Physical science (M)

Physics (M, m)

Political science (M, m)

Psychology (M, m)

Resource management (m)

Science: broad field (M)

Science (6-9) (m)

Social sciences: broad field (M)

Social sciences: (6-9) (m)

Sociology (M, m)

Spanish (6-12 or K-12) (M, m)

Speech (M, m)

Theatre (M, m)

All of these programs are fully approved by the Wisconsin Department of Public Instruction for preparation for licensure as a teacher in Wisconsin. Individuals who have completed UWGB's teacher education program qualify for licensure in most other states.

For students with career goals other than the traditional role of classroom teacher, the education program offers opportunities, too. Such students may pursue individually planned programs to relate to their particular educational needs and career goals.

Some examples of such career fields include: environmental education and nature center programs, labor education programs, educational media, social services agency educational programs, education advocacy, parent education, education for the elderly, youth and adult community programs, and leisure education.

At UWGB, teacher preparation is a cooperative responsibility. Students fulfill degree requirements in a major while meeting requirements of the Wisconsin Department of Public Instruction for teaching licensure as approved for UWGB.

UWGB teacher preparation graduates have consistently shown excellent placement records. A follow-up of graduates of 1987-88 revealed that approximately 92 percent were professionally placed. Eighty-two percent of those with elementary licensure and 79 percent with secondary licensure were employed in education. Employment opportunities do vary depending upon the area of certification.

Program Entrance Requirements

Preliminary Admission. Students planning to complete a teacher certification program should indicate this when they apply for admission to UWGB. When they are admitted, students select teacher preparation programs in which they expect to complete requirements.

Also at the time of registration for classes, students should indicate pre-elementary, pre-middle school or pre-secondary education in the appropriate section of the final registration form. Any student in good standing may enroll in supporting courses (100-200 level) in education or in an education program not leading to full preparation for licensure.

Final Admission. Students must meet the following requirements for admission to the UWGB teacher education program:

1. Be a matriculated student and have earned a minimum of 15 credits in residence at UWGB with a grade point average of 2.5 or higher for work completed at UWGB. Transfer students with a cumulative grade point average of 2.75 or higher based on at least 40 credits accepted for transfer are not required to meet this 15-credit requirement. Students who complete an associate degree at a UW Center System campus will be treated as if all courses completed at that campus were taken at UWGB.
2. Have a minimum cumulative grade point average of 2.5 computed on at least 40 credits of college-level course work. This is calculated on all courses attempted at UWGB and at other institutions which might be recognized for transfer of credit to UWGB. Those courses in which UWGB has no comparable curricular area are not considered in these calculations.
3. Have completed the Preprofessional Skills Test (PPST) with a score of at least 173 in mathematics, 175 in reading, and 174 in writing. The PPST is administered by Educational Testing Service, PPST Program Service, Box 23480, Oakland, California 94623. Information and registration forms are available from the Education Office.
4. Have demonstrated proficiency in speaking and listening by completion of 246-133 with a grade of "C" or better, or by completing an equivalent speech course acceptable for transfer to UWGB with a grade of "C" or better.
5. Have a copy of her or his high school transcript on file in the Education Office.
6. Have ACT test scores submitted to the Registrar's Office for entry on the UWGB transcript.
7. Be free from physical or mental/psychological impairment which would substantially limit a person from performing the essential functions of a teacher candidate or teacher. Such physical or mental/psychological impairment does not disqualify a person who with reasonable accommodation can perform the essential functions of a teacher. An examination and recommendation by an appropriate medical and/or other professional specialist will be required if deemed necessary.

Applicants must disclose whether they have been convicted of any crime and whether licensure to teach has ever been denied or revoked in any state for reasons other than insufficient credits or courses. A criminal record or denial or revocation of a teaching license is not an automatic bar to admission and is considered only as these substantially relate to the responsibilities of the teacher education program and eventual licensure. Persons denied admission are entitled to appeal.

Application for Admission

Students should apply for admission to the program during the semester in which they expect to complete all requirements for admission. Specific deadlines are available from the Education Office.

Exceptions or appeals to any of the above criteria should be directed to the Education Office.

Because requirements of the Wisconsin Department of Public Instruction change from time-to-time, requirements of the education program are subject to change. Although students cannot be accepted into the program until they meet the criteria above, they should contact a faculty adviser early in their academic years for sound academic planning.

Requirements for Teacher Preparation

The interdisciplinary problem-focused studies offered at UW-Green Bay provide an uncommonly strong preparation for teaching. Students focus on excellence in the teaching/learning process through methods and field experience courses which provide the prospective teacher with the background, knowledge, and instructional tools needed to become an effective teacher. Early field experience requirements provide the prospective teacher with experience with students in actual educational settings, including work with ethnic, cultural and economic minorities, the adult learner, and the exceptional child. All UWGB graduates complete an interdisciplinary major or minor. In addition, students preparing for elementary/middle school licensure must have an approved teaching minor and students preparing for secondary school licensure complete one or more teaching majors.

In addition to course requirements listed here, there are regulations about time limits, grade point average and other requirements for completion and recommendation for licensure. The Education Office can provide specific requirements. Also, students who already hold a bachelor's degree who are interested in pursuing initial teacher preparation or extending their licensure to additional areas or grade levels should learn the special requirements which apply to them.

General Education, 42 credits

Course work included in the student's major(s), minor(s) or professional education sequence may not be counted as part of this requirement.

The 42 credits must include:

- 9 credits in the humanities and fine arts
- 9 credits in the social sciences
- 9 credits in the natural sciences and mathematics
- 3 credits of senior seminar

Also, courses from each category below must be included, unless the major(s), or minor(s) includes courses in that category:

- Written communication, 3 credits minimum required
 - Oral communication, 3 credits minimum required
 - Mathematics, 3 credits minimum required
 - Fine arts, 3 credits minimum required
 - National, state and local government, 3 credits required
 - Literature, 3 credits minimum required
 - Biological science, 3 credits minimum required
 - Physical science, 3 credits minimum required
 - Western and non-western history or contemporary culture, 3-6 credits minimum required
- (A list of specific, approved courses is available.)

Academic Major or Minor, 30-36 credits minimum

Students may select either an interdisciplinary major or a disciplinary major with an interdisciplinary minor. Some certification programs require specific majors, minors, or academic competencies.

Human Relations**Fulfilled by:**

- 493-211 Human Relations and the Humanities: Understanding Discrimination, 3 credits
 493-212 Human Relations and the Humanities: Cultural Diversity, 3 credits

And:

50 clock hours of direct involvement with adult and pupil members of specified groups.

Conservation/Environmental Education, 5-8 credits

This is a requirement only for those students pursuing licensure to teach early childhood, elementary education, science or social science. For an approved list of courses to satisfy this requirement, contact the Education or Academic Advising Offices.

Professional Education**■ Early Childhood/Elementary Level**

- 302-203 Introduction to Environmental Education in the Schools, 2 credits
 302-250 Field Experience in Education, 2 credits
 302-280 Instructional Media, Materials and Applications, 2 credits
 302-300 Introduction to Education and Teaching, 3 credits
 302-302 Teaching Social Studies in the Elementary and Middle School, 2 credits
 302-303 Teaching Art in the Elementary School, 2 credits
 302-304 Teaching Music for the Elementary Teacher, 2 credits
 302-306 Health and Physical Education in the Elementary and Middle School, 3 credits
 302-307 Teaching Reading in the Elementary School, 3 credits
 302-308 Children's Literature in the Elementary School, 3 credits
 OR
 302-206 Cultural Images in Materials for Children and Adolescents, 3 credits
 302-309 Language Arts in the Elementary and Middle School, 3 credits
 302-324 Teaching Mathematics in the Elementary and Middle School, 3 credits
 302-325 Teaching Science in the Elementary and Middle School, 3 credits
 302-350 Field Experience in Teaching Methods, 0 credits
 302-400 Perspectives on Education, Schools, and Society in the United States, 3 credits
 302-402 Student Teaching, 15 credits
 302-410 Introduction to the Education of Exceptional Children, 3 credits
 302-421 Reading Readiness and Language Skill Development, 3 credits
 302-441 History, Philosophy, and Current Programs in Early Childhood Education, 3 credits
 302-442 Curriculum and Program Development in Early Childhood Education, 3 credits
 302-445 Early Childhood Center Administration and Community Resource Management, 3 credits
 481-335 Introduction to Experience with Young Children, 2 credits
 OR
 Approved, supervised experience with a group of young children
 820-315 Educational Psychology, 3 credits

Also:

A pre-student-teaching clinical experience in the teaching of reading

■ Elementary and Elementary/Middle Level

- 302-203 Introduction to Environmental Education in the Schools, 2 credits
 302-250 Field Experience in Education, 2 credits
 302-280 Instructional Media, Materials and Applications, 2 credits
 302-300 Introduction to Education and Teaching, 3 credits
 302-302 Teaching Social Studies in Elementary and Middle Schools, 2 credits
 302-303 Teaching Art in the Elementary School, 2 credits
 302-304 Teaching Music for the Elementary Teacher, 2 credits
 302-306 Health and Physical Education in Elementary and Middle Schools, 3 credits
 302-307 Teaching Reading in the Elementary School, 3 credits
 302-308 Children's Literature in the Elementary School, 3 credits
 OR
 302-206 Cultural Images in Materials for Children and Adolescents, 3 credits
 302-309 Language Arts in the Elementary and Middle Schools, 3 credits
 302-324 Teaching Mathematics in Elementary and Middle Schools, 3 credits
 302-325 Teaching Science in Elementary and Middle Schools, 3 credits
 302-350 Field Experience in Teaching Methods, 0 credits
 302-351 Field Experience Project in Education, 1 credit
 302-400 Perspectives on Education, Schools, and Society in the United States, 3 credits
 302-401, 402 Student Teaching in the Middle/Elementary School, 15 credits
 302-410 Introduction to the Education of Exceptional Children, 3 credits
 302-421 Reading Readiness and Language Skill Development, 3 credits
 OR
 302-422 Reading in the Content Areas, 3 credits
 820-315 Educational Psychology, 3 credits

Also:

A pre-student-teaching clinical experience in the teaching of reading

■ Secondary or Middle/Secondary Level

- 302-250 Field Experience in Education, 2 credits
 302-280 Instructional Media, Materials and Applications, 2 credits
 302-300 Introduction to Education and Teaching, 3 credits
 302-310 through 317 Teaching (Specific Subjects) in Middle/Secondary Schools, 3 credits each
 302-318 Reading and Study Skills in Middle and Secondary Schools, 3 credits
 302-350 Field Experience in Teaching Methods, 0 credits
 302-351 Field Experience Project in Education, 1 credit
 302-400 Perspectives on Education, Schools, and Society in the United States, 3 credits
 302-401, 403 Student Teaching in the Middle/Secondary School, 15 credits
 302-410 Introduction to the Education of Exceptional Children, 3 credits
 820-315 Educational Psychology, 3 credits

Also:

A 3-credit language arts course (being developed)

A pre-student-teaching clinical experience in the teaching of reading

Engineering

Professional Major

Advisers: Harold J. Day, professor; Robert Lanz, associate professor; Nancy J. Sell, professor.

Engineering at UWGB is a joint program co-sponsored by UWGB and the University of Wisconsin-Milwaukee and called the Northeast Wisconsin (NEW) Engineering Program. It allows students to complete their first two years of engineering studies at UWGB and continue into upper-level courses in the College of Engineering and Applied Science at UWM. Some upper-level courses in engineering may be offered at the UWGB campus.

Engineering and general education courses at UWGB are recognized as equivalent to course work at UWM. Students who complete their first two years at UWGB and meet eligibility requirements are automatically considered for admission into upper-level studies in the College of Engineering and Applied Science at UWM—they do not have to re-apply for admission and are not considered transfer students.

Students who complete one of the majors in engineering receive a Bachelor of Science degree from the College of Engineering and Applied Science at UWM. There are currently five such majors:

- civil engineering
- electrical engineering
- industrial engineering
- materials engineering
- mechanical engineering

Participants in the NEW Engineering Program complete 70 to 74 credits at UWGB, all of which are countable toward the degree. In order to be eligible to advance into junior- and senior-level courses, students must meet grade-point average requirements and complete a number of specific courses. Grade-point requirements are:

- 2.25 minimum GPA in civil, industrial, or materials engineering
- 2.75 minimum GPA in mechanical engineering
- 3.00 minimum GPA in electrical engineering

In addition, engineering students must receive a B minus or better in Expository Writing and successfully complete the UWM English proficiency examination, which is administered at UWGB each semester.

Students in the NEW Engineering Program must meet 18 credits of general education requirements specific to this program:

- 3 credits in the arts
- 6 credits in the humanities
- 6 credits in the social sciences
- 3 additional credits

Nine of these credits must be grouped into an approved "theme," such as aesthetics, economics, history of science and technology, culture and society, professionalism and ethics, or politics. Students should consult a faculty adviser or the *Academic Advising Handbook* for specific course groupings which will meet this requirement.

UWGB students must apply for advancement into the major at UWM by October 1 for spring semester, by February 1 for summer session, and by June 1 for fall semester.

Requirements for the Major

Lower-Level Courses

All engineering students must take:

- 225-211, 212 Principles of Chemistry I, II, 5, 5 credits
- 246-390 Scientific and Technical Communication, 3 credits
- 325-201 Engineering Materials, 4 credits
- 325-234 Linear Systems Analysis, 4 credits
- 325-251 Programming for Science and Engineering, 3 credits
- 325-313 Mechanics I, 3 credits
- 552-105 Introduction to Expository Writing, 3 credits
- 600-202, 203 Calculus and Analytic Geometry I, II, 4, 4 credits
- 600-209 Multivariate Calculus, 4 credits
- 754-201, 202 Principles of Physics I, II, 5, 5 credits

Additional courses required in civil and mechanical engineering:

- 325-105 Elements of Descriptive Geometry, 3 credits
- 325-210 Introduction to Design Techniques, 3 credits
- 325-314 Mechanics II, 3 credits
- 325-316 Strength of Materials, 4 credits

Additional course required in electrical engineering:

- 325-314 Mechanics II, 3 credits

Additional courses required in industrial engineering:

- 325-210 Introduction to Design Techniques, 3 credits
- 325-314 Mechanics II, 3 credits
- 325-316 Strength of Materials, 4 credits

Additional course required in materials engineering:

- 325-316 Strength of Materials, 4 credits

Environmental Planning

Interdepartmental Major or Minor

Professors: Daniel Alesch; Hallett Harris; Harvey Kaye; Robert Wenger.

Associate Professors: Ronald Baba (chairperson); William Laatsch; David Littig; William Niedzwiedz.

Environmental planning is an interdepartmental major for students interested in careers focusing on the design, management, and protection of the natural and built environment. Students develop professional knowledge and skills in planning and decision making, political and economic systems, and the environmental sciences, and the analytic tools for participation in those processes which will determine environmental quality in the future. This program of study fulfills the UWGB requirement for an interdisciplinary major.

The program is an effective preparation for graduate-level study as well as entry-level employment in a variety of fields because the UWGB major in environmental planning is one of the few such programs offered at the undergraduate level in colleges and universities across the nation. Many graduates have gone on to master's and doctoral-level studies in urban planning and design, regional planning, architecture, environmental protection and management, and environmental policy studies. Many received advanced placement in recognition of the quality of their undergraduate course work.

Other graduates have entered employment in public and private organizations directly. These students found that the problem-focused approach prepared them for dealing with the complex problems resulting from the interaction of the environmental, social, and political-economic concerns found in the world of decision making and planning. Students have also noted the benefits of internships with agencies and programs in the region.

One important feature of the major is the field specialization, which allows students to combine studies of the planning process with a solid foundation in a specific area of application. The flexibility of the major and the field specialization, enable students to construct personalized programs appropriate for further study or entry-level employment in such fields as urban, regional, or environmental planning. By completing a field specialization in environmental design, students can prepare for future work in urban design or architecture. Other areas appropriate for field specialization include urban studies, public administration, environmental sciences, computer sciences, political science, regional analysis, and economics.

Students have several options for meeting the field specialization requirement. To take advantage of the flexibility built into this major, students should consult with the adviser.

Environmental planning is a cooperative program offered through several UWGB study programs: business administration, regional analysis, environmental science, urban and public affairs, and social change and development.

Requirements for the Major

Supporting Courses, 21 credits

255-205 Social Science Statistics, 3 credits
OR

600-260 Introductory Statistics, 3 credits

216-102 Introduction to Environmental Science, 3 credits

255-301 Foundations for Social Research, 3 credits

266-155 Computers and Microcomputers, 3 credits

600-101 Intermediate Algebra, 3 credits (or equivalent)

778-100 Introduction to Political Science, 3 credits

950-201 Problem Analysis and Decision Making, 3 credits

Upper-Level Courses, 30 credits

Required:

950-452 Planning Theory and Methods, 3 credits

Choose 9 credits:

416-350 Geographic and Land Information Systems, 3 credits

834-322 Regional Planning, 3 credits

834-323 Land Use Controls, 3 credits

834-421 Techniques and Methods of Regional Planning, 3 credits

950-408 Public Policy Analysis, 3 credits

950-412 Urban Planning I, 3 credits

950-451 Decision Theory and Methods, 3 credits

Choose 6 credits:

298-302 Intermediate Macro Economic Theory, 3 credits

298-303 Intermediate Micro Economic Theory, 3 credits

298-404 Economics of Developing Areas, 3 credits

834-340 Economics of Land Use, 3 credits

950-309 Urban and Regional Economic Theory, 3 credits

950-409 Public Finance and Fiscal Policy, 3 credits

950-415 Public and Nonprofit Budgeting, 3 credits

Choose 6 credits:

778-301 Environmental Politics and Policy, 3 credits

778-312 Community Politics, 3 credits

778-351 Comparative Political Systems, 3 credits

778-353 Politics of Developing Systems, 3 credits

778-410 Intergovernmental Relations, 3 credits

778-416 American Legislative Process, 3 credits

875-333 Social Change in Selected Areas, 3 credits

875-361 Historical Perspectives on Social Change, 3 credits

950-331 Urban Politics and Policy, 3 credits

950-378 Environmental Law, 3 credits

Choose 6 credits:

296-420 Soil Classification and Geography, 3 credits

362-302 Principles of Ecology, 3 credits

362-303 Conservation of Natural Resources, 3 credits

362-384 The Environment's Response to Human Settlement, 3 credits

362-460 Resource Management Strategy, 3 credits

Field Specialization, 18 credits

Students choose one of these alternatives:

1. successful completion of an individually tailored set of courses
2. fulfilling requirements for an approved second major,
3. meeting requirements for an approved minor.

Requirements for the Minor

Upper-Level Courses, 18 credits

Required:

362-302 Principles of Ecology, 3 credits

950-452 Planning Theory and Methods, 3 credits

Choose 9 credits:

416-350 Geographic and Land Information Systems, 3 credits

778-301 Environmental Politics and Policy, 3 credits

834-322 Regional Planning, 3 credits

834-421 Techniques and Methods of Regional Planning, 3 credits

950-408 Public Policy Analysis, 3 credits

950-412 Urban Planning I, 3 credits

950-451 Decision Theory and Methods, 3 credits

Choose 3 credits:

298-404 Economics of Developing Areas, 3 credits

834-323 Land Use Controls, 3 credits

834-340 Economics of Land Use, 3 credits

950-309 Urban and Regional Economic Theory, 3 credits

950-409 Public Finance and Fiscal Policy, 3 credits

950-415 Public and Nonprofit Budgeting, 3 credits

Students who take the minor must choose an interdisciplinary major.

Environmental Science

Interdisciplinary Major or Minor

Professors: Harold J. Day; Fritz A. Fischbach; Hallett J. Harris; David Jowett; Thomas H. McIntosh; Anjani K. Mehra; Joseph M. Moran; V.M.G. Nair; David L. Outcalt; Charles R. Rhyner; Paul E. Sager; Leander J. Schwartz; Nancy J. Sell; Ronald D. Strieglitz; Robert B. Wenger (chairperson).

Associate Professors: Steven I. Dutch; Dennis M. Girard; Robert W. Howe; Robert W. Lanz; Bruce Mielke; Michael D. Morgan; Jack C. Norman; Nikitas L. Petrakopoulos; William A. Shay; Ronald H. Starkey; Thomas E. Van Koevering; James H. Wiersma.

Assistant Professors: Forrest B. Baulieu; Gregory Davis.

Lecturers: Linda A. Curl; Bonnie Denis; Gary Fewless; Lee C. Hansen; Clifford Kraft; Gary G. Wardall.

Environmental science is an interdisciplinary program of study in the natural sciences which offers students the opportunity to acquire a sound understanding of the scientific principles that govern natural processes. Through course work, independent study, and research, students develop a realistic awareness of the interdependency of the various components of the environment and the nature of environmental change. The program is structured so that students develop analytical skills and acquire a broad base of knowledge in the biological, physical, and mathematical sciences.

The UW-Green Bay science program has more than 20 years of experience in applying a multidisciplinary approach to complex issues such as global warming, water and air quality, energy, and the like. Many universities are just beginning to recognize the need and develop such programs.

As part of their upper-level requirements, environmental science majors select one of two emphasis areas. They are:

- ecology and biological resources management
- physical resources management

Environmental science provides preprofessional training in agriculture, dentistry, engineering, medicine, pharmacy, and veterinary studies. Majors may fulfill requirements for teacher preparation in several areas including biology, chemistry, computer science, earth science, mathematics, physics, and broad-field science. Students seeking teaching licensure should consult with advisers in the education program.

Students completing the major may also take course work in other professional areas such as business administration and urban and public affairs to prepare for science-related careers in business and public and nonprofit organizations.

A substantial percentage of UWGB environmental science graduates do continue their studies in graduate and professional schools in areas such as biology, mathematics, earth science, chemistry, meteorology, water resources, natural resources management, and other fields.

Students planning to enter graduate or professional programs in engineering, medicine or the natural sciences are advised to take calculus and calculus-based physics. Entrance into and success in these postgraduate programs will depend in part on a solid preparation in mathematics and physics.

Requirements for the Major

Areas of Emphasis

Each area of emphasis has its own supporting and upper-level required and elective courses. Students should consult with an adviser to select courses that best suit their needs.

■ Ecology and Biological Resources Management

Supporting Courses, 28 credits

- 204-202, 203 Principles of Biology I, II, 8 credits
- 225-211, 212 Principles of Chemistry I, II, 10 credits
- 266-155 Computers and Microcomputers, 3 credits
- 296-102 Introduction to Earth Science, 3 credits
- 600-260 Introductory Statistics, 4 credits

Upper-Level Courses, 33 credits

Required core courses, 13 credits:

- 362-302 Principles of Ecology, 3 credits
- 362-390 Scientific Applications of Computing, 3 credits
- 362-403 Limnology, 3 credits
- 362-475 Ecological Dynamics, 4 credits

Field biology, 6 credits required:

- 204-320 Field Botany, 3 credits
- 204-342 Ornithology, 3 credits
- 204-343 Mammalogy, 3 credits
- 362-401 Stream Ecology, 3 credits

Biophysical interface, 6 credits required:

- 362-320 The Soil Environment, 3 credits
- 362-342 Environmental Geology, 3 credits
- 362-350 Meteorology, 3 credits
- 362-421 Soils and Geology of Wisconsin Field Trip, 2 credits
- 362-440 Environmental Chemistry, 4 credits
- 362-454 Remote Sensing of the Environment, 3 credits
- 600-364 Biometrics, 4 credits

Resource management, 5 to 6 credits required:

- 362-303 Conservation of Natural Resources, 3 credits
- 362-307 Ecology and Management of Fire, 2 credits
- 362-309 Ecology and Management of Endangered Species, 2 credits
- 362-363 Plants and Forest Pathology, 3 credits
- 362-366 Integrated Pest Management, 3 credits
- 362-460 Resource Management Strategy, 4 credits
- 362-466 Vegetation Management, 3 credits

Socioeconomic, 3 credits required:

- 778-301 Environmental Politics and Policy, 3 credits
- 834-340 Economics of Land Use, 3 credits
- 950-306 Regulatory Policy and Administration, 3 credits
- 950-378 Environmental Law, 3 credits

■ Physical Resources Management

Supporting Courses, 28 or 29 credits

- 266-155 Computers and Microcomputers, 3 credits
- 296-202 Physical Geology, 4 credits
- 600-201 Calculus for the Management and Social Sciences, 3 credits
- OR
- 600-202 Calculus and Analytical Geometry I, 4 credits
- 600-260 Introductory Statistics, 4 credits

A minimum of 14 credits in 100- or 200-level chemistry, biology, physics, or earth science laboratory courses. These credits must be chosen from a minimum of two disciplinary subject areas.

Upper-Level Courses, 30 credits

Core courses, 9 credits:

- 362-303 Conservation of Natural Resources, 3 credits
- OR
- 362-460 Resource Management Strategy, 3 credits
- 362-454 Remote Sensing of the Environment, 3 credits
- OR
- 416-353 Air Photo Interpretation, 3 credits
- 362-390 Scientific Applications of Computing, 3 credits

Physical resources, 9 to 12 credits:

- 296-340 Rock and Mineral Resources, 3 credits
- 296-430 Soil Classification and Geography, 3 credits
- 362-320 The Soil Environment, 3 credits
- 362-330 Descriptive Hydrology, 3 credits
- 362-331 Oceanography, 3 credits
- 362-350 Meteorology, 3 credits
- 416-325 Regional Climatology, 3 credits

Resource management, 6 credits:

- 362-318, 319 Industrial Pollution Control Techniques and Field Trips, 2, 1 credits
- 362-335 Water and Waste Water Treatment, 3 credits
- 362-342 Environmental Geology, 3 credits
- 362-415 Solar and Alternate Energy Systems, 3 credits
- 362-440 Environmental Chemistry, 4 credits

Socioeconomic, 3-6 credits:

- 298-402 Resource Economics Analysis, 3 credits
- 778-301 Environmental Politics and Policy, 3 credits
- 834-322 Regional Planning, 3 credits
- 834-323 Land Use Controls, 3 credits
- 834-340 Economics of Land Use, 3 credits
- 834-356 Environmental Impact Analysis, 3 credits
- 950-306 Regulatory Policy and Administration, 3 credits
- 950-378 Environmental Law, 3 credits

NOTE: physical resources and socioeconomic courses must total 15 credits

Requirements for the Minor

Supporting Courses, 10 credits

- 266-155 Computers and Microcomputers, 4 credits
- 362-102 Introduction to Environmental Science, 3 credits
- 600-260 Elementary Statistics, 4 credits

Upper-Level Courses, 12 credits

- 362-303 Conservation of Natural Resources, 3 credits
- OR
- 362-460 Resource Management Strategy, 3 credits
- 362-372 Science, Technology and the Future, 3 credits (course approval pending)
- 362-390 Scientific Applications of Computing, 3 credits

A practical, three-credit project in environmental science, satisfied by one of these:

- 362-381 January in the Yucatan: Natural Sciences, 3 credits
- 362-484 Senior Honors Project, 3 credits
- 362-492 Practicum in Environmental Science, 3 credits
- 362-497 Internship, 3-12 credits
- 362-498 Independent Study, 1-4 credits

Geography

Disciplinary Major or Minor

Professors: Donald Gandre; William Kuepper.

Associate Professors: William Laatsch; William Niedzwiedz (chairperson).

Geography is the systematic study of the location, variations, and interrelations of natural and cultural features of the earth. Its study exemplifies the university's mission to emphasize interdisciplinary, problem-focused education because geography examines the world and its problems with a view to comprehensive understanding.

Geography offers technical training for students who wish to work as professional geographers in government or industry, and provides background for advanced work in business, economics, history, political science, or in the biological and earth sciences, depending upon a student's individual needs. Geography majors also may prepare for study beyond the bachelor's degree in geography and allied fields. Students who want preparation to teach should seek advice early from advisers in geography and education, to make sure they complete all requirements.

Geography majors combine their studies with an interdisciplinary program. Students often combine the study of geography with the interdisciplinary programs in regional analysis or urban and public affairs to prepare for careers in various aspects of planning. Science-oriented students combine it with the program in environmental science to enhance their preparation for various careers in resources use, identification, and allocation. Increasingly, students with interests in the quality of human life and human culture are combining geography with humanistic studies.

Students in geography can expect to become acquainted with current technology in the field through courses introducing them to the concepts and uses of geographic information systems. Also, students are encouraged to gain practical experience through internships with agencies and organizations in the region and through practical course projects.

Requirements for the Major

Supporting Courses, 9 credits required

- 416-120 Survey of Physical Geography, 3 credits
- 416-250 Displays of Geographic Information, 3 credits
- 416-102 Introduction to Geography: The Regions of Earth, 3 credits
- OR
- 416-202 Introduction to Cultural Geography, 3 credits

Recommended courses:

- 246-133 Fundamentals of Public Address, 3 credits
- 255-205 Social Science Statistics, 3 credits
- OR
- 600-260 Introductory Statistics, 3 credits
- 266-256 Introduction to Computer Science I, 3 credits
- 552-105 Expository Writing, 3 credits

Upper-Level Courses, 24 credits required**Physical Geography (one course required):**

- 416-320 Landform Geography: Topics and Regions, 3 credits
- 416-325 Regional Climatology, 3 credits
- 416-380 Geomorphic Processes, 3 credits
- 416-420 Soil Classification and Geography, 3 credits
- 416-421 Soils and Geology of Wisconsin Field Trip, 2 credits
- 416-470 The Glacial Environment and Chronology, 3 credits

Cultural Geography (one course required):

- 416-341 Urban Geography, 3 credits
 416-342 Settlement Geography, 3 credits
 416-368 The Geopolitics of World Regions, 3 credits

Regional Geography (one course required):

- 416-361 Geography of Africa, 3 credits
 416-371 Geography of the United States and Canada, 3 credits
 416-372 Analysis of Great Lakes Regions of North America, 3 credits
 416-377 Analysis of Northern Lands, 3 credits
 416-378 Geography of Conflict Areas, 3 credits

Geographic Techniques (two courses required):

- 416-350 Geographic Land Information Systems, 3 credits
 (course approval pending)
 416-351 Elements of Cartography, 3 credits
 416-353 Air Photo Interpretation, 3 credits
 416-451 Computer Cartography, 3 credits
 416-453 Advanced Air Photo Interpretation, 3 credits
 834-454 Remote Sensing of the Environment by Satellite, 3 credits

Geography Colloquium (required):

- 416-465 Colloquium for Geography Majors, 3 credits

Geography Electives (two courses required):

Upper-level geography courses in physical, cultural, regional geography and/or geographic techniques and/or:

- 416-483X Selected Topics, 1-4 credits
 416-497 Internship, 3-12 credits
 416-498 Independent Study, 1-4 credits

Requirements for the Minor**Supporting Courses, 6 credits required**

- 416-250 Displays of Geographic Information, 3 credits

One of the following:

- 416-102 Introduction to Geography: The Regions of the Earth, 3 credits
 416-120 Survey of Physical Geography, 3 credits
 416-202 Introduction to Cultural Geography, 3 credits

Upper-Level Courses, 12 credits required

Courses selected must come from at least two of the following areas listed in the major: physical geography, cultural geography, regional geography, geographic techniques.

History

Disciplinary Major or Minor

Professors: Martin H. Greenberg; Anthony M. Galt; Harvey J. Kaye; Craig A. Lockard.

Associate Professors: Paul P. Abrahams; David H. Galaty; Norbert H. Gaworek; Peter J. Kellogg (chairperson); Jerrold C. Rodesch; Joyce E. Salisbury.

Community Lecturers: Ross Fullam; James McHale; Ronald A. Pascale.

History is a guide to the present and the future as well as the past. We cannot understand ourselves or our society without an understanding of our past and the comparative perspective gained from a knowledge of the history of other areas of the world. History helps us appreciate the commonality and diversity of cultures.

History's rigorous intellectual discipline, its emphasis on research and writing skills, and its probing of theory and methods of analysis, provide ideal preparation for professional careers, particularly law, business, journalism, teaching, and public relations, and for graduate study in many fields.

Resources in history include faculty with broad expertise in political, social, economic, diplomatic, cultural and intellectual history and outstanding records in teaching and research. Faculty members are trained in the fields of American, European, African, Asian, and Latin American history, and in the history of science and international relations. The library's Area Research Center has an excellent collection of documents for primary research.

Students seeking teacher preparation in history should seek advising early from the social studies education adviser.

History majors choose a minor in an interdisciplinary program. Most typical combinations include the interdisciplinary programs in humanistic studies for students interested in gaining a thorough background in human culture and broad exposure to liberal education, and in social change and development for those focusing on social change, institutions, and the like. Students intending to teach at the secondary level generally choose to combine history with the program in human development.

Requirements for the Major**Lower-Level Courses, 12 credits**

Choose 12 credits; a minimum of 6 credits must be from Category 1:

Category 1:

- 448-100 History of the Modern World, 3 credits
 448-205 History of the United States, 1600 to 1865, 3 credits
 448-206 History of the United States, 1865 to Present, 3 credits

- 493-101 Foundations of Western Culture I, 3 credits
 493-102 Foundations of Western Culture II, 3 credits
 OR

- 448-203 History of Europe, 1300 to 1815, 3 credits
 448-204 History of Europe, 1815 to Present, 3 credits

Category 2:

- 448-201 Ancient Civilization, 3 credits
 448-202 The Middle Ages, 3 credits
 448-207 Roots of Black America, 3 credits
 448-208 The Development of Modern Science in Western Society, 3 credits
 448-250 Traditional Asian Civilization, 3 credits
 448-251 Modern Asian Civilization, 3 credits
 493-250 European Economy and Society, 3 credits
 493-251 Business and American Life, 3 credits
 493-274 Red Man in White America, 3 credits
 875-270 Third World: Development or Despair, 3 credits

Upper-Level Courses, 24 credits

Choose a minimum of 3 credits from each of the 3 categories below. Courses must include at least 1 of the courses marked with an asterisk to assure study of cultural and intellectual history as well as social and political history.

Category 1, American History:

- *448-302 History of American Thought and Culture I, 3 credits
- *448-303 History of American Thought and Culture II, 3 credits
- *448-309 History of Science in Modern Times, 3 credits
- 448-310 American Colonial History, 3 credits
- 448-311 History of Wisconsin, 3 credits
- 448-320 U.S. Military History, 3 credits
- 448-322 Economic and Business History of the U.S., 1876 to Present, 3 credits
- 448-324 American Foreign Relations, 1865 to Present, 3 credits
- 448-345 Women in American Perspective, 3 credits
- 448-367 World Wars I and II: Age of Global Conflict, 3 credits
- 448-375 Great Decisions: Issues and Options in International Affairs, 3 credits
- 448-403 Political and Social History of Modern America, 3 credits
- *448-405 History of Technological Change, 3 credits

Category 2, European History:

- *448-306 European Thought and Culture I, 3 credits
- *448-307 European Thought and Culture II, 3 credits
- *448-309 History of Science in Modern Times, 3 credits
- 448-314 History of the Russian Empire, 3 credits
- 448-315 The Soviet Union from 1917 to the Present, 3 credits
- 448-325 History of Modern Germany, 3 credits
- 448-350 Social History of Europe, 3 credits
- 448-367 World Wars I and II: Age of Global Conflict, 3 credits
- 448-404 Political and Social History of Modern Europe, 3 credits
- *448-405 History of Technological Change, 3 credits

Category 3, Non-Western History:

- 448-314 History of the Russian Empire, 3 credits
- 448-315 Soviet Union From 1917 to the Present, 3 credits
- 448-352 History of Modern China, 3 credits
- 448-354 History of Modern Southeast Asia, 3 credits
- 448-356 History of Africa, 3 credits
- 448-358 Aspects of Latin American History, 3 credits
- 448-375 Great Decisions: Issues and Options in International Affairs, 3 credits

Required:

- 448-480 Seminar in History, 3 credits

Other upper-level courses appropriate for the major program:

- 493-332 Art and Social Thought, 3 credits
- 493-341 Perspectives on Human Values: The Medieval World, 3 credits
- 493-374 Wisconsin's Indians: Historical and Cultural Perspectives, 3 credits
- 778-360 International Politics, 3 credits
- 834-368 Geopolitics of World Regions, 3 credits
- 875-320 American Constitutional Law, 3 credits
- 875-333 Social Change in Selected Areas, 3 credits
- 875-361 Historical Perspectives on Social Change, 3 credits

Requirements for the Minor

Lower-Level Courses, 6 credits

Choose 6 credits from lower-level courses listed under requirements for the major.

Upper-Level Courses, 12 credits minimum

Choose 12 credits from the list of upper-level courses under the description of the history major. No more than 6 credits may be applied from courses that do not carry the 448 prefix.

Human Biology

Interdisciplinary Major or Minor

Associate Professors: Charles A. Ihrke; Joseph A. Mannino; Dorothea B. Sager (chairperson); Richard J. Stevens.

Assistant Professors: James C. Marker; Donna Ritch.

Human biology focuses on the biological, physiological, anthropological, and behavioral bases of the human organism's ability to adapt to and survive the environment. Courses emphasize human structure and function, patterns of growth and development, genetics, nutrition and behavior today and in relation to human biological evolution and diversity.

Human biology is an appropriate major for students interested in the health sciences, medicine, dentistry, exercise physiology, or biology education. Most premedical and pre dental students choose human biology as their interdisciplinary major. It is also appropriate for those students interested in general biology, physical anthropology and chemistry.

Human biology majors complete an area of emphasis. Emphases include:

- **health sciences**, which provides preparation for medical, dental or other health related professional schools or graduate programs;
- **exercise physiology**, which offers students broad training in human motion, exercise physiology, and techniques of measurement and assessment of fitness;
- **general human biology**, which is appropriate for students seeking careers in secondary science education, industrial, managerial, or sales positions in biological or health-related industries, or students planning to obtain further graduate training in the biological sciences.
- **cytotechnology**, offered in affiliation with the School of Cytotechnology, in the Center for Health Sciences at the University of Wisconsin-Madison and the Mayo School of Health-Related Sciences. Cytotechnology is the microscopic study of human cells primarily for detection of pre-cancer or cancer conditions. This emphasis leads to a major in human biology and professional certification as a registered cytotechnologist.

Students seeking teaching licensure should consult advisers in education as well as human biology.

Many UW-Green Bay human biology majors do continue their studies in graduate or professional schools. UWGB applicants to medical and dental schools have a very high acceptance rate.

Requirements for the Major

Supporting Courses, 23-26 credits

Category I:

204-202 Principles of Biology I, 4 credits

AND

204-203 Principles of Biology II, 4 credits

OR

204-202 Principles of Biology I, 4 credits

AND

478-203, 204 Anatomy and Physiology, 6 credits

AND EITHER

225-108 General Chemistry, 5 credits

OR

225-211, 212 Principles of Chemistry I, II 10 credits

Category II:

600-260 Introductory Statistics, 4 credits

Category III: (6-7 credits)

552-105 Expository Writing, 3 credits

Choose one course from these subject areas:

Oral Communication (Communication Processes)

Literature

Foreign language

Upper-Level Courses, 9 credits

One course in three of the four subject areas:

Genetics:

204-303 Genetics, 3 credits

OR

478-310 Human Genetics, 3 credits

Human Physiology and/or Anatomy:

Many alternatives available, check course offerings.

Nutrition:

694-300 Nutritional Significance of Food, 3 credits

OR

694-302 Nutrition and Culture, 3 credits

Evolution:

478-342 Human Evolution, 3 credits

OR

478-312 Evolutionary Processes, 3 credits

OR

478-364 Human Variability, 3 credits

Areas of Emphasis, 21 credits minimum

Students must complete requirements in one of the following areas of emphasis. Additional supporting courses are required in some emphases.

■ Health Science Emphasis

Premedical and pre dental students must consult a premedical adviser during the freshman year and must take Chemistry I and II (225-211, 212) in the freshman year.

Supporting Courses, 32-40 credits**Required:**

225-211, 212 Principles of Chemistry I, II, 10 credits

225-302, 303, 304, 305 Organic Chemistry I, II and Laboratories, 8 credits

225-311 Analytical Chemistry, 4 credits

754-103, 104 Fundamentals of Physics I, II, 10 credits
(or 754-201, 202 Principles of Physics) (calculus level)

600-202, 203 Calculus and Analytic Geometry, 8 credits
(Optional for admission to some medical schools, but usually, no less than algebra and trigonometry)

Upper-Level Courses**Recommended:**

204-302 Principles of Microbiology, 4 credits

204-303 Genetics, 3 credits

204-340 Comparative Anatomy of Vertebrates, 4 credits

204-347 Developmental Biology, 4 credits

478-402 Human Physiology, 3 credits

478-413 Neurophysiology, 3 credits

■ Exercise Physiology**Supporting Courses****Required:**

742-116 First Aid and Emergency Care Procedures, 2 credits

742-117 Cardio-pulmonary Resuscitation, 1 credit

820-300 Experimental Psychology, 4 credits

Upper-Level Courses, 24 credits**Recommended:**

478-320 Biology of Human Development and Senescence, 3 credits

478-333 Principles of Sports Physiology, 3 credits

478-342 Human Evolution, 3 credits

478-350 Principles of Exercise Physiology, 4 credits

478-351 Kinesiology, 3 credits

694-300 Nutritional Significance of Food, 3 credits

742-406 Prevention and Treatment of Athletic Injuries, 2 credits

820-311 Psychology of Sports and Exercise, 3 credits

■ General Human Biology Emphasis**Upper-Level Courses, 23 credits****Recommended:**

204-302 Principles of Microbiology, 4 credits

204-340 Comparative Anatomy of Vertebrates, 4 credits

204-345 Animal Behavior, 3 credits

204-346 Comparative Physiology, 3 credits

204-347 Developmental Biology, 4 credits

204-407 Molecular Biology, 3 credits

204-408 Molecular Biology Laboratory, 1 credit

478-313 Brain Functions in Human Behavior, 3 credits

478-318 Mammalian Reproduction, 3 credits

For students interested in graduate work, a background in basic mathematics and in chemistry and physics is recommended. A human biology adviser will assist in selecting appropriate courses.

Requirements for the Minor**Supporting Courses, 8-10 credits**

From Category I of the major requirements.

Upper-Level Courses, 12-14 credits

One course from each of the four subject areas listed under upper-level course requirements for the major.

Human Development

Interdisciplinary Major or Minor

Professors: Fergus P. Hughes; Richard D. Logan.

Associate Professors: Lloyd Noppe (chairperson); Dean Rodeheaver.

Assistant Professors: James G. Elicker; Ilene Noppe; Timothy J. Sewall; Joanne M. Stohs.

Human development is concerned with the study of humans from conception to death. It provides basic understanding of changes, tasks, and crises that occur throughout the normal life span and examines factors that promote both normal development and deviations from normal development. The program examines the contributions to our understanding of human development which have been made by psychologists, sociologists, biologists, and anthropologists.

Students who plan careers working with people major or minor in this program in order to acquire broad background knowledge about human development and behavior. Students whose ultimate goals are to become teachers, or to provide counseling, or other social services to persons of various ages frequently choose human development majors. It also benefits those planning careers in health-related fields, or academic careers in human development or psychology.

Human development provides a preprofessional program of courses for students planning careers in early childhood, elementary, or secondary education, for example. Such students also fulfill requirements through the professional education program and should seek advisers in both human development and education early in their college years.

Students preparing for graduate study in psychology can take either a major or minor in human development with a major or minor in psychology. Typically, UWGB students who enter Ph.D. programs take experimental psychology and statistics, gain research experience, and take the Graduate Record Examination.

Requirements for the Major

Supporting Courses, 9 credits

- 255-205 Social Science Statistics, 3 credits
OR
600-260 Introductory Statistics, 3 credits
478-102 Introduction to Human Biology, 3 credits
OR
478-110 Introduction to Physical Anthropology, 3 credits
481-210 Introduction to Human Development, 3 credits
OR
820-102 Introduction to Psychology, 3 credits

Upper-Level Courses, 24 credits

Required courses for all emphases, 9 credits:

- 481-331 Infancy and Early Childhood, 3 credits
481-332 Middle Childhood and Adolescence, 3 credits
481-343 Adulthood and Aging, 3 credits

Electives, 15 credits:

Chosen according to area of emphasis from this list or other courses with adviser's approval.

- 481-333 Observation and Interpretation of Child Behavior, 3 credits
481-334 Play and Creative Activities in Childhood, 3 credits
481-336 Gender Roles, 3 credits
481-342 Cross-Cultural Human Development, 3 credits
481-344 Death: The Final Stage of Life, 3 credits
481-431 Cognitive Development, 3 credits
481-435 Abnormal Behavior, 3 credits

- 481-436 Counseling with Children and Adolescents, 3 credits
481-437 Counseling with Adults and the Aged, 3 credits
481-441 History, Philosophy and Current Programs in Early Childhood Education, 3 credits
481-452 Advanced Gerontology, 3 credits
481-495 Language Acquisition in Childhood, 3 credits
481-420 Tests and Measurements, 3 credits
481-429 Theories of Personality, 3 credits

Areas of Emphasis

■ Child Development Emphasis

Supporting Courses, 9 credits

These are the same as listed under major requirements.

Upper-Level Courses, 24 credits

- 481-331 Infancy and Early Childhood, 3 credits
481-332 Middle Childhood and Adolescence, 3 credits
481-333 Observation and Interpretation of Child Behavior, 3 credits
481-334 Play and Creative Activities in Childhood, 3 credits
481-343 Adulthood and Aging, 3 credits
481-436 Counseling With Children and Adolescents, 3 credits
481-441 History, Philosophy, and Current Programs in Early Childhood Education, 3 credits
481-495 Language Acquisition in Childhood, 3 credits

■ Preclinical/Precounseling Emphasis

Supporting Courses, 9 credits

These are the same as listed under major requirements.

Upper-Level Courses, 24 credits

Required:

- 481-331 Infancy and Early Childhood, 3 credits
481-332 Middle Childhood and Adolescence, 3 credits
481-429 Theories of Personality, 3 credits
481-343 Adulthood and Aging, 3 credits
481-435 Abnormal Behavior, 3 credits
481-436 Counseling With Children and Adolescents, 3 credits
481-437 Counseling With Adults and the Aged, 3 credits

And one other elective chosen with an adviser.

The most effective ways to fulfill this emphasis are to complete a minor in psychology along with the human development major, or to major in psychology and include a minor in human development, or to complete a double major in human development and psychology.

Requirements for the Minor

Supporting Courses, 6 credits

Choose from:

- 156-100 Varieties of World Culture, 3 credits
156-110 Introduction to Physical Anthropology, 3 credits
478-102 Introduction to Human Biology, 3 credits
481-210 Introduction to Human Development, 3 credits
OR
820-102 Introduction to Psychology, 3 credits
900-202 Introduction to Sociology, 3 credits

Upper-Level Courses, 12 credits

Choose 3 credits:

- 478-313 Brain Functions in Human Behavior, 3 credits
478-320 Biology of Human Development and Senescence, 3 credits
478-364 Human Variability, 3 credits

Choose 9 credits:

- 481-331 Infancy and Early Childhood, 3 credits
481-332 Middle Childhood and Adolescence, 3 credits
481-342 Cross-Cultural Human Development, 3 credits
481-343 Adulthood and Aging, 3 credits

Humanistic Studies

Interdisciplinary Major or Minor

Professors: Elmer Havens; Walter Herrscher; Frederick Kersten; Estella Lauter; Werner Prange; Irwin Sonenfield; Peter Stambler; E. Michael Thron; Louise Witherell.

Associate Professors: Paul Abrahams; Thomas Churchill; Orville Clark; Kenneth Fleurant; David Galaty (chairperson); Norbert Gaworek; Gary Greif; Peter Kellogg; Michael Murphy; Gilbert Null; Jerrold Rodesch; Joyce Salisbury; Thomas Tasch.

Assistant Professors: Philip Core; Julia Cruz

Lecturers: Jo Chern; Joan Thron.

The study of the humanities develops the whole person and provides skills necessary for leadership positions in our service-oriented society. In its integrated approach to history, philosophy, literature, languages, and the arts, humanistic studies brings students in contact with the greatest expressions of human thought and creativity.

The humanities provide an effective course of study for developing the skills of critical thinking, judgment, and insight that lead to a comprehensive understanding of society and culture. They provide intense training in thoughtful reading, effective writing, and articulate speaking—often in more than one language.

Because of their ability to think, to communicate, and to understand complex relationships, students of the humanities are well prepared to excel in their careers and assume positions of responsibility. Evidence indicates that students trained in the humanities have advantages in the business world over those trained more narrowly. In addition, the humanities offer an excellent basis for careers in education, the law, human services, religion, government, and a variety of other fields in which the ability to think, understand, and communicate is important.

Graduates of UW-Green Bay's humanistic studies program are employed in government, the helping professions, business, college teaching, and other fields. Many have gone on to advanced studies in law, philosophy, history, foreign languages, medieval studies, and other areas.

In the humanistic studies core, students study the ways human values have been expressed and created throughout history. By examining connections among significant works of literature, art, music, philosophy, architecture, and science from the past, students become better able to understand the complexities of their own lives today.

Students choose an area of emphasis within humanistic studies. Areas of emphasis for majors are:

- continuity and change in values
- other cultural studies
- religious studies
- American Indian studies
- women's studies

Some emphases for humanistic studies minors have been developed specifically to add breadth to majors in other fields of study. These emphases include:

- history and foundations of science (for majors in natural or social sciences)
- business executive (for business majors)
- international business (for business majors)

In consultation with a humanistic studies adviser, students may also develop their own areas of emphasis from a rich variety of courses.

Requirements for the Major

All students must either have completed two years of foreign language study at the high school level, complete two semesters of foreign language study at the college level, or include two upper-level electives from the other-culture areas of emphasis described below as part of their 24 credit upper-level program in the major.

Supporting Courses, 9 credits

Choose nine credits from humanistic studies courses or from at least two of the following disciplines:

- history
- literature
- philosophy
- foreign languages (must be at 200-level or above to meet requirement)

Upper-Level Courses, 24 credits

Choose two courses totaling 6 credits from the series, **Perspectives on Human Values:**

- 493-340 Perspectives on Human Values: The Classical World, 3 credits
- 493-341 Perspectives on Human Values: The Medieval World, 3 credits
- 493-342 Perspectives on Human Values: Renaissance to Rationalism, 3 credits
- 493-343 Perspectives on Human Values: Romanticism to Naturalism, 3 credits
- 493-344 Perspectives on Human Values: The Modern Period, 3 credits

Seniors must complete the 3-credit capstone seminar:

- 493-480 Humanities Seminar, 3 credits

Areas of Emphasis

Choose 6 credits from one of the following areas to complete an emphasis:

■ Continuity and Change in Values

- 493-302 Human Identity, 3 credits
- 493-305 Value Theory and the Humanities, 3 credits
- 493-332 Art and Social Thought, 3 credits
- 493-333 Utopia and Anti-Utopia, 3 credits
- 493-340 Perspectives on Human Values: The Classical World, 3 credits
- 493-341 Perspectives on Human Values: The Medieval World, 3 credits
- 493-342 Perspectives on Human Values: Renaissance to Rationalism, 3 credits
- 493-343 Perspectives on Human Values: Romanticism to Naturalism, 3 credits
- 493-344 Perspectives on Human Values: The Modern Period, 3 credits

■ Other Cultural Studies

- 493-354 France Today, 3 credits
- 493-356 Contemporary German Culture, 3 credits
- 493-358 Latin America Today, 3 credits
- 493-359 The Americas Look at Each Other, 3 credits
- 493-361 January/June Abroad: German Culture, 3 credits
- 493-363 January Abroad: Mexico, 3 credits
- 493-365 January Abroad: England and Its Heritage, 3 credits
- 493-374 Wisconsin Indians: Historical and Cultural Perspectives, 3 credits
- 493-376 Cultural Conflict in French Canada, 3 credits

■ Religious Studies

- 493-323 The Writings of the Old Testament, 3 credits
- 493-324 The Writings of the New Testament, 3 credits
- 493-325 Judaism, Christianity, and Islam, 3 credits
- 493-326 Non-Western Religions, 3 credits
- 493-440 Women and Religion, 3 credits

■ American Indian Studies

- 493-371 American Indian Art and Artists, 3 credits
- 493-374 Wisconsin Indians: Historical and Cultural Perspectives, 3 credits

■ *Women's Studies*

493-440 Women and Religion, 3 credits

Other courses may be chosen from other units in consultation with a humanistic studies adviser.

Great Works, 3 credits

Students must choose 3 credits from a series of 1-3 credit courses in Great Works. (Courses may be numbered 493-483.) When possible, students should choose courses or works which were created in the ages studied in the "Perspectives on Human Values" sequence.

Electives, 6 credits

Students must choose 6 elective credits from among humanistic studies offerings to total 24 upper-level credits in the major.

Requirements for the Minor

Supporting Courses, 6 credits

Choose 6 credits in history, literature, philosophy, humanistic studies, or foreign languages.

Upper-Level Courses, 6 credits minimum

Choose two courses from the Perspectives on Human Values sequence.

Electives, 6 credits minimum

Choose two courses from among the upper-level offerings in humanistic studies.

Areas of Emphasis

Students majoring in the sciences or business may choose, instead of the basic minor, a special minor in the humanities that is related to their majors.

■ *History and Foundations of Science*

This minor is for students majoring in natural or social sciences.

Supporting Courses, 12 credits

448-208 The Development of Modern Science in Western Society, 3 credits

493-101 Foundations of Western Culture I, 3 credits

493-102 Foundations of Western Culture II, 3 credits

736-208 Science and Human Values, 3 credits

Certain upper-level history and philosophy courses may be used as a substitute for 101 or 102 in consultation with the program adviser.

Upper-Level Courses, 12 credits

448-309 History of Science in Modern Times, 3 credits

736-406 Philosophical Problems in the Sciences, 3 credits

Two courses from:

448-405 History of Technological Change, 3 credits

493-344 Perspectives on Human Values: The Modern Period, 3 credits

493-480 Humanities Seminar, 3 credits

■ *Business Executive*

This minor is for students majoring in business.

Supporting Courses, 12 credits

493-102 Foundations of Western Culture II, 3 credits

493-201 Introduction to Humanistic Studies I, 3 credits

493-202 Introduction to Humanistic Studies II, 3 credits

493-251 Business and American Life, 3 credits

OR

493-250 European Economy and Society, 3 credits

Upper-Level Courses, 12 credits

493-344 Perspectives on Human Values: The Modern Period, 3 credits

One other course from the Perspectives on Human Values Series.

Two other upper-level humanities courses chosen in consultation with the humanistic studies adviser.

■ *International Business*

This minor is only for students majoring in business.

Supporting Courses, 12-28 credits

493-102 Foundations of Western Culture II, 3 credits

493-201 Introduction to Humanistic Studies I, 3 credits

493-202 Introduction to Humanistic Studies II, 3 credits

A language through the fifth college semester (French/German/Spanish 225)

Upper-Level Courses, 12 credits

A course dealing with other cultures.

A course in the history or literature of another region.

One course from the Perspectives on Human Values series.

One other humanities course chosen in consultation with the adviser.

Information and Computing Science

Interdisciplinary Major (A minor is being developed.)

Professor: Timothy Meyer (electronic media).

Associate Professors: Clifford Abbott (chairperson) (linguistics); Phillip Clampitt (communications); Dennis Girard (mathematics); Charles Matter (psychology); Bruce Mielke (computer science); William Shay (computer science).

Assistant Professor: Forrest Baulieu (computer science).

The central organizing concept of the information and computing science major is information—its structure, storage, retrieval, and communication.

The curriculum ranges widely across several disciplines, all of which are represented in the core requirements: computing, linguistics, cognitive psychology, communication theory, mathematics, electronic media and telecommunications, organizational communication and management, logic, and language.

Computing is a significant dimension of this major, but students also are expected to be thoroughly grounded in human language, cognition, and communication. This insures against narrow technical preparation, which leads to rapid obsolescence in a rapidly changing field, and it prepares students to make the most creative and useful applications of machine processing and telecommunications.

Each student negotiates an individual area of emphasis. This requirement is an opportunity to apply information principles to a particular problem area or to gain further tools for some specific career direction.

Career paths for information and computing science graduates are changing rapidly and UW-Green Bay graduates report that the breadth of this program has been important to them. Some have essentially created their own positions. Graduates have pursued advanced studies in areas such as computer science and artificial intelligence. Others have entered a wide variety of jobs directly after graduation in the computing, management, and communications fields. Programming, sales, and systems analysis are some of their career areas.

Requirements for the Major

Supporting Courses, 11 credits

One year of foreign language (French, German, Spanish or advanced placement)

736-111 Elementary Logic, 3 credits

Core Courses, 27 credits

242-160 Introduction to Language, 3 credits
 246-200 Introduction to Communication Processes, 3 credits
 246-201 Human Information Processing, 3 credits
 246-220 Controlling Bibliographic Information, 3 credits
 266-256 Introduction to Computer Science I, 4 credits
 266-257 Introduction to Computer Science II, 4 credits
 416-250 Displays of Geographic Information, 3 credits
 600-242 Discrete Mathematics, 4 credits

Upper-Level Courses, 36 credits

246-305 Elements of Electronic Media, 3 credits
 246-322 Modern Linguistics, 3 credits
 246-326 Modern Semantics, 3 credits
 246-335 Organizational Communication, 3 credits
 OR
 216-382 Introductory Management, 3 credits
 246-445 Human Communication Theory, 3 credits
 266-353 Computer Organization and Programming, 3 credits
 OR
 266-357 Theory of Programming Languages, 3 credits
 266-352 Computer Graphics, 3 credits
 266-351 Data Structures, Storage and Retrieval, 3 credits

Choose one:

246-308 Telecommunications Delivery Systems, 3 credits
 266-455 Microprocessors and Digital Electronics, 3 credits
 362-454 Remote Sensing of the Environment by Satellite, 3 credits

Area of Emphasis, 9 credits

The area of emphasis affords an opportunity for students to develop expertise in a particular dimension of information processing. The examples here show some typical possibilities. Others can be created with an adviser.

■ *Management of Information Resources*

266-451 Database Management Systems, 3 credits
 266-452 Operating Systems, 3 credits
 520-483 Expert Systems, 3 credits

■ *Structure and Design of Computer-Based Information Systems*

216-452 Management Information and Decision Support Systems, 3 credits
 266-451 Database Management Systems, 3 credits
 266-454 Artificial Intelligence, 3 credits

■ *Communications Media*

246-308 Telecommunications Delivery Systems, 3 credits
 246-390 Scientific and Technical Communication, 3 credits
 246-444 Time Duration Visual Media, 3 credits

International Studies

Interdepartmental Minor

Professor: Werner Prange (chairperson).

International studies is an increasingly useful field of study as the world we live in becomes more interdependent and complex. Developments elsewhere in the world today quickly affect us directly or indirectly, while decisions and activities in the U.S. influence other countries. International trade accounts for an increasing proportion of American and world economic activity. For these reasons, the employment market for individuals with foreign language competence, cross-cultural sensitivity, and knowledge of the world is growing rapidly.

Students pursuing a variety of fields will find international studies useful. These fields include education, business, public service, comparative cultural studies, foreign languages, area studies, political science, history, anthropology, sociology, developmental economics, comparative environmental studies, international relations and diplomacy.

UW-Green Bay graduates with international studies minors are teaching in a variety of fields, including English as a second language; working in international development agencies and international business; working in social service and refugee resettlement agencies; and pursuing many other fields. Several have earned advanced degrees in graduate programs.

International studies is jointly offered by the programs in social change and development, humanistic studies, and regional analysis.

Students have several options in developing a course of study. Students with majors in humanistic studies, regional analysis, or social change and development may select international studies as either a regular minor or as an area of emphasis within their major program. Students with other interdisciplinary majors, such as business administration or urban and public affairs, can also select international studies as a regular minor. Students with disciplinary majors such as history, anthropology, political science, economics, or literature and language, can select international studies as a second minor alongside a regular interdisciplinary minor.

Requirements for the Minor

Supporting Courses, 9 credits

- 156-100 Varieties of World Culture, 3 credits
- 416-102 An Introduction to Geography: The Regions of the Earth, 3 credits
- 448-100 History of the Modern World, 3 credits

Competency in foreign language, 16 credits:

Four semesters of study or equivalent.

Lower and Upper-Level Courses, 18 credits

Of the 18 credits required, 12 must be at the upper level.

Required:

- 448-375 Great Decisions: Issues and Options in International Affairs, 3 credits

Courses focusing on a particular region or country, 6 credits:

Students choose courses on one area such as China, Mexico, Africa, the Soviet Union, Malaysia, Latin America, Southeast Asia, Britain, or Western Europe.

The following courses meet this requirement:

- 416-361 Geography of Africa, 3 credits
- 448-204 History of Europe From 1815 to the Present, 3 credits
- 448-250 Traditional Asian Civilization, 3 credits
- 448-251 Modern Asian Civilization, 3 credits
- 448-307 History of European Thought and Culture, 3 credits
- 448-314 History of the Russian Empire, 3 credits
- 448-315 Soviet Union From 1917 to the Present, 3 credits
- 448-325 History of Modern Germany, 3 credits
- 448-350 Social History of Europe, 3 credits
- 448-352 History of Modern China, 3 credits
- 448-354 History of Modern Southeast Asia, 3 credits
- 448-356 History of Africa, 3 credits
- 448-404 Political and Social History of Modern Europe, 3 credits
- 493-102 Foundations of Western Culture II, 3 credits
- 493-250 European Economy and Society, 3 credits
- 493-354 France Today, 3 credits
- 493-356 Contemporary German Culture, 3 credits
- 493-358 Latin America Today, 3 credits
- 493-359 The Americas Look at Each Other, 3 credits
- 834-392 Analysis of South Asia, 3 credits
- 875-333 Social Change in Selected Areas, 3 credits

Area of Emphasis, 9 upper-level credits minimum:

Several possible emphases are available such as international business, area studies (Asia, Latin America, Western Europe, Africa), international development, or diplomacy/international politics. Students can put together an appropriate specialization and suitable interdisciplinary mix through consultation with the program coordinator and other advisers.

■ Literature and Language

Disciplinary Majors or Minors in English, French, German, or Spanish

Professors: Martin Greenberg; Elmer Havens; Walter Herrscher; Estella Lauter; Werner Prange; Peter Stambler; E. Michael Thron (chairperson); Louise Witherell.

Associate Professors: Sidney Bremer; Julie Brickley; Tom Churchill; Ken Fleurant; Michael Murphy.

Assistant Professors: Philip Core; Julia Cruz.

Lecturers: Jo Chern; Joan Thron.

■ English

Courses in English develop students' understanding of important works of American and English literature, give them an awareness of—and appreciation for—our literary heritage, provide them with a historical perspective from which to evaluate works written in their own time, and deepen their insight into their own experience. Inherent in achieving these aims is the development of students' ability to express their ideas orally and in writing.

Although some students choose to study English primarily for personal growth and intellectual enrichment, the program is intended to prepare students for graduate work, teaching, and the professions, as well as for a variety of occupations in business, industry, and government.

UW-Green Bay graduates in English have found satisfying careers in personnel work, public relations, business management, journalism, politics, free-lance writing, publishing, and other fields requiring communication skills combined with a broad humanities background.

Students majoring in English will choose an interdisciplinary minor. Students interested in the humanities usually choose the interdisciplinary program in humanistic studies; students interested in fine arts or the performing arts usually choose communication and the arts. Depending on their personal preferences and career goals, students may find other interdisciplinary programs appropriate, such as human development or social change and development.

Students desiring teacher preparation in English must combine their studies in English with the professional program in education and with an interdisciplinary program.

Requirements for the Major in English

Lower-Level Courses, 9-12 credits

552-105 Expository Writing, 3 credits (waived for qualified students)

Minimum of 9 credits from:

- 552-104 Introduction to Literature, 3 credits
- 552-212 Introduction to Creative Writing: Fiction, 3 credits
- 552-213 Introduction to Creative Writing: Poetry, 3 credits
- 552-214 Introduction to English Literature I, 3 credits
- 552-215 Introduction to English Literature II, 3 credits
- 552-216 Introduction to American Literature I, 3 credits
- 552-217 Introduction to American Literature II, 3 credits

Upper-Level Courses, 24 credits

Required:

- 552-323 Approaches to Literature, 3 credits
- 552-431 Shakespeare, 3-4 credits

Minimum of 3 credits from any pre-1800 literature course, such as:

- 552-310 Major English Drama (before 1800), 3 credits
- 552-315 The English Novel: 1700-1860, 3 credits
- 552-335 Literary Eras: Medieval, 3 credits
- 552-335 Literary Eras: Renaissance, 3 credits

Minimum of 3 credits from any literature in translation course, such as:

- 552-333 French Literary Themes, 3 credits
- 552-333 German Literary Themes, 3 credits
- 552-335 French Literary Eras, 3 credits
- 552-335 German Literary Eras, 3 credits
- 552-350 Major French Drama, 3 credits
- 552-350 Major German Drama, 3 credits
- 552-351 Major French Fiction, 3 credits
- 552-351 Major German Fiction, 3 credits
- 552-352 Major German Poetry, 3 credits
- 552-438 Major Spanish Writer: Cervantes, 3 credits

Minimum of 12 additional credits from courses listed above or other literature or writing courses, including:

- 552-301 Intermediate Creative Writing, 3 credits
- 552-302 Fiction Writing Workshop, 3 credits
- 552-303 Poetry Writing Workshop, 3 credits
- 552-310 Major English Drama, 3 credits
- 552-315 English Novel: 1700-1860, 3 credits
- 552-316 English Novel: 1850-Present, 3 credits
- 552-331 Major American Prose Fiction, 3 credits
- 552-333 Literary Themes, 3 credits
- 552-335 Literary Eras, 3 credits
- 552-490 Seminar in Literature, 3 credits

(Course content may vary; some of above may be repeated for credit. See adviser.)

Requirements for the Minor in English

Lower-Level Courses, 9-12 credits

552-105 Expository Writing, 3 credits (waived for qualified students)

Minimum of 9 credits from:

- 552-104 Introduction to Literature, 3 credits
- 552-212 Introduction to Creative Writing: Fiction, 3 credits
- 552-213 Introduction to Creative Writing: Poetry, 3 credits
- 552-214 Introduction to English Literature I, 3 credits
- 552-215 Introduction to English Literature II, 3 credits
- 552-216 Introduction to American Literature I, 3 credits
- 552-217 Introduction to American Literature II, 3 credits

Upper-Level Courses, 12 credits

552-431 Shakespeare, 3 credits

Minimum of 3 credits from any pre-1800 literature course (see list in major)

Minimum of 6 additional upper-level credits (see list in major)

Area of Emphasis

■ Creative Writing

Supporting Courses, 9-12 credits

- 552-105 Expository Writing, 3 credits (waived for qualified students)
- 552-212 Introduction to Creative Writing: Fiction, 3 credits
- 552-213 Introduction to Creative Writing: Poetry, 3 credits

A minimum of 3 credits in lower-level literature courses (see list in major)

Upper-Level Courses, 24 credits

Required:

552-431 Shakespeare, 3 credits

Six to 12 credits in creative writing courses such as:

- 552-302 Fiction Writing Workshop, 3 credits (may be repeated once)
- 552-303 Poetry Writing Workshop, 3 credits (may be repeated once)
- 552-498 Independent Study, 1-4 credits

A minimum of 9 credits in upper-level literature courses (see list in major)

■ Foreign Languages

Proficiency in a foreign language and understanding other cultures are essential for peace and prosperity in a mutually interdependent world. *Language and cultural studies* are of great professional value in many fields such as international business, music, art, linguistics, law, history, communications, politics, anthropology, and theology. All language courses stress development of practical communication skills and cultural understanding. Students can enhance their UWGB language studies through travel and study abroad.

Students who seek teacher preparation in a foreign language should contact the education office for requirements in addition to those listed here.

Students who begin language study at UWGB should enroll in the introductory level, numbered 101. The normal sequence of language courses is:

- 101 Introduction to French, German, or Spanish I
- 102 Introduction to French, German, or Spanish II
- 201 Intermediate French, German, or Spanish I
- 202 Intermediate French, German, or Spanish II
- 225 French, German, or Spanish Conversation and Composition
- 325 Advanced Oral and Written Conversation and Composition
French, German, or Spanish

Students who have previously studied a language, should select a course appropriate to their level by counting a year of high school work as equivalent to a semester of college work, or they should consult a language adviser. Credit may be available for previous language study.

Retroactive Credit. Students who have taken French, German, or Spanish in high school or who have acquired a knowledge of one of those languages elsewhere may earn up to 16 additional credits for their previous foreign language study by completing a foreign language course beyond the 101 level. With a grade of "B" or better, credit will be given for all foreign language courses preceding the one in which the student has enrolled, to a maximum of 16 credits; with a grade of "BC" or "C," half credit will be given for the courses preceding the one in which the student has enrolled, to a maximum of eight credits.

For example, students who have taken four years of French in high school who complete 556-225, French Conversation and Composition, with a grade of "B" will receive 16 retroactive credits for French 101, 102, 201, and 202 in addition to the three credits for French 225; students who complete the course with a "C" will receive eight retroactive credits in addition to the three credits for the course.

■ French

The program in French provides students with the opportunity to develop practical communication skills in French along with an understanding of and appreciation for the literature, culture and people of France and the rest of the French-speaking world.

In addition to regularly scheduled courses in French language, literature, and culture, the French program provides opportunities for students to study with their professors individually or in small groups, and to participate in a semester in France.

Requirements for the Major in French

Lower-Level Courses, 7 credits

- 554-202 Intermediate French II, 4 credits
(can be earned through retroactive credit)
- 554-225 French Conversation and Composition, 3 credits

Upper-Level Courses, 24 credits

- Required:**
- 493-376 Cultural Conflict in French Canada, 3 credits
 - 554-325 Advanced Oral and Written Expression in French, 3 credits
 - 554-354 France Today, 3 credits

Minimum of 6 credits from:

- 554-329 Representative French Authors, 3 credits
- 554-333 French Literary Themes, 3 credits
- 554-335 French Literary Eras, 3 credits
- 554-350 Major French Drama, 3 credits
- 554-351 Major French Fiction, 3 credits

Minimum of 9 credits from:

- 552-323 Approaches to Literature, 3 credits
- 554-329 Representative French Authors, 3 credits
- 554-333 French Literary Themes, 3 credits
- 554-335 French Literary Eras, 3 credits
- 554-350 Major French Drama, 3 credits
- 554-351 Major French Fiction, 3 credits
- 554-498 Readings in French Literature, 3 credits
- 554-498 French Phonetics, 3 credits (required for teaching licensure)
- 554-498 Advanced French Grammar, 3 credits
- 554-498 Business French, 3 credits
- 554-498 Conversational French, 1-4 credits
- 554-498 Topics in French Literature, 1-4 credits

(Course content may vary; some of above may be repeated for credit. See adviser.)

Requirements for the Minor in French

Lower-Level Courses, 7 credits

- 554-202 Intermediate French II, 4 credits
(can be earned through retroactive credit)
- 554-225 French Conversation and Composition, 3 credits

Upper-Level Courses, 12 credits

Required:

- 554-325 Advanced Oral and Written Expression in French, 3 credits
- 554-329 Representative French Authors, 3 credits

Minimum of 6 credits from:

- 493-376 Cultural Conflict in French Canada, 3 credits
(required for teaching licensure)
- 554-333 French Literary Themes, 3 credits
- 554-335 French Literary Eras, 3 credits
- 554-350 French Drama, 3 credits
- 554-351 Major French Fiction, 3 credits
- 554-354 France Today, 3 credits (required for teaching licensure)
- 554-498 French Phonetics, 3 credits (required for teaching licensure)

■ German

The German literature and language program provides students with communication skills in both written and spoken German and with an understanding of and appreciation for German literature and culture.

In addition to regularly scheduled courses in German language and literature, the German program offers students the opportunity to study with their professors individually or in small groups. Students are encouraged to enroll in the January or June Abroad program, which provides four weeks of travel and instruction in Germany, and to spend a semester or a year in Germany as exchange students at the University of Kassel.

Students beginning the study of German may enroll in the intensive German program. The aim of this workshop is to develop German communication competency in one semester; completing the program is equivalent to completing 16 credits in introductory and intermediate German language courses. The workshop meets six hours a day, four days a week for 15 weeks. Students who complete the program in the fall are encouraged to take the January trip to Germany and to spend the spring semester as exchange students at the University of Kassel to refine their language skills.

Graduates in German have found satisfying careers in international business, translating and interpreting, teaching, government service, and other fields. German may also provide students with a sound liberal arts background for further study in graduate school or for professional training.

Requirements for the Major in German

Lower-Level Courses, 7 credits

- 556-202 Intermediate German II, 4 credits (Can be earned as part of 556-289, Intensive German Workshop, 16 credits; equivalent to 556-101, 102, 201, 202.) (Can be earned through retroactive credit.)
 556-225 German Conversation and Composition, 3 credits

Upper-Level Courses, 24 credits

Required:

- 556-325 Advanced Written and Oral Expression in German, 3 credits

Minimum of 6 credits from:

- 448-325 History of Modern Germany, 3 credits
 493-361 January/June Abroad: German Culture, 3 credits
 556-356 Contemporary German Culture, 3 credits

Minimum of 6 credits from:

- 556-329 Representative German Authors, 3 credits
 556-333 German Literary Themes, 3 credits
 556-335 German Literary Eras, 3 credits
 556-350 Major German Drama, 3 credits
 556-351 Major German Fiction, 3 credits
 556-352 Major German Poetry, 3 credits

Minimum of 9 credits from:

- 552-323 Approaches to Literature, 3 credits
 556-329 Representative German Authors, 3 credits
 556-333 German Literary Themes, 3 credits
 556-335 German Literary Eras, 3 credits
 556-350 Major German Drama, 3 credits
 556-351 Major German Fiction, 3 credits
 556-352 Major German Poetry, 3 credits
 556-498 German Phonetics, 3 credits (required for teaching licensure)
 556-498 Business German, 3 credits
 556-498 Scientific German, 3 credits
 556-498 Two Hundred Years of German Culture, 3 credits

(Course content may vary; some of above may be repeated for credit. See adviser.)

Requirements for the Minor in German

Lower-Level Courses, 7 credits

- 556-202 Intermediate German II, 4 credits (Can be taken as part of 556-289, Intensive German Workshop, 16 credits; equivalent to 556-101, 102, 201, 202.) (Can be earned by retroactive credit.)
 556-225 German Conversation and Composition, 3 credits

Upper-Level Courses, 12 credits

Required:

- 556-325 Advanced Written and Oral Expression in German, 3 credits
 556-329 Representative German Authors, 3 credits

Minimum of 6 credits from:

- 494-361 January/June Abroad: German Culture, 3 credits
 556-333 German Literary Themes, 3 credits
 556-335 German Literary Eras, 3 credits
 556-350 Major German Drama, 3 credits
 556-351 Major German Fiction, 3 credits
 556-352 Major German Poetry, 3 credits
 556-356 Contemporary German Culture, 3 credits

■ Spanish

The Spanish literature and language program provides students with communication skills in both written and spoken Spanish and with an understanding of and appreciation for Spanish literature and culture. The growing number of Spanish-speaking people in the U.S. has significantly increased the need for teachers and speakers of Spanish.

Graduates in Spanish have found satisfying careers in teaching, international business, translating and interpreting, personnel work, public relations, business management, social work, government service, and other fields in which a knowledge of Spanish is useful or essential. The Spanish major is also excellent preparation for graduate study.

In addition to regularly scheduled courses in Spanish language and literature, the Spanish program offers students the opportunity to study with their professors individually or in small groups. Students are also encouraged to enroll in the January Abroad: Mexico course, which provides four weeks of travel and instruction in Yucatan during the interim period, and to take advantage of specially arranged plans which allow students to spend a semester or year at a university in Spain or Mexico as exchange students.

Requirements for the Major in Spanish

Lower-Level Courses, 7 credits

- 558-202 Intermediate Spanish II, 4 credits
 (can be earned through retroactive credit)
 558-225 Spanish Conversation and Composition, 3 credits

Upper-Level Courses, 24 credits

Required courses, 15 credits:

- 558-325 Advanced Written and Oral Expression in Spanish, 3 credits
 558-351 Major Spanish Fiction: The Narrative Art in Latin America, 3 credits
 558-358 Latin America Today, 3 credits
 558-359 The Americas Look at Each Other, 3 credits
 558-438 Major Spanish Writer: Cervantes, 3 credits

Minimum of 9 credits from:

- 493-363 January Abroad: Mexico, 3 credits
 552-323 Approaches to Literature, 3 credits
 558-333 Spanish Literary Themes, 3 credits
 558-335 Spanish Literary Eras, 3 credits
 558-350 Major Spanish Drama, 3 credits
 558-352 Major Spanish Poetry, 3 credits
 558-498 Spanish Phonetics, 3 credits (required for teaching licensure)

(Content of some of above courses may vary; these may be repeated for credit. See adviser.)

Requirements for the Minor in Spanish

Lower-Level Courses, 7 credits

- 558-202 Intermediate Spanish II, 4 credits
 (can be earned through retroactive credit)
 558-225 Spanish Conversation and Composition, 3 credits

Upper-Level Courses, 12 credits

Required:

- 558-325 Advanced Written and Oral Expression in Spanish, 3 credits
 558-358 Latin America Today, 3 credits

Minimum of 6 credits from:

- 493-363 January Abroad: Mexico, 3 credits
 558-351 Major Spanish Fiction, 3 credits
 558-359 The Americas Look at Each Other, 3 credits
 558-438 Major Spanish Writer: Cervantes, 3 credits

■ Mathematics

Disciplinary Major or Minor

Professors: David Jowett; David Outcalt; Robert B. Wenger.

Associate Professors: William C. Conley; Dennis M. Girard; Bruce W. Mielke; Nikitas L. Petrakopoulos; William A. Shay (chairperson).

Assistant Professors: Forrest B. Baulieu; Gregory Davis; Theodor Korithoski.

Lecturers: Linda Curl; Gary G. Wardall.

The mathematics discipline has undergraduate programs of study in three areas:

- mathematics
- computer science
- statistics

A student who elects a disciplinary major in mathematics must choose an area of emphasis from one of these three programs of study.

Students choosing an area of emphasis in **mathematics** can focus their studies in a discipline which has been an important part of our intellectual heritage for centuries. Students fulfilling an emphasis in mathematics may use their skills in many career fields including those traditional for mathematicians in fields requiring physics or in engineering. Today, mathematical techniques are required in the social, industrial, and management realms as well.

The student who chooses **computer science** as an area of emphasis chooses a field which is *undergoing great changes* as technology advances. The goal of the computer science emphasis is to provide students with a basic knowledge upon which they can continue to grow in the profession as it changes. Students receive instruction in areas such as software and language design, operating systems, database management, computer graphics, and artificial intelligence. They also develop problem solving skills which may be applied to many professions.

The program in **statistics** provides applied courses in experimental design, multivariate statistical analysis, biometrics and, business and industrial statistical methods. In addition, students can gain an extensive background in statistical computing. Students who wish to enter the actuarial professions may prepare for the first two actuarial examinations by completing the calculus sequence, linear algebra, and the statistical theory sequence.

Students who concentrate their studies in statistics may find employment in business, industry, and government, as well as pursue further professional training in graduate school.

Students who wish to earn licensure to teach at the elementary or high school levels should consult with advisers in mathematics and education early in their college years to make sure they meet all certification requirements.

Program Entrance Requirements. ACT placement examinations are used to advise entering freshmen about the level at which they should enter university courses. There are four levels:

Level 1. An ACT score below 14 indicates a deficiency in first year high school algebra; such students enter the noncredit 601-094.

Level 2. An ACT score of 14 or higher but below 24 indicates mastery of first year high school algebra. Students enter 600-101.

Level 3. An ACT score of 24 or 25 assumes mastery of the first two years of high school algebra; students may enter 600-104, 201, 260, 281 or 266-151, 155, 256; performance below this level results in recommendation to enter 600-101.

Level 4. An ACT score of 26 or higher assumes mastery of last two years of high school algebra, and grade 12 course on functions, or mathematical analysis, including trigonometry; student may enter 600-202 or any course cited under level 3 except 600-104; performance below this level results in recommendation to enter 600-104.

In rare cases, a student who has been accelerated and has mastery of high school calculus may, with advice of faculty, enter 600-203. Upon earning a "C" or better in 600-203, an additional four credits for 600-202 are granted.

Requirements for the Major

Supporting Courses, 11 credits

All students majoring in mathematics, regardless of chosen area of emphasis, must take:

- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-203 Calculus and Analytic Geometry II, 4 credits
- 600-320 Linear Algebra I, 3 credits

Areas of Emphasis

Each area of emphasis has its own set of requirements.

■ Mathematics Emphasis, 25-27 credits

Required:

- 600-209 Multivariate Calculus, 4 credits
- 600-305 Ordinary Differential Equations, 3 credits
- 600-328 Introduction to Algebraic Structures, 3 credits
- 600-385 Foundations of Geometry, 3 credits

Those wishing teacher preparation must add to lower-level requirements:

- 266-256 Introduction to Computer Science I, 4 credits
- 600-260 Introductory Statistics, 4 credits

Two courses from:

- 600-311 Advanced Calculus, 3 credits
- 600-312 Real Analysis, 3 credits
- 600-321 Linear Algebra II, 3 credits
- 600-410 Complex Analysis, 3 credits

Two more courses to be chosen from remaining courses above or from the following list:

- 266-350 Numerical Analysis, 3 credits
- 600-309 Systems of Ordinary Differential Equations, 3 credits
- 600-355 Applied Mathematical Optimization, 3 credits
- 600-360 Theory of Probability, 3 credits
- 600-361 Mathematical Statistics, 3 credits
- 600-364 Biometrics, 4 credits
- 600-416 Orthogonal Functions and Partial Differential Equations, 3 credits
- 600-465 Business and Industrial Statistics, 4 credits

■ Computer Science Emphasis, 36 credits

Required:

- 266-256 Introduction to Computer Science I, 4 credits
- 266-257 Introduction to Computer Science II, 4 credits
- 266-351 Data Structures, Storage and Retrieval, 3 credits
- 266-353 Computer Organization and Programming, 3 credits
- 266-357 Theory of Programming Languages, 3 credits
- 600-242 Discrete Mathematics, 4 credits

Those wishing teacher preparation must add this requirement:

- 266-155 Computers and Microcomputers, 3 credits

Three courses from:

- 266-352 Computer Graphics, 3 credits
- 266-451 Database Management Systems, 3 credits
- 266-452 Operating Systems, 3 credits
- 266-454 Artificial Intelligence, 3 credits
- 266-455 Microprocessors and Digital Electronics, 3 credits
- 266-457 Compiler Theory, 3 credits

Two more courses chosen from the above list or from:

- 266-350 Numerical Analysis, 3 credits
- 266-450 Theory of Algorithms, 3 credits
- 266-456 Advanced Topics in Microcomputing, 3 credits
- 600-355 Applied Mathematical Optimization, 3 credits

■ *Statistics Emphasis, 25 credits minimum*

Required:

- 600-209 Multivariate Calculus, 4 credits
- 600-321 Linear Algebra II, 3 credits
- 600-360 Theory of Probability, 3 credits
- 600-361 Mathematical Statistics, 3 credits

One course from:

- 600-364 Biometrics, 4 credits
- 600-465 Business and Industrial Statistics, 4 credits

One course from:

- 008-704 Discrete Multivariate Statistical Analysis, 2 credits
- 008-767 Statistical Design and Analysis of Experiments, 4 credits
- 008-768 Multivariate Statistical Analysis, 4 credits

(Registration in any of the 3 courses above requires a GPA of 3.00 or higher.)

Additional courses to reach a total of 24 credits at the 300-level or above must be chosen from remaining courses in the two lists above or from:

- 266-350 Numerical Analysis, 3 credits
- 266-351 Data Structures, 3 credits
- 266-353 Computer Organization, 3 credits
- 600-311 Advanced Calculus, 3 credits
- 600-312 Real Analysis, 3 credits
- 600-355 Applied Mathematical Optimization, 3 credits
- 600-410 Complex Analysis, 3 credits

Requirements for the Minor

Areas of Emphasis

■ *Mathematics Emphasis, 20 credits*

Required:

- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-203 Calculus and Analytic Geometry II, 4 credits
- 600-320 Linear Algebra I, 3 credits

Students wishing teacher preparation must add these lower-level requirements:

- 266-256 Introduction to Computer Science I, 4 credits
- 600-260 Introductory Statistics, 4 credits

Three of the following:

- 266-350 Numerical Analysis, 3 credits
- 600-305 Ordinary Differential Equations, 3 credits
- 600-309 Systems of Ordinary Differential Equations, 3 credits
- 600-311 Advanced Calculus, 3 credits
- 600-312 Real Analysis, 3 credits
- 600-321 Linear Algebra II, 3 credits
- 600-328 Introduction to Algebraic Structures, 3 credits
- 600-355 Applied Mathematical Optimization, 3 credits
- 600-360 Theory of Probability, 3 credits
- 600-361 Mathematical Statistics, 3 credits
- 600-385 Foundations of Geometry, 3 credits
(required for teacher preparation)
- 600-410 Complex Analysis, 3 credits
- 600-416 Orthogonal Functions and Partial Differential Equations, 3 credits
- 600-492 Special Topics in Mathematics, 1-3 credits

■ *Computer Science Emphasis, 24 credits*

Required:

- 266-256 Introduction to Computer Science I, 4 credits
- 266-257 Introduction to Computer Science II, 4 credits
- 600-242 Discrete Mathematics, 4 credits

Students wishing licensure to teach computer science must add this lower-level requirement:

- 266-155 Computers and Microcomputers, 3 credits

Two of the following:

- 266-351 Data Structures, Storage and Retrieval, 3 credits
- 266-353 Computer Organization, 3 credits
(required for teacher preparation)
- 266-357 Theory of Programming Languages, 3 credits

Two more courses from:

- 266-350 Numerical Analysis, 3 credits
- 266-352 Computer Graphics, 3 credits
- 266-450 Theory of Algorithms, 3 credits
- 266-451 Data Base Management Systems, 3 credits
- 266-452 Operating Systems, 3 credits
- 266-454 Artificial Intelligence, 3 credits
- 266-455 Microprocessors and Digital Electronics, 3 credits
- 266-456 Advanced Topics in Microcomputing, 3 credits
- 266-457 Compiler Theory, 3 credits
- 600-355 Applied Mathematical Optimization, 3 credits

Or remaining course from previous list.

■ *Statistics Emphasis, 24 credits*

Required:

- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-203 Calculus and Analytic Geometry II, 4 credits
- 600-260 Introductory Statistics, 4 credits

Twelve additional credits from:

- 600-360 Theory of Probability, 3 credits
- 600-361 Mathematical Statistics, 3 credits
- 600-364 Biometrics, 4 credits
- 600-465 Business and Industrial Statistics, 4 credits
- 008-704 Discrete Multivariate Statistical Analysis, 2 credits
- 008-767 Statistical Design and Analysis of Experiments, 4 credits
- 008-768 Multivariate Statistical Analysis, 4 credits

(Registration in 008-704, 767, or 768 requires a GPA of 3.00 or higher.)

■ Military Science

Professional Program

Associate Professor: Tom Hartford, LTC, U.S. Army

Assistant Professors: Jose R. Rivera, Captain, U.S. Army; Robert H. Ronge, Captain, U.S. Army.

Military science is concerned primarily with developing leadership competence for success in civilian and military occupations. Students who want to develop such skills pursue studies in military science in addition to their majors and minors.

The military science program has a core curriculum consisting of military skills and professional knowledge integrated in both basic and advanced courses. While the ultimate purpose of the program is to provide college-trained officers for the U.S. Army, Army Reserve and Army National Guard, it supports University goals by emphasizing personal depth and developing qualities necessary for leadership in civilian occupations as well.

The program is conducted by the Reserve Officers Training Corp (ROTC). It normally is a four-year program. Completing the course provides opportunities for full- or part-time careers as officers in the U.S. Army, Army National Guard, or Army Reserve.

Basic Course (Preprofessional). The basic course is normally taken in the freshman and sophomore years. However, any student may register for any lower-level military science course. No military commitment is incurred and students may withdraw at any time before the end of the second year. Students attend class two hours every week and complete two leadership laboratories each semester. They may participate in a variety of extracurricular activities ranging from social events to rigorous, confidence-building physical activities.

Advanced Course (Professional). Satisfactory performance in the basic course, demonstrated leadership potential, and recommendations from program instructors make a student eligible to enter the professional program. Instruction includes introduction of military skills necessary to attend an Officer Basic Course (OBC). Such skills are fundamental to the military profession and serve as the basis for all future branch-directed specialty training. Students attend a six-week advanced camp during the summer between the junior and senior years. Successful completion of the advanced camp is required prior to receiving a commission.

Two-Year Program. The military science program also offers a course of study designed specifically for students who are unable to take ROTC during their first two years of college. Such applicants must successfully complete a six-week basic camp prior to or after their junior year of college. Qualified veterans with prior military service and members of the Army Reserve or Army National Guard who have completed their formal training are eligible to enroll in the advanced course without participating in the basic courses.

Simultaneous Membership Program. Under this program, a person may enlist in the Army National Guard or Army Reserve, attend basic training, and be qualified to enroll in the advanced course in the sophomore year in college. Upon successful completion of the advanced course, the cadet could receive an early commission and serve as a second lieutenant with the Army National Guard or Reserve while completing a college degree.

ROTC Scholarships. Army ROTC offers opportunities for two- and three-year scholarships awarded competitively to students who are already enrolled in college. While there are definite academic standards, emphasis is on the student's total abilities and leadership potential.

Students who attend the basic camp under the two-year program may also compete for two-year scholarships while at camp. These scholarships pay for tuition, textbooks, lab fees, and other educational expenses, plus providing a living allowance of up to \$1,000 each year the scholarship is in effect.

■ Music

Disciplinary Major or Minor

Professors: Michael J. Arendt; Robert J. Bauer; Trinidad J. Chavez; Arthur L. Cohrs; Lovell G. Ives; Irwin C. Sonnenfeld.

Associate Professors: Jerome B. Abraham; Margaret E. Charnon (chairperson); Wayne L. Jaeckel; Terence J. O'Grady.

Assistant Professors: Kevin Collins; Sarah Meredith.

Lecturers: Cheryl A. Grosso.

The music discipline offers a program leading to a Bachelor of Arts or a Bachelor of Science degree with music as a major or minor. The program is accredited by the National Association of Schools of Music (NASM).

Majors in music choose one of two areas of emphasis and further select a focus within that emphasis. Emphases are:

- applied music performance
- music education (preparation for teaching choral music, instrumental music, or general music)

Students who major in music also complete an interdisciplinary minor. This requirement enables students to plan programs to meet their individual goals. Students interested in the aesthetic, theoretical, or historical aspects of music usually choose minors in communication and the arts or humanistic studies. Students planning careers in teaching music generally choose the program in human development. Some UW-Green Bay students have chosen to minor in business administration in preparation for careers in the business aspects of music. It also is possible to choose music as the minor and couple it with an interdisciplinary major.

The music program emphasizes quality in vocal and instrumental music along with broadly based, general education courses. Music students have many opportunities for solo and group performances, both on campus and in the larger community.

Four-year sequences of applied instruction are available in piano, organ, guitar, voice, flute, oboe, clarinet, saxophone, bassoon, French horn, trumpet, trombone, euphonium, tuba, percussion, violin, viola, cello, and string bass. Group ensemble performance opportunities include Symphonic Band, Wind Ensemble, Concert Choir, University Chorus, Jazz Ensemble, Show/Jazz Choir, as well as ensembles in woodwind, brass, percussion, string, vocal, ancient and modern music, and musical theatre.

Requirements for the Major

Lower-Level Courses, 32-37 credits

Category 1, 27 credits:

- 242-121 Masters and Masterpieces of Music, 3 credits
- 670-115, 116 Ear Training and Sight Singing I, II, 2 credits
- 670-151, 152 Materials and Values in Music I, II, 6 credits
- 670-251, 252 Literature and Styles in Music I, II, 8 credits
- 672-100, 200 Applied Lessons, 2 credits each, 8 credits (4 semesters)

Category 2, 1-4 credits:

- 672-Keyboard Musicianship I-IV, 1-4 credits (1-4 semesters at 1 credit each, depending upon placement). Students placed in 011 also take 021, 031, and 041. Students placed in 012 also take 022, 032, 042. Students placed in 013 take only that course.

Category 3, 4-6 credits:**672-Major Performing Ensembles**

Concurrent enrollment is required when studying at the 100- or 200-level of applied lessons. The major ensemble chosen must be related to the area of applied lessons when possible.

Major Ensembles, 4 credits (4 semesters required)

672-241 Symphonic Band, 1 credit

672-241 Wind Ensemble, 1 credit

672-261 Concert Choir, 1 credit

672-262 University Chorus, 1 credit

A large variety of minor ensembles are offered each semester in voice, string, woodwinds, brass, percussion, jazz, ancient and new music which, although not required, are recommended.

Upper-Level Courses, 13-14 credits**Required for all emphases:**

670-333 Basic Conducting, 2 credits

670-351, 352 Literature and Styles in Music III, IV, 8 credits

672-Major Performing Ensembles

Concurrent enrollment in a major ensemble is required when studying at the 300-level of applied lessons. The ensemble chosen must be directly related to the area of applied lessons when possible.

Major Ensembles, 2 credits (2 semesters required)

672-441 Symphonic Band, 1 credit

672-441 Wind Ensemble, 1 credit

672-461 Concert Choir, 1 credit

672-462 University Chorus, 1 credit

Areas of Emphasis

Each area of emphasis has different upper-level course requirements. Students seeking the music major must complete requirements in one of the following areas of emphasis.

■ Applied Music**Upper-Level Courses, 20-23 credits**

670-315 Choral Arranging, 2 credits

OR

670-316 Instrumental Arranging, 3 credits

672-300 Applied Lessons, including a half recital, 6 credits
(2 semesters at 3 credits each)

672-400 Applied Lessons, including a full recital, 6 credits
(2 semesters at 3 credits each)

672-Major Performing Ensembles

Concurrent enrollment in either a major or minor ensemble is required when studying at the 300- or 400-level of applied lessons. The ensemble chosen must be directly related to the area of applied lessons when possible.

A minimum of 6 credits from:

670-325 Diction for the Voice: German, 1 credit

670-326 Diction for the Voice: French, 1 credit

670-327 Diction for the Voice: Italian, 1 credit

670-411 Composition I, 3 credits

670-412 Composition II, 3 credits

670-423 Seminar in Music Literature, 3 credits

670, 672-498 Independent Study, 1-4 credits

■ Music Education: Choral Licensure**Upper-Level Courses, 12 credits**

670-315 Choral Arranging, 2 credits

670-318 Choral Literature, 2 credits

670-344 Choral Conducting and Rehearsal Techniques, 3 credits

670-346 Keyboard Accompanying I, 1 credit

672-Applied Lessons, including a half recital, 4 credits
(2 semesters at 2 credits each)

■ Music Education: Instrumental Licensure**Upper-Level Courses, 18 credits**

670-316 Instrumental Arranging, 3 credits

670-341 Woodwind Techniques, 2 credits

670-342 Brass Techniques, 2 credits

670-343 String Techniques, 2 credits

670-345 Percussion Techniques, 2 credits

670-348 Instrumental Conducting and Rehearsal Techniques, 3 credits

672-Applied Lessons, including a half recital, 4 credits
(2 semesters at 2 credits each)

Voice Proficiency

■ Music Education: General Music Licensure**Upper-Level Courses, 11-12 credits**

670-315 Choral Arranging, 2 credits

OR

670-316 Instrumental Arranging, 3 credits

670-344 Choral Conducting and Rehearsal Techniques, 3 credits

OR

670-348 Instrumental Conducting and Rehearsal Techniques, 3 credits

670-346 Keyboard Arranging I, 1 credit

672-Applied Lessons, including a half recital, 4 credits
(2 semesters at 2 credits each)

670-672 Elective, 1 credit

Voice Proficiency

Guitar Proficiency

Requirements for the Minor**Lower-Level Courses, 18-22 credits**

These are the same as for the major, excluding:

670-251, 252 Literature and Styles in Music I, II, 8 credits

672-200 Applied Lessons, 4 credits
(2 semesters at 2 credits each)

Upper-Level Courses, 6 credits

670-333 Basic Conducting, 2 credits

One of the following:

242-329 Cross-Cultural Communication: Expressive Traditions,
3 credits (Introduction to World Music)

242-329 Cross-Cultural Communication: Expressive Traditions,
3 credits (Jazz History or American Show Music)

■ Nursing

Bachelor of Science for Registered Nurses

Professional Nursing Degree Program

Chairperson: Associate Professor Sallie Tucker-Allen, R.N., M.S., medical-surgical nursing, Ph.D.

Faculty: Lorraine Noll, R.N., C., M.S.N., community health nursing; Harriet Wichowski, R.N., M.S., psychiatric and mental health nursing; Sylvia Kubsch, R.N., M.S.N., medical-surgical nursing; Jerri Hoehn, R.N., C., M.S.N., parent-child nursing.

The baccalaureate nursing program (BSN), fully accredited by the State of Wisconsin Board of Nursing and the National League for Nursing, provides an opportunity for registered nurses holding a diploma or associate degree in nursing to further their nursing education and earn a bachelor of science degree in nursing.

Nursing program objectives and educational methods are designed to meet the needs of adult learners and practicing registered nurses. Each course meets for one class session per week.

The nursing curriculum builds on previous nursing education. The course of study emanates from general education and is problem focused, inter-disciplinary in nature, value oriented, and based on professional program goals.

Students are assisted to identify and achieve their career goals. Five nursing roles—provider of care, teacher, manager, investigator, and member of the profession—are integrated throughout the nursing curriculum.

Entry Requirements

- Graduate of NLN-accredited associate degree or diploma nursing program approved by State Board of Nursing
- Currently registered as a nurse in Wisconsin; out of state students must hold licenses in their respective states
- Successful completion of written NLN Profile II and simulated Clinical Performance tests (30 credits)
- Completion of lower-level coursework:
 - natural science (9 credits)
 - social science (9 credits)
- Cumulative GPA of 2.25 on lower-level coursework

Requirements for the Major

Supporting Courses, 6 credits

- One course in speech, 3 credits
- One course in statistics, 3 credits

Upper-Level Courses, 36 credits

- 689-315 Health Assessment of the Adult, 3 credits
- 689-329 Computer Applications in Nursing, 3 credits
- 689-411 Theoretical Foundations in Nursing, 2 credits
- 689-415 Adaptation in Health and Illness, 4 credits
- 689-419 Adaptive Parent-Child Health, 4 credits
- 689-425 Adaptation to Acute and Chronic Health Problems, 4 credits
- 689-431 Nursing Management, 3 credits
- 689-435 Nursing Research, 3 credits
- 689-441 Community Health Nursing, 6 credits
- 689-451 Advanced Nursing Concepts, 4 credits

Prior to taking 689-451, Advanced Nursing Concepts, students must have completed 6 of the 9 required upper-level credits to support their career goals.

■ Nutritional Sciences

Interdisciplinary Major or Minor

Associate Professor: Dawson C. Deese.

Assistant Professor: Warren V. Johnson.

Nutritional sciences students study nutritional needs, nutrient functions, food quality, food supply, food preservation and food preparation. The program provides interdisciplinary, problem-centered study of the factors affecting the nutritional quality of life as related to quality, quantity, and availability of food.

Nutritional sciences students choose one of two areas of emphasis. They are:

- human nutrition (may include dietetics)
- food science

The **human nutrition** emphasis provides appropriate training in natural and social sciences and in communication skills to prepare students for positions as nutritionists or dietitians in hospitals or other health agencies at local, state, federal, or international levels. Students who wish to become registered dietitians follow the human nutrition/dietetics program of study outlined by the American Dietetic Association (A.D.A.). UW-Green Bay's program in human nutrition/dietetics is qualified by the A.D.A. An individual who wishes to become a fully qualified registered dietitian must earn a bachelor's degree from such a program; complete an approved clinical experience; and pass a qualifying examination.

The **food science** emphasis examines fundamentals of food composition and analysis; food resources, utilization, and distribution; and food safety. It prepares students to work as technicians or scientists in areas of food processing or research. Students who are especially interested in chemistry are encouraged to elect double majors in food science and chemistry.

When combined with professional courses in education, nutritional sciences is an appropriate major for students preparing to teach in primary or secondary schools. A minor in business administration can be a good choice for the nutritional sciences major planning to work in industry or aiming for management-level positions. Nutritional sciences majors can be planned to fulfill requirements for entrance into graduate programs and to provide valuable background for professional training in medicine, dentistry, and pharmacy. UW-Green Bay nutritional sciences students have chosen these options and others.

Requirements for the Major

Supporting Courses, 18-21 credits

Category I:

- 204-202 Principles of Biology I, 4 credits
- AND
- 204-203 Principles of Biology II, 4 credits
- OR
- 204-202 Principles of Biology I, 4 credits
- AND
- 478-203, 204 Anatomy and Physiology I, II, 6 credits

Category II:

- 600-260 Introductory Statistics, 4 credits

Category III: (6-7 credits)

- 552-105 Expository Writing, 3 credits

Choose one course from these subject areas:

- Oral Communication (Communication Processes)
- Literature
- Foreign language

Upper-Level Courses, 9 credits

One course in three of the four subject areas:

Genetics:

204-303 Genetics, 3 credits

OR

478-310 Human Genetics, 3 credits

Human Physiology and Anatomy:

Many alternatives available, check course offerings.

Nutrition:

694-300 Nutritional Significance of Food, 3 credits

OR

694-302 Nutrition and Culture, 3 credits

Evolution:

478-342 Human Evolution, 3 credits

OR

478-312 Evolutionary Processes, 3 credits

OR

478-364 Human Variability, 3 credits

Areas of Emphasis**■ Human Nutrition/Dietetics Emphasis****Supporting Courses, 38-43 credits****Required:**

225-108 General Chemistry, 5 credits

OR

225-211, 212 Principles of Chemistry I, II, 10 credits

225-300 Bio-organic Chemistry, 3 credits

225-301 Bio-organic Chemistry Laboratory, 1 credit

246-133 Principles of Public Address, 3 credits
(Or, a course in counseling)

266-155 Computers and Microcomputers, 3 credits

298-202 Macro Economic Analysis, 3 credits

478-203 Anatomy and Physiology I, 2 credits

AND

478-204 Anatomy and Physiology II, 4 credits

600-101 Intermediate Algebra, 3 credits

694-201 Dietetics and Related Professions, 1 credit

694-212 Nature of Food, 4 credits

820-102 Introduction to Psychology, 3 credits

900-202 Introduction to Sociology, 3 credits

Upper-Level Courses, 33 credits**Required:**

204-302 Principles of Microbiology, 4 credits

216-362 Human Resources Management, 3 credits

216-382 Introductory Management, 3 credits

225-331 Biochemistry Laboratory, 1 credit

694-300 Nutritional Significance of Food, 3 credits

694-312 Quantity Food Production and Service, 4 credits

694-328 Physiological Chemistry, 3 credits

694-421 Community Nutrition, 3 credits

694-475 Advanced Human Nutrition, 3 credits

694-478 Nutrition in Disease, 3 credits

820-315 Educational Psychology, 3 credits

■ Food Science Emphasis**Supporting Courses****Required:**

225-211 Principles of Chemistry I, 5 credits

225-212 Principles of Chemistry II, 5 credits

600-104 Elementary Functions: Algebra and Trigonometry, 4 credits

754-103 Fundamentals of Physics I, 5 credits

754-104 Fundamentals of Physics II, 5 credits

Upper-Level Courses, 31 credits**Required:**

204-302 Principles of Microbiology, 4 credits

225-302 Organic Chemistry I, 3 credits

225-303 Organic Chemistry II, 3 credits

225-304 Organic Chemistry Laboratory I, 1 credit

225-305 Organic Chemistry Laboratory II, 1 credit

225-311 Analytical Chemistry, 4 credits

225-330 Biochemistry, 3 credits

OR

694-328 Physiological Chemistry, 3 credits

225-331 Biochemistry Laboratory, 1 credit

694-302 Nutrition and Culture, 3 credits

694-404 Food Science, 3 credits

694-409 Analysis of Food and Food Products, 2 credits

694-475 Advanced Human Nutrition, 3 credits

Requirements for the Minor**Supporting Courses, 9-14 credits**

204-202 Principles of Biology I, 4 credits

225-108 General Chemistry, 5 credits

OR

225-211, 212 Principles of Chemistry I, II, 10 credits

Upper-Level Courses, 13-14 credits**Category I:**

694-300 Nutritional Significance of Food, 3 credits

Category II:

204-302 Microbiology, 4 credits

Category III:

225-300, 301 Bioorganic Chemistry and Laboratory, 4 credits

OR

694-404 Food Science, 3 credits

Category IV:

694-302 Nutrition and Culture, 3 credits

694-475 Advanced Human Nutrition, 3 credits

Philosophy

Disciplinary Major or Minor

Professor: Fredrick Kersten.

Associate Professors: Orville Clark; Gary Greif (chairperson); Gilbert Null.

The study of philosophy acquaints students with the major philosophical ideas in the history of Western thought and provides them with the conceptual means for critical reflection on the values and beliefs of their own culture. Philosophy also provides students with a forum for the exchange of ideas and with alternative methods of research and problem-solving techniques.

Courses of study in philosophy include logic, ethics, metaphysics, aesthetics, social and political philosophy, and history of philosophy. Course work in philosophy addresses the basic concerns of humankind with the natural and social worlds, as well as those of the humanities, fine arts, and sciences.

Philosophy majors must choose interdisciplinary minors. Students interested in broad issues of literature and history might logically choose minors in humanistic studies. Those who want to explore issues in the arts and aesthetics would find communication and the arts appropriate. Students seeking application to current and historical political and social theories might select social change and development. Environmental science would be the choice of students interested in the natural sciences. An adviser can help in choosing appropriate minors.

The undergraduate program in philosophy is excellent preparation for many other disciplines and professional programs, including teaching, fine arts, natural and social sciences, psychology, and business.

UWGB philosophy graduates are actively working in many of those fields. Some have gone on to graduate or professional schools in law, philosophy, and other areas.

Requirements for the Major

Lower-Level Courses, 12 credits

Required, 9 credits:

- 736-111 Elementary Logic, 3 credits
- 736-213 Ancient Philosophy, 3 credits
- 736-214 Modern Philosophy, 3 credits

Choose 3 credits from:

- 736-101 Introduction to Philosophy, 3 credits
- 736-102 Problems in Ethics, 3 credits
- 736-104 Freedom and Individuality, 3 credits
- 736-105 Introduction to Social and Political Philosophy, 3 credits
- 736-106 Pacifism and Violence, 3 credits
- 736-207 Philosophy and Literature, 3 credits
- 736-208 Science and Human Values, 3 credits
- 736-209 Reason and Passion: Philosophical Issues in Film, 3 credits
- 736-210 Civilization and Culture, 3 credits
- 736-211 The Arts and Human Existence, 3 credits
- 736-212 Philosophy of Science, 3 credits

Upper-Level Courses, 18 credits

Choose from:

- 736-301 Criticism of Values, 3 credits
- 736-304 American Philosophy, 3 credits
- 736-322 Aesthetics, 3 credits
- 736-324 Contemporary Philosophy, 3 credits
- 736-325 Marxist Humanism, 3 credits
- 736-326 Philosophy, Politics and Law, 3 credits
- 736-403 Major Philosophical Figures and Issues, 3 credits
- 736-406 Philosophical Problems in the Sciences, 3 credits

Requirements for the Minor

Lower-Level Courses, 9 credits

Required:

- 736-213 Ancient Philosophy, 3 credits
- 736-214 Modern Philosophy, 3 credits

Choose 3 credits from:

- 736-101 Introduction to Philosophy, 3 credits
- 736-102 Problems in Ethics, 3 credits
- 736-104 Freedom and Individuality, 3 credits
- 736-105 Introduction to Social and Political Philosophy, 3 credits
- 736-106 Pacifism and Violence, 3 credits
- 736-111 Elementary Logic, 3 credits
- 736-207 Philosophy and Literature, 3 credits
- 736-208 Science and Human Values, 3 credits
- 736-209 Reason and Passion: Philosophical Issues in Film, 3 credits
- 736-210 Civilization and Culture, 3 credits
- 736-211 The Arts and Human Existence, 3 credits
- 736-212 Philosophy of Science, 3 credits

Upper-Level Courses, 9 credits

Choose from:

- 736-301 Criticism of Values, 3 credits
- 736-304 American Philosophy, 3 credits
- 736-322 Aesthetics, 3 credits
- 736-324 Contemporary Philosophy, 3 credits
- 736-325 Marxist Humanism, 3 credits
- 736-326 Philosophy, Politics and Law, 3 credits
- 736-403 Major Philosophical Figures and Issues, 3 credits
- 736-406 Philosophical Problems in the Sciences, 3 credits

Physical Education

Including Coaching Certification

Lecturers, basic instruction program: Otis Chambers, Cecily Dawson, Ada Gee, Roger Harriman, Mike Heideman, Janis Pum, Aldo Santaga.

Lecturers, certification program: Otis Chambers, Mike Heideman, Terry Powers, Bernard Starks.

While the physical education unit does not offer a major or minor, a student may take up to four credits of physical education courses numbered from 100 to 499 for elective credit toward a B.A. or B.S. degree. In addition, any number of approved physical education courses and credits may be counted as degree credits if those courses are listed on a student's academic plan as a requirement for: 1) an interdisciplinary major; 2) a disciplinary major; 3) a professional program; or, 4) a part of the supporting subject or background requirements—but only if the related program is completed before graduation.

Credits in physical education courses taken in addition to the above do not count toward graduation. Consult the *Timetable* for further regulations about physical education credits.

Enrollment in physical education activity presumes a student's health status is appropriate for the course selected. A physical examination and the filing of a health history form with the office of Student Health Services are recommended.

Coaching Certification. The coaching certification program consists of a minimum of 16 credits to prepare students for coaching responsibilities and is approved by the Wisconsin Department of Public Instruction for athletic coaching preparation for the public schools of Wisconsin. Youth-sport coaches are encouraged to acquire similar training.

Students desiring certification may normally complete requirements within two academic years, but it is wise to begin coaching course work early to assure normal matriculation.

Some coaching certification courses are appropriate for interdisciplinary study and many students select individual courses without completing the entire program. Persons already teaching and/or coaching may take courses to expand their personal and professional background.

UWGB's coaching certification program is consistent with the recommendations of the National Council of State High School Coaches, the National Association for Girls and Women in Sport, and the American Alliance of Health, Physical Education, Recreation and Dance.

Requirements for Coaching Certification

Required Courses, 16 credits

- 478-102 Introduction to Human Biology, 3 credits
- 742-401 Theory and Philosophy of Coaching, 2 credits
OR
- 742-402 Psychology and Sociology of Sport, 2 credits
- 742-403 Organization and Administration of Interscholastic Athletics, 2 credits
- 742-405 Scientific Conditioning of the Athlete, 2 credits
(prerequisite 478-102 or equivalent)
- 742-406 Prevention and Treatment of Athletic Injuries, 2 credits
(prerequisite 478-102 or equivalent)

- 742-410-434 Principles of Coaching, 2 credits
Select from:
- 410 Basketball/Softball
 - 411 Basketball
 - 412 Bowling
 - 413 Crew
 - 414 Curling
 - 415 Fencing
 - 416 Field Hockey
 - 417 Football
 - 418 Golf
 - 419 Gymnastics
 - 420 Handball Team
 - 421 Ice Hockey
 - 422 Lacrosse
 - 424 Skiing
 - 425 Soccer
 - 426 Swimming and Diving
 - 427 Tennis
 - 428 Track and Field
 - 429 Volleyball
 - 430 Wrestling
 - 431 Cheerleading
 - 433 Pom-Pon Team
 - 434 Drill Team

- 742-435-459 Field Experience in Coaching, 2 credits
Select from:
- 435 Baseball/Softball
 - 436 Basketball
 - 437 Bowling
 - 438 Crew
 - 439 Curling
 - 440 Fencing
 - 441 Field Hockey
 - 442 Football
 - 443 Golf
 - 444 Gymnastics
 - 445 Handball Team
 - 446 Ice Hockey
 - 447 Lacrosse
 - 449 Skiing
 - 450 Soccer
 - 451 Swimming and Diving
 - 452 Tennis
 - 453 Track and Field
 - 454 Volleyball
 - 455 Wrestling
 - 456 Cheerleading
 - 458 Pom-Pon Team
 - 459 Drill Team

Electives, 1 credit minimum

Coaching Electives (1 credit minimum)

- 742-401 Philosophy of Athletics and Coaching, 2 credits
- 742-116 First Aid and Emergency Care, 2 credits
- 742-117 Cardiopulmonary Resuscitation, 1 credits
- 742-179-184 Athletic Officiating, 1 credit
Select from:
- 179 Baseball/Softball
- 171 Basketball
- 172 Field Hockey
- 173 Football
- 174 Gymnastics
- 175 Ice Hockey
- 176 Lacrosse
- 178 Soccer
- 181 Swimming and Diving
- 182 Track and Field
- 183 Volleyball
- 184 Cheerleading

■ Physics

Disciplinary Major or Minor

Professors: Fritz A. Fischbach; Anjani K. Mehra; George T. O'Hearn; Charles R. Rhyner (chairperson); Nancy J. Sell.

Associate Professor: Robert W. Lanz.

Physics is the study of matter and energy and their interactions in the areas of mechanics, heat, acoustics, optics, electricity, magnetism, radiation, and atomic and nuclear phenomena. Physics provides students with concepts and models for describing, understanding, and predicting many phenomena of the natural environment. It provides the foundation for other physical sciences such as chemistry, astronomy, and geology and for many engineering fields.

Graduates typically pursue graduate work in physics, meteorology, or other related fields, enter careers in industry, or obtain licensure to teach physics in secondary schools.

Students majoring in physics must select an interdisciplinary minor. Environmental sciences, information and computing science, and human biology are particularly appropriate choices, depending on students' individual interests and career goals.

Physics majors are encouraged to include mathematics courses beyond those listed as supporting courses in their programs of study.

Requirements for the Major

Supporting Courses, 28 credits

- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 600-202 Calculus and Analytical Geometry I, 4 credits
- 600-203 Calculus and Analytical Geometry II, 4 credits
- 600-209 Multivariate Calculus, 4 credits
- 754-201 Principles of Physics I, 5 credits
- 754-202 Principles of Physics II, 5 credits

Upper-Level Courses, 24 credits

At least 3 upper-level laboratory credits are required.

- 754-315 Classical Mechanics, 3 credits
- 754-317 Optics, 3 credits
- 754-321 Structure of Matter, 3 credits
- 754-323 Structure of Matter Laboratory, 1 credit
- 754-404 Electricity and Magnetism, 3 credits
- 754-417 Nuclear Physics and Radiochemistry, 3 credits

A minimum of 8 credits from:

- 754-318 Optics Laboratory, 1 credit
- 754-320 Thermodynamics and Kinetics, 3 credits
- 754-322 Thermodynamics and Kinetics Laboratory, 1 credit
- 754-405 Electronics for Scientists, 3 credits
- 754-415 Solar and Alternative Energy Systems, 3 credits
- 754-418 Nuclear Physics and Radiochemistry Laboratory, 1 credit
- 754-455 Microprocessors and Digital Electronics, 3 credits

Requirements for the Minor

Supporting Courses, 18 credits

- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-203 Calculus and Analytic Geometry II, 4 credits
- 754-201 Principles of Physics I, 5 credits
- 754-202 Principles of Physics II, 5 credits

Upper-Level Courses, 12 credits

- 754-321 Structure of Matter, 3 credits

A minimum of 9 credits from:

- 754-315 Classical Mechanics, 3 credits
- 754-317 Optics, 3 credits
- 754-318 Optics Laboratory, 1 credit
- 754-320 Thermodynamics and Kinetics, 3 credits
- 754-322 Thermodynamics and Kinetics Laboratory, 1 credit
- 754-323 Structure of Matter Laboratory, 1 credit
- 754-404 Electricity and Magnetism, 3 credits
- 754-405 Electronics for Scientists, 3 credits
- 754-417 Nuclear Physics and Radiochemistry, 3 credits
- 754-418 Nuclear Physics and Radiochemistry Laboratory, 1 credit
- 754-455 Microprocessors and Digital Electronics, 3 credits

Political Science

Disciplinary Major or Minor

Professors: Martin H. Greenburg; Michael E. Kraft.

Associate Professors: David M. Littig; E. Nelson Swinerton (chairperson).

Assistant Professors: Craig G. Heatwole; Hugh T. Miller.

Political science is concerned with the systematic study of political behavior, governmental institutions and policy making processes, public policies and their implementation, and political values in local, state, national, cross-national and international settings.

The program acquaints students with the structure and operation of political systems; the cultural, social, economic and ideological context of these systems; the major philosophical questions and perspectives on politics and government through history and their relevance to understanding modern political phenomena; and the major methods of inquiry and analysis used in the contemporary study of politics, government and public policy.

Political science is a major often chosen by students intending careers in law. The field of study is also useful for students planning careers in journalism, planning, education, business, foreign service, politics, and public service positions with private and public agencies at the local, state, regional, and federal levels.

Political science majors have entered graduate study in political science, public administration, education, and related fields. Students seeking teacher preparation should consult early with advisers in political science and education.

Majors in political science must choose an interdisciplinary minor. Because political science is a discipline with applications in many fields of endeavor, there are many appropriate choices, depending upon a student's individual interests. The most commonly chosen minors are urban and public affairs, regional analysis, social change and development, business, humanistic studies, human development, and environmental science.

Requirements for the Major

Supporting Courses, 6 credits

Choose from:

- 778-100 Introduction to Political Science, 3 credits
- 778-101 American Government and Politics, 3 credits
- 778-215 Understanding Presidential Elections, 3 credits
- 778-218 Political Behavior, 3 credits

Students intending to pursue graduate study are encouraged to take:

- 255-205 Social Science Statistics, 3 credits
- 255-301 Foundations of Social Research, 3 credits

Upper-Level Courses, 24 credits

Minimum of 3 credits from:

- 778-301 Environmental Politics and Policy, 3 credits
- 778-305 Urban Politics and Policy, 3 credits
- 778-306 Regulatory Policy and Administration, 3 credits
- 778-310 The American Presidency, 3 credits
- 778-312 Community Politics, 3 credits
- 778-320 Constitutional Law, 3 credits
- 778-330 Law and the Judicial Process, 3 credits
- 778-408 Public Policy Analysis, 3 credits
- 778-410 Intergovernmental Relations, 3 credits
- 778-412 Political Parties and Interest Groups, 3 credits
- 778-416 American Legislative Process, 3 credits
- 950-344 Leadership in Organizations, 3 credits
- 950-351 Transportation and the City, 3 credits
- 950-376 Administrative Law, 3 credits
- 950-378 Environmental Law, 3 credits
- 950-406 Administration of State and Local Government, 3 credits

Minimum of 3 credits from:

- 448-352 History of Modern China, 3 credits
- 448-354 History of Modern Southeast Asia, 3 credits
- 778-351 Comparative Political Systems, 3 credits
- 778-353 Politics of Developing Areas, 3 credits
- 778-378 Geography of Conflict Areas, 3 credits
(This course can only count in one group)

Minimum of 3 credits from:

- 736-326 Philosophy, Politics and Law, 3 credits
- 736-403 Major Philosophical Figures and Issues, 3 credits
- 778-340 Political Theory, 3 credits

Minimum of 3 credits from:

- 778-360 International Politics, 3 credits
- 778-368 Geopolitics of World Regions, 3 credits
- 778-378 Geography of Conflict Areas, 3 credits
(This course can only count in one group)
- 778-460 American Foreign and Defense Policies, 3 credits

Requirements for the Minor

Supporting Courses, 6 credits

Choose from:

- 778-100 Introduction to Political Science, 3 credits
- 778-101 American Government and Politics, 3 credits
- 778-215 Understanding Presidential Elections, 3 credits
- 778-218 Political Behavior, 3 credits

Upper-Level Courses, 12 credits

Choose courses with the 778 prefix from the lists shown under major requirements.

■ Psychology

Disciplinary Major or Minor

Professors: Fergus Hughes; Nicholas Pollis; William Smith.

Associate Professors: Bela Baker; Charles Matter (chairperson); Robert Mendelsohn; Lloyd Noppe; Dean Rodeheaver.

Assistant Professor: Illene Noppe.

Psychology is the systematic and scientific study of behavior and experience. It seeks to explain how physiological, personal, social, and environmental conditions influence thought and action. Research with humans and animals aims at understanding, predicting, and influencing behavior.

In the past 100 years, psychology has moved from being a branch of philosophy to being both an experimental science and an active helping profession.

Psychology helps to deepen understanding of individual and social behavior and provides a strong general background for many careers. Psychology graduates are employed in a variety of positions with social and community service agencies, businesses, research institutes, and governmental agencies. Preparation for specialized professional work—such as testing, counseling, university teaching, and many research activities—usually requires master's or doctorate degrees. Preparation for advanced study should combine a broad program in liberal arts with a sound background in the physical and biological sciences and should emphasize research skills and experiences.

Many graduates continue professional training in such fields as social work, education, medicine, and business, as well as psychology. Students seeking teaching licensure should consult with advisers in psychology and education.

Psychology majors must choose an interdisciplinary minor. Such a minor strengthens preparation in psychology and enables students to prepare for a diversity of careers. The three most often chosen minors are human biology, human development, and urban and public affairs. Some students choose minors in social change and development or communication and the arts.

Requirements for the Major

Supporting Courses, 9 credits

255-205 Social Science Statistics, 3 credits
OR

600-260 Introductory Statistics, 3 credits

478-102 Introduction to Human Biology, 3 credits
OR

478-313 Brain Functions in Human Behavior, 3 credits

820-102 Introduction to Psychology, 3 credits

Upper-Level Courses, 28 credits

25 credits must be at the upper level

820-300 Experimental Psychology, 4 credits

A minimum of 3 credits from:

820-306 Psychology of Perception, 3 credits

820-309 Psychology of Motivation, 3 credits

820-417 Psychology of Cognitive Processes, 3 credits

A minimum of 3 credits from:

820-202 Introduction to Social Psychology, 3 credits

820-335 Psychology of Attitude and Public Opinion, 3 credits

820-337 Social Behavior Dynamics, 3 credits

820-416 Psychology of Intergroup Relations, 3 credits

A minimum of 3 credits from:

481-210 Introduction to Human Development, 3 credits

481-331 Infancy and Early Childhood, 3 credits

481-332 Middle Childhood and Adolescence, 3 credits

481-343 Adulthood and Aging, 3 credits

A minimum of 3 credits from:

820-429 Theories of Personality, 3 credits

820-435 Abnormal Behavior, 3 credits

A minimum of 12 credits from:

(if not taken as part of above requirements)

481-331 Infancy and Early Childhood, 3 credits

481-332 Middle Childhood and Adolescence, 3 credits

481-343 Adulthood and Aging, 3 credits

481-431 Cognitive Development, 3 credits

481-436 Counseling with Children and Adolescents, 3 credits

481-437 Counseling with Adults and the Aged, 3 credits

600-364 Biometrics, 3 credits

736-406 Philosophical Problems in the Sciences: Psychology, 3 credits

820-290 Environmental Psychology, 3 credits

820-306 Psychology of Perception, 3 credits

820-309 Psychology of Motivation, 3 credits

820-315 Educational Psychology, 3 credits

820-335 Psychology of Attitude and Public Opinion, 3 credits

820-337 Social Behavior Dynamics, 3 credits

820-415 Organizational Psychology, 3 credits

820-417 Psychology of Cognitive Processes, 3 credits

820-420 Tests and Measurements, 3 credits

820-429 Theories of Personality, 3 credits

820-435 Abnormal Behavior, 3 credits

820-438 Group Dynamics, 3 credits

820-466 Clinical and Community Psychology, 3 credits

820-483X Selected Topics, 1-4 credits

820-490 Problems in Environmental Psychology, 3 credits

820-497 Internship, 3-12 credits

820-498 Independent Study, 1-4 credits

834-325 Behavior in Designed Environments, 3 credits

875-371 Motivation and Social Change, 3 credits

Requirements for the Minor

Supporting Courses, 6 credits

255-205 Social Science Statistics, 3 credits
OR

600-260 Introductory Statistics, 3 credits

820-102 Introduction to Psychology, 3 credits

Upper-Level Courses, 15 credits

3 credits in each of the five groups of courses listed under the upper-level requirements for the major

Regional Analysis

Interdisciplinary Major or Minor

Professors: Donald Gandre (chairperson); Martin Greenberg; William Kuepper; Ismail Shariff; William Smith.

Associate Professors: Kumar Kangayappan; William Laatsch; William Niedzwiedz.

Studies in regional analysis prepare students to understand the character and utilization of human and natural resources in the context of defined areas of the world. These areas are defined as regions and are described by terms such as Fox River Valley, Midwest, or a county, a state, or country.

At other universities, faculty, students and programs in regional analysis would typically be dispersed among departments of economics, geography, political science, psychology, and regional planning. Students wanting to apply knowledge from these fields to a variety of careers can do so within regional analysis at the UW-Green Bay.

Regional analysis prepares students for positions in business, government, universities, community organizations, and industry as researchers and policy analysts. More than half of regional analysis graduates have been hired by business firms. Another sizable portion are administrators or other professionals in planning agencies at all levels of government.

The major also serves as suitable preparation for graduate work in economics, geography, regional science, environmental studies, and planning. Ten to 20 percent of graduates continue their studies.

Examples of positions held by graduates include university extension work, neighborhood associations, community development corporations, marketing groups, planning agencies, and research organizations.

Regional analysis students may choose an area of emphasis to prepare for specific career fields. Emphases include:

- Land use and regional planning
- Regional economic development
- Transportation (planning and management)
- Real estate (development and appraisal)

Other areas of emphasis are possible in consultation with an adviser.

Each major in regional analysis works out a specific program with a faculty adviser from the unit.

Requirements for the Major

Supporting Courses, 9 credits

Required:

834-220 Introduction to Regional Analysis, 3 credits

Two of the following:

255-205 Social Science Statistics, 3 credits

OR

600-260 Introductory Statistics, 4 credits

266-155 Computers and Microcomputers, 3 credits

416-250 Displays of Geographic Information, 3 credits

600-201 Calculus for Management and Social Sciences, 3 credits

Areas of Emphasis, 27 credits

■ General Program

Upper-Level Courses

Choose from:

- 834-309 Urban and Regional Economic Theory, 3 credits
- 834-322 Regional Planning, 3 credits
- 834-323 Land Use Controls, 3 credits
- 834-325 Behavior in Designed Environments, 3 credits
- 834-335 Transportation Systems in the United States, 3 credits
- 834-340 Economics of Land Use, 3 credits
- 834-342 Community Economic Development, 3 credits
- 834-356 Environmental Impact Analysis, 3 credits
- 834-365 Impressions of South Africa, 3 credits
- 834-368 The Geopolitics of World Regions, 3 credits
- 834-372 Analysis of the Great Lakes Region of North America, 3 credits
- 834-377 Analysis of Northern Lands, 3 credits
- 834-392 Analysis of South Asia, 3 credits
- 834-395 Seminar: Transportation Systems in Wisconsin, 3 credits
- 834-421 Techniques and Methods in Regional Planning, 3 credits
- 834-454 Remote Sensing of the Environment, 3 credits
- 834-472 Senior Research Colloquium (required), 3 credits

Some courses from other disciplines can be used for the requirements in some of the areas of emphasis in the regional analysis major.

■ Land Use and Regional Planning

Upper-Level Courses

In consultation with an adviser, select courses from:

- 416-342 Settlement Geography, 3 credits
- 416-351 Elements of Cartography, 3 credits
- 416-353 Air Photo Interpretation, 3 credits
- 416-451 Computer Cartography, 3 credits
- 834-309 Urban and Regional Economic Theory, 3 credits
- 834-322 Regional Planning, 3 credits
- 834-323 Land Use Controls, 3 credits
- 834-340 Economics of Land Use, 3 credits
- 834-342 Community Economic Development, 3 credits
- 834-356 Environmental Impact Analysis, 3 credits
- 834-372 Analysis of the Great Lakes Region of North America, 3 credits
- 834-421 Techniques and Methods of Planning Analysis, 3 credits
- 834-454 Remote Sensing of the Environment, 3 credits
- 834-472 Senior Research Colloquium (required), 3 credits

■ Regional Economic Development

Upper-Level Courses

To be selected from:

- 298-404 Economics of Developing Areas, 3 credits
- 298-406 Comparative Economic Systems and Institutions, 3 credits
- 834/950-309 Urban and Regional Economic Theory, 3 credits
- 834-322 Regional Planning, 3 credits
- 834-335 Transportation Systems in the United States, 3 credits
- 834-340 Economics of Land Use, 3 credits
- 834-342 Community Economic Development, 3 credits
- 834-368 The Geopolitics of World Regions, 3 credits
- 834-372 Analysis of the Great Lakes Region of North America, 3 credits
- 834-377 Analysis of Northern Lands, 3 credits
- 834-392 Analysis of South Asia, 3 credits
- 834-421 Techniques and Methods of Planning Analysis, 3 credits
- 834-472 Senior Research Colloquium (required), 3 credits

■ *Transportation Planning and Management*

Upper-Level Courses

In consultation with an adviser, select from:

- 298-403 International Trade, 3 credits
- 416-371 Geography of the United States and Canada, 3 credits
- 834-309 Urban and Regional Economic Theory, 3 credits
- 834-322 Regional Planning, 3 credits
- 834-335 Transportation Systems in the United States, 3 credits
- 834-372 Analysis of the Great Lakes Region of North America, 3 credits
- 834-395 Seminar: Transportation Systems in Wisconsin, 3 credits
- 834-421 Techniques and Methods of Regional Planning, 3 credits
- 834-472 Senior Research Colloquium-Transportation Emphasis (required), 3 credits
- 834-498 Independent Study: Transportation, 3 credits
- 950-351 Transportation and the City, 3 credits
- 950-412 Urban Planning I, 3 credits

■ *Real Estate Development and Appraisal*

Upper-Level Courses

In consultation with an adviser, select courses from:

- 216-343 Corporation Finance, 3 credits
- 216-344 Real Estate Principles, 3 credits
- 298-308 Business Cycles, 3 credits
- 416-342 Settlement Geography, 3 credits
- 416-353 Air Photo Interpretation, 3 credits
- 834-309 Urban and Regional Economic Theory, 3 credits
- 834-322 Regional Planning, 3 credits
- 834-323 Land Use Controls, 3 credits
- 834-325 Behavior in Designed Environments, 3 credits
- 834-340 Economics of Land Use, 3 credits
- 834-342 Community Economic Development, 3 credits
- 834-356 Environmental Impact Analysis, 3 credits
- 834-421 Techniques and Methods of Regional Planning, 3 credits
- 834-472 Senior Research Colloquium (required), 3 credits
- 950-313 Cities Past, Present and Future, 3 credits

Students entering this emphasis are encouraged to consider a minor in business administration.

Requirements for the Minor

Supporting Course, 3 credits

- 834-220 Introduction to Regional Analysis, 3 credits

Upper-Level Courses, 15 credits

A minor program can include any one of the areas of emphasis listed for the major in regional analysis. Students will select the 15 credits in consultation with an adviser in the unit.

■ Social Change and Development

Interdisciplinary Major or Minor

Professors: Anthony Galt; Harvey J. Kaye; Craig A. Lockard (chairperson); Carol Pollis.

Associate Professors: Bela Baker; Julie R. Brickley; Walter Groves; Larry Smith; Lynn W. Walter.

Social change and development provides students with the basic tools needed to understand large scale processes of social change and the impacts these changes have on people. Emphasis is placed on helping students develop a global perspective—one which views societies as interdependent parts of a continually changing world system. Social change and development's distinctive program emphasizes a common core of courses; an approach embracing both the social sciences and the humanities; and close student-teacher contact.

Social change and development is appropriate for individuals interested in graduate work in the social sciences or history; law school; journalism; international business development or relations; and a variety of human services careers related to women's issues, community development, social activism, criminal justice, and others.

Social change and development graduates are working in a wide range of careers. They include business people, political office-holders, journalists, members of a variety of helping professions, and teachers of foreign language, English as a second language, social studies, and primary grades. Some have pursued advanced studies in fields such as history, sociology, philosophy, and law.

Majors select an area of emphasis from among:

- **Contemporary social issues** studies socioeconomic change in modern America as background for careers in law, politics, teaching or social activism.
- **Criminal justice** provides preparation for careers in law enforcement and corrections and preparation for law school or graduate studies in related fields.
- **Development studies** supplies a background for students interested in employment with Third World and international development agencies.
- **International studies/world affairs** offers a broad background for understanding relationships between nations and preparation for careers in foreign service, international business or other international organizations, and for graduate study.
- **Law and social change** is appropriate for students seeking admittance to law school and those interested in law-related careers.
- **Media and social change** offers a broad background in social sciences, history, and current affairs for students seeking careers in electronic or print journalism.
- **Social studies education** leads to licensure to teach social studies through grade eight.
- **Women's studies** is useful for students planning careers in social services, education, counseling and therapy, personnel management, community organizing, labor relations, religious service, or other fields in which issues of gender identity are important.

It is possible also to develop personalized emphases in fields like broad field social studies (high school teaching), elementary education, family studies, historical studies, and general social science.

Students seeking the interdisciplinary major or minor in social change and development may choose to combine their programs with an appropriate disciplinary or with another interdisciplinary field of study. Among fields most relevant are: anthropology, business, economics, education, ethnic studies, history, human development, international studies, journalism, political science, psychology, social work, sociology, urban studies, and women's studies.

Requirements for the Major

Supporting Courses, 12 credits required

Choose 6 credits from category 1 and 6 credits from 2, 3, 4, 5, or 6:

Category 1:

156-100 Varieties of World Culture, 3 credits

OR

900-202 Introduction to Sociology, 3 credits

AND

448-100 History of the Modern World, 3 credits

Category 2:

255-205 Social Science Statistics, 3 credits

OR

600-260 Introductory Statistics, 4 credits

AND

255-301 Foundations of Social Research, 3 credits

OR

255-302 Interviewing and Participant Observation, 3 credits

Category 3:

Foreign Language: Two years of a foreign language up through the 202 level. Students with some language skills may receive retroactive credits.

Category 4: (for teacher preparation)

302-300 Introduction to Education and Teaching, 3 credits

302-302 Teaching Social Studies in Elementary and Middle Schools, 2 credits

Category 5: (for journalism students)

246-303 Feature Writing, 3 credits

246-305 Elements of Electronic Media, 3 credits

255-302 Interviewing and Participant Observation, 3 credits

Category 6:

Other supporting courses appropriate to individual area of emphasis

Upper-Level Courses, 12 credits

875-333 Social Change in Selected Areas, 3 credits
(specific region changes with each offering)

875-360 Models and Social Change, 3 credits

875-361 Historical Perspectives on Social Change, 3 credits

875-470 Seminar in Social Change and Development, 3 credits
(topics vary with each offering)

Areas of Emphasis

Students must complete requirements in one of the following area of emphasis. Additional supporting courses are required in some areas of emphasis.

■ Individual Emphasis, 12 credits

Designed for students with very specific interests or desire for more general liberal arts education. Requires 12 credits of upper-level work and necessary prerequisites of supporting courses.

■ Contemporary Social Issues Emphasis, 12 credits

Recommended Supporting Courses, 6 credits

875-275 The Vietnam War in Historical Perspective, 3 credits

900-203 Minority Groups, 3 credits

Upper-Level Courses, 12 credits

242-370 Modern American Culture, 3 credits

875-340 Women, Work and Family, 3 credits

875-461 History, Politics and Social Criticism, 3 credits

875-483 Drug and Alcohol Use in Society, 3 credits

875-483 Women, Crime and Social Change, 3 credits

900-302 Class, Status and Power, 3 credits

900-308 Sociology of the Family, 3 credits

950-303 Urban Sociology, 3 credits

■ Criminal Justice Emphasis, 12 credits

Recommended Supporting Courses, 6 credits

875-204 Freedom and Social Control, 3 credits

875-235 Sex and Society, 3 credits

Upper-Level Courses, 12 credits

875-303 Criminal Justice Process, 3 credits

875-325 Law in Society, 3 credits

875-330 Law and the Judicial Process, 3 credits

900-304 Deviant Behavior, 3 credits

900-404 Criminology, 3 credits

■ Development Studies Emphasis, 15 credits

Recommended Supporting Courses

Foreign language (2 years)

Required Supporting Course, 3 credits

875-270 Third World: Development or Despair, 3 credits

Upper-Level Courses, 12 credits

156-303 Cultural Ecology, 3 credits

298-404 Economics of Developing Areas, 3 credits

448-354 History of Modern Southeast Asia, 3 credits

448-356 History of Africa, 3 credits

448-358 Aspects of Latin American History, 3 credits

875-345 Women in Cross-Cultural Perspective, 3 credits

875-371 Motivation and Social Change, 3 credits

■ International Studies/World Affairs Emphasis, 12 credits

Recommended Supporting Courses, 6-22 credits

Foreign language (2 years)

448-251 Modern Asian Civilization, 3 credits

875-270 Third World: Development or Despair, 3 credits

Upper-Level Courses, 12 credits

448-352 History of Modern China, 3 credits

448-354 History of Modern Southeast Asia, 3 credits

448-356 History of Africa, 3 credits

448-358 Aspects of Latin American History, 3 credits

448-375 Great Decisions, 3 credits

778-368 Geopolitics of World Regions, 3 credits

875-345 Women in Cross-Cultural Perspective, 3 credits

■ Law and Social Change Emphasis, 12 credits

Recommended Supporting Courses

216-206 Law and the Individual, 3 credits

736-100 Ethics, 3 credits

736-111 Elementary Logic, 3 credits

Upper-Level Courses, 12 credits

448-403 Political and Social History of Modern America, 3 credits

778-312 Community Politics, 3 credits

778-410 Intergovernmental Relations, 3 credits

875-320 Constitutional Law, 3 credits

875-325 Law in Society, 3 credits

875-400 Environmental Law, 3 credits

900-404 Criminology, 3 credits

950-376 Administrative Law, 3 credits

■ **Media and Social Change Emphasis, 12 credits**

This emphasis is primarily for students majoring or minoring in communication processes.

Recommended Supporting Courses, 6 credits

778-101 American Government and Politics, 3 credits

900-203 Minority Groups, 3 credits

Upper-Level Courses, 12 credits

448-403 Political and Social History of Modern America, 3 credits

778-305 Urban Politics and Policy, 3 credits

778-312 Community Politics, 3 credits

778-412 Political Parties and Interest Groups, 3 credits

875-340 Women, Work and Family, 3 credits

875-461 History, Politics and Social Criticism, 3 credits

875-483 Drug and Alcohol Use in Society, 3 credits

950-303 Urban Sociology, 3 credits

■ **Social Studies Education Emphasis, 12 credits**

Recommended Supporting Courses, 6 credits

298-202 Macro Economic Analysis, 3 credits

416-102 Introduction to Geography, 3 credits

778-101 American Government and Politics, 3 credits

Upper-Level Courses, 12 credits

416-378 Geography of Conflict Areas, 3 credits

448-311 History of Wisconsin, 3 credits

778-360 International Politics, 3 credits

875-342 Women, Myth and Identity, 3 credits

875-371 Motivation and Social Change, 3 credits

■ **Women's Studies Emphasis, 12 credits**

Required Supporting Course

875-241 Women and Changing Values, 3 credits

Upper-Level Courses, 12 credits

875-340 Women, Work and Family, 3 credits

875-342 Women, Myth and Identity, 3 credits

875-345 Women in Cross-Cultural Perspective, 3 credits

875-440 Women and Religion, 3 credits

875-497 Internship, 3-12 credits

875-498 Independent Study, 1-4 credits

Requirements for the Minor

Supporting Courses, 6 credits required

These are the same as for the major.

Upper-Level Courses, 12 credits required

These are the same as for the major.

■ Social Gerontology

Interdepartmental Minor

Associate Professor: Dean Rodeheaver.

Social gerontology provides students with a concentrated study of individual development in later adulthood. It focuses predominantly on the socio-psychological development of the individual 65 years of age and older, but physical and biological development is also studied.

The minor is primarily designed for students who are interested in an in-depth examination of the functioning of the older adults in our society and who may want to pursue careers in some areas of the growing field of gerontology. Such careers may be found in a federal, state or local aging agency or a long-term care institution. Students with minors in social gerontology also may pursue research or graduate study in the field.

Requirements for the Minor

Supporting Course, 3 credits

481-210 Introduction to Human Development, 3 credits

Upper-Level Courses, 21 credits

478-320 Biology of Human Development and Senescence, 3 credits

481-343 Adulthood and the Aging, 3 credits

481-437 Counseling with Adults and the Aged, 3 credits

481-452 Advanced Gerontology, 3 credits

481-484 Senior Honors Project, 3 credits

481-497 Internship, 3-12 credits

481-498 Independent Study, 1-4 credits

And two other courses chosen with an adviser.

Students majoring in human development may not count 481-437, 452, 484, 497, or 498 as part of their major degree requirements.

■ Social Work

Professional Major

Associate Professors: Betty Baer (chairperson); Rolfe White.

Lecturer: Anne Kok.

The major in social work, leading to the Bachelor of Social Work degree, offers a significant opportunity for students who seek careers in the human services. The program prepares students for beginning level professional practice in social work and provides educational preparation applicable to a wide range of positions in the human services.

Graduates of the UWGB social work program secure positions in programs serving the aging, children and their families, the developmentally and emotionally impaired, the economically dependent, sufferers of alcoholism and drug abuse, and others. Graduates also are eligible for advanced standing in graduate-level, Master of Social Work programs.

The UWGB social work program is accredited by the Council on Social Work Education, the profession's accrediting body.

Program Entry Requirements. Students who wish to major in social work must make formal application for admission to the program. To enter the BSW degree program, the student must first complete 27 credits, including two lower-division supporting courses for the major (listed in Requirements for Major), with an overall cumulative grade point average of 2.5. He or she also must demonstrate interest in working with people.

Prospective social work majors should seek advising from social work faculty. They also are encouraged to enroll in Introduction to Social Services, a lower-level course designed to acquaint students with career opportunities in the human services.

Requirements for the Major

Supporting Courses, 36 credits

Required, 36 credits:

- 255-205 Social Science Statistics, 3 credits
- 255-301 Foundations of Social Research, 3 credits
- 298-301 Economics and Social Security, 3 credits
- 481-331 Infancy and Early Childhood, 3 credits
- 481-332 Middle Childhood and Adolescence, 3 credits
- 481-343 Adulthood and Aging, 3 credits
- 552-105 Expository Writing, 3 credits
- 875-203 Prejudice and the Human Condition, 3 credits
(or equivalent course)
- 875-241 Women and Changing Values, 3 credits
(or equivalent course)
- 875-360 Models and Social Change, 3 credits
- 892-275 American Social Welfare, 3 credits
- 900-308 Sociology of the Family, 3 credits

Recommended, 6 credits:

- 246-166 Fundamentals of Interpersonal Communication, 3 credits
- 266-155 Computers and Microcomputers, 3 credits

Upper-Level Courses, 36 credits

- 892-300 Field Experience in a Social Service Agency, 2 credits
- 892-305 The Social Work Profession, 3 credits
- 892-370 Principles of Social Work Methods I, 3 credits
- 892-371 Human Behavior and the Social Environment, 3 credits
- 892-402 Field Practicum I, 5 credits
- 892-403 Field Practicum II, 5 credits
- 892-411 Social Work Methods II, 3 credits
- 892-420 Social Work Methods III, 3 credits
- 892-430 Social Policy Analysis, 3 credits
- 892-460 Evaluation of Practice, 3 credits

Elective:

- 892-202 Introduction to Social Services, 3 credits
- 892-257 Training in Social Service Skills and Techniques, 3 credits

In addition, social work majors are required to take three specific courses to fulfill general-education requirements:

- 478-102 Introduction to Human Biology, 3 credits
- 820-202 Introduction to Social Psychology, 3 credits
- 892-205 Personal Values and Social Reform, 3 credits

■ Sociology

Disciplinary Major or Minor

Professors: Harvey J. Kaye; Carol A. Pollis.

Associate Professor: Walter B. Groves (chairperson).

Assistant Professors: Ray Hutchison; Joanne Stohs.

Sociology is the systematic study of social organization and social life in society. It uses both scientific and humanistic approaches to understand social behavior and social systems. Topics studied range from the family, intimate relations, minority groups, deviant behavior, and crime, to gender, ethnicity, social class, collective behavior, and power.

Sociology students learn a variety of research methods and social theories used to study both large-scale and small-scale patterns of social relationships and processes by which these patterns change.

Sociology offers excellent preparation for students going on to graduate work in a number of professional programs. The minor in sociology is a useful choice for many students majoring in business, communications, human development, social change and development, and urban and public affairs.

Students with sociology majors choose many kinds of careers, including those of teacher or professor (with appropriate work in education or graduate work); staff member of local, state, or federal government agencies; or researcher in an organization. They also work in a variety of positions in social and community development programs, health agencies, correctional institutions, and in other profit and nonprofit organizations which hire individuals with a liberal arts degree background.

Sociology majors must choose an interdisciplinary minor. For students interested in counseling or developmental issues, human development would be a logical complement. For those pursuing sociological aspects of politics, the urban and public affairs concentration would be appropriate. Students with philosophical or literary interests might consider humanistic studies as a minor and those interested in social movements or planned change might consider minoring in social change and development. An adviser can help students choose appropriate minors. Student seeking teacher preparation should consult advisers in the education program.

Requirements for the Major

Supporting Courses, 6 credits

- 255-205 Social Science Statistics, 3 credits
OR
600-260 Introductory Statistics, 3 credits
900-202 Introduction to Sociology, 3 credits

Upper-Level Courses, 24 credits

- 900-301 Foundations of Social Research, 3 credits
900-307 Social Theory, 3 credits

A minimum of 12 credits from the following sociology courses:

- 900-302 Class, Status and Power, 3 credits
900-304 Deviant Behavior, 3 credits
900-308 Sociology of the Family, 3 credits
900-311 Collective Behavior and Social Movements, 3 credits
900-375 Sociology of Sexual and Intimate Relations, 3 credits
900-404 Criminology, 3 credits
900-483 Selected Topics, 3 credits
900-498 Independent Study, 1-4 credits

A maximum of 6 credits from the following courses or others approved by the chairperson or adviser:

- 156-304 Family, Kin and Community, 3 credits
481-336 Gender Role Development, 3 credits
820-337 Social Behavior Dynamics, 3 credits
875-303 Criminal Justice Process, 3 credits
875-360 Models and Social Change, 3 credits
950-303 Urban Sociology, 3 credits

Students interested in teacher certification in broad field social studies and/or sociology should contact an adviser in the education office for requirements in addition to those listed here.

Requirements for the Minor

Supporting Courses, 6 credits

- 255-205 Social Science Statistics, 3 credits
OR
600-260 Introductory Statistics, 3 credits
900-202 Introduction to Sociology, 3 credits

Upper-Level Courses, 12 credits

- 900-301 Foundations of Social Research, 3 credits
900-307 Social Theory, 3 credits

AND

An additional 6 credits of upper-level sociology courses

Theatre

Disciplinary Major or Minor

Professors: Jack Frisch; Richard Sherrell.

Visiting Professor: Louis Erdmann.

Associate Professors: Jeffrey Entwistle (chairperson).

Assistant Professor: Susan Kline.

Lecturers: Scott Conklin; Eugenia Erdmann; Carol Hoehn.

The theatre program provides a rigorous artistic/academic environment for the study and production of all forms of theatre. A balanced approach to classical, modern, experimental, and children's theatre allows students to keep in touch with the traditions of the past while looking to the future for new theatre forms.

Theatre faculty members believe that the best way to learn theatre is to do theatre. Students are encouraged to take advantage of the minimum of four mainstage productions offered each year and to become active members of the student Alternate Theatre organization that creates several productions each year.

Facilities include the 485-seat University Theatre, the smaller, flexible Experimental Theatre space, an acting studio, a dance studio, and scene and costume shops. All facilities are well equipped for production. Casting is open and by audition. No previous experience is required in order to be considered for roles. Many opportunities exist for backstage work. Credit can be earned in many different ways for participation in productions.

Theatre majors will choose one of two areas of emphasis:

- performance
- design/technical theatre

To complement their theatre studies, majors also complete an interdisciplinary minor. Most theatre majors choose the aesthetic awareness track of the communication and the arts interdisciplinary program. The combination provides students with an exceptionally strong undergraduate preparation in theatre. Students interested in design/technical theatre may elect to complete minors in the communication and the arts graphic communications emphasis.

UWGB theatre graduates typically go on to graduate programs in acting, directing, and in design/technical theatre. Students also find gainful employment in professional theatre by working in resident companies, children's theatre, community theatre, film companies, and summer stock.

Requirements for the Major

(vary with the area of emphasis)

Areas of Emphasis

■ Performance

Supporting Courses, 6 credits required

- 242-141 Introduction to the Performing Arts: Theatre and Music, 3 credits
 242-142 Performing Arts Perspectives: Experience and Evaluation, 3 credits

Lower-Level Courses, 22 credits required

Acting core, 9 credits required:

- 915-131 Beginning Acting, 3 credits
 915-231 Intermediate Acting, 3 credits
 915-235 Performance Practicum, 3 credits

Technical theatre core, 9 credits required:

- 915-221 Theatre Production Techniques: Stagecraft, 3 credits
 915-222 Theatre Production Techniques: Costume/Make-up, 3 credits
 915-224 Scenography: Introduction to Theatre Design, 3 credits

Dance core, 4 credits required:

- 915-128 Beginning Jazz Dance, 2 credits
 915-137 Beginning Ballet, 2 credits
 915-141 Movement for Theatre, 2 credits
 915-145 Beginning Modern Dance, 2 credits

Upper-Level Courses, 33 credits required

Acting/directing, 15 credits required:

- 915-305 Audition Techniques for the Actor, 3 credits
 915-331 Advanced Acting, 3 credits
 915-335 Performance Practicum, 3 credits
 915-351 Directing I, 3 credits
 915-352 Directing II, 3 credits

History/criticism/literature, 12 credits required:

- 915-309 Theatre History I, 3 credits
 915-310 Theatre History II, 3 credits
 915-409 Theatre Criticism, 3 credits

Select one from:

- 552-310 Major English Drama, 3 credits
 552-350 Major Foreign Drama, 3 credits
 552-431 Shakespeare, 3 credits

Design, 6 credits required:

- 915-321 Scene Design, 3 credits
 915-322 Costume Design, 3 credits
 915-323 Lighting Design, 3 credits
 915-325 Three-Dimensional Stage Make-up, 3 credits

Electives to strengthen upper-level preparation:

- 915-403 Seminar in Theatre Arts I, 3 credits
 915-404 Seminar in Theatre Arts II, 3 credits
 915-405 Theatre Management, 3 credits
 915-498 Independent Study, 1-4 credits

■ Design/Technical Theatre

Supporting Courses, 6 credits required

- 242-141 Introduction to the Performing Arts: Theatre and Music, 3 credits
 242-142 Performing Arts Perspectives: Experience and Evaluation, 3 credits

Lower-Level Courses, 25 credits required

Design/technical theatre core, 18 credits required:

- 915-220 Stage Management, 3 credits
 915-221 Theatre Production Techniques: Stagecraft, 3 credits
 915-222 Theatre Production Techniques: Costume/Make-up, 3 credits
 915-224 Scenography: Introduction to Theatre Design, 3 credits
 915-235 Performance Practicum, 3 credits

- 168-105 Drawing, 3 credits

OR

- 168-106 Design Methods, 3 credits

Acting core, 3 credits required:

- 915-131 Beginning Acting, 3 credits

Dance core, 4 credits required:

- 915-128 Beginning Jazz Dance, 2 credits
 915-137 Beginning Ballet, 2 credits
 915-141 Movement for Theatre, 2 credits
 915-145 Beginning Modern Dance, 2 credits

Upper-Level Courses, 33 credits required

Design/technical theatre, 12 credits required:

- 915-351 Directing I, 3 credits

Select three from:

- 915-321 Scene Design, 3 credits
 915-322 Costume Design, 3 credits
 915-323 Lighting Design, 3 credits
 915-325 Three-Dimensional Stage Make-up, 3 credits

History/criticism/literature, 12 credits required:

- 915-309 Theatre History I, 3 credits
 915-310 Theatre History II, 3 credits
 915-409 Theatre Criticism, 3 credits

Select one from:

- 552-310 Major English Drama, 3 credits
 552-350 Major Foreign Drama, 3 credits
 552-431 Shakespeare, 3 credits

Electives, 9 credits required:

- 915-335 Performance Practicum, 1-4 credits
 915-403 Seminar in Theatre Arts I, 3 credits
 915-404 Seminar in Theatre Arts II, 3 credits
 915-405 Theatre Management, 3 credits
 915-423 Advanced Stage Lighting, 3 credits
 915-424 Advanced Technical Practices, 3 credits
 915-498 Independent Study, 1-4 credits

Note: Students may take the one upper-level design course not selected above as a three-credit elective.

Requirements for the Minor**■ Theatre****Lower-Level Courses, 12 credits required**

- 915-131 Beginning Acting, 3 credits
 915-221 Theatre Production Techniques: Stagecraft, 3 credits
 915-222 Theatre Production Techniques: Costume/Make-up, 3 credits
 915-235 Performance Practicum, 3 credits
 OR
 915-224 Scenography: Introduction to Theatre Design, 3 credits

Note: Design/technical theatre minors must take 915-224 in place of 915-235.

Upper-Level Courses, 9 credits required**Performance:**

- 915-351 Directing I, 3 credits
 915-352 Directing II, 3 credits

History:

- 915-309 Theatre History I, 3 credits
 915-310 Theatre History II, 3 credits

Design/technical theatre:

- 915-321 Scene Design, 3 credits
 915-322 Costume Design, 3 credits
 915-323 Lighting Design, 3 credits

■ Dance**Lower-Level Courses, 16 credits required**

- 915-131 Beginning Acting, 3 credits
 915-137 Beginning Ballet, 2 credits
 915-138 Continuing Beginning Ballet, 2 credits
 915-141 Movement for Theatre, 2 credits
 915-237 Intermediate Ballet, 3 credits

- 915-128 Beginning Jazz Dance, 2 credits

OR

- 915-145 Beginning Modern Dance, 2 credits

- 915-228 Intermediate Jazz Dance, 2 credits

OR

- 915-245 Intermediate Modern Dance, 2 credits

Upper-Level Courses, 6 credits required

- 915-335 Performance Practicum, 2 credits
 915-340 Dance History, 2 credits
 915-440 Choreography, 2 credits

Urban and Public Affairs

Interdisciplinary Majors or Minors in Public and Environmental Administration and Urban Studies

Professors: Michael E. Kraft; Nicholas Pollis.

Associate Professors: Ronald Baba; Sidney Bremer; David M. Littig; Robert Mendelsohn; E. Nelson Swinerton.

Assistant Professors: Craig Heatwole; Ray Hutchinson; Hugh Miller.

Urban and public affairs has majors and minors in two areas—public and environmental administration and urban studies.

■ Public and Environmental Administration

Studies in public and environmental administration prepare students for a variety of careers in public and nonprofit organizations and for further study in a wide range of graduate programs. The program meets the need for public policy analysts and public administration professionals who can effectively identify and analyze problems; develop and evaluate policies; and manage and lead organizations. But it also serves as a broad-based social sciences major, with a strong interdisciplinary orientation.

All public and environmental administration majors engage in both theoretical and applied studies and every student gains experience through independent studies, internships, and/or applied research projects. Students are encouraged to take courses in urban studies, the other major within the concentration.

Students in public and environmental administration choose an area of emphasis to meet their particular needs. Emphases are:

- public management
- public policy
- environmental policy and administration
- urban management
- health care policy and administration

Graduates in public and environmental administration hold positions such as administrative analysts, budget officers, data processors, personnel counselors, and others in local, state, and federal government and in nonprofit organizations. Many pursue graduate studies in fields such as law, political science, social services, and public policy.

Requirements for the Major in Public and Environmental Administration**Supporting Courses, 21 credits minimum****Required:**

- 255-205 Social Science Statistics, 3 credits
 255-301 Foundations of Social Research, 3 credits
 778-101 American Government and Politics, 3 credits
 OR
 950-200 Introduction to Urban Studies, 3 credits
 950-102 Introduction to Public Policy, 3 credits
 950-201 Problem Analysis and Decision Making, 3 credits
 950-215 Introduction to Public Administration, 3 credits

Students should have competencies at the level of the courses below:

- 246-133 Fundamentals of Public Address, 3 credits
 266-155 Computing and Microcomputers, 3 credits
 552-105 Expository Writing, 3 credits

Recommended:

- 298-202 Macro Economic Analysis, 3 credits
 OR
 298-203 Micro Economic Analysis, 3 credits

Areas of Emphasis, 18 credits

Students choose appropriate courses for their area of emphasis from the list below, with faculty advice.

- 216-362 Human Resource Management, 3 credits
- 246-335 Organizational Communication, 3 credits
- 778-301 Environmental Politics and Policy, 3 credits
- 778-312 Community Politics, 3 credits
- 778-320 Constitutional Law, 3 credits
- 778-410 Intergovernmental Relations, 3 credits
- 778-416 American Legislative Process, 3 credits
- 778-460 American Foreign and Defense Policy, 3 credits
- 820-415 Organizational Psychology, 3 credits
- 950-306 Regulatory Policy and Administration, 3 credits
- 950-309 Urban and Regional Economic Theory, 3 credits
- 950-331 Urban Politics and Policy, 3 credits
- 950-344 Leadership in Organizations, 3 credits
- 950-351 Transportation and the City, 3 credits
- 950-376 Administrative Law, 3 credits
- 950-378 Environmental Law, 3 credits
- 950-402 Resource Economics Analysis, 3 credits
- 950-406 Administration of State and Local Government, 3 credits
- 950-409 Public Finance and Fiscal Policy, 3 credits
- 950-412 Urban Planning I, 3 credits
- 950-415 Public and Nonprofit Budgeting, 3 credits
- 950-451 Decision Theory and Methods, 3 credits
- 950-452 Planning Theory and Methods, 3 credits

Field experience, 6 credits from:

- 950-461 Urban and Public Affairs Laboratory, 3 credits
- 950-497 Internship, 3-12 credits
- 950-498 Independent Study, 1-4 credits

Requirements for the Minor in Public and Environmental Administration

Supporting Courses, 12 credits

Required:

- 298-202 Macro Economic Analysis, 3 credits
- OR
- 298-203 Micro Economic Analysis, 3 credits
- 778-101 American Government and Politics, 3 credits

Select two:

- 950-102 Introduction to Public Policy, 3 credits
- 950-201 Problem Analysis and Decision Making, 3 credits
- 950-215 Introduction to Public Administration, 3 credits

Upper-Level Courses, 12 credits minimum

Choose from:

- 778-416 American Legislative Process, 3 credits
- 778-460 American Foreign and Defense Policies, 3 credits
- 950-306 Regulatory Policy and Administration, 3 credits
- 950-330 Environmental Politics and Policy, 3 credits
- 950-331 Urban Politics and Policy, 3 credits
- 950-344 Leadership in Organizations, 3 credits
- 950-351 Transportation and the City, 3 credits
- 950-376 Administrative Law, 3 credits
- 950-378 Environmental Law, 3 credits
- 950-402 Resource Economics Analysis, 3 credits
- 950-406 Administration of State and Local Government, 3 credits
- 950-408 Public Policy Analysis, 3 credits
- 950-409 Public Finance and Fiscal Policy, 3 credits
- 950-415 Public and Nonprofit Budgeting, 3 credits
- 950-451 Decision Theory and Methods, 3 credits
- 950-452 Planning Theory and Methods, 3 credits

Urban Studies

The program in urban studies focuses on the problems, possibilities, and promise of life in urban areas. Its interdisciplinary program offers a valuable focus for understanding contemporary culture and the small, medium, and large cities in which most of us will live our lives.

As a liberal arts program, it offers the interdisciplinary background increasingly sought by employers for a variety of urban-based careers. Examples include architecture, planning, policy analysis, social services, education, journalism, marketing, real estate, politics, and community organizations. UWGB graduates in urban studies are pursuing careers in those fields and others. More than 20 percent of graduates with this major have gone on to graduate schools in fields such as architecture, planning, administration, law, business, and education.

Urban studies students combine descriptive and theoretical courses with practical experience in the community through independent studies, internships, and applied research projects. Students select an area of emphasis to complement their particular program. Emphases are:

- public policy
- urban management
- urban affairs
- urban design and aesthetics

Students are encouraged to take courses from public and environmental administration, the other major within the concentration.

Requirements for the Major in Urban Studies

Supporting Courses, 12 credits minimum

Required:

- 255-205 Social Science Statistics, 3 credits
- 255-301 Foundations for Social Research, 3 credits
- 778-101 American Government and Politics, 3 credits
- OR
- 950-102 Introduction to Public Policy, 3 credits
- 950-200 Introduction to Urban Studies, 3 credits

It is recommended that students demonstrate competencies at the level of the courses below or take those courses:

- 246-133 Fundamentals of Public Address, 3 credits
- 266-155 Computing and Microcomputers, 3 credits
- 552-105 Expository Writing, 3 credits

Areas of Emphasis, 18 credits

Students choose appropriate courses for their area of emphasis from the list below, with the aid of faculty advice.

- 778-301 Environmental Politics and Policy, 3 credits
- 950-302 Urban Behavior, 3 credits
- 950-303 Urban Sociology, 3 credits
- 950-306 Regulatory Policy and Administration, 3 credits
- 950-309 Urban and Regional Economic Theory, 3 credits
- 950-313 Cities: Past, Present and Future, 3 credits
- 950-325 Behavior in Designed Environments, 3 credits
- 950-331 Urban Politics and Policy, 3 credits
- 950-341 Cities in Literature and Art, 3 credits
- 950-344 Leadership in Organizations, 3 credits
- 950-345 Women in American Perspective, 3 credits
- 950-351 Transportation and the City, 3 credits
- 950-363 Urban Aesthetics, 3 credits
- 950-375 Women's Strategies for Change, 3 credits
- 950-376 Administrative Law, 3 credits
- 950-378 Environmental Law, 3 credits
- 950-379 Law in Society, 3 credits
- 950-402 Resource Economics Analysis, 3 credits

continued

- 950-406 Administration of State and Local Government, 3 credits
- 950-408 Public Policy Analysis, 3 credits
- 950-409 Public Finance and Fiscal Policy, 3 credits
- 950-412 Urban Planning I, 3 credits
- 950-415 Public and Nonprofit Budgeting, 3 credits
- 950-436 Environmental Design Studio I, 3 credits
- 242-437 Environmental Design Studio II, 3 credits
- 950-438 Environmental Design Studio III, 3 credits
- 242-439 Environmental Design Studio IV, 3 credits
- 950-451 Decision Theory and Methods, 3 credits
- 950-452 Planning Theory and Methods, 3 credits

Field experience, 6 credits chosen from:

- 950-461 Urban and Public Affairs Laboratory, 3 credits
- 950-497 Internship, 3-12 credits
- 950-498 Independent Study, 1-4 credits

Requirements for the Minor in Urban Studies

Supporting Course, 3 credits

- 950-200 Introduction to Urban Studies, 3 credits

Upper-Level Courses, 15 credits**Core courses, 9 credits, chosen from:**

- 950-302 Urban Behavior, 3 credits
- 950-303 Urban Sociology, 3 credits
- 950-309 Urban and Regional Economic Theory, 3 credits
- 950-313 Cities, Past, Present and Future, 3 credits
- 950-331 Urban Politics and Policy, 3 credits
- 950-363 Urban Aesthetics, 3 credits
- 950-412 Urban Planning I, 3 credits

Choose remaining courses from:

- 242-477 Women as Creative Agents, 3 credits
- 778-301 Environmental Politics and Policy, 3 credits
- 778-408 Public Policy Analysis, 3 credits
- 875-340 Women, Work and Family, 3 credits
- 875-345 Women in Cross-Cultural Perspective, 3 credits
- 950-306 Regulatory Policy and Administration, 3 credits
- 950-325 Behavior in Designed Environments, 3 credits
- 950-341 Cities in Literature and Art, 3 credits
- 950-345 Women in American Perspective, 3 credits
- 950-351 Transportation and the City, 3 credits
- 950-375 Women's Strategies for Change, 3 credits
- 950-376 Administrative Law, 3 credits
- 950-378 Environmental Law, 3 credits
- 950-379 Law in Society, 3 credits
- 950-402 Resource Economics Analysis, 3 credits
- 950-406 Administration of State and Local Government, 3 credits
- 950-409 Public Finance and Fiscal Policy, 3 credits
- 950-415 Public and Nonprofit Budgeting, 3 credits
- 950-436 Environmental Design Studio I, 3 credits
- 242-437 Environmental Design Studio II, 3 credits
- 950-438 Environmental Design Studio III, 3 credits
- 242-439 Environmental Design Studio IV, 3 credits
- 950-451 Decision Theory and Methods, 3 credits
- 950-452 Planning Theory and Methods, 3 credits
- 950-461 Urban and Public Affairs Laboratory, 3 credits

Women's Studies

Interdepartmental Minor

Professors: Estella Lauter, humanistic studies; Carol Pollis, social change and development; Louise Witherell, humanistic studies.

Associate Professors: Sidney Bremer, urban and public affairs; Julie Brickley (chairperson), social change and development; Dean Rodeheaver, human development; Lynn Walter, social change and development.

Assistant Professors: Illene Noppe, human development; Joanne Stohs, human development.

Women's studies is an essential component of a liberal arts education. Women's studies are studies about women—for women and men. The field examines common denominators affecting women's lives, and at the same time focuses on the cultural, racial, and economic diversity of their experiences. It explores their past and present contributions to societies as persons, creators, and thinkers. The program has been a formal component of UWGB's interdisciplinary problem-focused academic plan since 1977.

The program draws upon methods and content from a wide range of disciplines, including anthropology, literature and the arts, biology, economics, history, political science, psychology, religion and sociology. It seeks to improve the quality of human life by expanding women's and men's appreciation of women's accomplishments and capabilities, and by enabling students to widen their sphere of development beyond the limits of traditional gender-differentiated roles.

Any student may take women's studies as a minor in addition to the required interdisciplinary major or minor. Women's studies also may be pursued as an area of emphasis in any one of the three cooperating interdisciplinary programs: human development, humanistic studies, and social change and development.

Graduates with women's studies minors are working in a variety of fields, including business, social work and the helping professions, paralegal work, and elementary and secondary teaching. Others have pursued graduate studies in various areas.

Requirements for the Minor

Lower-Level Course, 3 credits**Required introductory course:**

- 875-241 Women and Changing Values, 3 credits

Upper-Level Courses, 18 credits**Core courses, 9 credits:**

- 242-477 Women as Creative Agents, 3 credits
- 875-345 Women, Race and Culture, 3 credits
- 950-345 Women in American Perspective, 3 credits

Other upper-level courses, choose 9 credits:

- 242-395 Images of Woman in Contemporary Arts, 3 credits
- 554-333 Literary Themes: Women in 19th and 20th Century French Literature, 3 credits
- 875-340 Women, Work and Family, 3 credits
- 875-342 Women, Myth and Identity, 3 credits
- 875-440 Women and Religion, 3 credits
- 950-375 Women's Strategies for Change, 3 credits

Other experimental courses may be substituted for one of the above at the discretion of the women's studies advisers.

PREPROFESSIONAL PROGRAMS



In addition to its majors, minors, and professional programs, UW-Green Bay offers studies which prepare students for professional programs offered at other institutions.

Some professional programs require prior completion of a prescribed set of courses and an acceptable grade point average. Others, such as medicine, require that students already possess a four-year bachelor's degree. Some professional programs, law, for example, have other criteria, such as demonstrated ability in certain skills.

Requirements for professional programs and schools change as the professions strive to offer up-to-date preparation for their practitioners. Also, each professional program is unique. Students planning to enter a professional program or school should seek academic advice as soon as they enroll at UW-Green Bay. That way, they can plan their preprofessional programs to meet all requirements for their chosen field.

It is possible to complete preprofessional requirements at UW-Green Bay for fields other than those outlined here. The programs described are some of those most commonly chosen. UW-Green Bay's strong general education component and liberal arts preparation provides a sound foundation for many endeavors. Students with other interests should seek information from the Academic Advising Office.

■ Agriculture

Preprofessional Program

Adviser: Charles A. Ihrke, associate professor.

UWGB offers good basic preparation for agricultural science. Pre-agriculture students ordinarily complete their first two years of study at UWGB and transfer into a professional agriculture program at one of the other UW campuses, such as the College of Agricultural and Life Sciences at UW-Madison, the Agriculture Department at UW-Platteville, the College of Agriculture at UW-River Falls, or the College of Natural Resources at UW-Stevens Point.

A degree in agriculture can lead to a variety of careers. Some graduates become owners or operators of production-commercial farms, while others continue on into advanced studies for careers as scientists or researchers. Still others go into agriculture-related business or industry, technical services, teaching, communications, conservation and recreation, nutritional fields, or public service.

Students should decide early where they wish to complete their degrees. It is important to choose lower-level courses carefully with the help of an adviser to ensure transferability to the chosen professional program.

Students intending to transfer to any agriculture or natural resources program will complete lower-level all-university requirements in the social sciences and humanities at UWGB. In addition, they will begin a program of studies in basic sciences, economics, and communications, including such courses as:

Preprofessional Courses

These supporting courses would apply to most agriculture majors:

- 225-108 General Chemistry, 5 credits
- 298-202 Macro Economic Analysis, 3 credits
- OR
- 298-203 Micro Economic Analysis, 3 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 552-105 Expository Writing, 3 credits

Choices of remaining courses depend upon the requirements of the transfer institution and major.

Because agriculture includes many different majors, pre-agriculture programs will vary. Majors include such fields as agricultural economics, dairy science, forestry, landscape architecture, soil science, wildlife ecology, agricultural journalism, genetics, rural sociology, and many others. Pre-agriculture students should plan programs for their intended majors with the help of advisers from UWGB and the transfer institution.

■ Architecture

Preprofessional Program

Adviser: Ronald Baba, associate professor.

Architecture is a profession which requires individuals to complete a certification process before they call themselves architects and engage in contracts. The procedure entails completion of an accredited professional degree in architecture, a period of employment supervised by a licensed architect, and successful completion of a set of examinations. The University of Wisconsin System has one program of study leading to an accredited degree in architecture—the Master of Architecture program at UW-Milwaukee.

Students beginning their studies at UW-Green Bay have a choice of two paths to the Master of Architecture degree:

—they may complete two years at UWGB (about 58 credits) and apply for transfer to the Level 2: Architectural Studies program at UW-Milwaukee to complete requirements for entry into the Master of Architecture program, or

—they may complete an undergraduate degree at UW-Green Bay and apply for graduate admission to UW-Milwaukee or to an out-of-state institution with an accredited Master of Architecture program.

The second option has advantages. First, an appropriately chosen undergraduate degree provides a variety of career options in addition to preparation for architecture. Second, an undergraduate degree with specialization in a field such as computer science, graphic design, urban planning, urban design, and the like, builds a stronger foundation for the complex profession of architecture.

Most UW-Green Bay pre-architecture students have chosen to complete bachelor's degrees here and apply for entry into Master of Architecture programs. While a number have entered the Master of Architecture program at UW-Milwaukee, the majority have been admitted to graduate programs at out-of-state institutions such as Virginia, North Carolina, Illinois, Minnesota, Arizona, UCLA, UC-Berkeley, Washington, and others.

The environmental design program at UW-Green Bay was developed specifically to provide pre-architectural studies. It provides course work in design methods, architectural graphics, and architectural and urban design. Students interested in combining architecture with urban scale problems usually coordinate the program with a major in urban studies. Those with interests in graphic design or studio art may select a major in communication and the arts.

Preprofessional Program

Recommended Supporting Courses, 17-30 credits

Mathematics:

- 600-104 Elementary Functions: Algebra and Trigonometry, 4 credits
- 600-202 Calculus and Analytical Geometry I, 4 credits

Engineering and physics:

- 325-313 Mechanics I, 3 credits
- 325-316 Mechanics of Materials, 3 credits
- 754-103 Fundamentals of Physics I, 4 credits

Arts and communication:

- 168-105 Drawing, 3 credits
- 168-107 Two-Dimensional Design, 3 credits
- 242-102 History of the Visual Arts: Ancient to Medieval, 3 credits
- 242-103 History of the Visual Arts: Renaissance to French Revolution, 3 credits
- 242-202 Concepts and Issues of Modern Art, 3 credits

continued

Core Courses, 18 credits

- 168-106 Design Methods, 3 credits
 950-210 Drawing Systems for the Designer, 3 credits
 950-436 Environmental Design Studio I, 3 credits
 242-437 Environmental Design Studio II, 3 credits
 950-438 Environmental Design Studio III, 3 credits
 242-439 Environmental Design Studio IV, 3 credits

Alternate Major in Urban Studies**Supporting Courses, 12 credits:**

- 255-205 Social Science Statistics, 3 credits
 255-301 Foundations for Social Research, 3 credits
 778-101 American Government and Politics, 3 credits
 950-200 Introduction to Urban Studies, 3 credits

Upper-Level Courses, 30 credits:

- 242-370 Modern American Culture, 3 credits
 950-303 Urban Sociology, 3 credits
 950-313 Cities: Past, Present and Future, 3 credits
 950-325 Behavior in Designed Environments, 3 credits
 950-412 Urban Planning I, 3 credits
 950-415 Public and Nonprofit Budgeting, 3 credits

Plus, the series of environmental design studios listed as core courses.

Other courses, chosen with advisers, may be appropriate.

Alternate Major in Communication and the Arts**Supporting Courses, 15 credits:**

- 168-106 Design Methods, 3 credits
 242-202 Concepts and Issues of Modern Art, 3 credits
 242-231 Introduction to Graphic Communications, 3 credits
 950-200 Introduction to Urban Studies, 3 credits
 950-210 Drawing Systems for the Designer, 3 credits

Upper-Level Courses, 24 credits:

- 242-331 Graphic Communications Studio I, 3 credits
 242-332 Graphic Communications Studio II, 3 credits
 242-370 Modern American Culture, 3 credits
 950-325 Behavior in Designed Environments, 3 credits
 950-412 Urban Planning I, 3 credits

Plus, the environmental design studios I through III, listed above.

Other courses, chosen with advisers, may be appropriate.

■ Chiropractic

Preprofessional Program

Advisers: Academic Advising Office

Chiropractors work with their hands to treat problems of the human body. They may arrange exercise, rest and diet programs to assist patients, but they do not prescribe drugs or perform surgery.

Requirements for admission to professional chiropractic colleges vary, but generally they require completion of two years of college course work, including specific required courses. Once admitted to the professional college, students should expect about three and a half years of study.

Early in their freshman year, students should get specific requirements from the chiropractic college to which they expect to transfer.

Advisers in the Academic Advising Office can provide lists of chiropractic colleges and help students plan programs of study to meet requirements.

The UW-Green Bay courses below fulfill requirements for the Palmer College of Chiropractic in Davenport, Iowa. Requirements for other professional chiropractic colleges are similar.

Preprofessional Courses

- 204-202 Principles of Biology I, 4 credits
 204-203 Principles of Biology II, 4 credits
 225-211 Principles of Chemistry I, 5 credits
 225-212 Principles of Chemistry II, 5 credits
 225-302, 304 Organic Chemistry I and Laboratory, 4 credits
 225-303, 305 Organic Chemistry II and Laboratory, 4 credits
 246-133 Fundamentals of Public Address, 3 credits
 552-105 Expository Writing, 3 credits
 754-103 Fundamentals of Physics I, 5 credits
 754-104 Fundamentals of Physics II, 5 credits
 OR
 754-201 Principles of Physics I, 5 credits
 754-202 Principles of Physics II, 5 credits
 (calculus level)

820-102 Introduction to Psychology, 3 credits

Elective courses from the humanities, social sciences and other areas, 15 credits

(Suggested courses include psychology, sociology, business, literature, philosophy, history, government, foreign language, religion.)

■ Counseling

Preprofessional Program

Adviser: Robert Mendelsohn, associate professor.

Students seeking careers in this broad human services field will choose majors and minors based on the particular type of counseling they wish to enter. Some counseling fields require advanced study and UW-Green Bay can provide undergraduate preparation for such programs. UWGB offers a master of science degree in community human services with a counseling specialization. It also has a cooperative program with UW-Milwaukee for the master of science in educational psychology-counseling. Bachelor's degrees from UW-Green Bay can prepare graduates for entry into advanced programs at other UW institutions, including those offered by the UW-Milwaukee and UW-Oshkosh graduate schools and UW-Stout (vocational rehabilitation). UW-Green Bay offers the Bachelor of Social Work (B.S.W.) which is a suitable credential for employment in some fields and serves as preparation for Master of Social Work (M.S.W.) programs at UW-Milwaukee and UW-Madison.

Alcohol and drug abuse counselors. Not all positions in this field require college degrees. But others seek counselors with bachelor's or master's degrees in social work, guidance and counseling, education, psychology, nursing, and other fields. UW-Green Bay students intending this career field might major in psychology or sociology with minors in human development or social change and development. A Bachelor of Social Work degree is another possibility. Appropriate master's degrees include the community human services degree from UWGB and the M.S.W. from one of the granting institutions.

Counselors. Students seeking entry to this field may choose from among many majors including psychology, social work, sociology, human development, urban and public affairs, and social change and development. The UW-Green Bay master's degree in community human services or particular tracks from master's degree programs at other UW institutions would provide good advanced credentials.

Clinical psychologists. These practitioners must have advanced training at the master's and doctoral degree levels. Persons who wish to become licensed and develop their own practices must have the doctorate. Admission to such programs is competitive, and students seeking the degree should have exceptional grade point averages and abilities in research and scientific methods.

Probation and parole officers. An appropriate major at UW-Green Bay for such positions would be the criminal justice track of the social change and development major. Second majors or minors in psychology or sociology would be appropriate.

Social workers. UW-Green Bay's Bachelor of Social Work program is accredited by the Council on Social Work Education. Some agencies hiring social workers accept majors in sociology or psychology. At UW-Green Bay, these should be combined with interdisciplinary minors such as social change and development or human development. Some social work positions require the Master of Social Work.

Vocational and education counselors. Such counselors usually need at least a bachelor's degree and experience in a field such as teaching, a health occupation, or social work. Sociology or psychology majors combined with appropriate interdisciplinary minors would provide good preparation. Individuals in many educational settings need teaching licensure. Many such positions require a master's degree. The UW-Green Bay-UW-Milwaukee cooperative master's degree program in educational psychology-counseling is one possibility. UWGB bachelor's degrees prepare students for entry into specialized graduate programs in counseling at other UW institutions as well.

Vocational rehabilitation counselors. These counselors need master's degrees in vocational rehabilitation. Certification through examination is sometimes required. Appropriate undergraduate preparation can be gained through majors in psychology or sociology coupled with interdisciplinary minors. UW-Stout has a master's degree program in vocational rehabilitation.

■ Dentistry

Preprofessional Program

Adviser: Richard J. Stevens, associate professor.

All dental schools specify certain subjects and most require completion of at least 90 credits of college work with superior grade point averages and good scores on the Dental Admissions Test before admitting students to their programs. Each dental school sets its own requirements. It is important for pre dental students to seek information from their chosen school early so they can plan pre dental studies appropriately.

UW-Green Bay provides preparation for dental schools, including specific required courses. The logical major for pre dentistry and human life sciences is human biology, although students with particular interests in nutrition, psychology, field biology, chemistry, or physics might choose other majors, such as nutritional sciences, human development, or environmental science. It is not required that pre dental students complete a science major, although some dental schools favor science majors. Pre dental students are advised to plan an undergraduate major that offers career alternatives should they fail to gain admission to dental school.

UW-Green Bay's pre dentistry program has demonstrated its effectiveness. Most of its students whose grade point averages were 3.0 or higher and who achieved good dental entrance exam scores have been accepted into dental schools.

Marquette University has the only school of dentistry in Wisconsin. The following minimum courses are those required for admission into that program. Students desiring entrance into out-of-state dentistry programs should get those schools' requirements and plan their programs with the pre dentistry adviser.

Preprofessional Courses

(minimum required courses)

Chemistry and physics:

225-211 Principles of Chemistry I, 5 credits
225-212 Principles of Chemistry II, 5 credits
225-302, 304 Organic Chemistry I and Laboratory, 4 credits
225-303, 305 Organic Chemistry II and Laboratory, 4 credits

754-103 Fundamentals of Physics I, 5 credits
754-104 Fundamentals of Physics II, 5 credits
OR
754-201 Principles of Physics I, 5 credits
754-202 Principles of Physics II, 5 credits
(calculus level)

Biology:

204-202 Principles of Biology I, 4 credits
204-203 Principles of Biology II, 4 credits

English:

552-105 Expository Writing, 3 credits
Any literature course, 3 credits

Recommended electives:

204-302 Principles of Microbiology, 4 credits
204-303, 304 Genetics and Laboratory, 4 credits
204-340 Comparative Anatomy of Vertebrates, 4 credits
204-347 Developmental Biology, 4 credits
225-311 Analytic Chemistry, 4 credits
225-330, 331 Biochemistry and Laboratory, 4 credits
478-402, 404 Human Physiology/Animal Physiology Laboratory, 5 credits
478-413 Neurophysiology, 3 credits
600-101 Intermediate Algebra, 3 credits
600-104 Elementary Functions: Algebra and Trigonometry, 4 credits
600-202 Calculus and Analytic Geometry I, 4 credits
600-260 Introductory Statistics, 4 credits

■ Engineering

Preprofessional Program

Advisers: Harold Day, professor; Robert Lanz, associate professor; Coral Lee MacKay, academic adviser; Nancy Sell, professor.

In addition to its own joint engineering program with UW-Milwaukee, offering degrees in civil, electrical, industrial, materials, and mechanical engineering, UW-Green Bay can provide preprofessional courses for transfer into other engineering programs. These include courses in mathematics, physics, chemistry, engineering drawing, engineering mechanics, and other related courses, as well as courses in the humanities, arts, and social sciences.

Required pre-engineering courses will vary, depending on the engineering program from which students expect to earn their degrees. Generally, students can expect to spend a minimum of two years in pre-engineering studies at UW-Green Bay before transferring to the professional engineering program.

Students should expect rigorous requirements and competitive entry for engineering programs. Pre-engineering students should seek advice about the various engineering programs and pre-engineering program planning early.

Institutions in Wisconsin offering engineering degrees are:

UW-Madison—degrees in agricultural, chemical, civil and environmental, electrical and computer, engineering mechanics, geological, industrial, mechanical, metallurgical, nuclear and engineering physics.

UW-Platteville—degrees in civil, electrical, mechanical, and industrial engineering.

Marquette University—degrees in civil, electrical, mechanical, industrial, and biomedical engineering.

Milwaukee School of Engineering—degrees in architectural, biomedical, computer science, electrical, industrial, and mechanical engineering.

■ Law

Preprofessional Program

Advisers: Casey Groves, associate professor; Dan Spielmann, university attorney; Jeff Tollers, assistant professor.

Most law schools require a bachelor's degree for admission. Unlike many professional schools, however, law schools do not require a uniform program of study or specific undergraduate major. Law schools do recommend that a prelaw student demonstrate:

- understanding of the development of social, political and economic institutions;
- ability to communicate well, orally and in writing;
- capacity to think clearly and analytically;
- habits of disciplined study.

Preparation for law school can be carried out through majors and professional programs at UW-Green Bay. Commonly chosen majors by prelaw students include political science, public and environmental administration, business administration, social change and development, urban studies, and humanistic studies. In addition to an appropriate major, prelaw students should take courses in a wide range of liberal arts and sciences. Courses in political science, economics, sociology, history, philosophy, literature, accounting, computer science, and natural science are recommended.

Each state sets minimum requirements for admission to law schools within its borders. A bachelor's degree does not guarantee admission. Law schools consider college record, grade point average, honors or awards, faculty recommendations, and scores on the Law School Admissions Test (LSAT).

The following recommended UW-Green Bay courses are based on three major areas of student development outlined by the Association of American Law Schools. In addition, students complete requirements of their chosen UWGB major and all-university requirements.

Preprofessional Courses

Oral and written competencies:

- 246-133 Fundamentals of Public Address, 3 credits
- 246-333 Persuasion and Argumentation, 3 credits
- 552-104 Introduction to Literature, 3 credits
- 552-105 Expository Writing, 3 credits
- 552-304 Advanced Expository Writing, 3 credits

Critical understanding of human institutions and values:

- 298-202 Macro Economic Analysis, 3 credits
- 298-203 Micro Economic Analysis, 3 credits
- 448-205 History of the United States from 1600 to 1865, 3 credits
- 448-206 History of the United States from 1865 to the Present, 3 credits
- 448-302 History of American Thought and Culture I, 3 credits
- 493-101 Foundations of Western Culture I, 3 credits
- 493-102 Foundations of Western Culture II, 3 credits
- 736-101 Introduction to Philosophy, 3 credits
- 736-102 Problems in Ethics, 3 credits
- 736-301 Criticism of Values, 3 credits
- 736-304 American Philosophy, 3 credits
- 736-314 Modern Philosophy, 3 credits
- 778-100 Introduction to Political Science, 3 credits
- 778-101 American Government and Politics, 3 credits
- 778-310 The American Presidency, 3 credits
- 778-320 Constitutional Law, 3 credits
- 778-330 Law and the Judicial Process, 3 credits
- 778-340 Political Theory, 3 credits
- 778-360 International Politics, 3 credits
- 778-416 American Legislative Process, 3 credits
- 820-102 Introduction to Psychology, 3 credits
- 820-202 Introduction to Social Psychology, 3 credits

continued

- 900-202 Introduction to Sociology, 3 credits
 950-102 Introduction to Public Policy, 3 credits
 950-215 Introduction to Public Administration, 3 credits

Creative power in thinking:

- 266-256 Introduction to Computer Science I, 4 credits
 266-257 Introduction to Computer Science II, 3 credits
 600-202 Calculus and Analytic Geometry I, 4 credits
 600-203 Calculus and Analytic Geometry II, 4 credits
 736-111 Elementary Logic, 3 credits
 950-201 Problem Analysis and Decision Making, 3 credits
 950-408 Public Policy Analysis, 3 credits
 950-451 Decision Theory and Methods, 3 credits

In addition, UWGB has a number of law-related courses which may help students prepare for law school. These include:

- 216-206 Law and the Individual, 3 credits
 216-305 Business Law I, 3 credits
 216-306 Business Law II, 4 credits
 778-320 Constitutional Law, 3 credits
 778-330 Law and the Judicial Process, 3 credits
 875-204 Freedom and Social Control, 3 credits
 875-303 Criminal Justice Process, 3 credits
 875-325 Law in Society, 3 credits
 875-348 Women and the Law, 3 credits
 900-404 Criminology, 3 credits
 950-376 Administrative Law, 3 credits
 950-378 Environmental Law, 3 credits

■ Medical Technology

Preprofessional Program

Adviser: Dorothea Sager, associate professor.

Medical technology is normally a four-year program of study. The first two years are spent in preprofessional studies satisfying specific requirements for entry into the final two years of the professional program.

UW-Green Bay offers courses that fulfill requirements for the first two years of preprofessional study. The degree in medical technology is available at the University of Wisconsin institutions at Eau Claire, LaCrosse, Madison, Milwaukee, Oshkosh, Stevens Point, and Superior. Two private institutions in the state—Marquette University and St. Norbert College—also offer the degree. Each institution has its own requirements for entry into the professional program and students intending to fulfill preprofessional studies at UWGB should learn the requirements of the school they wish to attend and plan their programs accordingly.

The following list of courses meets preprofessional requirements for one of the medical technology programs in Wisconsin. It is included to give an example of courses required for the field. Students planning to seek admission to medical technology professional programs should acquire the preprofessional program advising guide and consult with the medical technology adviser.

Preprofessional Courses

- 204-202 Principles of Biology I, 4 credits
 204-203 Principles of Biology II, 4 credits
 204-302 Principles of Microbiology and Laboratory, 4 credits
 225-211 Principles of Chemistry I, 5 credits
 225-212 Principles of Chemistry II, 5 credits
 266-155 Computers and Microcomputers, 3 credits
 552-100 College Writing, 3 credits
 600-104 Elementary Functions: Algebra and Trigonometry, 4 credits
 600-201 Calculus for the Management and Social Sciences, 3 credits
 600-202 Calculus and Analytic Geometry I, 4 credits
 600-203 Calculus and Analytic Geometry II, 4 credits
 600-260 Introductory Statistics, 4 credits
 754-103 Fundamentals of Physics I, 5 credits
 754-104 Fundamentals of Physics II, 5 credits
 754-201 Principles of Physics I, 5 credits
 754-202 Principles of Physics II, 5 credits

Also:

- Social sciences courses, 6 credits
 Humanities courses, 6 credits

Medicine

Preprofessional Program

Adviser: Richard Stevens, associate professor.

Almost all medical schools require a bachelor's degree for entrance and specify certain subjects that a candidate must have completed. Students seeking admission to medical school must demonstrate exceptional ability, high aptitude in science, and achievement. Premedical students must take the Medical College Admissions Test (MCAT).

The most logical major for UW-Green Bay students interested in premedicine and human life sciences is human biology. Other majors for students with interests in nutrition, field biology, chemistry, or physics would include nutritional sciences, or environmental sciences.

UW-Green Bay's premedical program has demonstrated its effectiveness. UWGB graduates with grade point averages of 3.5 or better and high scores on the MCAT have virtually all been accepted into medical schools. Another advantage of the program is offered by the multidisciplinary nature of its majors which prepares students for professional activities in addition to medicine. This allows more than one choice of graduate education opportunities.

Wisconsin has two medical schools—the Medical College of Wisconsin in Milwaukee and the University of Wisconsin Medical Center in Madison. Students planning to seek admission to one of those programs or to an out-of-state medical college should get requirements from the medical college so they can plan undergraduate studies accordingly.

The following list of required UW-Green Bay courses is based on requirements for the medical colleges in Wisconsin. In addition, students complete requirements of their chosen UW-Green Bay major and all-university requirements.

Preprofessional Courses

Chemistry and physics:

- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 225-302, 304 Organic Chemistry and Laboratory, 4 credits
- 225-303, 305 Organic Chemistry II and Laboratory, 4 credits
- 225-311 Analytical Chemistry, 4 credits

- 754-103 Fundamentals of Physics I, 5 credits
- 754-104 Fundamentals of Physics II, 5 credits

OR

- 754-210 Principles of Physics I, 5 credits
- 754-202 Principles of Physics II, 5 credits (calculus level)

Biology:

- 204-202 Principles of Biology I, 4 credits
- 204-203 Principles of Biology II, 4 credits

And, a minimum of one of these:

- 204-302 Principles of Microbiology, 4 credits
- 204-303, 304 Genetics and Laboratory, 4 credits
- 204-340 Comparative Anatomy of Vertebrates, 4 credits
- 204-347 Developmental Biology, 4 credits
- 478-402, 404 Human Physiology and Physiology Laboratory, 5 credits
- 478-413 Neurophysiology, 3 credits

Mathematics, a minimum of one of these:

- 600-101 Intermediate Algebra, 3 credits
 - 600-104 Elementary Functions: Algebra and Trigonometry, 4 credits
 - 600-202 Calculus and Analytic Geometry I, 4 credits
 - 600-260 Introductory Statistics, 4 credits
- (some out-of-state medical colleges recommend or require differential and integral calculus)

English:

- 552-105 Expository Writing, 3 credits
- One literature course, 3 credits

Mortuary Science

Preprofessional Program

Advisers: Academic Advising Office

Professionals in mortuary science include embalmers and funeral directors. Both require apprenticeships and successful completion of state examinations leading to licensure to practice. Embalmers may be high school graduates with college preparatory courses, but funeral directors generally must complete preprofessional college courses and then enroll in mortuary college. Requirements for states vary. Students should plan preprofessional studies to satisfy requirements of the state where they intend to practice.

Wisconsin requires funeral directors to complete two years of preprofessional college work plus professional mortuary science training. Wisconsin students generally attend the University of Minnesota for their advanced work. UW-Green Bay courses fulfilling basic preprofessional requirements for mortuary science are listed below.

Preprofessional Courses

- 204-202 Principles of Biology I, 4 credits
- 204-203 Principles of Biology II, 4 credits
- 216-202 Business and its Environment, 3 credits
- 216-206 Law and the Individual, 3 credits
- 216-300 Introductory Accounting, 3 credits
- 216-305 Business Law I, 3 credits
- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 298-202 Macro Economic Analysis, 3 credits
- 298-203 Micro Economic Analysis, 3 credits
- 448-100 History of the Modern World, 3 credits
- 552-100 College Writing, 3 credits
- 552-105 Expository Writing, 3 credits
- 600-101 Intermediate Algebra, 3 credits
- 600-260 Introductory Statistics, 4 credits
- 778-100 Introduction to Political Science, 3 credits
- 778-101 American Government and Politics, 3 credits
- 820-102 Introduction to Psychology, 3 credits
- 820-202 Introduction to Social Psychology, 3 credits
- 820-205 Psychology of Human Adjustment, 3 credits
- 900-202 Introduction to Sociology, 3 credits

■ Nursing

Preprofessional Program

Advisers: Academic Advising Office

In addition to its own Bachelor of Science in Nursing (B.S.N.) degree completion program for persons who are registered nurses, UW-Green Bay offers preprofessional courses for individuals who are just beginning their nursing studies. This allows prospective nurses to spend approximately two years studying at UWGB before transferring to one of the University of Wisconsin campuses which offers the B.S.N. These are the universities at Eau Claire, Madison, Milwaukee, and Oshkosh.

UW-Green Bay also supports professional nursing education by providing the required academic coursework for students in the Bellin College of Nursing in Green Bay. Students complete professional courses at the Bellin College and receive their degrees from that institution.

While requirements for professional nursing programs at the other UW schools vary somewhat, the list here outlines a typical two-year prerequisite program which may be completed at UW-Green Bay.

Preprofessional Courses

- 204-202 Principles of Biology I, 4 credits
- 204-302 Principles of Microbiology, 4 credits
- 225-108 General Chemistry, 5 credits
- 225-300 Bio-organic Chemistry, 3 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 362-102 Introduction to Environmental Science, 3 credits
- 478-203 Anatomy and Physiology I, 2 credits
- 478-204 Anatomy and Physiology II, 4 credits
- 481-210 Introduction to Human Development, 3 credits
- 481-343 Adulthood and Aging, 3 credits
- 552-100 College Writing, 3 credits
- OR
- 552-105 Expository Writing, 3 credits
- 694-300 Nutritional Significance of Food, 3 credits
- 736-101 Introduction to Philosophy, 3 credits
- 736-102 Problems in Ethics, 3 credits
- 820-102 Introduction to Psychology, 3 credits
- Elective, 3 credits

■ Occupational Therapy

Preprofessional Program

Advisers: Academic Advising Office

Students can complete at least three semesters of preprofessional work in occupational therapy at UW-Green Bay before transferring to an institution which offers the bachelor's degree in occupational therapy. In Wisconsin, the degree is offered at UW-Madison, UW-Milwaukee, and Mount Mary College in Milwaukee.

Requirements for entry into each program vary. UW-Green Bay has arranged an approved three-semester program with UW-Madison's occupational therapy program. Similar arrangements can be made with the other institutions.

The following UW-Green Bay courses satisfy preprofessional requirements for UW-Madison.

Preprofessional Courses

- 204-202 Principles of Biology I, 4 credits
- 204-203 Principles of Biology II, 4 credits
- 225-211 Principles of Chemistry I, 5 credits
- OR
- 225-108 General Chemistry, 5 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 481-331 Infancy and Early Childhood, 3 credits
- 481-332 Middle Childhood and Adolescence, 3 credits
- 481-343 Adulthood and Aging, 3 credits
- 481-435 Abnormal Behavior, 3 credits
- 552-100 College Writing, 3 credits
- 742-117 Cardiopulmonary Resuscitation, 1 credit
- 820-102 Introduction to Psychology, 3 credits
- 900-202 Introduction to Sociology, 3 credits
- OR
- 900-308 Sociology of the Family, 3 credits

Also:
Humanities electives

■ Optometry

Preprofessional Program

Advisers: Academic Advising Office

Optometrists earn a Doctor of Optometry (O.D.) degree and successfully complete state and national board examinations in order to practice their professions. Most schools of optometry require a minimum of 90 college credits for admission. Many applicants complete a bachelor's degree first. In either case, certain required courses must be completed before admission to a school of optometry. Successful completion of the Optometry Admission Test (O.A.T.) is required as well.

Advisers can help students get information about schools of optometry and their specific requirements, and plan appropriate preprofessional programs.

Students who complete bachelor's degrees before entering the professional school usually complete majors in biology or chemistry. Science majors are not mandatory, however, as long as students complete specific required courses.

Following are UW-Green Bay courses which satisfy prerequisite requirements for schools of optometry.

Preprofessional Courses

- 204-202 Principles of Biology I, 4 credits
- 204-203 Principles of Biology II, 4 credits
- 204-302 Principles of Microbiology, 4 credits
- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 225-302 Organic Chemistry I, 3 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 552-105 Expository Writing, 3 credits
- 600-104 Elementary Functions: Algebra and Trigonometry, 4 credits
- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-260 Introductory Statistics, 4 credits
- 754-201 Principles of Physics I, 5 credits
- 754-202 Principles of Physics II, 5 credits
- 820-102 Introduction to Psychology, 3 credits
- 900-202 Introduction to Sociology, 3 credits

Also:

Electives in computer science, genetics, human anatomy and physiology, sociology, business, economics, and public speaking.

■ Pharmacy

Preprofessional Program

Advisers: Academic Advising Office

UW-Green Bay offers courses satisfying requirements for the first two years of study for the Bachelor of Science in Pharmacy. The only school of pharmacy in Wisconsin is at UW-Madison and that institution has approved the UW-Green Bay prepharmacy program.

The practice of pharmacy is regulated by law and requires that a candidate be a graduate of an accredited school of pharmacy, complete a one-year internship, and pass a board examination.

Advisers from UW-Madison usually visit UW-Green Bay each year to help prepharmacy students plan their programs. Admission to the School of Pharmacy is based on completion of prerequisite courses and a grade point average of "B" or better. Grade point averages in mathematics and science courses are particularly important.

UW-Green Bay courses listed satisfy prepharmacy requirements.

Preprofessional Courses

- 204-202 Principles of Biology I, 4 credits
- 204-203 Principles of Biology II, 4 credits
- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 225-302, 304 Organic Chemistry I and Laboratory, 4 credits
- 225-303, 305 Organic Chemistry II and Laboratory, 4 credits
- 298-202 Macro Economic Analysis, 3 credits
- 298-203 Micro Economic Analysis, 3 credits
- 552-105 Expository Writing, 3 credits
- 600-202 Calculus and Analytical Geometry, 4 credits
- 754-103 Fundamentals of Physics I, 5 credits
- OR
- 754-201 Principles of Physics I, 5 credits (calculus level)
- 754-104 Fundamentals of Physics II, 5 credits
- OR
- 754-202 Principles of Physics II, 5 credits (calculus level)
- 900-202 Introduction to Sociology, 3 credits

Also:

Literature courses

Electives in humanities and social sciences

■ Physical Therapy

Preprofessional Program

Advisers: Academic Advising Office

Students intending careers in physical therapy may complete two years of preprofessional studies at UW-Green Bay to prepare for transfer into a professional program. UW-Madison and UW-LaCrosse offer the bachelor's degree in physical therapy. Marquette University offers the degree, but because it accepts freshmen, it is difficult to transfer in from another institution.

Students can generally expect to spend two and one-half years of study at the professional level after completing the two-year preprofessional program. Requirements for entry into the programs at Madison and LaCrosse differ slightly. Both programs set minimum grade point averages and require completion of a specific number of preprofessional credits and actual experience in settings with patients.

Courses in chemistry, biology, written and oral communication, physics, psychology, and human development are required by both. Both also require courses in literature and the humanities and social sciences. The Madison program requires statistics, and LaCrosse requires algebra and trigonometry and anatomy and physiology. All of these preprofessional courses may be completed at UW-Green Bay.

Academic advisers can provide specific requirements for each program and help students plan appropriate preprofessional programs.

■ Physician Assistant

Preprofessional Program

Advisers: Academic Advising Office

Physician assistants are highly trained professionals who provide medical care under the supervision of a doctor. Wisconsin has a program leading to the Bachelor of Science-Physician Assistant at UW-Madison. The program has a two-year preprofessional component leading to two years of professional study. Students desiring careers as physician assistants may complete one year of the preprofessional program at UW-Green Bay.

Admission to the physician assistant program is competitive. Grade point average is important, but the admission committee also evaluates health care experience, letters of recommendation, and a written essay by the applicant.

UW-Green Bay courses listed here are approved for preprofessional work by the Madison physician assistant program. Completing these courses does not guarantee admission.

Preprofessional Courses

- 204-202 Principles of Biology I, 4 credits
- 204-203 Principles of Biology II, 4 credits
- 204-302 Principles of Microbiology, 4 credits
- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 552-100 College Writing, 3 credits
- OR
- 246-100 Writing Skills Laboratory, 3 credits
- 820-102 Introduction to Psychology, 3 credits

Also:

Courses in the social sciences and humanities

■ Theology

Preprofessional Program

Adviser: Elmer Havens, professor.

Theological schools typically recommend a broad undergraduate program in the liberal arts. Students who wish to enter the field of theology usually earn a bachelor's degree and then spend three or four years studying in a school of theology.

At the undergraduate level, students preparing for theological studies should take courses in English composition, literature, history, philosophy, and natural and social sciences and gain a working knowledge of a foreign language. A logical major for pretheology students at UW-Green Bay is humanistic studies which has a religious studies area of emphasis. Many different minors might be chosen, including history, philosophy, literature, foreign language, sociology, women's studies, social change and development, and others. Pretheology students should learn requirements of the theological schools to which they are likely to apply, assess their own interests, and plan their programs with the pretheology adviser.

The following list of UW-Green Bay courses are appropriate preprofessional preparation for theology.

Preprofessional Courses

- 156-220 Myth, Ritual and Religion, 3 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 448-100 History of the Modern World, 3 credits
- 448-201 Ancient Civilization, 3 credits
- 448-202 The Middle Ages, 3 credits
- 448-205 History of the United States from 1600 to 1865, 3 credits
- 448-206 History of the United States from 1865 to the Present, 3 credits
- 448-306, 307 European Thought and Culture I, II, 6 credits
- 493-101 Foundations of Western Culture I, 3 credits
- 493-102 Foundations of Western Culture II, 3 credits
- 493-201 Introduction to Humanities I: Music and Arts in Western Civilization, 3 credits
- 493-202 Introduction to Humanities II: Literature, Philosophy and History in Western Civilization, 3 credits
- 493-204 Humanistic Values Through Literature, 3 credits
- 493-205 Personal Values and Social Reform, 3 credits
- 493-225 American Indian Studies: Arts and Ceremonial Traditions, 3 credits
- 493-226 American Indian Studies: History and Verbal Traditions, 3 credits
- 493-271 American Indian Literature, 3 credits
- 493-323 The Writings of the Old Testament, 3 credits
- 493-324 The Writings of the New Testament, 3 credits
- 493-325 Judaism, Christianity and Islam, 3 credits
- 493-326 Non-Western Religions, 3 credits
- 493-332 Art and Social Thought, 3 credits
- 552-105 Expository Writing, 3 credits
- 736-101 Introduction to Philosophy, 3 credits
- 736-102 Introduction to Ethics, 3 credits
- 736-105 Introduction to Social and Political Philosophy, 3 credits
- 736-213 Ancient Philosophy, 3 credits
- 736-214 Modern Philosophy, 3 credits
- 900-202 Introduction to Sociology, 3 credits

Especially useful literature courses include:

- 552-214, 215 Introduction to English Literature I, II, 3 credits
- 552-216, 217 Introduction to American Literature I, II, 3 credits

Also, students should take selected upper-level courses in fiction, drama, and poetry.

Foreign language:

Students should take courses in French, German, or Spanish.

■ Veterinary Medicine

Preprofessional Program

Advisers: Academic Advising Office

Each school of veterinary medicine has its own requirements and students planning careers as veterinarians need to plan both preprofessional course work and practical experiences to enhance their chances of acceptance. Veterinary schools value laboratory experience and experience in working with animals as well as evidence of academic ability in preprofessional courses.

Wisconsin has a College of Veterinary Medicine at UW-Madison. To qualify for admission, students must have completed 60 credits of college course work and submit scores on the Graduate Record Exam. Wisconsin students may plan to meet requirements and apply to out-of-state veterinary schools as well.

Preveterinary medicine requirements can be met at UW-Green Bay. An advantage of its program is the interdisciplinary emphasis which provides career options in addition to veterinary medicine. Instead of applying to a college of veterinary medicine as soon as prerequisites are completed, students may be wise to complete a bachelor's degree to strengthen their preveterinary programs and gain career flexibility. Students choosing to finish a bachelor's degree before pursuing veterinary medicine would logically choose majors in biology or chemistry coupled with interdisciplinary minors in environmental science.

The following UW-Green Bay courses meet preprofessional requirements at the UW-Madison College of Veterinary Medicine.

Preprofessional Courses

- 204-202 Principles of Biology I, 4 credits
- 204-303 Genetics, 3 credits
- 225-211 Principles of Chemistry I, 5 credits
- 225-300 Bio-organic Chemistry I and Laboratory, 4 credits
- 225-330 Biochemistry, 3 credits
- 552-100 College Writing, 3 credits
- 552-105 Expository Writing, 3 credits
- 600-260 Introductory Statistics, 4 credits
- 754-201 Principles of Physics I, 5 credits
- 754-202 Principles of Physics II, 5 credits

Also:

Social sciences courses, 6 credits

Humanities courses, 6 credits

OTHER DEGREES

Associate of Arts Degree

The associate of arts degree at the University of Wisconsin-Green Bay offers a flexible program with areas of emphasis in a broad range of subjects and represents a degree earned through a fully accredited university-level educational program.

The A.A. degree certifies completion of a focused, structured program of study. This accomplishment represents essentially half of a bachelor's degree and a minimum of 62 degree credits.

There are several reasons why a person might find an A.A. degree beneficial:

- to add breadth and depth to the vocational training he or she has or plans to receive;
- to strengthen opportunities for advancement by gaining additional education and certification;
- to serve as a stepping stone toward a bachelor's degree;
- to provide an opportunity to pursue a special academic interest in a focused, systematic way;
- for personal enrichment and pleasure.

The university began granting the A.A. degree with the December 1977 graduation. Students and former students who may already have fulfilled A.A. degree requirements may file an academic plan and a request to graduate with the A.A. degree even though they are not enrolled for the semester in which they would graduate.

Requirements for the Degree. Requirements for the associate of arts degree at UWGB include:

- a total of 62 degree credits;
- a minimum of 15 credits of UWGB course work (meaning that only 47 transfer credits from another accredited college or university can be counted toward the A.A. degree);
- a grade point average of 2.0 or better;
- a completion of general-education requirements except for the senior seminar requirement described elsewhere in this book;
- a minimum of 12 additional credits in one area of emphasis developed by the student and a faculty adviser;
- acceptable score on an English proficiency test or 3 credit hours of college level writing;
- supporting subjects as may be required by the individual area of emphasis;
- additional elective credits to total 62 or more earned degree credits.

A summary shows these requirements:

- 30 credits of general education
- 12 credits emphasis
- 3 credits writing (if required)
- 20-23 credits electives and/or supporting subjects
- 65-68 total credits

Associate of arts degree students must fulfill the same admission requirements as students in the bachelor's degree program. All of the services available to regular degree students apply to A.A. candidates and they can participate as fully in the life of the campus as they wish.

Tuition and fee charges for A.A. degree students are the same as for bachelor's degree students.

Persons interested in the associate of arts degree program should read especially the sections in this catalog on admissions and costs, general-education requirements, and descriptions of the academic programs which they may wish to emphasize. More information is available from the Office of Admissions and Orientation.

Associate of Arts degree requirements described here fulfill lower-level general-education requirements only at UWGB.

Master's Degrees

The University of Wisconsin-Green Bay offers two types of programs leading to master's degrees.

The first type consists of degrees awarded by UW-Green Bay in three distinct areas of study. They are:

- Master of Science in Administrative Science
- Master of Science in Community Human Services
- Master of Science in Environmental Science and Policy

The second group comprises cooperative programs with the Universities of Wisconsin at Oshkosh and Milwaukee. Course work in these cooperative programs is normally completed on the UW-Green Bay campus, but the degree is awarded by the sponsoring institution.

Administrative Science. Administrative science is concerned with the effective management of formal organizations. A principle objective of administrative science is to prepare skilled and imaginative individuals for middle-management and policy-making positions in government, nonprofit organizations and the private sector. The program offers areas of emphasis in:

Public and private management. For students who wish to pursue primarily management careers in public, private and nonprofit organizations.

Policy analysis and planning. For students who want to focus their graduate studies on policy issues associated with contemporary public problem-solving activities, on characteristics of the public policy system, and on methods of policy analysis and planning.

Decision science and systems analysis. For quantitatively oriented students who wish to engage in sophisticated systems planning and analysis.

Community Human Services. Community human services focuses on the dynamics, structure, management and improvement of such organizations as mental health clinics, social and welfare agencies, community organizations, rehabilitation agencies, hospitals, and certain aspects of police departments, schools, and industrial organizations. The program seeks to provide sufficient knowledge to permit graduates to understand, modify, create and use these organizations to assist others.

Environmental Science and Policy. Environmental science and policy is appropriate for students with interests in the scientific and/or public policy and administration aspects of environmental problems such as waste management, resource management, ecosystems studies, and technology development and assessment. Two areas of emphasis are available:

Environmental science. For students interested in positions dealing with a variety of environmental problems in industry, consulting, laboratory/engineering firms and/or government agencies.

Environmental policy and administration. For students interested in policy analysis, planning and administration, leading to positions in government agencies, legislative bodies, environmental organizations or industry.

Cooperative Programs. UWGB, in cooperation with the Universities of Wisconsin at Milwaukee (UWM) and Oshkosh (UWO), offers four master's degrees in the field of education and one in business administration (MBA). The course work for these programs is normally completed on the UW-Green Bay campus. The cooperative programs are:

Master of Science in Administrative Leadership—Educational Administration and Supervision (UWM)

Master of Business Administration (UWO)

Master of Science in Curriculum and Instruction (UWM)

Master of Science in Educational Psychology—Counseling (UWM)

Master of Science in Education—Reading (UWO)

For More Information. Detailed information on graduate programs at UW-Green Bay is available from the Office of Graduate Studies.

COURSE DESCRIPTIONS



Instructional Unit Numbers

The instructional unit number listed with each group of course descriptions is necessary for identification and record keeping. For example, Biology 303, Genetics, is listed as 204-303. The first three digits refer to the instructional unit; the last three to the course number. All six digits are needed for registration and other forms.

Courses are listed numerically by instructional units in the *Timetables* and in this catalog. Instructional unit numbers are:

107	Accounting	556	Literature and Language: German
156	Anthropology	558	Literature and Language: Spanish
168	Art	600	Mathematics
204	Biology	644	Military Science
216	Business Administration	670	Music
225	Chemistry	672	Applied Music
242	Communication and the Arts	689	Nursing
246	Communication Processes	694	Nutritional Science
255	Community Sciences	736	Philosophy
266	Computer Science	742	Physical Education
296	Earth Science	754	Physics
298	Economics	778	Political Science
302	Education	820	Psychology
325	Engineering	834	Regional Analysis
362	Environmental Science	867	Senior Seminars
416	Geography	875	Social Change and Development
448	History	892	Social Services
478	Human Biology	900	Sociology
481	Human Development	915	Theatre
493	Humanistic Studies	930	University Without Walls
552	Literature and Language: English-American	950	Urban and Public Affairs
554	Literature and Language: French		

Course Periodicity

Every course described in this catalog is not offered every semester, though nearly all are offered regularly, such as every spring, or every fall, or in odd-numbered or even-numbered years. Some courses are offered only during the January interims. Courses offered at regular intervals are indicated with codes following the course description. Up-to-date information on course periodicity is published in each *Timetable*.

Codes for course periodicity are:

F	Every fall semester
FE	Alternate fall semesters, even-numbered academic years (example: 1990-91, 1992-93)
FO	Alternate fall semesters, odd-numbered academic years (example: 1991-92, 1993-94)
S	Every spring semester
SE	Alternate spring semesters, even-numbered academic years (example: 1990-91, 1992-93)
SO	Alternate spring semesters, odd-numbered academic years (example: 1991-93, 1993-94)
J	Every January interim
JE	Alternate January interims, even-numbered academic years (example: 1990-91, 1992-93)
JO	Alternate January interims, odd-numbered academic years (1991-93, 1993-94)

Cross-Listed Courses

Many academic units accept for major or minor credit courses listed under another academic area. In this catalog, such course titles generally appear in both units, but the description may be listed only in the course's "home" unit. This is one of the many reasons students should seek advising in designing their programs of study.

Timetables

Timetables published for each semester, January and summer session, are essential for program planning. *Timetables* list course prerequisites, schedule, location, and, usually, the name of the teacher. *Timetables* also list new courses and special offerings that may not appear in this catalog.

Courses With Variable Content

Courses with variable content provide opportunities for individual work and exploration of unusual, specialized, or topical subjects not ordinarily included in the curriculum. These courses include selected topics, student-led courses, independent study, internships, distinction in the major, and senior honors projects. General descriptions of each type of course follow. They are cited by number and title in the course lists of units offering them. Information on how to enroll such courses can be found in the *Timetable* or through the Academic Advising Office.

281, 481 Student-Led Courses 1-4 credits

Well prepared, highly motivated students may develop and lead courses on their own. Topics must be subjects of contemporary concern not covered in regularly scheduled or catalogued courses. One to three qualified students may work with a faculty adviser to propose a course they can demonstrate they are competent to design and lead. Proposals are routed through appropriate interdisciplinary or professional programs. Approval is based both on merit and potential demand.

Approved courses are listed in the *Timetable* with the 281 or 481 course number. The listed title will appear on student transcripts. Students may enroll for a maximum of six credits of student-led courses in any one semester. A maximum of 18 credits can be accumulated in 281 and 481 courses except by special permission. A complete set of guidelines for student-led courses is available in concentration and professional program offices.

283X, 483X Selected Topics 1-4 credits

These are courses and seminars presented on an experimental basis or in response to special demand. A particular topic is offered only once under the selected topics course number. It may then be adopted as a regular course and assigned a regular course number.

Selected topics courses are announced in the *Timetable* under the heading of the sponsoring unit. *Timetables* usually include the course description. Further information can be obtained from the unit or the instructor. Freshman-sophomore-level courses are presented under the 283X number. Those calling for more advanced preparation carry the 483X number and normally require the consent of the instructor for enrollment. The course title appears on the transcripts of students who enroll.

298, 498 Independent Study 1-4 credits

Independent study is offered on an individual basis at the student's request and consisting of a program of learning activities planned in consultation with a faculty member. A student wishing to study or conduct research in an area not represented in available scheduled courses should develop a preliminary proposal and seek the sponsorship of a faculty member. The student's adviser can direct him or her to instructors with appropriate interests. A written report or equivalent is required for evaluation, and a short title describing the program must be sent early in the semester to the registrar for entry on the student's transcript. *Timetables* can provide up-to-date information on independent study.

478 Senior Distinction in the Major 3 credits

Some academic units offer an opportunity to students graduating with a major to earn distinction by designing, completing, and defending original work undertaken with the consent and supervision of the faculty. Projects vary, according to each student's area of emphasis, but may take the form of written research projects, creative portfolios, video/audio/or slide-tape presentations, computerized materials, publishable series of articles, or other results, as appropriate. Prerequisites are 3.5 overall grade point; 3.75 gpa in upper-level major courses; senior standing; consent of instructor.

484 Senior Honors Project 3 credits

Each interdisciplinary or professional program offers qualified students the opportunity to undertake a project to qualify for graduation with summa cum laude honors. Such a project—normally a thesis, research, or other creative activity—is carried out in the latter part of the junior year or in the senior year with the consent of a faculty adviser. Specific details are available from advisers and chairpersons. Students should register for an honors project not later than the first semester of the senior year. A 3.75 or higher cumulative grade point average is required to qualify.

497 Internships 3-12 credits

Supervised practical experience in an organization or activity appropriate to a student's career and educational interests is offered through many academic units. Internships are supervised by faculty members and require periodic student/faculty meetings. Prerequisites are junior standing and consent of department chair.

107 Accounting

107-283X Selected Topics 1-4 cr.
See *Courses with Variable Content*.

107-298 Independent Study 1-4 cr.
See *Courses with Variable Content*.

107-300 Introductory Accounting 3 cr.
Principles, concepts and terminology of financial accounting; processes by which accounting data are recorded, summarized and reported; accounting for sole proprietorships, partnerships and corporations, current and fixed assets, current and long-term liabilities, owner's equity account. (F,S)

107-301 Intermediate Accounting 4 cr.
Theories of financial accounting practice; preparation of income statements and balance sheets; the valuation of cash, receivables, inventories, long-term investments, fixed assets, liabilities, and owner's equity accounts; relevant APB opinions and FASB statements. (F,S)

107-302 Accounting for Administrators 3 cr.
Accounting concepts and methods; interpretation and use of accounting reports and analyses for planning, coordination and control; cost-profit-volume relations; budgeting; effects of taxation and price level changes on decision-making. (F,S)

107-305, 306 Business Law I, II 3, 4 cr.
Laws affecting business, emphasizing the Uniform Commercial Code. Introduction to law and the legal process, contracts, agency, property, landlord-tenant and real estate laws, sales and consumer protection laws, secured transactions, negotiable instruments, corporation and partnership law, and estate and bankruptcy law. (F,S)

107-312 Managerial Accounting 3 cr.
Principles and procedures in accumulating cost data in an organization; role of cost accounting in management and how cost data are recorded in accounts; job order and process cost systems; use of flexible budgeting and standard cost accounting in the context of budgetary control. (F,S)

107-313 Financial Accounting I 3 cr.
Specialized financial accounting topics, including price-level accounting, accounting changes, cash flow statement preparation, tax allocation, accounting for leases and pensions, special sales arrangements, and partnerships; AICPA and FASB pronouncements affecting accounting practice. (F)

107-314 Financial Accounting II 3 cr.
Business combinations; preparation of consolidated financial statements; intercompany inventory profit, preference interests and liquidating dividends; "earnings per share" calculations; accounting for branch operations, and foreign operations. (S)

107-316 Governmental and Institutional Accounting 3 cr.
Accounting theory and practice in governmental and institutional jurisdictions; control of revenues and expenditures through budgets and allotments; comparison with commercial accounting; in depth study of the nature and purpose of separate funds. (F,S)

107-348 Practicum in Computer-Assisted Financial Analysis 3 cr.
Integration and practical application of finance, accounting, taxation and marketing through microcomputer spreadsheets; use of spreadsheets in development of cash flow, feasibility, break-even and related models; use of the computer in evaluating alternative strategies, sensitivity analysis, and report generation. (J)

107-395 Practicum in Financial Statement Analysis 3 cr.
Analysis of published financial statements; review of balance sheet and income statements; other topics such as short- and long-term liquidity, funds flow analysis and ROI analysis. (Counts for upper-level finance credit.) (J)

107-410 Introduction to Income Tax Theory and Practice 3 cr.
Federal and state income tax as applied to individuals, partnerships

and corporations; tax and raw source materials; tax planning and determination. (F)

107-411 Financial Information Systems 3 cr.
Principles of systems design, emphasizing organizational structure; internal control; flow charts and the impact of people on systems studies; systems requirements of the procedural areas of accounting systems, such as cash, purchasing, inventory management, sales, and billing. (F)

107-412 Auditing Standards and Procedures 4 cr.
Audit standards, professional ethics, legal liability of auditors; audit procedures relating to assets, liabilities, equity, revenue and expense accounts; review of computer applications in auditing, statistical sampling and internal auditing. (S)

107-414 Advanced Managerial Accounting 3 cr.
Cost concepts for decision-making: cost-profit analysis, break-even analysis, differential and comparative cost, capital budgeting and control, profit performance measurements and linear programming for decision-making; responsibility accounting concepts and implications of transfer pricing for performance evaluation. (S)

107-415 Advanced Income Tax Theory and Practice 3 cr.
Advanced topics in income tax at state and federal levels, emphasizing federal tax as it relates to corporations, estates, trusts and partnerships, tax planning and determination. (S)

107-451 Design of Computer-Assisted Systems 3 cr.
See 216-451.

107-452 Management Information and Decision Support Systems 3 cr.
See 216-452.

107-478 Senior Distinction in Accounting 3 cr.
See *Courses with Variable Content*.

107-483X Selected Topics 1-4 cr.
See *Courses with Variable Content*.

107-497 Internship in Accounting 3-12 cr.
See *Courses with Variable Content*.

107-498 Independent Study 1-4 cr.
See *Courses with Variable Content*.

156 Anthropology

156-100 Varieties of World Culture 3 cr.
The variety of ways of life that exist in the world and the concepts of culture, cultural relativity, and ethnocentrism. Representative case studies of tribal and peasant societies are considered. (F,S)

156-110 Introduction to Physical Anthropology 3 cr.
A study of populations from a biological evolutionary perspective; evolutionary history, diversity, and adaptations of human beings and the mutual interaction and influence of human culture and biology within an evolutionary framework. Credit is not granted for both 156-110 and 478-102. (F)

156-220 Myth, Ritual and Religion 3 cr.
Mythologies, rituals, and religion and magic among divergent cultures of the world; how religious and magical systems interrelate with family, political and economic institutions. (F)

156-283X Selected Topics 1-4 cr.
See *Courses with Variable Content*.

156-298 Independent Study 1-4 cr.
See *Courses with Variable Content*.

156-303 Cultural Ecology 3 cr.
How people, nature, and culture interrelate. The approaches hunting, agricultural, and industrial societies use in adapting to the physical environment. (SE)

156-304 Family, Kin, and Community 3 cr.

A cross-cultural comparison of the form and function of such social institutions as marriage and the family; age, sex and kin groups; task groups; caste and class. (F)

156-342 Human Evolution 3 cr.

See 478-342.

156-364 Human Variability 3 cr.

See 478-364.

156-370 Internship in Museum Anthropology 1-4 cr.

Cooperative program with the Neville Public Museum. Students negotiate a specific anthropologically related task to be carried out at the museum under staff supervision and seek approval of a UWGB anthropology faculty sponsor. (F,S)

156-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

156-497 Internship in Anthropology 3-12 cr.

See Courses with Variable Content.

156-498 Independent Study 1-4 cr.

See Courses with Variable Content.

168 Art**168-101 Tool Safety and Materials 2 cr.**

Acquaints students with a wide range of materials and safe working practices and methods, including power hand tools, joining, glues, plastics, wood, metal, fiberglass, brazing, riveting, forging and vacuumforming. (F,S)

168-105 Drawing 3 cr.

Introduction to studio art work and to fundamental concepts of drawing structure and designing; emphasis upon two-dimensional art work employing various drawing techniques in black and white media. (F,J,S)

168-106 Design Methods 3 cr.

Investigates spatial design as a decision-making and problem-solving process bounded by criteria which include human sensory systems, basic structural systems and materials. (F,S)

168-107 Two-Dimensional Design 3 cr.

Design studio art work and fundamental concepts of art structure and composition, color and design, applying the elements and principles of design. (F,S)

168-210 Introduction to Painting 3 cr.

Painting media; oil, watercolor, and acrylics and their inherent expressive qualities and characteristics. (F,S)

168-220 Introduction to Sculpture 3 cr.

Various sculpture media and their inherent expressive qualities; construction of basic forms using clay, plaster, cement and other media. (F,S)

168-230 Introduction to Ceramics 3 cr.

The forming of clay by pitch, slab and coil methods and throwing on the wheel; pottery decoration and glaze application. (F,S)

168-243 Introduction to Photography 3 cr.

See 246-243.

168-250 Introduction to Textiles 3 cr.

Ways in which prewoven fabrics can be altered through surface embellishment and through assembling and reconstructing; integration of textile processes and concepts with those normally associated with painting, drawing, and sculpture. (F)

168-260 Introduction to Art Metals: Jewelry 3 cr.

Designing and creating jewelry projects using varied metal techniques, processes and metal media; forming, shaping and designing of jewelry. (F,S)

168-270 Introduction to Printmaking 3 cr.

Exploration of various printmaking media such as relief, monoprint, calligraph, intaglio and lithography. (F,S)

168-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

168-298 Independent Study 1-4 cr.

See Courses with Variable Content.

168-302 Intermediate Drawing 3 cr.

Experimental conceptual and transformative approaches to drawing. The human figure will be subject matter for half the course. (F,S)

168-311 Intermediate Painting 3 cr.

Techniques for personal expression; composition and development of imaginative concepts in oil paint and allied media. (F,S)

168-321 Intermediate Sculpture 3 cr.

Intermediate work in sculpture: metal fabrication, casting of metals, carving, lamination of plastics, and innovative methods of working with different materials. (F,S)

168-331 Intermediate Ceramics 3 cr.

Intermediate work in ceramic media; mold work, wheel work or handbuilding; aesthetics, history and technology of ceramics. (F,S)

168-343 Photography II 3 cr.

See 246-343.

168-344 Photography III 3 cr.

See 246-344.

168-345 Designing Multiple Media Applications of Photography 3 cr.

See 246-345.

168-346 Photographic Design for Print Media 3 cr.

See 246-346.

168-353 Textiles: Fiber Techniques 3 cr.

Varied techniques for creating two- and three-dimensional forms with fibers and pliable linear materials; weaving (on- and off-loom) with crochet, knotting and other fiber construction techniques. (F)

168-355 Intermediate Textiles: Papermaking 3 cr.

Potential of handmade paper as a primary artistic material; pulp processing, sheet forming, poured pulp, color application, and three-dimensional techniques in casting, molding and assemblage. (S)

168-364 Intermediate Art Metals: Jewelry 3 cr.

Jewelry and art metals techniques: casting, fabricating and assembling mixed-media objects. (S)

168-371 Intermediate Relief Printing 3 cr.

Relief printing techniques: woodcut, collage print, linoleum cut and wood engraving. (FE)

168-373 Intermediate Intaglio 3 cr.

Intaglio techniques: dry point, aquatint and various etching procedures. (FO)

168-375 Intermediate Screen Printing 3 cr.

Studio work in screen printing, including basic materials and equipment, blockout stencil making, paper stencil, pochoir, water soluble film, and photo-emulsion technique. (SO)

168-377 Intermediate Lithography 3 cr.

Lithography techniques: plate lithography, drawing and process. (FE)

168-390 19th and 20th Century Art 3 cr.

The evolution of art styles from neo-classicism to surrealism and their historic and cultural origins. Field trip required. (F)

168-395 Exhibition Development and Design 2 cr.

Standards, practices and methods of the museum and art gallery profession: planning, promotion and publicity; development of educational materials and programs; exhibition design and installation; proper handling and treatment of works of art. Field trips required. (F)

168-396 Gallery Practicum 2 cr.

Practical experience in the practices and methods of the museum and art gallery profession, emphasizing exhibition design, installation and evaluation. Field trips required. (S)

168-402 Advanced Drawing 3 cr.

Development of personalized imagery with continuing technical and formal exploration. The human figure will be subject matter for one half of the course. (F,S)

168-410 Advanced Painting 3 cr.

Painting students explore specific problems relevant to their individual artistic development, focusing upon portfolio development and a formally and conceptually consistent body of work. May be repeated to a maximum of 9 cr. (F,S)

168-421 Advanced Sculpture 3 cr.

Techniques and equipment; construction of tools; investigation of traditional and innovative materials as related to the needs and aesthetic considerations of the sculptor. May be repeated to a maximum of 9 cr. (F,S)

168-431 Advanced Ceramics 3 cr.

Extension and development of ceramic techniques and aesthetics into a significant personal expression and development of a portfolio. May be repeated to a maximum of 9 cr. (F,S)

168-443 Advanced Problems in Photography 3 cr.

See 246-433.

168-444 Time Duration Visual Media 3 cr.

See 246-444

168-453 Advanced Textiles 3 cr.

Exploration of one area of textiles or papermaking, such as handmade paper, weaving and related fiber construction techniques, alteration of prewoven fabrics; development of individual expressive style. (F,S)

168-463 Advanced Art Metals: Jewelry 3 cr.

Advanced techniques in jewelry; creative research and investigation of metals and jewelry media. May be repeated to a maximum of 9 cr. (F,S)

168-470 Advanced Printmaking 3 cr.

Advanced techniques and individual expression in one area of printmaking: intaglio, relief, lithography or screen printing. May be repeated to a maximum of 9 cr. (F,S)

168-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

168-490 Contemporary Art: Post 1945 3 cr.

Art movements from abstract expressionism to the present. (S)

168-495 Advanced Arts Management 2 cr.

Advanced study of exhibition development within the context of ongoing exhibitions in the Lawton Gallery or other campus galleries and exhibition spaces. (F,S)

168-497 Gallery Management Internship 3-9 cr.

Internship with an outside museum or gallery. Activities are determined by the curator of art and a professional in the sponsoring institution. See Courses with Variable Content.

168-497 Internship 3-12 cr.

See Courses with Variable Content.

168-498 Independent Study 1-4 cr.

See Courses with Variable Content.

204 Biology**204-202, 203 Principles of Biology I, II 4, 4 cr.**

Biological principles, structure and function of organisms, with consideration of interactions at cellular level and examination of the relationships of organisms to the environment. Includes laboratories. (F,S)

204-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

204-298 Independent Study 1-4 cr.

See Courses with Variable Content.

204-302 Principles of Microbiology 4 cr.

Microorganisms and their activities; their form, structure, reproduction, physiology, metabolism, and identification; their distribution in nature and their relationship to each other and other living things. (F,S)

204-303 Genetics 3 cr.

Mechanisms of heredity and variation, their cytological and molecular basis and their implications in biological technology. (F)

204-304 Genetics Laboratory 1 cr.

Basic techniques of genetic research; laboratory investigation and analysis of animal, plant, and human patterns of inheritance. (F)

204-305 Biological Microtechnique 3 cr.

Theory and practice in cytological and histological laboratory techniques, including fixation, staining, and sectioning of plant and animal tissues for microscope slides and mounts of cells for study of cell division, gamete formation and chromosome behavior. (J)

204-310 Plant Taxonomy 3 cr.

Identification and classification of vascular plants of North America, emphasizing flora of Wisconsin and including topics in evolution of vascular plants. Field trip required. (SE)

204-311 Plant Physiology 4 cr.

General physiology of vascular plants within the context of a plant life cycle: seed dormancy and germination, metabolism, transport systems, mineral nutrition, patterns of plant growth and development, growth regulators, reproduction and senescence. (SO)

204-312 Mycology 3 cr.

Morphology and taxonomy of lower and higher fungi; studies of fungi in medicine and allergies, in brewing, baking, and other industries; poisonous and edible fungi; techniques in collection, isolation, pure culture and identification. Field trips required. (S)

204-317 Structure of Seed Plants 3 cr.

Anatomy of seed plants, with special emphasis upon tissue differentiation and structure. (FE)

204-320 Field Botany 3 cr.

Identification and natural history of plants indigenous to northeastern Wisconsin. Field trip required. (F)

204-340 Comparative Anatomy of Vertebrates 4 cr.

Comparison of organ systems of vertebrates, emphasizing anatomy leading to human adaptations. Laboratory dissection of shark, mud puppy, and cat. (F)

204-342 Ornithology 3 cr.

Overview of avian biology, emphasizing adaptation and ecology. Identification of North American bird species and other avian families. Required field trips visit some of the region's most interesting birding areas. (SO)

204-343 Mammalogy 3 cr.

Comprehensive study of mammals, including systematics, anatomy, physiology, behavior, and ecology. Laboratory studies include work with specimens from the Richter Natural History Museum. Field trips required. (SE)

204-345 Animal Behavior 3 cr.

Biology of animal behavior patterns; behavioral interactions of animals with their environment. (S)

204-346 Comparative Physiology 3 cr.

Ways in which dissimilar organisms perform similar functions. Behavioral, physiological, and biochemical solutions to problems imposed on invertebrate and vertebrate animals by their environment. (SE)

204-347 Developmental Biology 4 cr.

Processes of development: growth, differentiation, and morphogenesis during animal development; gametogenesis, fertilization, cleavage, gastrulation, and organogenesis. Observation of development of slime molds, echinoderms, amphibians, and chicks, using slides and live organisms. (S)

204-402 Advanced Microbiology 3 cr.

Detailed study of microorganisms from viruses to fungi in their environment. Study of both free-living and pathogenic organisms and their degrading abilities. Field trip required. (F)

204-405 Microbial Physiology 3 cr.

Study of microbial physiological and biochemical adaptations to temperature, oxygen, light, nutrients, and other environmental factors. Primary emphasis on the bacteria. (SE)

204-407 Molecular Biology 3 cr.

Molecular approaches to biological problems, emphasizing study of informational macromolecules. Topics include replication, control, expression, organization, and manipulation of genes; RNA processing; protein processing; transposons; oncogenes; growth factors; genetic control of development and the immune system. (S)

204-408 Molecular Biology Laboratory 1 cr.

Molecular biology of nucleic acids and the techniques that form the basis of biotechnology. Topics include electrophoresis, restriction mapping, hybridization, plasmid analysis, and DNA cloning (recombinant DNA library construction, screening, and mapping). (S)

204-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

204-497 Internship 1-4 cr.

See Courses with Variable Content.

204-498 Independent Study 1-4 cr.

See Courses with Variable Content.

Other courses that count toward a major or minor in Biology are:

362-302 Principles of Ecology 3 cr.

362-363 Plants and Forest Pathology 3 cr.

362-401 Stream Ecology 3 cr.

362-403 Limnology 3 cr.

362-475 Ecological Dynamics 3 cr.

478-312 Evolutionary Processes 3 cr.

478-318 Mammalian Reproduction 3 cr.

478-402 Human Physiology 3 cr.

478-404 Animal Physiology Laboratory 1 cr.

478-413 Neurophysiology 3 cr.

216 Business Administration**General Courses****216-202 Business and Its Environment 3 cr.**

The major components of the business enterprise and its resources, competitive and regulatory environments; pricing, profit, finance planning, controls, ethics, environmental impact, social responsibility and other important concepts; environmental issues that challenge the business leader. (F)

216-203 January Abroad: Mexican Business Explorations 3 cr.

Economic development issues and business practices in Mexico; the cultural, political, social, economic and historical context in which Mexican businesses operate. (J)

216-206 Law and the Individual 3 cr.

The American legal system: its principles, processes, language, ethics and laws from the viewpoint of the individual, including family, personal injury, property, consumer, privacy, probate and administrative laws. (F,S)

216-217 Quantitative Methods in Administration 3 cr.

Applications of mathematics, including probability, statistics, linear programming, game theory and associated models, and probability tables to practical business decisions; translation of typical business problems to obtain and examine numerical answers. (F,S)

216-281 Student-Led Courses 1-4 cr.

See Courses with Variable Content.

216-282 Personal Financial Planning 3 cr.

Explores a variety of consumer problems such as budgeting, financing and investing; philosophies and values of consumers; psychology of consumer behavior; legal aspects of consumer rights. (S)

216-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

216-298 Independent Study 1-4 cr.

See Courses with Variable Content.

216-372 Introduction to International Business 3 cr.

Factors affecting business on an international level, including law, finance, marketing, management, political and social elements. (F)

216-395 Practicum in Financial Statement Analysis 3 cr.

See 107-395.

216-478 Senior Distinction in Business Administration 3 cr.

See Courses with Variable Content.

216-481 Student-Led Courses 1-4 cr.

See Courses with Variable Content.

216-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

216-484 Senior Honors Project 3 cr.

See Courses with Variable Content.

216-497 Internship 3-12 cr.

See Courses with Variable Content.

216-498 Independent Study 1-4 cr.

See Courses with Variable Content.

Accounting and Quantitative Methods**216-317 Computer Techniques for Business Decisions 3 cr.**

Quantitative decision-making problems in business, including many classical business optimization problems, and new approaches to and computer applications in their solutions. (J)

216-451 Design of Computer-Assisted Systems 3 cr.

Designing computer-assisted processes in organizations: feasibility analysis, design, implementation and evaluation; management information and decision support systems; fundamentals of sociotechnical systems design. (F,S)

216-452 Management Information and Decision Support Systems 3 cr.

Use of computer technology in management decision-making through a variety of decision-making models. Review and applications of management information systems, organizational concepts, spreadsheet software and modeling. (F,S)

Marketing**216-322 Introductory Marketing 3 cr.**

The marketing system and the managerial techniques used to market goods, services and organizations. Relationships between marketing activities and economic, political and social institutions; understanding consumer behavior; product, price, promotion and distribution decisions. (F,J,S)

216-325 Public Relations 3 cr.

Internal and external relations of the business enterprise or governmental unit; attitudes and actions of the public and how they affect internal relations and conduct. (S)

216-327 Selling and Sales Management 3 cr.

Principles and techniques of successful selling that lead to a mutually profitable relationship between salesperson and customer. The nature and scope of sales management: selecting and training sales personnel, importance of customer satisfaction, relationship of company philosophy to the sales force, fundamentals of communication processes. (F)

216-422 Retailing Management 3 cr.

Operation of retail and wholesale enterprises: nature of retailing in the U.S.; basic requirements for successful store management; store location, building, fixtures, equipment, interior layout, organizational structure; personnel management; merchandise management; sales promotion and customer service; controls; coordination and management. (S)

216-424 Marketing Research 3 cr.

Techniques of obtaining and analyzing information about marketing problems; obtaining and interpreting data from primary and secondary sources for marketing decisions. (F)

216-425 Promotional Strategy 3 cr.

Analysis of the environments in which persuasive efforts take place; applications of concepts from communication theory; promotional tools to communicate to various publics about products, services, ideas and institutions, as viewed from a promotion system perspective. (F)

216-426 Marketing Management 3 cr.

Strategic interrelationships, development of analytical techniques and abilities, and decision making in marketing. (S)

216-428 Consumer Behavior 3 cr.

Theories of buyer behavior, including ultimate and industrial customers, and their implications for marketing management. (S)

216-429 Marketing Strategies for Nonbusiness Institutions 3 cr.

Applications of marketing concepts, strategies and techniques to the problems faced by nonprofit institutions as they relate to various societal needs. (J)

Finance**216-343 Corporation Finance 3 cr.**

Organization for management of finance of business units; management of fixed and working capital; short- and long-range financial planning; money and capital markets; failure and reorganization. (F,S)

216-344 Real Estate Principles 3 cr.

The nature of real estate ownership, the importance of land, contracts, title transfer, and mortgage instruments; real estate valuation, finance and investment; impact of taxation, marketing, insuring and laws affecting real estate. Not intended to prepare students for the real estate licensing examination. (F)

216-345 Principles of Risk Management 3 cr.

Theory and principles of risk management; techniques and bases for decision-making in management of business and personal risks; introduction to the insurance function. (S)

216-347 Financial Markets and Institutions 3 cr.

The role of financial markets and institutions in forming and managing capital resources; financial intermediation and disintermediation; financial organization, structure and investment management strategies of financial institutions such as commercial banks, savings and loans, credits unions and insurance companies. (F,S)

216-348 Practicum in Computer-Assisted Financial Analysis 3 cr.

See 107-348.

216-442 Principles of Investment 3 cr.

Construction and management of investment portfolios; meeting investment needs of personal and institutional investors; reducing investment risks inherent in selection; inflation, depression and money market fluctuations. (F,S)

216-443 Financial Planning and Control 3 cr.

The efficient management of working capital; analysis and projection of financial data for planning, control, and dealing effectively with the financial dimensions of management decisions. (F)

216-445 International Financial Management 3 cr.

Conceptual framework for financial decisions of multinational firms in international setting, impacts of international factors on managing resources; impacts of multicurrency, economic, and political environments. (S)

216-446 Advanced Corporation Finance 3 cr.

Long- and short-term financial decisions in environment of uncertainty; in-depth coverage of theories and practices of capital budgeting, cost of capital, dividend policies, and financing; mergers, acquisition, bankruptcy and alternative financing methods. (F)

216-447 Investment Analysis and Portfolio Management 3 cr.

Fundamental and technical analysis within a framework of markets and uncertainty; modern portfolio theory and techniques for adjusting portfolio returns for risk; development of investment strategy within the environment facing investors or portfolio managers. (S)

216-450 Bank Administration 3 cr.

Commercial banking theories and practices from a financial management perspective: operations, administration and asset-liability management, including bank services, credit, loan, investment, profitability, cost control and capital budgeting and analysis; implications of deregulation of the financial industry. (F)

Management**216-362 Human Resource Management 3 cr.**

Personnel management: manpower planning, selection, recruitment, training, motivation, fringe benefits, salary and wages, and labor relations. (F,S)

216-366 Collective Bargaining 3 cr.

Techniques and problems in dealings between organized employees and their employers; industry-wide collective bargaining; constraints in the public service; administration of collective bargaining agreements. (F)

216-382 Introductory Management 3 cr.

The realities of management in contemporary situations, emphasizing the functional approach; understanding the management environment; knowledge required by managers to function effectively and adjust to rapid changes. (F,S)

216-384 Industrial Management 3 cr.

The management of physical and human resources in the production and operation functions for producing goods or providing services in manufacturing and processing enterprises. (F,S)

216-385 Management of the Nonprofit Organization 3 cr.

Operation and management of organizations that operate for purposes other than generating profit for owners or shareholders; operational principles and management control techniques in such nonprofit institutions as the hospital and the university. (S)

216-386 Small Business Management 3 cr.

Applications of management concepts in the development and operation of small businesses and business start-ups. (F)

216-389 Organizational Behavior 3 cr.

Application of the behavioral sciences to business organization, including motivation theory, learning theory, leadership theory and small group behavior. (FE,S)

216-462 Seminar in Personnel Management 3 cr.

Analysis of personnel problems and issues and their translation into corporate personnel policies; urban, cultural and legal realities in personnel matters; decisions affecting the development and administration of personnel policies. (S)

216-463 Labor Legislation and Administration 3 cr.

Federal and state statutory and administrative regulation of social legislation and benefit programs; other regulations, including workmen's compensation, unemployment compensation, social security, and labor laws affecting women and children. (S)

216-467 Compensation and Benefits Planning 3 cr.

Theories of compensation and work motivation and their impact on various reward systems, and the rationale for decisions affecting the selection of benefits. (F)

216-482 Management Planning and Control 3 cr.

Planning and control processes; completing the planning cycle through implementation, control and feedback; applications of organizational guidance, systems design, motivation, resource allocation, communication, control of variance and systems integration in project and process settings. (F,S)

216-485 Managerial Economics 3 cr.

Applications of the basic theoretical tools of micro- and macro-economic analysis to the problems of business management, including such topics as demand, production, costs, pricing and forecasting as well as current economic issues such as environmental policies and regulations. (S)

216-486 Small Business Feasibility Analysis 3 cr.

Methods of determining the feasibility of proposed businesses, based on the developer's objectives, the site, the investor(s), and the constraints and opportunities of the market. (S)

216-487 Ethics and Social Issues in Business 3 cr.

Examines the ethics in business decision-making and the appropriate social role of the business firm; discussion of ethical positions in a range of issues such as the corporate role in government, impact of businesses upon the environment, and business relations with consumers, employees and minority groups. (J)

216-488 Rational Decision-Making 3 cr.

Quantitative and non-quantitative approaches to rational decision-making in organizations, including probability, decision analysis, gaming and risk assessment. (F)

225 Chemistry**225-101 Fundamentals of Chemistry 1 cr.**

Basic qualitative concepts and principles of chemistry demonstrated through experiments using household materials and equipment and applied to everyday living. Chemical and physical properties of substances; names, formulas and chemical equations; types of chemical reactions. (S)

225-108 General Chemistry 5 cr.

Survey of basic concepts of matter: its measurement, properties and states; atomic structure and chemical bonding; solutions; acid-base theories; introduction to organic chemistry and biochemistry. Full graduation credit not awarded for both 225-108 and either 225-211 or 225-212. (F,S)

225-211, 212 Principles of Chemistry I, II 5, 5 cr.

Atomic structure, chemical bonding, periodic table, thermochemistry, properties of gases, molecular structure and properties, solutions, chemical equations; thermodynamics, kinetics, chemical equilibrium, solubility, acid-base reactions, oxidation-reduction, nuclear reactions. (F,S)

225-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

225-298 Independent Study 1-4 cr.

See Courses with Variable Content.

225-300 Bio-Organic Chemistry 3 cr.

Those aspects of the field pertinent to students entering the biologically related disciplines: Basic organic chemistry, natural products, and molecules important to biological systems. Credit not given for both 225-300 and 225-302 or 225-303. (S)

225-301 Bio-Organic Chemistry Laboratory 1 cr.

Optional laboratory course to accompany 225-300. (S)

225-302, 303 Organic Chemistry I, II 3, 3 cr.

The chemistry of carbon compounds: structure, reactions, synthesis, stereochemistry, reaction mechanisms, spectroscopy, nomenclature and physical properties of both aliphatic and aromatic compounds; covers all common functional groups and natural products. (302, F; 303, S)

225-304, 305 Organic Chemistry Laboratory I, II 1, 1 cr.

Basic and intermediate synthesis, basic and intermediate instrumental techniques in organic chemistry. (304, F; 305, S)

225-311 Analytical Chemistry 4 cr.

Theory and practice of chemical analysis. Gravimetric analysis techniques, computations, solubility products and applications. Volumetric analysis techniques; computations; acid-base, oxidation-reduction, precipitation and complexometric titrations. Introductory instrumental analysis, spectrophotometric and electroanalytical methods. (S)

225-320 Thermodynamics and Kinetics 3 cr.

Temperature, heat and work, thermodynamic properties of gases, solids and solutions; homogeneous and heterogeneous equilibria; thermodynamics of electrochemical cells; statistical thermodynamics; calculation of thermodynamic properties; chemical kinetics. (F)

225-321 Structure of Matter 3 cr.

Integrated approach to the concepts of physical chemistry and modern physics: introduction to quantum theory, symmetry, atomic and molecular structure, crystal structure, spectroscopy, X-rays, properties of gases, liquids and solids. (S)

225-322 Thermodynamics and Kinetics Laboratory 1 cr.

Laboratory course to accompany 225-320. (S)

225-323 Structure of Matter Laboratory 1 cr.

Laboratory course to accompany 225-321. (S)

225-328 Physiological Chemistry 3 cr.

See 694-328.

225-330 Biochemistry 3 cr.

Nature and function of the important constituents of living matter, their biosynthesis and degradation; energy transformation, protein synthesis and metabolic control. (F)

225-331 Biochemistry Laboratory 1 cr.

Laboratory course to accompany 225-330. (F)

225-402 Advanced Organic Chemistry 3 cr.

Physical organic approach to chemistry; reaction mechanisms, molecular orbital theory, conservation of orbital symmetry, aromaticity, stereochemistry, linear free energy relationships, isotopes effects, pericyclic reactions, photochemistry, natural products and advanced topics in molecular spectroscopy. (FO)

225-403 Advanced Organic Chemistry Laboratory 1 cr.

Laboratory course to accompany 225-402; advanced molecular spectroscopy, organic qualitative analysis, physical organic chemistry experiments. (FO)

225-407 Molecular Biology

See 204-407.

225-408 Molecular Biology Laboratory 1 cr.

See 204-408.

225-410 Inorganic Chemistry 3 cr.

Survey of the elements including coordination and organo-metallic compounds. Modern bonding theories, group theory and periodic properties extended and applied to chemical systems and reactions. General acid-base theory and non-aqueous solvent systems. (FE)

225-411 Inorganic Chemistry Laboratory 1 cr.

Laboratory course to accompany 225-410. (FE)

225-413 Instrumental Analysis 4 cr.

Theory and practice of analysis by instrumental methods, including methods based on absorption and emission of radiation, electroanalytic methods, chromatographic methods and radiochemical methods. (F)

225-417 Nuclear Physics and Radiochemistry 3 cr.

Properties and reactions of atomic nuclei; application of the properties of radioactive nuclei to the solution of chemical, physical, biological and environmental problems. (SO)

225-418 Nuclear Physics and Radiochemistry Laboratory 1 cr.

Laboratory course to accompany 225-417. (SO)

225-440 Environmental Chemistry 3 cr.

See 362-440.

225-478 Senior Distinction in Chemistry 3 cr.

See *Courses with Variable Content*.

225-483X Selected Topics 1-4 cr.

See *Courses with Variable Content*.

225-497 Internships 3-12 cr.

See *Courses with Variable Content*.

225-498 Independent Study 1-4 cr.

See *Courses with Variable Content*.

242 Communication and the Arts**242-102 History of the Visual Arts: Ancient to Medieval 3 cr.**

Survey of the visual arts: prehistoric to the late Gothic period. (F)

242-103 History of the Visual Arts: Renaissance to French Revolution 3 cr.

Survey of the visual arts: early Renaissance to the contemporary period. (S)

242-121 Masters and Masterpieces of Music 3 cr.

The musical styles of several well-known composers as evident in selected compositions; review of a basic repertoire of musical compositions of various forms and styles. (S)

242-141 Introduction to the Performing Arts: Theatre and Music 3 cr.

The literature and the artists in theatre and music from a historical perspective. Includes research prior to performances, performance attendance, artist interviews, and writing of critiques. (F)

242-142 Performing Arts Perspectives: Experience and Evaluation 3 cr.

Understanding the elements of performance from the perspective of the audience and critic; includes research prior to performances, performance attendance, artist interviews, and writing of critiques. (S)

242-160 Introduction to Language 3 cr.

Study of language and linguistics, including basic principles and methods in structural linguistics, social and regional variation in language, historical change, and introductory study of meaning. (S)

242-202 Concepts and Issues in Modern Art 3 cr.

Key concepts of modern art, the visual art which emerged and the corresponding issues they raise; explores the wider cultural matrix in which modern artistic ideas develop.

242-210 Film and Society 3 cr.

The ways in which films reflect and influence society. Examines films for their social content and the social milieu of their creation, the ways in which different cultures use films and the cross-cultural influences which occur. (F)

242-221 Popular Music Since 1955 3 cr.

Evolution of popular music since 1955 and its relationship to society, especially rock music in the 1960's and early 1970's, the period of greatest stylistic expansion and also the period in which the music was most intimately intertwined with its social milieu. (JE)

242-225 American Indian Studies: Arts and Ceremonial Traditions 3 cr.

The cultures of North American Indians through their visual arts and crafts, musical forms and ritual ceremony, and traditions; emphasizes the arts, music and ceremonies of woodland Indians of Wisconsin. (S)

242-226 American Indian Studies: History and Verbal Traditions 3 cr.

The cultures of North American Indians through their history, literature and languages; emphasizes the history, literature and languages of woodland Indians of Wisconsin. (F)

242-231 Introduction to Graphic Communication 3 cr.

Basic principles and potentials of visual communication; application of design concepts, exploring aspects of printing, preparation of mechanicals, type units of measurement, letterspacing, and type styles as communicative devices. (F)

242-243, 244 Native American Cultures: Film and Performance I, II 3, 3 cr.

"Popular" and stereotypical images of American Indian people in feature and documentary films and critical commentaries; group processes in creating and developing performance pieces derived from American Indian materials. (F, JE)

242-261 Aesthetic Awareness: Foundations 3 cr.

Focuses on escaping habitual ways of perceiving and redeveloping subjective feeling from which aesthetic responses come; starts with the formal elements and vocabulary of visual arts and finds their parallels in other arts and other environments. (F,J,S.)

242-272 Women in the Visual and Performing Arts 3 cr.

Studies artistic works by women in order to re-value their place in the history and development of the arts.

242-281 Student-Led Courses 1-4 cr.

See Courses with Variable Content.

242-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

242-298 Independent Study 1-4 cr.

See Courses with Variable Content.

242-301 Communication and the Arts Projects in the Community 1-5 cr.

Projects vary but emphasize service, creative, developmental and communications activities in the community. May be repeated for credit. (F,S)

242-323 Language and Human Conflict 3 cr.

Language as cause and consequence of racial, social, ethnic and national conflict; problems in dialect differences, language and nationalism, linguistic and cultural minorities, language and world view. (F)

242-329 Cultural Cross-Communication: Expressive Traditions 3 cr.

Cultural conflict, influence and enrichment that arise when differing traditions of the arts come into contact. Variable content, including such areas as ethnomusicology, jazz history, American show music, Japanese and Indian art. Course may be repeated once with a different topic. (F,S)

242-331, 332 Graphic Communications Studio I, II 3, 3 cr.

Problem-solving techniques in graphic communication: expansion of visual, verbal, technical and management skills through group work and evaluation in larger-scale projects. (S,F)

242-361 Aesthetic Awareness: Interpretation 3 cr.

The experience of the perceiver and the process of interpretation; development of the senses and altering of habits of perception through exploration of selected aesthetic objects and laboratory experimentation. (F)

242-362 Aesthetic Awareness: Psychology of Aesthetic Perception 3 cr.

The psychological and physiological processes that give rise to aesthetic perception and arousal; current work on cognition and perception and the relationships between these processes and art and other sources of the aesthetic experience. (F)

242-364 Aesthetic Awareness: Creation 3 cr.

Explores the artist's aesthetic experience: how and why the artist works, the artist's relationship to society and audience, and the artist's concerns with creative process and end products. (S)

242-370 Modern American Culture 3 cr.

Fad, fashion and popular art: the media, music, advertising and entertainment as they express the intimate unguarded concerns of modern America. (F)

242-375 Communication Skills: Language of Metaphor 3 cr.

Examines metaphors and the metaphoric process and seeks to develop skills in creating and understanding metaphors, especially those that have become an unconscious part of our language and culture. (S)

242-380 The Arts: London 3 cr.

Group study of the arts in and near London: performing arts events, galleries, museum collections, neighborhood art groups; development of historical perspective as well as awareness of contemporary British artistic expression. (J)

242-395 Images of Women in Contemporary Arts 3 cr.

Investigates whether visual and verbal artists portray archetypal images of woman, how their images compare with other profiles of women in post-World War II America, and the significance of their creations. Establishes a method of interpretation and concentrates on a few artists in depth.

242-430 Mass Media and Society 3 cr.

Analysis of the media as persuaders, informers, entertainers; public opinion, readership and audience studies; communication theory; legal aspects; critical examination of mass communication in the changing social environment. (S)

242-432 Graphic Communications Workshop 3 cr.

Applying concepts in graphic design, technology and management in projects for university or nonprofit groups from concept to finished product: design, writing copy, contacting printers, interacting with clients, etc. (F,S)

242-436 Environmental Design Studio I 3 cr.

See 950-436.

242-437 Environmental Design Studio II 3 cr.

Analysis and design of group spaces, such as houses, classrooms, waiting rooms and other spaces intended for occupancy by groups of people. (S)

242-438 Environmental Design Studio III 3 cr.

See 950-438.

242-439 Environmental Design Studio IV 3 cr.

Each student proposes, designs and executes a design/research project on an elected topic. Individual projects are acceptable in some instances; projects by design teams are encouraged. (S)

242-450 The Construction of Public Images 3 cr.

Develops skill in reading the imagery of mass media and public environments: image problems in news, promotion, entertainment, photography, tourism, sports, landscapes and other realms. (F)

242-474 Aesthetic Awareness, Traditional Art Styles 3 cr.

Interpretation of the arts based upon stylistic analogy and the assumption that a change in cultural style signals a change in the style of human consciousness itself; comparative study of artists, writers, architects and thinkers from the Renaissance to the modern periods. (F)

242-475 Aesthetic Awareness: Avant-garde Styles 3 cr.

Comparative study of common stylistic elements operating in different forms in the work of avant-garde artists, composers, playwrights and novelists; emphasizes the nature of innovative consciousness. (S)

242-477 Women as Creative Agents 3 cr.

The multiple ways women have exercised their creative capacities and the external and internal factors that support creative work. Examines some of the assumptions about creativity in women by comparing them with the evidence from biographies of creative women in several fields. (S)

242-481 Student-Led Courses 1-4 cr.

See Courses with Variable Content.

242-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

242-484 Senior Honors Project 3 cr.

See Courses with Variable Content.

242-497 Internship in Graphic Communications 3-12 cr.

Instruction and experience in a professional graphics environment, where students work in any area of the field (management, design, technical processes) under professional and faculty supervision. No more than three credits may be used to meet requirements for a major or minor. (F,S)

242-497 Internship in Communication and the Arts 3-12 cr.

See Courses with Variable Content.

242-498 Independent Study 1-4 cr.

See Courses with Variable Content.

246 Communication Processes

246-100 Writing Skills Laboratory 3 cr.

A basic course in college-level expository writing, including conventional forms of argumentation, comparison/contrast, and research papers. (F)

246-102 Introduction to Mass Communication 3 cr.

Survey of the interplay between American society and mass media, both print and broadcast; commercial, cultural, and political functions of the media; popular taste; the pseudo-environment of symbols; the concept of a free and responsible press. (F)

246-133 Fundamentals of Public Address 3 cr.

Examination of the principles of oral message preparation and presentation. Students will prepare and present actual public communications. (F,J,S)

246-161 English as a Second Language: Reading and Comprehension 3 cr.

Development of academic competence in reading and listening skills to enable nonnative speakers of English to function successfully at the college level in an American university; includes reading, lecture notes, test-taking, and library skills. (F,S)

246-163, 164 English as a Second Language: Expository Writing I, II 3, 3 cr.

Development of academic competence in writing skills to enable nonnative speakers of English to function successfully at the college level in an American university; focuses on English grammar, essay organization, academic writing style, prewriting, drafting, revising, editing, research paper techniques. (F,S)

246-166 Fundamentals of Interpersonal Communication 3 cr.

Principles of personal interaction as a basis of communication; role of communication in interpersonal relationships; role of identity and self-concept in communication behavior; significance of information reception and evaluation in the effectiveness of communication. (F,S)

246-200 Introduction to Communication Processes 3 cr.

Overview of a variety of communication processes: what they share, how they differ, their uses for communication, for art, and for individual growth, their effect on the social fabric; includes practical experience as well as a theoretical framework. (F)

246-201 Human Information Processing 3 cr.

The study of human cognition from an information processing perspective. Examines the processes of sensation, perception, memory, thinking, language, and problem solving with special attention to their roles in communications. (S)

246-203 Newswriting Laboratory 3 cr.

Assignments in gathering and writing news, copy editing; emphasis on developing an objective, clear, accurate and forceful style. (F,S)

246-205 Intercultural Communication 3 cr.

Provides a conceptual framework for understanding and coping with the cultural differences confronted by international students in the U.S. and by American students considering study, travel, or work abroad or who would like to be acquainted with the viewpoints of international students. (J)

246-220 Controlling Bibliographic Information 3 cr.

Introduction to libraries as information systems, including print and electronic information control and retrieval, systems of library classification, information search tools and on-line data bases, reference materials, indexes, specialized collections, and bibliographic networks. (F)

246-243 Introduction to Photography 3 cr.

The creative process in photography is studied to develop visual perception through active participation in discussions and photographic exercises, including analysis of student work. 35mm camera required. (F,S)

246-253 Practicum in Print Journalism I 1-3 cr.

Supervised experience on the staff of the student newspaper, providing for development of skills in some facet of newspaper operation: reporting, feature writing or photojournalism. Repeatable for credit. (F,S)

246-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

246-298 Independent Study 1-4 cr.

See Courses with Variable Content.

246-303 Feature Writing 3 cr.

Writing feature articles for magazines and newspapers; emphasizes information gathering, professional standards, and effective style. (S)

246-305 Elements of Electronic Media 3 cr.

Exploring the potentials of electronic media; analyzing communication strategies employed in these media; examining policy and practice in commercial and educational operations and the forces that control them. (F)

246-306 Radio Broadcasting 3 cr.

Commercial and non-commercial radio as a communications medium and as a business enterprise; radio audiences, audience ratings, programming and program formats, news, advertising, promotion and sales. (F)

246-307 Television Production Techniques 3 cr.

Exploration of various uses of television as an informative, persuasive, and entertainment medium. Combines analysis of current uses of the medium in a professional context with practical experience in planning and producing a finished product for television. (F,S)

246-308 Telecommunications Delivery Systems 3 cr.

Historical development, economics, and current operations of telecommunications technology and its impact on society; programming telecommunications systems, interactive computer uses, changing media formats and delivery systems, and applications in the communications environment of the future. (S)

246-309 Electronic Media Commercial Campaigns 3 cr.

TV/media commercials as a unique form of communication. Through the use of student projects, both individual and team, the demands and rigors of the creative process are revealed. Legal and ethical considerations are also discussed. (S)

246-320 History of the English Language 3 cr.

The origins, development, and cultural background of the English language; evolution of pronunciation and spelling, grammar, vocabulary, meaning and usage in Old, Middle, and Modern English, including contemporary English dialects. (FO)

246-321 Sociolinguistics 3 cr.

Communication in social groups and applications of linguistic principles to the study of social and regional dialects, stylistic variation, bilingualism and language contact, nonverbal behavior, and language in culture. (FE)

246-322 Modern Linguistics 3 cr.

Structure and system in language, with attention to modern English and including principles of structural, computational, and generative-transformational linguistics. (F)

246-325 Applied Linguistics 3 cr.

Application of linguistic principles to specific problem areas such as language learning, reading, English as a second language, and writing; special emphasis upon problems faced by teachers. (S)

246-326 Modern Semantics 3 cr.

A study of meaning in language: how meanings of words and phrases change, how meanings may be measured, the relations between logic and meaning, cultural differences in meaning due to language structure differences, and the effects of situation on meaning. (SO)

246-327 Error Analysis and Treatment in Second Language Learning 3 cr.

Analysis of errors produced by second language learners, their implications for understanding the process of inferring the rules of a second language, and strategies for responding to them. (SE)

246-333 Persuasion and Argumentation 3 cr.

Awareness, appreciation, understanding, and skill in contemporary forms and methods of oral persuasion and argumentation. (SE)

246-335 Organizational Communication 3 cr.

Communication in the modern organization; communication variables in the context of organizational theory; development of a systems perspective regarding functions, structures and levels of communication in the organization; use of evaluation tools and training strategies. (F)

246-336 Theories of the Interview 3 cr.

Basic theory behind conducting effective interviews. Specific types of interviews are discussed, such as selection, counseling, exit, discipline, appraisal, mass media and research interviews, from both the interviewer's and the interviewee's perspective. (F)

246-337 Small Group Communication 3 cr.

The role communication plays in small group processes; focus on development of the special communication skills needed in the small group setting. (SO)

246-343 Photography II 3 cr.

Black and white photography and darkroom printing techniques. Camera required. (FE,S)

246-344 Photography III 3 cr.

Black and white photography, allied media and applications of photography; photographic documentation. Camera required. Repeatable for credit with consent of instructor. (F)

246-345 Multiple Media Applications of Photography 3 cr.

Emphasis upon programmed multi-image designs bringing together photography, graphics and sound. 35mm camera required. (JO)

246-346 Photographic Design for Print Media 3 cr.

Investigation of photographic design and craft for print media. Camera required. (JE)

246-353 Practicum in Print Journalism II 1-3 cr.

Supervised experience on the staff of the student newspaper, providing for the development of advanced skills in some facet of newspaper operation: reporting, feature writing, photojournalism or editing. Repeatable for credit. (F,S)

246-380 Communication Law 3 cr.

Freedom of the press and broadcast media, problems of gag orders, contempt, privacy, censorship, libel and slander. Overview of copyright law, the Federal Communications Act, and other laws affecting communication. (SE)

246-390 Scientific and Technical Communication 3 cr.

Scientific and technical writing for professional and lay audiences, including news articles and features, laboratory reports, training and procedure manuals, grant and contract proposals, and technical reports. (S)

246-403 Advanced Reporting 3 cr.

In-depth, localized reporting of contemporary affairs; emphasis on research skills, writing styles, and the values at stake in the treatment of each story. Student work is designed for newspaper publication or radio broadcast. (J)

246-443 Advanced Problems in Photography 3 cr.

Participants identify an area of interest and the problems implied and are directed to appropriate resources. Seminars support production of a major photographic portfolio. 35mm camera required. (S)

246-444 Time Duration Visual Media 3 cr.

An investigation of visual media requiring the passage of time to be perceived and which enable the producer direct control over that perception. Includes direct experience in production. Camera required. (FO)

246-445 Human Communication Theory 3 cr.

Integration of a variety of theories to promote sensitivity to and understanding of the complexity of human communication; examines the construction of various communication theories, contexts, and processes in communication. (S)

246-460 Publications Management 3 cr.

An analytical, problem-solving approach to communication through print media that applies to a wide variety of situations encountered by publications professionals; strategies for organizing a publications effort; planning, producing and evaluating publications; impacts of technology. (SO)

246-478 Senior Distinction in Communication Processes

See Courses with Variable Content.

246-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

246-487 Communication Audits 3 cr.

A communication audit identifies and analyzes strengths and weaknesses of communications within an organization. In conducting an audit, students gain practical experience as well as furthering their understanding of theoretical concepts in organizational communication. (S)

246-497 Internship 3-12 cr.

See Courses with Variable Content.

246-498 Independent Study 1-4 cr.

See Courses with Variable Content.

255 Community Sciences

255-205 Social Science Statistics 3 cr.

Application of statistics to problems of the social sciences and of statistical techniques in problem definitions; hypothesis construction; and data collection, processing and evaluation. (F,S)

255-301 Foundations for Social Research 3 cr.

An integrated examination of the nature of science, theory and statistics. Emphasizes identifying and interpreting relationships between social phenomena by applying the conceptual tools provided in the course to specific problems. (F,S)

255-302 Methods of Participant Observation and Interviewing 3 cr.

Instruction and experience in extended interviewing and participant observation which are principal data gathering methods in sociology, anthropology, and psychology as well as practical methods in applied fields such as social services, community development, public health, and development studies; theoretical and ethical issues relating to these methods of research. (J)

266 Computer Science

266-151 COBOL: A Business Data Processing Language 3 cr.

Introduction to COBOL, the predominant computer language for commercial applications. (S)

266-155 Computers and Microcomputers 3 cr.

Understanding of computer concepts, systems, software and programming techniques; use of existing packages to gather, display and interpret information; instruction in BASIC. (F,J,S)

266-255 FORTRAN: A Scientific Programming Language 2 cr.

Introduction to FORTRAN programming and the design of elementary algorithms. Includes integer, real number, and alphanumeric processing; one-, two-, and three-dimensional arrays; FORMATS; functions; subprograms. Full credit will not be given for both this course and 325-251. (J)

266-256, 257 Introduction to Computer Science I, II 4, 3 cr.

Basic concepts of computer science, including problem-solving, algorithmic processes, programming in a higher-level language, style and expression, debugging and testing, aspects of string processing, recursion, internal search/sort methods, simple data structure, machine

organization, assembly language and algorithm analysis. Full credit will not be given for both these courses and 325-251. (F,S)

266-283X Selected Topics 1-4 cr.
See Courses with Variable Content.

266-298 Independent Study 1-4 cr.
See Courses with Variable Content.

266-350 Numerical Analysis 3 cr.
Application of computer techniques in solving various mathematical and engineering-related problems; solutions of systems of equations, interpolation, curve fitting, differentiation, integration and solutions of differential equations. (SE)

266-351 Data Structures, Storage and Retrieval 3 cr.
Concepts involved in storage, retrieval and processing of data, including arrays, stacks, queues, linked lists, trees and networks; design of efficient algorithms for problems such as searching, sorting, evaluation of arithmetic expressions, construction of symbol tables and memory management. (S)

266-352 Computer Graphics 3 cr.
Basic techniques of computer graphics, such as point and line plotting, clipping and windowing; use of graphics hardware; construction of graphics packages. (S)

266-353 Computer Organization and Programming 3 cr.
Binary-based number systems, data representations, machine instruction formats, assembly language programming and related systems software. Also includes microprogrammed logic, logic circuits and Boolean algebra. (F)

266-357 Theory of Programming Languages 3 cr.
Comparison of several common languages and discussion of advantages and disadvantages of compiling and interpreting. Discussion of language design and syntax, data types, variables, constants, binding and scope of a variable and data handling procedure. (F)

266-450 Theory of Algorithms 3 cr.
Design, analysis and comparison of algorithms; divide and conquer techniques, greedy method, dynamic programming and graph searching. Applications to profit maximization with constraints, graph coloring, traveling salesman problem and others. (FE)

266-451 Database Management Systems 3 cr.
Network, relational and hierarchical databases; use of a data manipulation language and structured query language to query a student-created database; also includes access methods, security, integrity rules, physical organization, design criteria, normal forms and entity-relationship modelling. (F)

266-452 Operating Systems 3 cr.
Operating systems, techniques and philosophies behind management of computing resources, including memory management, process management, auxiliary storage management, study of some popular current operating systems. (S)

266-454 Artificial Intelligence 3 cr.
Methods used to improve the performance of computers in those skills which measure "intelligence": recognition of analogies, ability to understand language, interpretation of visual images, problem solution and manipulation of machinery; use of a list-processing language (LISP). (FO)

266-455 Microprocessors and Digital Electronics 3 cr.
Digital electronics, microcomputer interfacing and microcomputer programming. (F)

266-456 Advanced Topics in Microcomputing 3 cr.
Hardware and software techniques for interfacing instruments and peripheral devices to a microcomputer, development and use of system software and advanced programming of microcomputer systems. (JE)

266-457 Compiler Theory 3 cr.
Software concepts, focused primarily on the theory of compilers, including formal language definition, dictionaries, symbol tables, text scanning, parsing, arithmetic expressions and Polish strings. (SO)

266-478 Senior Distinction in Computer Science 3 cr.
See Courses with Variable Content.

266-483X Selected Topics 1-4 cr.
See Courses with Variable Content.

266-497 Internship 3-12 cr.
See Courses with Variable Content.

266-498 Independent Study 1-4 cr.
See Courses with Variable Content.

296 Earth Science

296-102 Introduction to Earth Science 3 cr.
The properties of the earth's physical environment and the variety of processes operating within it; basics of physical and historical geology, soil science, oceanography, meteorology and astronomy. Students will not receive credit for both 296-102 and 296-202. Field trip required. (F,J)

296-110 Dinosaurs: Rise to Ruin 1 cr.
Explores dinosaurs, their ancestors, rise to preeminence, reasons for success, and possible reasons for their extinction. (J)

296-202 Physical Geology 4 cr.
Description and analysis of the geological processes that shape the earth's major internal and external features. Origins, properties and uses of the earth's rock and mineral resources. Students will not receive credit for both 296-202 and 296-102. (F,S)

296-203 Geologic Evolution of the Earth 3 cr.
The physical history of the earth through geologic time and the attendant evolution of plants and animals; principles governing interpretation of the rock and fossil record; unraveling of events culminating in modern landscape and life forms. Field trips. (S)

296-204 Geologic Evolution of the Earth Laboratory 1 cr.
Practical application of geologic principles and techniques to interpretation of earth history. Field trips. (S)

296-222 The Ocean of Air: An Introduction to Weather and Climate 3 cr.
See 834-222. (F,S)

296-230 Geology of Wisconsin 3 cr.
Examines the economic, environmental and scenic aspects of the geology of Wisconsin; discussion of Wisconsin's geologic history. (FE)

296-283X Selected Topics 1-4 cr.
See Courses with Variable Content.

296-298 Independent Study 1-4 cr.
See Courses with Variable Content.

296-306 Drifting Continents 3 cr.
Examines the theory of continental drift as an explanation of many geologic phenomena, such as earthquakes and volcanoes, mineral resources, evolution and mountain-building. (SE)

296-310 Paleobiology 4 cr.
Preservation, morphology, evolution, interrelationships and paleoecological significance of fossil plants and animals; field and laboratory study of fossil assemblages and their environments. (FE)

296-340 Rock and Mineral Resources 3 cr.
Macroscopic identification of common rocks and minerals, formation and uses of rock and mineral resources, and the environmental impact of resource exploration and extraction. Field trips. (FO)

296-350 Geologic Field Methods 4 cr.

Description and application of standard field techniques employed in assembling geologic data. Includes mapping, measuring sections, collecting rock and fossil specimens. (FE)

296-366 Structural Geology 3 cr.

Structures produced by deformation of the earth's crust: faults, folds, foliations. Methods of field study and laboratory analysis. Tectonic significance of structures within the earth's crust. Stress and strain analysis and its application to rock deformation. (FE)

296-380 Geomorphic Processes 3 cr.

See 416-380.

296-402 Stratigraphy and Sedimentation 3 cr.

Modern concepts and techniques used to study and interpret the origins and distribution of sediments and sedimentary rocks; principles of biostratigraphy and physical stratigraphy and sedimentology. Field trip required. (SE)

296-420 Soil Classification and Geography 3 cr.

See 416-420. (F)

296-441 Mineralogy 4 cr.

Survey of important concepts in mineralogy. Crystallography, symmetry and molecular structure of minerals. Optical properties of minerals and identification of minerals in thin section. Description and recognition of minerals and ores in hand specimens. (FO)

296-442 Petrology 4 cr.

Classification, genesis and occurrence of sedimentary, igneous and metamorphic rocks; introduction to optical methods of identification; identification of rocks in hand specimens. (SO)

296-470 The Glacial Environment and Chronology 3 cr.

Understanding the extremes in environmental behavior which characterize Pleistocene time. Principles of glaciology and the impact of glaciation on the landscape. Field trip. (SO)

296-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

296-497 Internship 3-12 cr.

See Courses with Variable Content.

296-498 Independent Study 1-4 cr.

See Courses with Variable Content.

Other courses for upper-division earth science credit include:

Land and Soil Resources

- 362-303 Conservation of Natural Resources
- 362-320 Soil Environment
- 362-321 Soil Environment Laboratory
- 362-342 Environmental Geology
- 362-345 Geology of Energy Resources
- 362-421 Soils of Wisconsin Field Trip
- 362-454 Remote Sensing by Satellite
- 362-460 Resource Management Strategy
- 416-351 Elements of Cartography
- 416-353 Air Photo Interpretation
- 416-451 Computer Cartography
- 416-453 Advanced Air Photo Interpretation
- 834-356 Environmental Impact Analysis
- 008-761 Global Environmental Monitoring
- 009-741 Land Use, Institutions and Policy

Water Resources

- 362-300 Descriptive Hydrology
- 362-331 Oceanography
- 362-335 Water and Waste Water Treatment
- 362-382 River Basins in Transition
- 362-403 Limnology
- 362-430 Quantitative Hydrology
- 362-434 Water Chemistry
- 008-759 Coastal Zone Management

Meteorology-Climatology

- 336-350 Meteorology
- 362-351 Synoptic Meteorology Laboratory
- 362-450 Air Pollution Chemistry and Meteorology
- 416-325 Regional Climatology
- 008-776 Bioclimatology

Geology

- 362-342 Environmental Geology
- 362-345 Geology of Energy Resources

298 Economics**298-202 Macro Economic Analysis 3 cr.**

Introduction to the behavior of our economy in the aggregate, focusing upon the process by which the economy achieves a certain level of output and employment. (F,S)

298-203 Micro Economic Analysis 3 cr.

The decision-making processes of individuals and business firms associated with the determination of what products will be produced, how they will be produced, and what prices specific goods and services will command. (F,S)

298-206 Macro Economics Laboratory 1 cr.

Laboratory course to accompany 296-202. (F,S)

298-207 Micro Economics Laboratory 1 cr.

Laboratory course to accompany 298-203. (F,S)

298-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

298-298 Independent Study 1-4 cr.

See Courses with Variable Content.

298-301 Economic and Social Security 3 cr.

The income distribution system in the U.S. economy and the various institutions and programs developed to modify the system to provide an income to all citizens. (F)

298-302 Intermediate Macro Economic Theory 3 cr.

Theories of national income distribution as a basis for an examination of policy proposals to deal with inflation, unemployment, economic fluctuations and economic growth at national and international levels. (F)

298-303 Intermediate Micro Economic Theory 3 cr.

Theories used in explaining the behavior of consumers and producers in choices relating to the production, exchange and distribution of output. (S)

298-304 Contemporary Labor Markets 3 cr.

The determination of wages and employment at the level of the firm, the industry, and the total economy. (FO)

298-306 Public Finance and Fiscal Policy 3 cr.

Effects of government spending and taxation on resource allocation, incomes, prices and employment. Includes consideration of the uses and effects of fiscal policy. (S)

298-307 Sources of Contemporary Economics Concepts 3 cr.

Development of contemporary economic thought, drawing upon contributions from the mercantilist period to the present, emphasizing contributions of major schools of economic thought. (FO)

298-308 Business Cycles 3 cr.

Description and recent history of business cycles: leading explanations of levels of employment, output and prices; savings and investment, forecasting; governmental policy. (F,S)

298-330 Money and Banking 3 cr.

Analysis of money as an economic institution and of the organizational structure of the commercial and central banking system in the U.S.; monetary theory and policy in the national and international setting. (F,S)

298-402 Resource Economics Analysis 3 cr.

Applications of tools and concepts in current economic decision making, with special emphasis upon common property resources management. (SE)

298-403 International Trade 3 cr.

Theory and concepts of international trade and finance; contemporary conditions and problems in international economic relations. (S)

298-404 Economics of Developing Areas 3 cr.

Social and economic factors underlying economic development; leading issues in the theories of economic growth; comparative rates of progress in different countries. (F)

298-406 Comparative Economic Systems and Institutions 3 cr.

Contemporary functioning of different economic systems and institutions; contrasts market-directed economies and centrally planned economies. (SE)

298-420 Workshop in Economic Education 2-3 cr.

Provides background on selected current economic topics and concepts; examines new print and nonprint instructional materials and curriculum guides in economic education; supports development of learning activities appropriate to students' instructional responsibilities.

298-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

298-485 Managerial Economics 3 cr.

Application of the basic theoretical tools of micro- and macroeconomic analysis to the problems of business management, such as demand, production, costs, pricing, and forecasting. (S)

298-497 Internship 3-12 cr.

See Courses with Variable Content.

298-498 Independent Study 1-4 cr.

See Courses with Variable Content.

302 Education**302-202 Changes in American Education 3 cr.**

Explores education as a lifelong learning processes, not limited to formal schooling; decision-making within institutions concerning goals, methods, financing, time-structuring and value issues; cross-cultural comparisons between American and other educational systems. (F)

302-203 Introduction to Environmental Education in the Schools 2 cr.

Environmental and ecological education concepts, goals, philosophies, and teaching/learning processes are included. Students are responsible for developing lesson plans, researching and presenting programs on selected environmental issues and ecological concepts, and conducting outdoor research on natural phenomena. (F,S)

302-206 Cultural Images in Materials for Children and Adolescents 3 cr.

The varied images of ethnic and racial groups and sex roles as developed in tradebooks, textbooks and other instructional materials for children and adolescents; detecting negative images and building positive images. (J)

302-250 Field Experience in Education 2 cr.

Direct field experience working with children in educational settings; biweekly campus classes and 30 hours direct observation, participation and interviews. Must be completed no later than first semester after admission to teacher certification. (F,S)

302-281 Student-Led Courses 1-4 cr.

See Courses with Variable Content.

302-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

302-298 Independent Study 1-4 cr.

See Courses with Variable Content.

302-300 Introduction to Education and Teaching 3 cr.

The technical skills of teaching, application of learning theory, instructional planning, microteaching and evaluation of teaching effectiveness; school observation and participation in instructional activities (2 1/2 hours per week). Must be completed before methods courses. (F,S)

302-302 Teaching Social Studies in Elementary and Middle Schools 2 cr.

Concepts, processes, learning skills, teaching methods and resource materials related to the social sciences; questioning, classroom environment, content and topic selection, scope and sequence; forces influencing the social studies curriculum. (F,S)

302-303 Teaching Art in the Elementary Schools 2 cr.

Philosophy and psychology of art education, characteristics and stages of creative development in children and children's art; selecting and motivating artistic experiences, developing lesson plans and units, organization of elementary art curriculum. (F,S)

302-304 Teaching Music for the Elementary Teacher 2 cr.

Identification of children's musical needs; materials and methods to assist classroom teachers in meeting these needs; includes practical experience with basic elements of music for the classroom teacher's competency and self-confidence. (F,S)

302-306 Teaching Health and Physical Education in Elementary and Middle Schools 3 cr.

Principles and methods of planning and conduct of health and physical education instruction for elementary and middle school classroom teachers. (F,S)

302-307 Teaching Reading in the Elementary School 3 cr.

Teaching methods in developmental reading; nature of the reading process, reading readiness, vocabulary, comprehension, and study-skills development. Techniques for diagnosis and instruction of diverse learners. (F,S)

302-308 Children's Literature in the Elementary School 3 cr.

Effective children's literature programs; analyzing children's books; developing instructional units and independent programs to foster positive attitudes toward reading; books for personal development, for developing attitudes about social issues; criteria for evaluating content, methods and effectiveness. (F)

302-309 Teaching Language Arts in the Elementary and Middle Schools 2 cr.

Develops a language arts model, rationale, basic processes and skills, and assessment procedures for the language arts classroom. (F,S)

302-310 Teaching Communication Arts in Middle and Secondary Schools 3 cr.

Theoretical and practical considerations in teaching communication arts. Development of a communication arts model, rationale, basic processes and skills, and assessment procedures for the communication arts classroom. (F)

302-311 Teaching Foreign Languages 3 cr.

Principles and methods of teaching foreign languages to students of all ages; evaluation of texts and other materials; simulation of planning for one semester's teaching. (FO)

302-312 Teaching Social Studies in Middle and Secondary Schools 3 cr.

Concepts, processes, learning skills, teaching methods and resource materials related to the social sciences; questioning, classroom environment, content and topic selection, scope and sequence; forces influencing the social studies curriculum. (F,S)

302-313 Teaching Mathematics in Middle and Secondary Schools 3 cr.

Principles, methods and materials for teaching mathematics and computer science; development of mathematical concepts and skills, selection and use of materials, motivation, lesson and unit planning and evaluation. (F)

302-314 Teaching Science in Middle and Secondary Schools 3 cr.
The nature of middle and high school science curricula, recent innovations in science teaching, classroom teaching techniques, and evaluation. (F)

302-315 Teaching English as a Second Language 3 cr.
Basic methods of teaching English to non-native speakers and the underlying theories from linguistics, psychology, education and sociolinguistics; development and evaluation of lessons for the ESL classroom. (FO)

302-316 Teaching Middle and Secondary School Art 3 cr.
Methodology, procedures and strategies for teaching art; motivation techniques, preparation of art lessons and lesson plans, evaluation of art learning experiences; creativity, visual awareness and perception techniques; curriculum development in art. (SO)

302-317 Teaching Instrumental and Choral Music 3 cr.
Philosophical and curricular issues in secondary school music; review of secondary school materials and methodologies; developing rehearsal objectives for a performance-oriented music curriculum. (F)

302-318 Reading and Study Skills in the Secondary Schools 3 cr.
Developmental reading, comprehension and retention, vocabulary development, motivation, reading rate and flexibility; diverse reading abilities and interests; development of appropriate study and learning techniques for reading in the content areas. (F)

302-319 Adolescent Literature in Middle and Secondary School Reading 3 cr.
Design and content of effective adolescent literature programs; analysis and evaluation of adolescent literature; current practices in literacy curricula; adolescent literature and personal development; literature and social issues. (SE)

302-324 Teaching Mathematics in Elementary and Middle Schools 3 cr.
Educational research and practices related to methods, materials, evaluation techniques; mathematics curriculum development, implementation and evaluation; teaching mathematical concepts, facts, skills, problem-solving, use of calculators and computers; error patterns and remediation. (F,S)

302-325 Teaching Science in Elementary and Middle Schools 3 cr.
Teaching methods, materials, evaluation techniques, curriculum development, implementation and evaluation in elementary and middle school science; teaching science concepts, processes and problem-solving; the nature of science; interactions of science, technology and society; applications of computers in science education. (F,S)

302-334 Teaching General Music in the Elementary School 3 cr.
Philosophical and theoretical foundations of music education. Children's musical needs; curriculum development; traditional and contemporary methods and materials. (FE)

302-350 Field Experience in Teaching Methods, 0 cr.
Observation of teaching in content areas covered by the methods course and reporting on teaching, management and evaluation strategies observed.

302-351 Field Experience Project in Education 1 cr.
Investigation of problems with educational significance within a minority group setting; includes design, research, and reporting on an investigative field project. (F,S)

302-352 Middle School and Secondary Level Language Arts 3 cr.
Teaching techniques for the language arts areas; concepts and philosophies of language arts instruction. (S)

302-400 Education, Schools, and Society in the U.S. 3 cr.
The nature of schools; their role in society; schools as socializing institutions; role and responsibilities of educators, teachers and the law; the professional context of teaching; school reform; and other education issues considered in the context of the history of education in America and in comparison to other countries.

302-401 Student Teaching in the Middle School 2-15 cr.
Supervised student teaching or internships in the middle school. Offered on a pass/no credit basis only. (F,J,S)

302-402 Student Teaching in the Elementary School 2-15 cr.
Supervised student teaching or internships in the elementary school. Offered on a pass/no credit basis only. (F,J,S)

302-403 Student Teaching in the Secondary School 2-15 cr.
Supervised student teaching or internships in the secondary school. Offered on a pass/no credit basis only. (F,J,S)

302-406 Evaluation and Testing in Education 2-3 cr.
Techniques for constructing tests and measurement systems; statistical procedures applied to classroom data; monitoring and assessing individual and group learning situations; using and interpreting data from standardized tests. (S)

302-410 Introduction to the Education of Exceptional Children 3 cr.
Survey of the kinds of exceptionalities, their needs and some methods for meeting them; recognition and understanding of exceptional children and unique subtleties that deserve specific attention. (F,S)

302-415 Counseling Role of the Classroom Teacher 2 cr.
Specific counseling and guidance skills necessary for guidance effectiveness of the classroom teacher and their implementation in the classroom. (S)

302-420 Workshop in Economics Education 2-3 cr.
See 298-420.

302-421 Reading Readiness and Language Skill Development 3 cr.
Acquisition of reading skills and development of language in preschool through primary grades; analysis of instructional and diagnostic strategies for listening and reading comprehension, vocabulary development, word identification strategies and approaches to beginning reading. (S)

302-422 Reading in the Content Areas 3 cr.
Practical guidelines for classroom teachers in subject areas—English, social studies, mathematics, science, etc.; suggestions for teaching reading and study skills related to content, specialized and technical vocabulary, developing study guides; dealing effectively with reading problems in the content areas. (S)

302-441 History, Philosophy, and Current Programs in Early Childhood Education 3 cr.
The historical and philosophical bases of early childhood education, emphasizing current approaches and programs. Guided observations of young children.

302-442 Curriculum and Program Development in Early Childhood Education 3 cr.
Developmental approach to curriculum and program, including the study of effective interweaving of various disciplines in programs for young children; considers program priorities and planning in the context of developmental levels and the variety of populations to be served. (S)

302-445 Early Childhood Center Administration and Community Resource Management 3 cr.
Overview of community early childhood programs; governmental licensing and controlling agencies; program organization and administration (funding, staffing, accounting); utilizing family and community resources. (F)

302-451 Field Experience in Environmental Education 1-12 cr.
Prestructured or individualized study in environmental education at environmental centers such as Trees for Tomorrow, MacKenzie Environmental Center, etc. (F,J,S)

302-462 The Adult Learner 3 cr.
Various physiological, psychological and sociological factors relevant to adult development and their implications for learning; key elements in the teaching-learning process for adults; survey of research in adult learning. (F)

302-481 Student-Led Courses 1-4 cr.*See Courses with Variable Content.***302-483X Selected Topics 1-4 cr.***See Courses with Variable Content.***302-498 Independent Study 1-4 cr.***See Courses with Variable Content.***325 Engineering****325-105 Engineering Graphics 3 cr.**

Orthographic projection and its application to analyzing and solving three-dimensional problems involving points, lines, planes and solids; axonometric projections for pictorial representation with engineering and design applications using microcomputers. (F,S)

325-201 Engineering Materials 4 cr.

Basic behavior and processing of engineering materials, including metals and alloys, ceramics, and plastics. (F)

325-210 Introduction to Design 3 cr.

Overview of the engineering design process from problem definition to detailed designs; includes ideation techniques, modeling, documentation, scheduling, economic analyses and professional ethics. (S)

325-234 Linear Systems Analysis 4 cr.

Mathematical techniques for linear systems. Solutions of ordinary differential equations by classical, transform, and state variable techniques. Elementary aspects of linear algebra. Applications in electrical, fluid, mechanical and thermal systems. (S)

325-251 Programming for Science and Engineering 3 cr.

Design and debugging of computer programs using FORTRAN and PASCAL. Programming and applications to different fields of science and engineering. Full credit will not be given for both this course and either 266-255 or 266-256. (S)

325-313 Mechanics I 3 cr.

Elementary vector operations, resultant of two- and three-dimensional force systems, centroids, hydrostatic forces, equilibrium of trusses and frames, laws of friction and impending motion, moments of inertia, virtual work, stability. (F)

325-314 Mechanics II 3 cr.

Displacement, velocity and acceleration components, kinematics of particles using rectilinear and curvilinear coordinates, relative motion, solution and plane motion of rigid bodies, work and potential energy of particles and rigid bodies, linear and angular impulse and momentum, central force motion. (S)

325-316 Mechanics of Materials 4 cr.

Stress and strain, torsion, bending of beams, shearing stresses in beams, compound stresses, principal stresses, deflection of beams, statically indeterminate members, columns. Lecture and laboratory. (S)

See courses in physics, chemistry, mathematics and related areas for complete listings for engineering.

362 Environmental Science**362-102 Introduction to Environmental Science 3 cr.**

Examines the interrelationships between people and their biophysical environment, including the atmosphere, water, rocks and soil, and other living organisms. The scientific analysis of nature and the social and political issues of natural resource use. (F,S)

362-125 Introduction to Horticulture 3 cr.

Techniques of intensive plant culture. Biological characteristics of horticultural plants, identification of home and commercial plant species, plant propagation, physiology and development. Local field trip. (F)

362-141 Elementary Astronomy 3 cr.

Study of the solar system, stars, galaxies and universe. (F,S)

362-142 COSMOS, Societal Implications of the Study of the Universe 3 cr.

Economic, educational, social and cultural impact of space exploration and of our knowledge of the universe. Major periods in human history affecting our knowledge of the cosmos; impacts of various scientific developments such as the Copernican heliocentric model and Darwinian evolution. Based on the television series *Cosmos*, produced by Dr. Carl Sagan. (J)

362-188 Issues in Biological Conservation 3 cr.

Current problems and controversies of nature conservation; scientific and political issues surrounding endangered species preservation, hunting and fishing, forest management, land use, animal rights, biotechnology and similar topics. (S)

362-190 Emergence of Western Technology 3 cr.

History of the shift in the technological balance of power from 16th century China, India and the Islamic world to western Europe and later to North America. (F)

362-260 Energy and Society 3 cr.

The issues relating energy and society rather than energy technology per se: global energy flows; sources of energy; energy-related problems, policy and conservation; energy growth; future scenarios. (F,S)

362-281 Student-Led Courses 1-4 cr.*See Courses with Variable Content.***362-283X Selected Topics 1-4 cr.***See Courses with Variable Content.***362-284 Husbandry of the Land 3 cr.**

Concepts of and attitudes concerning land and husbandry; historical aspects of our relationship with land; agricultural development in the U.S.; land ethics and land economics; conflicting demands on the land; state and national land use policies and land for the future. (F,J)

362-286 Forest Vegetation of Wisconsin 3 cr.

Historical and contemporary modification of Wisconsin forest vegetation; biology of individual species and community dynamics; current management practices. (S)

362-298 Independent Study 1-4 cr.*See Courses with Variable Content.***362-302 Principles of Ecology 3 cr.**

Biological principles governing interactions of plants and animals in their physical and biotic environments. Succession, productivity, energy flows and nutrient cycling in ecosystems. Physiological and behavioral adaptations of individuals to their environment; impact of people upon ecosystems and concepts underlying management strategies. Field trip required. (F,S)

362-303 Conservation of Natural Resources 3 cr.

Principles of conservation: the nature and extent of our natural resources; exploitation and conservation of our resource system; natural chemical, physical and biological processes which affect and influence conservation and management practices; politics and economics of resource conservation. (F,S)

362-307 Ecology of Fire 2 cr.

The use of fire to modify vegetation by native peoples in the past and by contemporary landscape managers in grasslands, chaparral, southern pine forests and northern aspen forests; causes and control of wildfires; case histories of prescribed burning. (JE)

362-309 Ecology and Management of Endangered Species 2 cr.

The population dynamics, niche relations and functional role of species in ecosystems, including endangered species; mechanisms of past and present extinctions; management tools for species preservation. (J,O)

362-318 Industrial Pollution Control Techniques 2 cr.

Air and water pollution control methods; nature of major existing pollutants; present government regulations; discussion of major types of industries—general manufacturing process, how and where major pollution arises, and techniques for emission control. (FO)

362-319 Industrial Pollution Control Field Trips 1 cr.

Field course to accompany 362-318; field trips are scheduled to a variety of local industries, including a paper mill, a foundry, the Metropolitan Sewerage District plant, etc. (FO)

362-320 The Soil Environment 3 cr.

The physical, chemical and biological properties of soil; formation, classification and distribution of major soil orders; influence of soil on agricultural, engineering, urban and water systems. Field trip. (F)

362-321 The Soil Environment Laboratory 1 cr.

Field and laboratory study of physical, chemical and biological properties of soils. (F)

362-330 Descriptive Hydrology 3 cr.

Qualitative study of the principal elements of the water cycle, including precipitation, runoff, infiltration, evapotranspiration and ground water; applications to water resource projects such as low flow augmentation, flow reregulation, irrigation, public and industrial water supply and flood control. (F)

362-331 Oceanography 3 cr.

Nature and extent of the marine environment, the physical and chemical properties of sea water, mass movements of oceanic water, marine geology, plant and animal life in the sea, environmental problems associated with exploitation of the marine environment and the Great Lakes. Field trip. (SE)

362-335 Water and Waste Water Treatment 3 cr.

Water and waste water treatment systems, including both sewage and potable water treatment plants and their associated collection and distribution systems. Study of the unit operations, physical, chemical and biological, used in both systems. (SE)

362-342 Environmental Geology 3 cr.

Applications of fundamental geologic concepts in the interpretation of environmental problems resulting from the exploitation of crustal resources. Environmental impact of construction, mining, waste disposal, natural geologic hazards and the tapping of crustal energy sources. Field trips. (F)

362-350 Meteorology 3 cr.

Examines the composition and structure of the atmosphere; atmospheric thermodynamics, dynamics and kinematics of air motion and radiation in the atmosphere. (FO)

362-351 Synoptic Meteorology Laboratory 1 cr.

Applications of meteorological principles to actual synoptic-scale weather situations. Techniques of weather analysis and forecasting. (FO)

362-353 Air Photo Interpretation 3 cr.

See 416-353.

362-363 Plants and Forest Pathology 3 cr.

Important diseases of forest, shade and orchard trees and diseases of representative economic plants; fungus deterioration in wood storage, its economic importance and methods of control. Field trips. (F)

362-366 Integrated Pest Management 3 cr.

The management of pest plant and animal populations using an integrated combination of control methods emphasizing maximum dependency upon natural regulators of populations; various control methods; obstacles and incentives in the future for integrated pest management. (SO)

362-372 Science, Technology, and the Future 3 cr.

The synergistic growth of science and technology along with their positive and negative influences on society; methods used to control existing technology and to assess developing technology; responsibility of individuals in technological settings

362-381 January in Mexico: Natural Science 3 cr.

Introduces the natural resources of the Yucatan peninsula with emphasis on their use and abuse. Makes comparisons with Wisconsin, including cultural, political, social, economic, and historical contexts. Field trips, special projects, and local interviews.

362-390 Scientific Applications of Computing 3 cr.

Applications of computing to various areas of the natural sciences: statistical software, scientific graphics, equation solvers, spreadsheets, databases, image processing, project management and automated data acquisition. (S)

362-392 January in Italy and Greece: Foundations of Western Science, Mathematics, and Culture 3 cr.

Students visit Athens and Rome, and Heracleion in Crete and study these historical sites where the foundations of western science, mathematics, political democracy, and culture were laid by Crete's Minoan civilization.

362-401 Stream Ecology 3 cr.

Structure and function of stream ecosystems. Functional relationships of feeding groups, nutrient spiralling and organic matter processing as responses to stream morphology, stream order and watershed conditions. Field sampling of northeastern Wisconsin streams. (FE)

362-403 Limnology 3 cr.

Physical, chemical and biological interactions in lakes and streams as expressed in the nature and dynamics of aquatic communities; laboratory and field techniques used in characterizing aquatic environments. (FO)

362-415 Solar and Alternate Energy Systems 3 cr.

Study of alternate energy systems which may be the important energy sources in the future, such as solar, wind, biomass, fusion, ocean thermal, fuel cells and magnetohydrodynamics. (SO)

362-421 Soils and Geology of Wisconsin Field Trip 2 cr.

Intensive three-day field study tour of the properties, origins and uses of major soils and landscapes of Wisconsin, with follow-up discussions. Cost of tour bus, guidebook, meals and lodging borne by student. (F)

362-440 Environmental Chemistry 3 cr.

The physical, chemical, and biological processes that affect the composition of air and water. Chemical reactions in polluted and unpolluted environments; dispersal processes; methods of control for various pollutants.

362-441 Environmental Chemistry Laboratory 1 cr.

Laboratory exercises, including field methods, monitoring and analysis techniques to accompany 362-440.

362-454 Remote Sensing of the Environment by Satellite 3 cr.

Large area, small scale analysis of earth surface features by satellite imagery and data. Manual and computer-assisted manipulation of multispectral images with respect to vegetation, geology, soils, water resources and land use. (S)

362-460 Resource Management Strategy 3 cr.

Applications of systems analysis principles to designing resource management systems and developing strategies for maintaining optimum environmental utilities. Decision models and the role of economic systems in resource management. (S)

362-466 Vegetation Management 3 cr.

Analysis of current practices in managing U.S. vegetation, including establishment, maintenance, control and conversion. Evaluation of various tools and practices in terms of their effectiveness, economic cost and environmental impact. (F)

362-475 Ecological Dynamics 4 cr.

Advanced exploration of key principles of ecology. Theoretical concepts are linked with practical applications in the fields of evolutionary ecology, population dynamics, community ecology and ecosystems ecology. Field trips. (F)

362-481 Student Led Courses 1-4 cr.

See Courses with Variable Content.

362-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

362-484 Senior Honors Project 3 cr.

See *Courses with Variable Content*.

362-492 Practicum in Environmental Science 3 cr.

A project-based course in which students address a practical application of scientific and mathematical skills in the environmental sciences. Topics vary.

362-497 Internship 3-12 cr.

See *Courses with Variable Content*.

362-498 Independent Study 1-4 cr.

See *Courses with Variable Content*.

416 Geography**416-102 An Introduction to Geography: The Regions of Earth 3 cr.**

Contemporary geography, its viewpoints and methodology; geographic reality of the present-day world is analyzed through case studies using both the regional approach and systematic analysis. (F)

416-202 Introduction to Cultural Geography 3 cr.

The impact of culture through time in creating the earth's contrasting landscapes, using case studies which often focus on North America. Field trips required. (S)

416-250 Displays of Geographic Information 3 cr.

The appreciation, use, and evaluation of maps and air photos as informational sources. (J)

416-283X Selected Topics 1-4 cr.

See *Courses with Variable Content*.

416-298 Independent Study 1-4 cr.

See *Courses with Variable Content*.

416-320 Landform Geography: Topics and Regions 3 cr.

Geographic methods of landform description and analysis with application to selected regions of the world. Field trips required. (SE)

416-325 Regional Climatology 3 cr.

The elements, controls, and classification of climates; the distribution of climatic types over the earth; world patterns of climate. (SE)

416-341 Urban Geography 3 cr.

The city is viewed in two perspectives: as an entity among other cities and the surrounding region, and as a complex of subsystems, commercial, residential, and manufacturing, functioning in space. Field trips required. (JE)

416-342 Settlement Geography 3 cr.

Evolution of major human settlement forms, emphasizing geographical patterns in the United States and including relationships between house form and culture, the arrangement of habitations on the landscape, and the historical geography of urban settlements. Field trips required. (S)

416-350 Geographic-Land Information Systems 3 cr.

Uses state-of-the-art software to integrate digitized data and maps, transfer data, manage relational data bases, overlay maps, display, query, edit interactive graphics, and geocode addresses. Applications are tailored to fit student interests and may include tax base analysis, property mapping, natural resources inventory, crime demography, transportation routing, and other tasks.

416-351 Elements of Cartography 3 cr.

Principles of basic cartography, including problem identification and clarification, data collection and analysis, compilation, generalization, and symbolization; presentation of data on medium and large scale maps. Field trips required. (F)

416-353 Air Photo Interpretation 3 cr.

Techniques for the interpretation of human and natural land use. Vertical, oblique, and infrared aerial photography are used in analyzing a wide variety of land use areas. (F)

416-368 Geopolitics of World Regions 3 cr.

See 834-368.

416-371 Geography of the United States and Canada 3 cr.

The physical features, resources, people, and economic activities of the United States and Canada. (F)

416-372 Analysis of the Great Lakes Region of North America 3 cr.

See 834-372.

416-377 Analysis of Northern Lands 3 cr.

See 834-377.

416-378 Geography of Conflict Areas 3 cr.

See 834-378.

416-380 Geomorphic Processes 3 cr.

See 296-380.

416-421 Soils and Geology of Wisconsin Field Trip 2 cr.

See 296-421.

416-451 Computer Cartography 3 cr.

Use of the computer in assisting cartographic production; its advantages, disadvantages and limitations; employment of current cartographic display software systems and applications of computer assisted mapping to geographic problems. (S)

416-470 The Glacial Environment and Chronology 3 cr.

See 296-470.

416-478 Senior Distinction in Geography 3 cr.

See *Courses with Variable Content*.

416-483X Selected Topics 1-4 cr.

See *Courses with Variable Content*.

416-497 Internship 3-12 cr.

See *Courses with Variable Content*.

416-498 Independent Study 1-4 cr.

See *Courses with Variable Content*.

448 History**448-100 History of the Modern World 3 cr.**

The history of the world during the past five centuries, and particularly since 1900. Emphasizes the global nature of modern historical change, with special attention to the interaction of Europe and North America with the societies of Asia, Africa, and Latin America. (F,S)

448-201 Ancient Civilization 3 cr.

Examines the evolution of early civilization from its beginnings in the Near East and eastern Mediterranean to classical Greece and the decline of the Roman Empire; includes art, institutions, ideas and values as well as political, social and economic development. (FO)

448-202 The Middle Ages 3 cr.

Examines Western civilization from the late Roman Empire to the Renaissance and Reformation; the Christian Church; feudalism, the emergence of national states and institutions, urban civilization, agriculture, trade, technology and cultural achievements. (SE)

448-203 History of Europe from 1300 to 1815 3 cr.

Emergence of the nation-state; absolutism and parliamentary government; development of urban centers, the middle class, commerce, capitalism and early industry; Western expansion and its collision with non-European cultures; the scientific revolution; the Enlightenment; the French Revolution; beginnings of the Industrial Revolution; appearance of the secular and rational human.

448-204 History of Europe from 1815 to the Present 3 cr.

Emergence of modern Europe; revolutions, industrialization, urbanization and the origins of modern classes and institutions; conservatism, liberalism, socialism, communism and fascism; the impact of science; imperialist expansion; the making of new nations in Europe and the Third World; world wars and totalitarian politics. (SO)

448-205 History of the United States from 1600 to 1865 3 cr.

Forces that shaped the political, social, cultural, intellectual and economic history of the United States through the Civil War. (F)

448-206 History of the United States from 1865 to the Present 3 cr.
Forces that shaped the political, social, cultural, intellectual and economic history of the United States since the Civil War. (S)

448-207 Roots of Black America 3 cr.
Survey of black people's experience in America, beginning with African culture through the development of Afro-American culture and institutions; includes political, social, economic and cultural history. (F,S)

448-208 Development of Modern Science in Western Society 3 cr.
Interrelationships between modern science and Western society and the ways each has shaped the other; emphasizes the blossoming of modern science in the 17th century, influence of science and technology in recent times, development of major theoretical ideas in science. (F)

448-250 Traditional Asian Civilization 3 cr.
History and civilization of traditional Asian societies, including China, Japan, India and the various peoples of Southeast Asia; focus on the evolution and structure of civilization before the increasing Western impact in the 19th century, emphasizing China and Japan. (F)

448-251 Modern Asian Civilization 3 cr.
History and civilization of East, Southeast and South Asia since the end of the 18th century, emphasizing China and Japan and the social, political, economic and cultural changes resulting from contact with the West. (S)

448-275 The Vietnam War in Historical Perspective 3 cr.
The conflicts and upheavals in Indochina from World War II to the present with particular attention to the Vietnam War; the role of the U.S. in Indochina, its effects on both the U.S. and Indochina, and the Indochinese context of revolution and change. (J)

448-283X Selected Topics 1-4 cr.
See Courses with Variable Content.

448-298 Independent Study 1-4 cr.
See Courses with Variable Content.

448-302, 303 History of American Thought and Culture 3, 3 cr.
Development of patterns of American thought and culture within the context of the major Western intellectual traditions; changing conceptions of nature, humanity, society, progress and art, and how they were given coherency and social force in the works of key American thinkers and in the formation of characteristic American cultural agencies. (F,S)

448-306, 307 European Thought and Culture: the Renaissance to the Present 3, 3 cr.
Development, transmission and impact of European philosophy, religion, science, literature, art and social thought; significant thinkers and cultural institutions; major currents and trends. 306 includes Renaissance, Reformation, Scientific Revolution, Age of Reason; 307 includes romanticism, liberalism, nationalism, positivism, irrationalism, fascism, socialism, existentialism. (FO, FE)

448-309 History of Science in Modern Times 3 cr.
Development of science since the 16th century as part of its cultural contexts; discussion of important scientific concepts of the last four centuries. (SO)

448-310 American Colonial History 3 cr.
Foundations of American institutions and attitudes; politics, economics and social movements; evolution of values during the transition period between the pre-industrial and industrial society in America. (FO)

448-311 History of Wisconsin 3 cr.
Wisconsin history from European exploration to the present; development of Wisconsin as part of the international Great Lakes region and the United States; political, economic and cultural history of the region, territory and state. (S)

448-314 History of the Russian Empire 3 cr.
Social, intellectual and economic developments and crises from the Crimean War to the Bolshevik Revolution. (FE)

448-315 The Soviet Union from 1917 to the Present 3 cr.
Ideological, political, economic, social, diplomatic and cultural history of Russia since the Bolshevik Revolution. (SE)

448-320 U.S. Military History 3 cr.
Important developments in American military strategy and its relationship to national policy; views of relevant theorists and their utility in actual strategic situations; current military thinking and the balance of forces. (FE)

448-322 Economic and Business History of the U.S.: 1876 to Present 3 cr.
Development of a corporate economy and the rise of government intervention; industrial, financial, agricultural and labor reorganization; wage and price policies and their relationship to these general themes; modernization and urbanization and the relationship between the domestic and world economy. (SE)

448-324 American Foreign Relations: 1865 to the Present 3 cr.
History of American foreign policy, including changing views of the world, balance of power, idealism and self-interest; foreign policy decisions and the relationship between foreign policy concerns and domestic politics. (FO)

448-325 History of Modern Germany 3 cr.
Political, social, economic and cultural development of modern Germany from the establishment of the Empire in 1871 to the division of Germany after World War II. (FO)

448-345 Women in American Perspective 3 cr.
See 950-345.

448-350 Social History of Europe 3 cr.
Development of social thought, institutions, organizations and policies from early to modern Europe; impact of economic change on society, formation of classes, consequences of European industrialization, and contemporary social issues, crises and conflicts. (SO)

448-352 History of Modern China 3 cr.
Social, political, economic and cultural history of China since 1800: the impact of the West, reform programs in late imperial China, Chinese nationalism, republican China, rise of Chinese communism, Maoist thought, and the development of Chinese communist society. (SO)

448-354 History of Modern Southeast Asia 3 cr.
Modern Southeast Asian history since 1800, including Vietnam, Indonesia, Thailand, Malaysia, Singapore, Cambodia, Laos and the Philippines. Emphasizes the remaking of Southeast Asia under the stimulus of the West and the Southeast Asian response. (SE)

448-356 History of Africa 3 cr.
Social, political, economic and cultural development of Sub-Saharan African societies from prehistoric times to the present, emphasizing the period since 1800. (FO)

448-358 Aspects of Latin American History 3 cr.
Examines themes such as colonization, neo-colonialism, and class and ethnic conflict; analyzes the external and internal forces which have contributed to the making of modern Latin America.

448-367 World Wars I and II: Age of Global Conflict 3 cr.
Causes, development and results of the world wars; major military operations on land, sea and in the air, and their strategic, political, economic and social implications; the war aims of the belligerents; impact of the wars on specific societies and the development of the modern world.

448-375 Great Decisions: Issues and Options in International Affairs 3 cr.
Major regional and global issues, problems and conflicts, their impacts on the U.S. and other countries, and analysis of policies and policy alternatives; evaluation of international affairs on the shaping of U.S. foreign and domestic policy. (S)

448-403 Political and Social History of Modern America 3 cr.
Political and social change in 20th century America; evolution of governmental roles in social change; development of American culture; emergence of the U.S. as an industrial and political power. (SE)

448-404 Political and Social History of Modern Europe 3 cr.
Political and social change in 20th century Europe; origins and impact of World War I; emergence of communism and fascism; the road to World War II; postwar renaissance of the European community. (SE)

448-405 History of Technological Change 3 cr.
Impact of major inventions on the patterns of life in modern society; ecological problems resulting from technological changes. (SE)

448-478 Senior Distinction in History 3 cr.
See Courses with Variable Content.

448-480 Seminar in History 3 cr.
Theoretical and practical topics and problems such as research techniques, source materials, comparative studies, analysis and interpretation, and the writing of historical inquiries. (S)

448-483X Selected Topics 1-4 cr.
See Courses with Variable Content.

448-497 Internship 3-12 cr.
See Courses with Variable Content.

448-498 Independent Study 1-4 cr.
See Courses with Variable Content.

Other courses which may be taken for credit in history:

- 493-101, 102 Foundations of Western Culture
- 493-226 American Indian Studies: History and Verbal Traditions
- 493-250 European Economy and Society
- 493-251 Business and American Life
- 493-274 Red Man in White America
- 493-332 Art and Social Thought
- 493-374 Wisconsin Indians: Historical and Cultural Perspectives
- 875-333 Social Change in a Selected Area
- 875-361 Historical Perspectives on Social Change
- 875-385 Dynamics of Revolutionary Change
- 950-313 Cities Past, Present and Future

478 Human Biology

478-102 Introduction to Human Biology 3 cr.
Basic concepts, principles, and processes in human biology; the origin of life, evolution, cells, population, genetics, reproduction, disease, the anatomy and function of major organ systems in humans. Credit not granted for both 478-102 and 110. (F,S)

478-110 Introduction to Physical Anthropology 3 cr.
Understanding human populations from a biological, evolutionary perspective: evolutionary history, diversity, and adaptation of human beings and the mutual interaction and influence of human culture and biology within an evolutionary framework. Credit not granted for both 478-110 and 102. (F)

478-203 Anatomy and Physiology I 2 cr.
Structure and function of the human body: general anatomy and the musculo-skeletal system. (J)

478-204 Anatomy and Physiology II 4 cr.
Structure and function of the human body: respiratory, nervous, endocrine, urinary, circulatory, digestive, and reproductive systems. (S)

478-205 Biotechnology and Human Values 3 cr.
Examination of technological developments in biology and medicine, including genetic, behavioral, and organism modification and the moral and ethical concerns raised by such technologies. (F,J,S)

478-206 Fertility, Reproduction and Family Planning 3 cr.
Factors that influence reproduction and fertility, i.e., physiological, psychological, social, cultural, and ethical; the methods available for limiting or increasing reproduction; the nature of family planning programs. (F,S)

478-215 Here's to Your Health 3 cr.
Moral, ethical, and personal responsibility in self health enhancement. Theoretical information about health and wellness with experimental exercises to heighten awareness of one's own values, attitudes, and abilities, with the goal of developing the potential for enhancing one's own health. (F,S)

478-217 Man, Nature and Disease 3 cr.
Impact of diseases in humans. Emphasizes the major diseases, their causes, individual effects, historical significance, and methods of control. (F)

478-281 Student-Led Courses 1-4 cr.
See Courses with Variable Content.

478-283X Selected Topics 1-4 cr.
See Courses with Variable Content.

478-298 Independent Study 1-4 cr.
See Courses with Variable Content.

478-310 Human Genetics 3 cr.
Principles of human population genetics and the genetic implications of technology; human metabolism, birth defects, and genetic diseases; genetic counseling and gene therapy. (S)

478-312 Evolutionary Processes 3 cr.
Cytological, morphological, behavioral, and geographic factors involved in the origin of species and higher taxa. (F)

478-313 Brain Functions in Human Behavior 3 cr.
Role of the nervous system as the basis of human behavior: evolution of nervous systems and behavior, human nervous system anatomy, neural bases for intellect, emotions, reflexes, conditioning and learning; development of the human nervous system and behavior; chemical, nutritional and stress effects. (FE,J,S)

478-318 Mammalian Reproduction 3 cr.
Basic reproductive processes, with emphasis on the factors, both hormonal and environmental, that affect reproductive functions in mammals; how these processes can be modified to control reproduction. (F)

478-320 Biology of Human Development and Senescence 3 cr.
Physical and functional changes that occur during stages in the human life span, from before birth to old age. Emphasis on nervous, skeletal, immune, reproductive and cardiovascular systems and on theories of aging. (F)

478-333 Principles of Sports Physiology 3 cr.
Applications of exercise physiology in exercise training, conditioning, and athletic performance, including study of such factors as ergogenic aids, sex, age, and training. (S)

478-342 Human Evolution 3 cr.
Phylogenetic history and affinities of homo sapiens and the evidence on which they are based. (S)

478-350 Principles of Exercise Physiology 4 cr.
Fundamentals of physiology and exercise in humans, including the role of physiological systems in dealing with adaptations to acute and chronic patterns of exercise; measurement of various parameters associated with human performance, such as maximal oxygen uptake and body composition. (F)

478-351 Kinesiology 3 cr.
Anatomical and mechanical principles involved in human movement. Emphasis on musculo-skeletal anatomy and the structural-functional relationship associated with movement. Additional topics include the role and significance of joints, connective tissue, and nerves in bodily movement. (S)

481-441 History, Philosophy, and Current Programs in Early Childhood Education 3 cr.
See 302-441.

481-452 Advanced Gerontology 3 cr.

The process of aging as studied in social gerontology (aging in the social context) and geropsychology (the psychological processes of aging). Discusses relationships among the physiological, emotional, cognitive, social and personality changes in later life; health care and social policies. (SE)

481-478 Senior Distinction in Human Development 3 cr.

See *Courses with Variable Content*.

481-481 Student Led Courses 1-4 cr.

See *Courses with Variable Content*.

481-483X Selected Topics 1-4 cr.

See *Courses with Variable Content*.

481-484 Senior Honors Project 3 cr.

See *Courses with Variable Content*.

481-495 Language Acquisition in Childhood 3 cr.

Language learning and development, including structural and transformational linguistics, biological and physiological aspects, relationship to psychological development, use as a cognitive tool, communication skills and the effects of sociocultural factors. (JO)

481-497 Internship 3-12 cr.

See *Courses with Variable Content*.

481-498 Independent Study 1-4 cr.

See *Courses with Variable Content*.

493 Humanistic Studies

493-101, 102 Foundations of Western Culture I, II 3, 3 cr.

Major events, developments, personalities, ideas, concepts and values that mold each age and constitute our traditions and sources; 101 covers the period from ancient civilization to the Renaissance, 102 the Renaissance to the modern world. (F,S)

493-106 Great Books 3 cr.

Introductory study of notable literary and nonliterary texts, considered from a historical perspective. (F,J,S)

493-201, 202 Introduction to Humanities I, II 3, 3 cr.

Major methods and ideas of the Western humanities, examined in selected works of literature, philosophy and fine arts. 201 covers Classical world through Renaissance; 202 Enlightenment through present. (F,S)

493-204 Humanistic Values Through Literature 3 cr.

Examines particular value issues from a humanistic perspective through discussion of essays, stories, poems, plays and novels; may include both Western and non-Western viewpoints. (F,S)

493-205 Personal Values and Social Reform 3 cr.

Examines the values that underlie social reform, asking such questions as whether attempts at social reform are harmful or beneficial to individuals in the society, how one might determine whether a society should be reformed, and what effects reform programs might have on the exercise of individual freedom. (S)

493-210 Film and Society 3 cr.

See 242-210.

493-211 Human Relations and the Humanities: Understanding Discrimination 3 cr.

Explores psychological and social causes and consequences of discrimination and their impact on groups in American society. Examines methods of discrimination reduction; constitutional and legal foundations for equal rights; and bases of attitude change. Students evaluate materials, activities, and environments and learn constructive ways of dealing with lack of human understanding.

493-212 Human Relations and the Humanities: Cultural Diversity 3 cr.

Develops understanding and appreciation of the histories and cultures of groups which have historically faced discrimination in the United States, including Afro-Americans, American Indians, Asian-Americans, Hispanic-Americans, and women. Studies historical development, current status, and perspective of each group. Students evaluate learning materials and learn ways to respond to actions which devalue others.

493-225 American Indian Studies: Arts and Ceremonial Traditions 3 cr.

See 242-225.

493-226 American Indian Studies: History and Verbal Traditions 3 cr.

See 242-226.

493-250 European Economy and Society 3 cr.

Major issues, developments and problems which shaped European societies in the course of the transformation from rural, agrarian and largely static societies to urban, industrial and rapidly changing ones. (F)

493-251 Business and American Life 3 cr.

The social and individual values which relate human experience to business goals; the influence of business values on the organization of American life; business successes and shortcomings and the ways in which American civilization has adapted to them. (F,S)

493-271 American Indian Literature 3 cr.

The religious, aesthetic and philosophical attitudes of some representative Indian cultures as these are reflected in literature. The contrasting lifestyles, customs and beliefs of Indian and American cultures.

493-274 Red Man in White America 3 cr.

Examines the changing position of American Indians in American culture and society; historical relations of Indians and whites, basic processes of socio-cultural change, and past and current stereotypes, images and visions of "the Indian." (F,S)

493-276 Ireland: Culture and Conflict 3 cr.

Studies Irish history, literature and culture to understand the values which have shaped the Irish way of life, especially from 1850 to the present.

493-281 Student-Led Courses 1-4 cr.

See *Courses with Variable Content*.

493-283X Selected Topics 1-4 cr.

See *Courses with Variable Content*.

493-295 Art and Ideas in Western Culture 3 cr.

Surveys the works and ideas of a selection of sculptors, architects, musicians, philosophers, poets and writers to provide a cultural history of the Western world from the middle ages to the present, using the television series *Civilization* by Kenneth Clark. (J)

493-298 Independent Study 1-4 cr.

See *Courses with Variable Content*.

493-302 Human Identity 3 cr.

Presents the concept of human identity from the vantage-point of many disciplines; demonstrates the contributions of science and art and their mutual interaction. (SE)

493-305 Value Theory and the Humanities 3 cr.

The ideas and methods of value inquiry with special attention to problems and claims of values of the environment and the humanities.

493-315 Theories of Creativity 3 cr.

Presents the concept of "creativity" from different humanistic approaches and viewpoints, emphasizing the relationship of creativity to the various psychological, artistic and humanistic theories. (SE)

493-323 The Writings of the Old Testament 3 cr.

The Old Testament as literature and as part of the literary heritage of the Western world. Examines the books of the Old Testament by genre (narrative, poetry, idyll, drama) with techniques of literary analysis as appropriate relative to theme, character, plot, symbolic order and structure. (FE)

493-324 The Writings of the New Testament 3 cr.

The origins of the Christian tradition as reflected in the primary texts of that tradition in the New Testament; the major divisions of the writings of the New Testament, the life of Jesus as recorded in the gospels, the importance of St. Paul and the apocalyptic writings of St. John. (SE)

493-325 Judaism, Christianity, and Islam 3 cr.

The world's three great monotheistic religions; their origins; the experience, ideas and attitudes they share; the features which make each a distinct and unique expression and system of belief in the God who is One. (FO)

493-326 Non-Western Religions 3 cr.

The two major religions of the East, Hinduism and Buddhism: the richness, variety and flexibility of the faith and practice of Hinduism, with its belief in a multiplicity of gods and goddesses; and the various sects and schools of Buddhism—Theravadic, Mahayana, Zen and Tantric. (SO)

493-332 Art and Social Thought 3 cr.

The role of art and art criticism in various modern theories of social order and social change; considers art, whether seen as personal expression or as the expression of social process, primarily from the perspectives of social criticism and historical analysis.

493-333 Utopia and Anti-utopia 3 cr.

The origins, history, and philosophical and political significance of utopian thought in Western culture; the development of major utopian ideals from Plato to the present.

493-340 Perspectives on Human Values: The Classical World 3 cr.

Focuses on the values of the world of classical Greece and Rome as reflected in its texts and fine arts. (S)

493-341 Perspectives on Human Values: The Medieval World 3 cr.

Focuses on the history, society, culture and values of the middle ages as reflected in its literature and fine arts. (S)

493-342 Perspectives on Human Values: Renaissance to Rationalism 3 cr.

Explores the idea of the individual as the measure of value in texts and fine arts as it appears in the Renaissance and develops in Western culture through the 18th century. (F)

493-343 Perspectives on Human Values: Romanticism to Naturalism 3 cr.

Studies the development of Romanticism as a self-conscious notion in the late 18th century, coincidental with the Industrial Revolution; examines the interaction of the social world with the world of art and ideas and the emergence of the naturalism movement. (F)

493-344 Perspectives on Human Values: The Modern Period 3 cr.

Some of the most significant ways by which modern writers and artists have sought to understand the value predicaments and dilemmas of the human condition in an age in which no single set of values has sufficient authority to command belief and provide assurance. (F,S)

493-354 France Today 3 cr.

Aspects of French history and traditional customs and values of contemporary French culture, including rural and urban life, industry and commerce, art and music, etc. (F)

493-356 Contemporary German Culture 3 cr.

The culture of the four German-speaking countries (the Federal Republic of Germany, the German Democratic Republic, Austria and Switzerland) and German culture in the U.S., emphasizing the post-World War II era in West Germany. (S)

493-358 Latin America Today 3 cr.

Specific humanistic aspects of contemporary Latin American culture, including its history, art, literature, music and value systems. (FE)

493-359 The Americas Look at Each Other 3 cr.

Examines the way the Latin American culture perceives North American culture through the study of Latin American writers and artists. (SE)

493-361 January/June Abroad: German Culture 3 cr.

Travel to one of the German-speaking countries. Studies of German culture through on-site lectures, tours of historical and architectural sites, universities and museums, factories and businesses, and attendance at concerts and operas. (J, June)

493-363 January Abroad: Mexico 3 cr.

Exposure to the accessible portions of a culture of ancient Mexico, the culture of present-day Mexican villages and the culture of contemporary urban Mexicans, typically in the states of Yucatan, Quintana Roo, Campeche and Chiapas; emphasis typically upon ancient and contemporary Maya cultures. (J)

493-364 Women and Religion 3 cr.

See 875-440.

493-365 January Abroad: England and Its Heritage 3 cr.

Field trip to England for on-site study of English literature, history and culture. Center of study is the city of London but also includes conducted study tours to other sites such as Bath, Brighton, Cambridge, Canterbury, Oxford, Stonehenge and Stratford upon Avon. (J)

493-367 The Structure of Evil and Western Culture 3 cr.

See 875-367.

493-371 American Indian Art and Artists 3 cr.

The art and painting of selected North American Indian cultures, using comparative analyses of arts as expressions of differing value systems; aesthetic ideals and basic symbolism of American Indian art. (J)

493-374 Wisconsin's Indians: Historical and Cultural Perspectives 3 cr.

Indian cultures of Wisconsin in the period 1600-1830. Basic cultural patterns and social life of such tribes as the Winnebago, Menominee, Sauk, Fox, Kickapoo, Huron and Potawatomi and their historical transformation; the impact of the fur trade, missionaries and Euro-Americans in the area.

493-376 Cultural Conflict in French Canada 3 cr.

Analyzes the conflict between the English and the French in Canada, one of many cases of conflicting cultural groups in the world today; focuses on the cultural dimension of the problem and assesses its consequences, both creative and destructive. (J or S)

493-478 Senior Distinction in Humanistic Studies 3 cr.

See Courses with Variable Content.

493-480 Humanities Seminar 3 cr.

A capstone seminar for Humanities majors, examining basic approaches of various humanities disciplines. Topics vary. (S)

493-481 Student-Led Courses 1-4 cr.

See Courses with Variable Content.

493-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

493-484 Senior Honors Project 3 cr.

See Courses with Variable Content.

493-497 Internship 3-12 cr.

See Courses with Variable Content.

493-498 Independent Study 1-4 cr.

See Courses with Variable Content.

552/554/556/558 Literature and Language

Each language has a separate curriculum area number. Many courses are offered separately in different languages.

552 ENGLISH-AMERICAN

554 FRENCH

556 GERMAN

558 SPANISH

552-100 College Writing 3 cr.

An introductory course in college writing, emphasizing writing as a four-step process of prewriting, drafting, revising and editing. Focuses on sentence structure, paragraph development, principles of organization, research paper techniques; reviews conventions of punctuation, grammar, spelling and usage. (F,S)

101, 102 Introduction to the French, German, Spanish Language, I, II 4, 4 cr.

Development of basic ability in understanding, reading, speaking and writing in French, German or Spanish. (F,S)

552-104 Introduction to Literature 3 cr.

The distinctive characteristics of poetry, plays, short stories and the novel, intended to help students understand, appreciate and enjoy literature ranging from the classic to the contemporary. (F,S)

552-105 Expository Writing 3 cr.

College-level writing skills and principles of logical reasoning, effective organization and development of ideas using a variety of rhetorical modes; improvement in research paper techniques. (F,S)

552-107 The Short Story 3 cr.

The short story as a literary form. Stories selected may be arranged according to period, theme, nationality or author. (J)

201, 202 Intermediate French, German, Spanish Language I, II 4, 4 cr.

Further development of the ability to understand, read and speak French, German or Spanish. (F,S)

552-206 Women in Literature 3 cr.

Surveys both women as writers and women as characters in literature; emphasizes the wisdom, experiences and insights of women writers and women in literature; concerned with literature from two or more cultures and comparison of the social and human values reflected in the literature of those cultures. (S)

552-212 Introduction to Creative Writing: Fiction 3 cr.

A first course in the writing, appreciation, understanding and technique of fiction. (F,S)

552-213 Introduction to Creative Writing: Poetry 3 cr.

A first course in the writing, appreciation, understanding and technique of poetry. (F,S)

552-214, 215 Introduction to English Literature I, II 3, 3 cr.

Chronological survey of English literature: 214 from Anglo-Saxon times to the end of the 18th century, including such writers as Chaucer, Shakespeare, Donne, Milton, Pope, and Swift; 215 from the 19th century to the present, including such writers as Wordsworth, Shelley, Keats, Byron, Tennyson, Shaw, Conrad, Eliot and Thomas. (F,S)

552-216, 217 Introduction to American Literature I, II 3, 3 cr.

Chronological survey of American literature: 216 from Bradford to Melville, including such writers as Mather, Bradstreet, Paine, Irving, Cooper, Poe, Emerson and Thoreau; 217 from Whitman to the present, including such writers as Longfellow, Dickinson, Twain, James, Crane, Eliot, Pound, Fitzgerald, Hemingway, Faulkner and Cummings. (F,S)

225 French, German, Spanish Conversation and Composition 3 cr.

Development of greater fluency through classroom practice in conversation and composition. (F)

283X Selected Topics 1-4 cr.

See *Courses with Variable Content*.

289 Intensive German 15 cr.

Intensive course aimed at developing foundational proficiency in one semester. Class meets six hours a day, four days a week; equivalent to both introductory and intermediate courses in the language. (S)

298 Independent Study 1-4 cr.

See *Courses with Variable Content*.

552-301 Intermediate Creative Writing 3 cr.

Literary texts are compared with their source materials. Student writers of poetry, fiction, drama and journalistic features develop projects based on research of historical or other source materials.

552-302 Fiction Writing Workshop 3 cr.

Advanced practice in the writing of fiction, including group criticism of student work. May be repeated once for credit. (F,S)

552-303 Poetry Writing Workshop 3 cr.

Advanced practice in the writing of poetry, including group criticism of student work. May be repeated once for credit. (F,S)

552-304 Advanced Expository Writing 3 cr.

Study and practice of non-fiction writing of various kinds; including autobiography, argument, personal essay, formal essay; emphasizes developmental strategies, organization, tone and style. (S)

552-310 Major English Drama 3 cr.

Significant English plays from the Renaissance to the Twentieth Century, including works by Marlowe, Webster, Congreve, Shaw, and Wilde.

552-315 The English Novel: 1700-1860 3 cr.

The development of the English novel from its beginnings to the mid-Victorian period; includes works by such authors Defoe, Sterne, Fielding, Fielding, Smolett, Austen, Scott, the Brontes, Thackeray, Dickens and Eliot.

552-316 The English Novel: 1850 to the Present 3 cr.

The development of the English novel from mid-Victorian to modern times; includes works by such authors as Dickens, Eliot, Trollope, Hardy, Wilde, Conrad, Joyce, Woolf, Lawrence, Bowen and Cary.

552-323 Approaches to Literature 3 cr.

Studies various ways of analyzing a literary work, including historical, psychological and formal approaches; examines poems, plays and novels using different critical approaches. (F)

325 Advanced Written and Oral Expression in French, German, Spanish 3 cr.

Continues development of fluency through intensive practice and study of the spoken and written language. Stresses accurate use of grammatical structures and sensitivity to differences in style, tone and levels of language from colloquial to formal. (S)

329 Representative French/German Authors 3 cr.

Important novels, plays, poems, and essays representative of major eras and movements of French or German society foster appreciation of the language and understanding of the literature and culture. Includes different styles of writing and differing treatment of recurring themes. Offered in the language.

552-331 Major American Prose Fiction 3 cr.

Study of American prose fiction including examples of novels, short stories and satire; includes works by such authors as Melville, Twain, Fitzgerald, Hemingway, Wright and Bellow.

333 Literary Themes 3 cr.

Explores a single theme such as fantasy, war, revolution, love, alienation, through the literature of one or many nations; may be repeated for credit when a different theme is studied.

335 Literary Eras 3 cr.

Studies the works of a number of writers in relation to their time; includes poetry, prose and drama. May be repeated for credit when a different era is studied. (F,S)

350 Major Foreign Drama 3 cr.

Study of French, German or Spanish drama either by period or by theme; conducted either in the foreign language or in English.

351 Major Foreign Prose Fiction 3 cr.

Study of French, German or Spanish short story and/or novels either by period or by theme; conducted either in the foreign language or in English.

352 Major Foreign Poetry 3 cr.

Study of French, German or Spanish poetry either by period or by theme; conducted either in the foreign language or in English.

354 France Today 3 cr.

See 493-354.

356 Contemporary German Culture 3 cr.

See 493-356.

358 Latin America Today 3 cr.

See 493-358.

359 The Americas Look at Each Other 3 cr.

See 493-359.

363 January Abroad: Mexico 3 cr.

Exposure to the accessible portions of a culture of ancient Mexico, the culture of present-day Mexican villages and the culture of contemporary urban Mexicans, typically in the states of Yucatan, Quintana Roo, Campeche, and Chiapas; emphasis typically upon ancient and contemporary Maya cultures. (J)

552-431 Shakespeare 3 cr.

Study of a representative selection of Shakespeare's plays, including comedies, tragedies and histories. (S)

552-434 Major British Writer(s) 3 cr.

Study of one or more outstanding figures in British literature, such as Chaucer, Milton, Blake, Wordsworth, Conrad, Joyce, Woolf, etc. May be repeated for credit when a different figure is studied.

552-435 Major American Writer(s) 3 cr.

Study of one or more outstanding figures in American literature, such as Melville, Twain, Dickinson, Whitman, Frost, Hemingway, Fitzgerald, Faulkner, etc. May be repeated for credit when a different figure is studied.

438 Major Spanish Writer 3 cr.

Study of an outstanding figure in Spanish literature. Subjects will vary. Offered in either Spanish or English.

478 Senior Distinction in Literature and Language 3 cr.

See *Courses with Variable Content*.

483X Selected Topics 1-4 cr.

See *Courses with Variable Content*.

490 Seminar in Literature 3 cr.

Intensive study of a major writer, literary movement, literary period or influence. (S)

497 Internship 3-12 cr.

See *Courses with Variable Content*.

498 Independent Study 1-4 cr.

See *Courses with Variable Content*.

600 Mathematics**600-101 Intermediate Algebra 3 cr.**

Properties of the real numbers; solving linear and quadratic equations and inequalities; polynomials; fractional expressions and equations; exponents, powers and roots; systems of linear equations. (F,S)

600-104 Elementary Functions: Algebra and Trigonometry 4 cr.

The real number system; inequalities; functions and their inverses; exponential and logarithmic functions; trigonometric and inverse trigonometric functions; complex numbers; polynomial and rational functions; systems of equations. (F,S)

600-201 Calculus for the Management and Social Sciences 3 cr.

Basic concepts and techniques of differential and integral calculus. Applications in the fields of accounting, economics, finance and management. Full credit is not given for both 600-201 and 600-202; students who enroll in 600-202 after receiving credit for 600-201 will receive one credit for 600-202. (F,S)

600-202, 203 Calculus and Analytic Geometry I, II 4, 4 cr.

Differential and integral calculus of the elementary functions with associated analytic geometry; transcendental functions; techniques of integration; applications; sequences and series. (F,S)

600-209 Multivariate Calculus 4 cr.

Real-valued functions of several variables; tangent and normal lines; chain rule for partial derivatives; extrema; least squares method; higher-ordered derivatives; integration; polar and cylindrical coordinates; spherical coordinates; vector fields; line integrals; physical applications. (F,S)

600-242 Discrete Mathematics 4 cr.

Fundamentals of enumeration, partitions, algebraic counting techniques, generating functions, recurrence relations, graph theory and combinatorial designs. (F,S)

600-260 Introductory Statistics 4 cr.

Descriptive and inferential statistics; frequency distributions; graphical techniques; measure of central tendency and of dispersion; probability distributions; large and small sample estimation and inference, regression correlation, analysis of count data, analysis of variance. Credit will not be granted for both 600-260 and 255-205. (F,S)

600-281, 282 Conceptual Foundations of Elementary Mathematics I, II 3, 2 cr.

Foundations of mathematics, particularly those concepts common to the mathematics curriculum of elementary schools. Explores the processes of abstraction, symbolic representation, notational manipulation and modelling in all arithmetic contexts; examines non-arithmetic topics such as geometry, probability, statistics, algebra, and programming concepts. May not be taken on a pass/no credit basis. (F,J,S)

600-283X Selected Topics 1-4 cr.

See *Courses with Variable Content*.

600-298 Independent Study 1-4 cr.

See *Courses with Variable Content*.

600-305 Ordinary Differential Equations 3 cr.

Solutions and applications of first and higher order linear differential equations; the meanings of existence and uniqueness theorems; nonlinear differential equations; modelling physical and biological systems. (S)

600-309 Systems of Ordinary Differential Equations 3 cr.

Systems of linear, first-order differential equations, making use of matrix algebra with eigenvectors and eigenvalues, and numerical methods; applications; nonlinear differential equations. (FO)

600-311 Advanced Calculus 3 cr.

Jacobians; transformation of coordinates; functional dependence; constrained extreme and Lagrange multipliers; line, surface and volume integrals; scalar and vector fields; gradient, divergence and curl; divergence theorem; Stokes' theorem. (FO)

600-312 Real Analysis 3 cr.

Basic ideas of real analysis; sets and functions; topology of the real numbers; sequences and series of real numbers; limits of functions; the derivative; the Riemann integral; sequences and series of functions. (SO)

600-320, 321 Linear Algebra I, II 3, 3 cr.

Matrices and vector space concepts. Systems of linear equations, matrices, determinants, vectors in two- and three-space, vector spaces, linear transformations, eigenvalues, and eigenvectors; positive-definite matrices, normal forms, the principal axis theorem, applications. (F,S; SE)

600-328 Introduction to Algebraic Structures 3 cr.

Groups, rings, and fields as organizing ideas. Basic structure theorems. Applications. (F)

600-355 Applied Mathematical Optimization 3 cr.

Analytical and numerical optimization techniques; linear, nonlinear, integer, and dynamic programming. Techniques applied to problems of water, forest, air and solid-waste management. (FE)

600-360 Theory of Probability 3 cr.

Probability as a mathematical system, with applications; basic probability theory; combinatorial analysis; distribution functions and probability laws; mean and variance of a probability law; expectation of a function with respect to a probability law; normal, Poisson, and related probability laws; random variables. (FE)

600-361 Mathematical Statistics 3 cr.

Sample moments and their distributions; tests of hypotheses; point and interval estimation; regression and linear hypotheses; nonparametric methods; sequential methods. (SE)

600-364 Biometrics 4 cr.

Emphasis on life science problems; analysis of variance techniques, linear regression, correlation analysis and nonparametric techniques; introduction to statistical computation. (SO)

600-385 Foundations of Geometry 3 cr.

Intuitive and deductive introductions to Euclidean, affine, hyperbolic, spherical, elliptic and projective geometries. (S)

600-410 Complex Analysis 3 cr.

Algebra and geometry of complex numbers; analytic functions, elementary transformations, integration, Taylor and Laurent series, contour integration, residues, conformal mapping. (FE)

600-416 Orthogonal Functions and Partial Differential Equations 3 cr.

Fourier series, Fourier transform; orthogonal functions; Legendre and other polynomial systems; Bessel functions; characteristic functions and values; Green's function; wave equation in one and more dimensions; D'Alembert's solution; Dirichlet problem; strings and membranes; heat flow; electricity flow. (FE)

600-465 Business and Industrial Statistics 4 cr.

Statistical methods commonly applied in business and industry: quality control, control charts and acceptance sampling; multiple regression, time series, smoothing and forecasting; index numbers. (FO)

600-478 Senior Distinction in Mathematics 3 cr.

See *Courses with Variable Content*.

600-483X Selected Topics 1-4 cr.

See *Courses with Variable Content*.

600-492 Special Topics in Mathematics 1-3 cr.

This course brings together students and professors who have mutual interest in some topics not otherwise available among the usual mathematics offerings.

600-497 Internship 3-12 cr.

See *Courses with Variable Content*.

600-498 Independent Study 1-4 cr.

See *Courses with Variable Content*.

Other courses applicable to mathematics:

754-315 Classical Mechanics 3 cr.

008-704 Discrete Multivariate Statistical Analysis 2 cr.

008-767 Statistical Design and Analysis of Experiments 4 cr.

008-768 Multivariate Statistical Analysis 4 cr.

644 Military Science**644-123 Exercise Leadership I 1 cr.**

See 742-123.

644-211 Introduction to Military Science I (MS 11) 2 cr.

(Pre-Professional Course) Introduces first year students to the ROTC program, Army life and organization, the Department of Defense and the Army's role in national defense and community activities. Map reading, radio and telephone procedures, CPR, and orienteering. (F)

644-212 Introduction to Leadership and Land Navigation II (MS 12) 2 cr.

(Pre-Professional Course) Formal leadership and management theory and how it applies in military and civilian environments, first aid, basic marksmanship training, and customs and courtesies. Review of the Army's role in national defense and community service and the specialized organizations, units, skills, and training contributing to those services. (S)

644-221 Military History Studies (MS 21) 2 cr.

(Pre-Professional Course) U.S. military history; origin and development of military organization, theories and practices of war (the evolutionary nature of war), from the American Civil War, World Wars I and II, the Korean Conflict, and the U.S. Army in Vietnam, to contemporary military realities. Continued development of leadership skills. (F)

644-222 Basic Leadership and Management (MS 22) 2 cr.

(Pre-Professional Course) Leadership skills through military techniques of training, training management and instruction on the concept of performance-oriented training; fundamentals of leadership; styles of leadership, the setting and the problems. (S)

644-223 Exercise Leadership II 1 cr.

Participation in the formal calisthenics program is enhanced by personal assessment and design of exercise program. Students learn leadership and elements of counseling for personal exercise involvement. Includes nutrition, stress control, environmental considerations. The physical readiness test is administered. (F,S)

644-431 Small Unit Tactics (MS 31) 2 cr.

(Professional Course) Squad and platoon-level command problems and tactics, Army communication and preparation for advanced ROTC camp by review of basic military skills and subjects, advanced land navigation and orienteering, completion of precamp preparation. (F)

644-432 Professional Ethics and Management (MS 32) 2 cr.

(Professional Course) The professional military science (ROTC) program. Basic concepts of military management with emphasis on integrating face-to-face leadership skills with management techniques; organizational theory and staff procedures; techniques of organizational decision making and communication. (S)

644-441 Contemporary Military Seminar (MS 41) 2 cr.

(Professional Course) Introduces ROTC seniors to concepts of task organization, combined arms teamwork, basic company level tactics, and tactical planning, combat support and combat service support aspects of military operations, and technical aspects of management in the Army's unit level organization. Incorporates the fundamentals of military law. (F)

644-442 Military Management Seminar (MS 42) 2 cr.

(Professional Course) The role of the Second Lieutenant in a military line organization and the Army's expectations regarding his or her commission, conduct, behavior, duty performance and public image. Military law and justice; obligations and responsibilities of an officer in both line and staff environments; active duty considerations affecting an officer, including military movements, compensation and financial management, and career. (S)

670 Music

670-101 Basic Musicianship 3 cr.

Musical notation, scale and chord structure with reference to the keyboard; developing skills in sight singing, ear training and rhythmic and melodic dictation. (F)

670-115, 116 Ear Training and Sight Singing I, II 1, 1 cr.

Concentrated drill in all aspects of musicianship. Emphasis on sight singing and aural perception in intervals, melodies, chords and rhythms. (F,S)

670-151, 152 Materials and Values in Music I, II 3, 3 cr.

The materials of which Western music is made are viewed not only in structural terms, but also in psychological, aesthetic and social perspective. (F,S)

670-241 Jazz Improvisation 3 cr.

Development of skills in musical improvisation: notation and function of chords, chord symbols, scales and rhythms; selected record listening and playing sessions. (J)

670-251, 252 Literature and Styles in Music I, II 4, 4 cr.

Musical literature and style from antiquity to the 18th century. Views music and musical attitudes in the perspective of other arts and in relation to their social and cultural milieu; development of related ear training, sight singing and some "composing" in period styles. (F,S)

670-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

670-298 Independent Study 1-4 cr.

See Courses with Variable Content.

670-301 Applied Music Pedagogy 1 cr.

Individual observation of private applied lessons given by UWGB faculty instructors; teaching one lower-level noncredit student in the Extension/Outreach program, or one student from the String Techniques class, with periodic observation. (F,S)

670-315 Choral Arranging 2 cr.

Arranging, adapting and creating scores for small and large vocal ensembles; includes an original composition for soprano-alto-tenor-bass (SATB) to be performed by the Concert Choir. (F)

670-316 Instrumental Arranging 3 cr.

Arranging, adapting and creating scores for small wind ensembles and full band; includes an original composition to be performed by the Concert Band. (S)

670-318 Choral Literature 2 cr.

Large choral masterpieces from the Renaissance to the present: musical styles, interpretive practices and performance problems inherent in extended choral works and the vocal and instrumental resources necessary to their performance. (F)

670-325, 326, 327 Diction for the Voice: German, French, Italian 1 cr.

Language diction as it applies to singing. Includes rules of pronunciation and use of the International Phonetic Alphabet.

670-333 Basic Conducting 2 cr.

Detailed study of conducting techniques: practical application to choral and instrumental ensembles. (F)

670-341 Woodwind Techniques 2 cr.

Experience in the performance, pedagogy and critical evaluation of woodwind instruments, including flute, oboe, bassoon, clarinet and saxophone. (S)

670-342 Brass Techniques 2 cr.

Experience in the performance, pedagogy and critical evaluation of brass instruments, including trumpet, French horn, trombone, baritone and tuba. (F)

670-343 String Techniques 2 cr.

Experience in the performance, pedagogy and critical evaluation of string instruments, including violin, viola, violoncello and string bass. (F)

670-344 Choral Conducting and Rehearsal Techniques 2 cr.

Advanced study of conducting and rehearsal techniques for school vocal ensembles, including principles, techniques and methods of choral tone, diction and score study. (S)

670-345 Percussion Techniques 2 cr.

Experience in the performance, pedagogy and critical evaluation of percussion instruments, including snare drum, tympani and accessories. (S)

670-346 Keyboard Accompanying I 1 cr.

Techniques of accompanying the vocal soloist and the choral ensemble at the piano, including laboratory experience in various types of accompaniment. (F)

670-348 Instrumental Conducting and Rehearsal Techniques 3 cr.

Advanced study of conducting and rehearsing school instrumental ensembles, including score preparation, analysis and musical error detection with specific assignments for marching band and jazz ensemble directing. (S)

670-351, 352 Literature and Styles in Music III, IV 4, 4 cr.

Historical and theoretical examination of musical literature and style in the 19th and 20th centuries. Views music and musical attitudes in the perspective of other arts and in relation to their social and cultural milieu; development of related ear training and sight singing. Some "composing" in the Romantic style in III and 20th century styles in IV. (F,S)

670-411, 412 Composition I, II 3, 3 cr.

Exercises and original compositions in media from solo to quintet, in forms from binary to sonatina, etc., depending on the needs of the individual students. (F,S)

670-417 Jazz Arranging 2-3 cr.

Acquaints students with the knowledge necessary to write an artistic jazz arrangement.

670-423 Seminar in Music Literature 3 cr.

Studies in selected areas of music literature for specific media, such as chamber music, opera, music for keyboard, etc., or on works of a single composer. Content varies. (F)

670-431 Jazz Ensemble Techniques 3 cr.

Procedures for rehearsing and teaching the jazz ensemble: daily playing experience in a jazz ensemble, writing an arrangement; studies in jazz theory, arranging, improvisation, piano, bass, guitar, drums, trumpet, trombone and saxophone.

670-478 Senior Distinction in Music 3 cr.

See Courses with Variable Content.

670-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

670-497 Internship 3-12 cr.

See Courses with Variable Content.

670-498 Independent Study 1-4 cr.

See Courses with Variable Content.

672 Applied Music

672-001-440 Class and Private Instruction in Instruments and Voice 1, 2 or 3 cr.

Study of the solo literature of music through class or private instruction. Placement by audition. Instruction in piano, organ, voice, flute, oboe, clarinet, saxophone, bassoon, horn, trumpet, trombone, baritone, tuba, percussion, guitar, violin, viola, cello, double bass and harp. Special enrollment restrictions apply. (F,S)

- 672-011, 012, 013 Keyboard Musicianship I 1 cr.
 672-021, 022, 023 Keyboard Musicianship II 1 cr.
 672-031, 032, 033 Keyboard Musicianship III 1 cr.
 672-041, 042, 043 Keyboard Musicianship IV 1 cr.
 672-045, 046 Elementary Voice I, II 1, 1 cr.
 672-143, 343 Jazz Ensemble 1 cr.
 672-144, 344 Woodwind Ensemble 1 cr.
 672-145, 345 Brass Ensemble 1 cr.
 672-146, 346 Percussion Ensemble 1 cr.
 672-148, 348 Collegium Musicum 1 cr.
 672-150, 350 New Music Ensemble 1 cr.
 672-153, 353 String Ensemble 1 cr.
 672-163, 363 Vocal Ensemble 1 cr.
 672-164, 364 University Singers 1 cr.
 672-241, 441 Concert Band 1 cr.
 672-242, 442 Marching Band 2 cr.
 672-251, 451 Orchestra 1 cr.
 672-261, 461 Concert Choir 1 cr.
 672-262, 462 University Chorus 1 cr.
 672-275, 475 Performance Practicum: Major Musical 1-3 cr.
 672-283X, 483X Selected Topics 1-4 cr.
 707-298, 498 Independent Study 1-4 cr.

689 Nursing

689-215 Here's to Your Health 3 cr.

Theoretical and practical knowledge about health and wellness, with experiential exercises to heighten awareness of one's own values, attitudes and abilities toward living healthy. (F,S)

689-315 Health Assessment of the Adult 3 cr.

The components of the health history, basic skills of a physical examination, and related verbal and written communication skills. (F,S)

689-329 Computer Applications in Nursing 3 cr.

Computer technology and its applications to manage information in nursing practice, research administration and education; explores the impact of computer technology on nursing and the health care industry. (F,S)

689-411 Theoretical Foundations in Nursing 3 cr.

Philosophical organization of nursing's scientific knowledge into theoretical frameworks: how these theories describe, explain or predict events; how nursing models describe the relationships that may exist about concepts in a developing theory; how theory has applications to nursing practice. (F,S)

689-415 Adaptation in Health and Illness 4 cr.

Theory and application of the Adaptation Model with well and ill clients, emphasizing care of the elderly; includes clinical experience to demonstrate use of the Adaptation Model. (F,S)

689-419 Adaptive Parent-Child Health 4 cr.

Adaptation model applied to the family when a child enters and develops within the system; the child's level of wellness and its effect on the family; research findings and ethical issues; applications in different health settings. (F,S)

689-425 Adaptation to Acute and Chronic Health Problems 4 cr.

Acute and chronic health problems in middle-aged people which are responsive to nursing therapy as well as medical therapy; explores the underlying psycho-pathophysiology to develop a scientific rationale and support for intervention. (F,S)

689-431 Nursing Management 3 cr.

Skills and strategies in nursing management and administration: organizational structure, change strategies, role conflicts and responsibilities, labor relations, leadership styles, group process and performance appraisal; applications in particular areas of nursing practice. (F,S)

689-435 Nursing Research 3 cr.

The role of the nurse as researcher: basic principles of research theory, understanding the research process; judging the adequacy of published research, concepts and procedures for conducting and reporting research. (F,S)

689-441 Community Health Nursing 6 cr.

Combines theory and clinical practice. Provision of care for individuals, families, aggregates and communities through the use of the Roy Adaptation Model. The nursing process as a problem-solving method. Primary, secondary and tertiary levels of prevention. (F,S)

689-451 Advanced Nursing Concepts 4 cr.

Knowledge, skills and attitudes in the utilization of the adaptation framework; nature of professionalism in nursing and the professional role; the autonomous role; the expanding role of the nurse; ethical issues in nursing; economic, legal, political and social forces on nursing. (F,S)

689-478 Senior Distinction in Nursing 3 cr.

See Courses with Variable Content.

689-484 Senior Honors Project 3 cr.

See Courses with Variable Content.

689-498 Independent Study 1-4 cr.

See Courses with Variable Content.

694 Nutritional Sciences

694-142 You and Your Food 3 cr.

Purposes, production, processing, packaging, advertising and distribution of food; changes in foods from farm to table; deterioration and preservation of foods; uses and abuses of additives; food safety and consumer protection. (F,S)

694-201 Dietetics and Related Professions 1 cr.

Opportunities in dietetics and related professions, including food service administration, health and physical fitness, and health education. Education and training; characteristics of various employment sectors; aspects of management practice; skills for entrepreneurship; ethical considerations; laws, regulations and standards; political process and legislation related to health professionals.

694-212 Nature of Food 4 cr.

Chemical, physical and microbiological nature of food and manipulation of these factors to produce properties of food associated with good quality and acceptability; Laboratory demonstrates principles of food science as applied to food preparation. (F)

694-250 World Food and Population Issues 3 cr.

World hunger and population growth as interrelated problems. Dimensions of the world food situation and its implications; scope, complex causes and effects of malnutrition; general strategies and obstacles to the solution of world food and population problems. (F)

694-281 Student-Led Courses 1-4 cr.

See Courses with Variable Content.

694-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

694-298 Independent Study 1-4 cr.

See Courses with Variable Content.

694-300 Nutritional Significance of Food 3 cr.

Fundamentals of human nutrition, including functions and requirements of essential nutrients; means of obtaining an adequate diet; nutritional needs of infancy, adolescence, adulthood, pregnancy and lactation, and aging. (F)

694-301 Crop Science 3 cr.

Principles of plant science involved in the growth, management and production of field crops. Biological factors, environment, soil, climatic and technological foundations of agronomy and crop distribution. (SO)

694-302 Nutrition and Culture 3 cr.

Effects of environment and culture on food habits in historical perspective. Role of food in health and disease as related to humans and the biosphere. (S)

694-312 Quantity Food Production and Service 4 cr.

Principles of quantity food preparation, service, and budgeting in food service systems. Projects, laboratory, and field trips afford pertinent practical experiences. (SE)

694-328 Physiological Chemistry 3 cr.

Principles of physiological chemistry as related to structure, function and metabolism in living organisms. (SO)

694-404 Food Science 3 cr.

Nature of the food industry; properties of food components and their quality, processing, and analysis; food deterioration and safety, including methods of preservation, packaging and distribution. Field trips required. (S)

694-409 Analysis of Food and Food Products 2 cr.

Laboratory study of principles, methods and techniques necessary for chemical analyses of food and food products. Analysis and instrumental methods related to the standards and regulations for food processing. (S)

694-421 Community Nutrition 3 cr.

Application of nutrition concepts in community nutrition; problems at various life stages; disease prevention and community health; community nutrition programs and related legislation; assessment of nutritional needs and resources; program planning and evaluation; delivery of quality nutrition services. (F)

694-481 Student-Led Courses 1-4 cr.

See Courses with Variable Content.

694-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

694-484 Senior Honors Project 3 cr.

See Courses with Variable Content.

694-485 Advanced Human Nutrition 3 cr.

Physiological and biochemical principles of nutrition; theoretical concepts of human nutrition and nutritional diseases. (FE)

694-488 Nutrition in Disease 3 cr.

Therapeutic applications of nutrition in treatment of human diseases, emphasizing appropriate medical terminology, etiology, biochemical and clinical manifestations of disease conditions, and the design of nutrition plans for treatment of disease. (SO)

694-497 Internship 3-12 cr.

See Courses with Variable Content.

694-498 Independent Study 1-4 cr.

See Courses with Variable Content.

736 Philosophy**736-101 Introduction to Philosophy 3 cr.**

Basic ideas and problems of philosophy; various disciplines and schools of philosophy; important philosophical issues and their relevance to the present. (F)

736-102 Problems in Ethics 3 cr.

Ethical problems which are significant to an individual in the contemporary world, including traditional issues and current issues in such areas as law, medicine, public policy, business and education. (F)

736-104 Freedom and Individuality 3 cr.

The notions of freedom and individuality and their significance for an individual in a complex and highly structured society. (S)

736-105 Introduction to Social and Political Philosophy 3 cr.

Basic concepts in social and political theory, including the ideas of natural law and right, social and political justice, duty, obligation and freedom. (S)

736-106 Pacifism and Violence 3 cr.

The value and possibility of the pacifist desire to eliminate violence from human affairs, examined through reflection upon possible sources, types and functions of human violence. (F)

736-111 Elementary Logic 3 cr.

Recognizing and judging the validity of various types of reasoning, especially those which are employed in nontechnical contexts. (F)

736-207 Philosophy and Literature 3 cr.

Issues shared between philosophy and literature as reflected in literary works; the nature and meaning of literature for an understanding of the world. (F)

736-208 Science and Human Values 3 cr.

Implications of the social and natural sciences for human values; study of the history of the distinction between fact and value in segments of human life such as politics, law and medical technology. (F)

736-209 Reason and Passion: Philosophical Issues in Film 3 cr.

The tension between reason and passion in human life. Topics include tolerance, justice, truth and practicality examined through readings, lectures and selected films. (J)

736-210 Civilization and Culture 3 cr.

Investigation of the value to humans of being civilized and of belonging to cultures, by raising such questions as: What is the relation between being civilized and being human? Is it necessary to belong to a culture in order to be human? Do some cultures promote human development while others obstruct it? (S)

736-211 The Arts and Human Existence 3 cr.

The nature and meaning of the various fine arts such as painting, literature, music and film, and their significance for human existence; the nature of the work of art and the creative activity of the artist. (S)

736-212 Philosophy of Science 3 cr.

The classical positions and current controversies in the philosophy of science. (S)

736-213 Ancient Philosophy 3 cr.

The origins and early development of Western philosophy in the context of Classical Greek culture. Introduction to the thought of Plato, Aristotle, and selected pre-modern thinkers; clarification of enduring issues in the Western philosophical tradition. (F)

736-214 Modern Philosophy 3 cr.

Major thinkers and movements representative of philosophical thought from the 17th century to the present. (S)

736-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

736-298 Independent Study 1-4 cr.

See Courses with Variable Content.

736-301 Criticism of Values 3 cr.

An examination of the possibility of adopting any value or set of values, including such issues as the nature of value, the ability to know value, and the problem of change and endurance of values as developed in works by various traditional and contemporary authors. (SO)

736-304 American Philosophy 3 cr.

Major thinkers and ideas in the American philosophical tradition: discussion of the views of Peirce, James, Royce, Dewey and Santayana; distinctly American schools and movements such as transcendentalism, naturalism, pragmatism, and instrumentalism. (FO)

736-322 Aesthetics 3 cr.

Survey of the main philosophical theories of art and beauty in Western culture; development of a critical understanding and appreciation of the nature and purpose of art. (FE)

736-324 Contemporary Philosophy 3 cr.

Current philosophical movements in Europe and America, such as phenomenology, existentialism, analytic philosophy, intuitionism, pragmatism and Marxism. (SE)

736-325 Marxist Humanism 3 cr.

Study of Marx's writings, concentrating on his concern for the value of human life and activity; topics include alienation, class struggle, historical process, and the relation of the individual to society. (SE)

736-326 Philosophy, Politics and Law 3 cr.

The nature of politics and law and their interrelations; general legal theory, legal rights, judicial reasoning; the problems of justice, property and morality law. (FE)

736-403 Major Philosophic Figures and Issues 3 cr.

In-depth study of selected major philosophic figures and issues in the history of Western thought. (SO)

736-406 Philosophical Problems in the Sciences 3 cr.

Philosophical examination of the logic and knowledge claims of the various natural and social sciences: questions of their foundations and assumptions and their interpretations of nature, the social world, and the human individual. (FO)

736-478 Senior Distinction in Philosophy 3 cr.

See Courses with Variable Content.

736-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

736-497 Internship 3-12 cr.

See Courses with Variable Content.

736-498 Independent Study 1-4 cr.

See Courses with Variable Content.

742 Physical Education**742-101 Swimming I 1 cr.**

Fundamental swimming, basic water survival skills, and safety for students with minimum swimming ability. American Red Cross certification available. (F,S)

742-116 First Aid and Emergency Care Procedures 2 cr.

Information and practical training in Red Cross, medical self help, and emergency medical procedures. American Red Cross certification available. (F,S)

742-117 Cardiopulmonary Resuscitation 1 cr.

Causes and effects of respiratory, cardiac and circulatory insufficiencies and arrests are explored as well as appropriate emergency care responses. Students develop resuscitation skills on adult, child and infant mannequins. American Red Cross certification available. (F,J,S)

742-121 Personal Conditioning 1 cr.

Principles of exercise physiology as they relate to muscular and organic stress from participation in calisthenics and exercise with light apparatus. Develops conditioning programs appropriate for life-long fitness. (F,J,S)

742-122 Training with Weights 1 cr.

Heavy resistance training and its effects upon the musculature; basic principles of the several styles of training with weights. (F,S)

742-123 Exercise Leadership I 1 cr.

Formal, concentrated and progressive calisthenics based upon the U.S. Army's physical readiness program. Students learn to lead group exercise. The physical readiness test is administered. Includes information on weight control, cardiovascular training, posture, etc. (F,S)

742-124 Conditioning Through Running 1 cr.

Designed for the individual who prefers a program of vigorous exercise to one of primarily recreational nature. Emphasizes cardiovascular benefits of running and the practical application of various types of running to improve physical fitness. (F,S)

742-131 Aerobic Exercise 1 cr.

A self-paced, self-monitored exercise program emphasizing cardiovascular endurance. Routines use basic locomotor skills, dance steps and vigorous floor exercises set to music. (F,S)

742-145 Golf I 1 cr.

The fundamental skills of grip, stance and stroking with irons and woods; history, equipment, rules, etiquette, safety, and strategy necessary for responsible play. (S)

742-148 Karate I 1 cr.

Basic techniques of striking and kicking and their defenses as used in karate; the history, philosophy and traditions of karate. (F,S)

742-154 Tennis I 1 cr.

Basic skills and techniques in tennis; forehand, backhand, flat serve, volley, lob, smash, footwork, singles and doubles positioning and strategy, regular and no-add scoring, U.S.T.A. rules, care and selection of equipment. (F,S)

742-159 Racquetball I 1 cr.

Basic skills and understanding of racquetball as a competitive recreational activity. Service, service returns, and rallying skills, history, rules and courtesies, equipment, and common strategies. (F,J,S)

742-171 to 184 Officiating (sport) 1 cr.

Provides interpretation of the rules and officiating mechanics of a specific sport in preparation for students to become officials. Class members are encouraged to register with the Wisconsin Interscholastic Athletic Association.

Approved courses are:

179 Officiating Softball/Baseball (SO)

181 Officiating Swimming and Diving

183 Officiating Volleyball (SE)

742-197 Cross Country Skiing I 1 cr.

Combines skiing, skating and hiking for exercise and aesthetic experience in the winter environment. Includes care and selection of equipment, skiing techniques, winter survival and safety and day touring. (J)

742-201 Swimming II 1 cr.

Emphasizes improvement of basic swimming techniques. Satisfactory completion enables students to enroll in subsequent aquatic courses. American Red Cross certification available. (F,S)

742-204 Lifesaving 1 cr.

Principles and techniques of personal safety, victim rescue, resuscitation, preventive lifeguarding, small craft safety, and first aid. Red Cross Advanced Lifesaving certification available. (F)

742-205 Water Safety Instruction 2 cr.

Trains instructors to conduct swimming programs sponsored by the American Red Cross. Swimming skills are perfected so instructors serve as good models and gain student confidence. Includes successful methods of planning lessons, organizing classes, presenting material, and evaluating progress. American Red Cross certification available. (S)

742-208 Scuba 2 cr.

The nature and use of equipment peculiar to skin and scuba diving; basic diving skills, functional diving, physiological aspects of respiration, the physics of diving, the physiological and environmental hazards of diving, and proper first aid procedures for emergencies. Certification by PADI may be earned. (F,S)

742-212 Sailing I 1 cr.

Sailing terminology, kinds of boats, water safety, and practical sailing experience. Individualized instruction is given in boats. Designed for those with little or no previous sailing experience. Special fee of \$10. (F)

742-213 Sailing II 1 cr.

Advanced techniques of sailing including safety, weather, and navigation. Special fee of \$10.

742-221 Slimnastics 1 cr.

Variety of conditioning programs, including diet and exercise techniques for attaining desired weight and figure goals to improve and maintain a positive body image. (F,S)

742-222 Nautilus Training 1 cr.

A resistance training program based upon the constant resistance concept and using Nautilus equipment to enhance strength and flexibility. (F,S)

742-223 Exercise Leadership II 1 cr.

Participation in the formal calisthenics program and personal assessment and design of exercise program. Students learn leadership and elements of counseling for personal exercise; nutrition, stress control and environmental considerations. Physical readiness test is administered. (F,S)

742-248 Karate II 1 cr.

Builds upon basic skills and physical and mental development of beginning karate. Provides opportunity to improve students' karate rank by continuing instruction in offensive and defensive techniques in conjunction with voluntary competition. (F,S)

742-254 Tennis II 1 cr.

Improves basic skills and develops intermediate skills such as the loop swing, tip-spin ground strokes, spin serve, one-half volley, drop volley, drop shot, approach shot, and more advanced strategy for both singles and doubles. (S)

742-259 Racquetball II 1 cr.

Provides students with comprehensive insight into all aspects of the sport: safety, conditioning, strategy, and skill analysis for singles, doubles, and other play variations. (F,S)

742-402 Psychology and Sociology of Sport 2 cr.

The effects of competition and cooperation, values, spectators, and group interaction on overall performance, social and psychological factors affecting athletes, individual differences in motivation, personality, and social factors as background for prospective coaches. (J)

742-403 Organization and Administration of Athletics 2 cr.

Various phases of organizing and administering an interscholastic athletic program with application to athletics in nonacademic environments as well (e.g. boys' clubs, tennis clubs). (S)

742-405 Scientific Conditioning of the Athlete 2 cr.

Interrelationships between growth and development and athletic participation by pre-adolescents, principles of physiology of exercise, and general and specific techniques of physical and psychological conditioning are studied. (F)

742-406 Prevention and Treatment of Athletic Injuries 2 cr.

Prevention, physical conditioning, strapping, properly fitted and designed equipment, condition of the competition site, conduct of practices, and respect of existing injuries; estimating the nature and extent of the injury, feasibility of moving the victim, immediate care at the scene, modes of required transport, sideline care, training room modalities, referral for definitive diagnosis, and treatment of simple follow-up rehabilitation. (S)

742-410 to 434 Principles of Coaching 2 cr.

The materials, drills, offenses, and defenses of specific sports gained through the literature of the field, personal interviews and observations, staff lectures and/or conferences. (F,J,S)

742-435 to 459 Field Experiences in Coaching 2 cr.

Culminates study and preparation for practical coaching experience. Participation in practice, competitive and other coaching experiences under the supervision of an experienced cooperating coach. Student coach maintains daily log and consults with and is observed by CCP adviser. (F,J,S)

754 Physics

754-103, 104 Fundamentals of Physics I, II 5, 5 cr.

A noncalculus physics sequence covering fundamentals of mechanics, energy, power, thermodynamics, sound, fundamentals of electricity and magnetism, electronics, light, atomic and nuclear structure and relativity. Applications to the areas of biology, chemistry, the earth sciences and technology. 754-104 requires field trip. Graduation credit will not be awarded for both 754-103, 104 and 201, 202. (F,S)

754-141 Elementary Astronomy 3 cr.

A study of the solar system, stars, galaxies and universe. (F,S)

754-180 Physical Science 3 cr.

Survey of physics, including motion, forces, momentum, energy, solids, liquids, gases, sound, heat, electricity, magnetism, light, atomic and nuclear physics. Designed for nonscience majors; credit will not be awarded to students who have taken 754-103, 104, 201 or 202. (F,S)

754-181 Physical Science Laboratory 1 cr.

Laboratory course to accompany 754-180. (F,S)

754-201, 202 Principles of Physics I, II 5, 5 cr.

A calculus physics sequence for students of science and engineering. Includes fundamentals of mechanics, Newton's laws, momentum, energy, fluid statics and dynamics; temperature, heat transfer, thermodynamics; vibrations, waves and sound; electric forces and fields, DC and AC circuits, magnetism; atomic structure, semiconductors; electromagnetic waves, light; relativity, quantum mechanics, nuclear physics and elementary particles. 754-202 requires field trip. Graduation credit will not be awarded for both 754-201, 202 and 103, 104. (F,S)

754-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

754-298 Independent Study 1-4 cr.

See Courses with Variable Content.

754-315 Classical Mechanics 3 cr.

Mechanics of static and dynamic systems. Topics include motion in two and three dimensions, conservation laws, rigid body motion, accelerated coordinate systems, generalized coordinate systems and the Lagrangian and Hamiltonian equations. (SE)

754-317 Optics 3 cr.

Study of geometric and physical optics. Topics include optical instruments, diffraction, interference, polarization, lasers, and modern applications of optics. (FO)

754-318 Optics Laboratory 1 cr.

Experiments in geometric and physical optics. (FO)

754-320 Thermodynamics and Kinetics 3 cr.
See 225-320.

754-321 Structure of Matter 3 cr.
See 225-321.

754-322 Thermodynamics and Kinetics Laboratory 1 cr.
See 225-322.

754-323 Structure of Matter Laboratory 1 cr.
See 225-323.

754-404 Electricity and Magnetism 3 cr.
An advanced approach to electrical and magnetic phenomena; plasmas, waveguides, electrical energy generation and transmission, Maxwell's equations and electromagnetic waves, electric and magnetic properties of matter. (FE)

754-405 Electronics for Scientists 3 cr.
Fundamentals of electronics, electronic elements, basic circuits, combinations of these into measurement and control instruments. (SE)

754-415 Solar and Alternate Energy Systems 3 cr.
See 362-415.

754-417 Nuclear Physics and Radiochemistry 3 cr.
See 225-417.

754-418 Nuclear Physics and Radiochemistry Laboratory 1 cr.
See 225-418.

754-455 Microprocessors and Digital Electronics 3 cr.
See 266-455.

754-483X Selected Topics 1-4 cr.
See Courses with Variable Content.

754-497 Internship 3-12 cr.
See Courses with Variable Content.

754-498 Independent Study 1-4 cr.
See Courses with Variable Content.

778 Political Science

778-100 Introduction to Political Science 3 cr.
The major areas of modern political science; political philosophy and theory, including methodology; comparative government; political development and change, including revolution; international relations and politics; the balance of power, liberty and freedom, justice and equality. (F,S)

778-101 American Government and Politics 3 cr.
The institutions and political processes of American national government and the nature of political analysis; the Constitution, ideological and cultural bases of American politics; the role of political parties, elections and interest groups; policy-making processes in the Congress, the presidency and the courts. (F,S)

778-102 Introduction to Public Policy 3 cr.
Contemporary issues in American public policy; separation of factual and value issues in policy debate; reasoning underlying evaluation of policy arguments; evaluation of data in policy arguments; influence of political ideologies on consideration of policy alternatives. Examines substantive American policies such as the economy, energy, environmental quality, and welfare and social issues. (F)

778-215 Understanding Presidential Elections 3 cr.
The electoral system affecting presidential campaigns and elections; the role of political parties, political action committees, the mass media and campaign professionals; the nomination process; electoral rules and procedures; voter behavior; and political strategies. Offered only during presidential election years.

778-218 Political Behavior 3 cr.
An introduction to political behavior, including political socialization, public opinion, personality and politics, the mass media, and political participation. (J)

778-283X Selected Topics 1-4 cr.
See Courses with Variable Content.

778-298 Independent Study 1-4 cr.
See Courses with Variable Content.

778-301 Environmental Politics and Policy 3 cr.
U.S. and global environmental problems and their political implications. Emphasizes U.S. environmental politics, issues and controversies in environmental protection policy, the performance of governmental institutions in response to environmental challenges, and strategies for environmental improvement. (S)

778-305 Urban Politics and Policy 3 cr.
Structures and operations of city governments and their responses to policy issues such as education, employment, social welfare, housing, transportation, migration, racial discrimination, urban sprawl and social inequality. (S)

778-306 Regulatory Policy and Administration 3 cr.
The origins, purposes and operation of regulatory agencies and the programs in the U.S.; theories of regulation, issues and controversies in regulatory policy, and decision-making in such areas as economic regulation, public health, consumer protection, workplace safety and environmental quality. (FO)

778-310 The American Presidency 3 cr.
The president's role in public policy-making. Topics include the history of the presidency, presidential elections, the nature and use of presidential power, the organization and operation of the executive office, the presidential relationship with Congress and the bureaucracy, and presidential leadership. (SE)

778-314 Administrative Law 3 cr.
See 950-376.

778-320 Constitutional Law 3 cr.
The law of the U.S. Constitution as it has been developed by decisions of the U.S. Supreme Court: the constitutional framework, federalism, separation of powers, limitations upon the powers of the United States and of the states imposed by the guarantees of rights and liberties to individuals made in the Constitution and amendments to it. (S)

778-330 Law and the Judicial Process 3 cr.
Courts as institutions of government and law as an instrument of government: the judiciary in the American system of government, the nature of the judicial process, judicial decision-making and policy-making, compliance with judicial policies, and theories of law and jurisprudence. (FO)

778-340 Political Theory 3 cr.
The foundations of Western political theory from the Greek polis to the 20th century. Discusses and analyzes leading political theorists in their historical contexts and in terms of their basic ideas and concepts. Attaches the study of politics to the history of Western political thought and practice. (F)

778-351 Comparative Political Systems 3 cr.
Comparative political analysis, stressing the politics and government of major European nations and the Soviet Union. (SO)

778-353 Politics of Developing Systems 3 cr.
Political processes in contemporary developing systems, with particular attention to problems of nation-building, the formulation of cross-national comparisons, and emerging patterns of regional cooperation. (SE)

778-360 International Politics 3 cr.
An overview of international politics, including an analysis of "the national interest," the nation-state systems, nationalism, arms control and disarmament, international conflict and conflict resolution. Examples are drawn from both American and non-American perspectives. (FE)

778-368 Geopolitics of World Regions 3 cr.
See 834-368.

778-378 Geography of Conflict Areas 3 cr.
See 416-378.

778-408 Public Policy Analysis 3 cr.
An introduction to public policy analysis and to the policy-making process, primarily in American government. Political aspects of policy analysis, models and methods for rational design of public policies, applications of policy studies to particular public problems. (F)

778-410 Intergovernmental Relations 3 cr.
The relations among the federal, state and local units of government; federalism, intergovernmental revenues and expenditures, intergovernmental policies and grants-in-aid. (SO)

778-416 American Legislative Process 3 cr.
Legislative institutions and policies, emphasizing the U.S. Congress. The role of legislatures in American politics; elections, representation, formal and informal legislative institutions and practices, leadership, interest groups and lobbying, and the role of legislatures in policy innovation. (SO)

778-460 American Foreign and Defense Policies 3 cr.
The major foreign and military problems facing the U.S. The organization and role of the military in American life; strategic and tactical military theory; the intelligence community, alliance politics, and the foreign policy-making process in the U.S. and an assessment of its effectiveness. (SE)

778-483X Selected Topics 1-4 cr.
See Courses with Variable Content.

778-497 Internship 3-12 cr.
See Courses with Variable Content.

778-498 Independent Study 1-4 cr.
See Courses with Variable Content.

820 Psychology

820-102 Introduction to Psychology 3 cr.
Understanding of behavior from psychophysiological, cognitive, social and clinical perspectives; important issues, methods and findings in the study of psychological processes. (F,S)

820-202 Introduction to Social Psychology 3 cr.
Attitude formation and change, group processes, communication, roles, multiple group membership, social prejudice and other aspects of social psychology. (F,S)

820-205 Psychology of Human Adjustment 3 cr.
Personality adjustment and maladjustment in normal persons; need, frustrations and conflict; adjustive techniques; analysis and rehabilitation. (F,S)

820-283X Selected Topics 1-4 cr.
See Courses with Variable Content.

820-290 Environmental Psychology 3 cr.
Human-environment relationships; examines ways in which the physical environment influences human behavior. (F)

820-298 Independent Study 1-4 cr.
See Courses with Variable Content.

820-300 Experimental Psychology 4 cr.
Experimental methods in psychological research; designing and drawing conclusions from experimental research; critiques of research reports; individual and group laboratory projects. (F,S)

820-306 Psychology of Perception 3 cr.
Nature of perceptual processes and their functional relationships to environments, behavioral, and central factors such as motivation, learning and personality. (F)

820-309 Psychology of Motivation 3 cr.
Initiation and direction of behavior; role of physiology, personality and environment in motivation; conflict, persistence and change of motives; social motivation of achievement. (F)

820-311 The Psychology of Sports and Exercise 3 cr.
The psychological aspects of involvement in sports; relationship between participation in physical activity and psychological variables such as mental health, affiliation, aggression and motivation; the role of sports in society.

820-315 Educational Psychology 3 cr.
Psychological processes involved in teaching, learning, and their interaction: motivation, individual differences, classroom management, cognition, group processes and educational assessment. (F,S)

820-335 Psychology of Attitude and Public Opinion 3 cr.
Analysis of attitudes; social factors in the formation and change of attitudes; expression of attitudes in public opinion, voting and consumer behavior; polling techniques and problems. (S)

820-337 Social Behavior Dynamics 3 cr.
Important factors in social behavior, roles, multiple-group membership, cognitive processes, motivation, aggression, social prejudice. (F,S)

820-415 Organizational Psychology 3 cr.
Relation between social structure and psychological behavior; problems of leadership styles, communication networks, decision-making processes and group productivity. (F,S)

820-416 Psychology of Intergroup Relations 3 cr.
Psychology of conflict and cooperation, cleavage and integration. Principles and applications in such contexts as industrial organizations, cross-generation adjustments, race relations and international relations. (S)

820-417 Psychology of Cognitive Processes 3 cr.
Contemporary theory and research on thinking processes; how people understand and interpret events around them; attention, recognition, thinking, memory, language, imagery and problem-solving. (S)

820-420 Tests and Measurements 3 cr.
See 481-420.

820-429 Theories of Personality 3 cr.
See 481-429.

820-430 History and Systems of Psychology 3 cr.
Major schools, figures, trends and systems of thought in the field of psychology; shifts in the conceptualization of the problems, phenomena, methods and tasks for psychology. (J)

820-435 Abnormal Behavior 3 cr.
See 481-435.

820-438 Group Dynamics 3 cr.
Psychological principles as they apply to the individual in social groups; experimental analyses of group formation, maintenance, morale and productivity. (F)

820-466 Clinical and Community Psychology 3 cr.
Typical activities, social functions, major theories, history and future trends of clinical and community psychology; evaluates effectiveness of typical activities and discusses programs of study and training, licensing qualifications and occupational opportunities for aspiring psychologists. (S)

820-483X Selected Topics 1-4 cr.
See Courses with Variable Content.

820-490 Problems in Environmental Psychology 3 cr.
In-depth study of one or more selected areas in environmental psychology.

820-497 Internship 3 cr.
See Courses with Variable Content.

820-498 Independent Study 1-4 cr.
See Courses with Variable Content.

834 Regional Analysis

834-220 Introduction to Regional Analysis 3 cr.

Examines choices that people can and must make in the use of the limited space and resources available to them to satisfy their needs. Includes methods of defining regions, as based upon human activities and the nature of the total environment. Field trip required. (F,S)

834-222 The Ocean of Air: Weather and Climate 3 cr.

Fundamental processes of the atmosphere, the resulting weather and climate, and the effects of the atmosphere on other aspects of the earth's environments and on humans. (F,S)

834-281 Student-Led Courses 1-4 cr.

See *Courses with Variable Content*.

834-283X Selected Topics 1-4 cr.

See *Courses with Variable Content*.

834-298 Independent Study 1-4 cr.

See *Courses with Variable Content*.

834-309 Urban and Regional Economic Theory 3 cr.

Basic concepts in the economics of regions and urban areas, including industrial location theory, central place theory, land rent theory, economic base theory and input-output analysis, and their applications in problems of economic development, urbanization, and place prosperity. (F)

834-322 Regional Planning 3 cr.

The concept of planning, the history of its use in the development of regions, and the present status of planning in the United States, with some international comparisons. (F)

834-323 Land-Use Controls 3 cr.

Various forms of public land-use controls in planning and administration, addressing "what, why and how" aspects of land-use controls. Students analyze zoning and subdivision regulations of a selected community. (S)

834-325 Behavior in Designed Environments 3 cr.

How the physical development of indoor and outdoor living spaces, including their location, form, and design, influence and shape human behavior. Contributing variables and techniques of measuring environment-behavior relationships. (F)

834-335 Transportation Systems in the United States 3 cr.

Intercity transportation systems in the United States, their development, impact, present character, problems and trends. (S)

834-340 Economics of Land Use 3 cr.

Economic relationships between humans and land. Principles governing land use and conservation and the institutional arrangements of this basic resource. Application of principles in policy-making in land valuation, taxation and zoning in the context of regional economic development. (S)

834-342 Community Economic Development 3 cr.

Various forces involved in community economic development, including the human and nonhuman resource potentials, motivation, values, and attitudes. Examines social and economic structures such as transportation, communication, and community services from the point of view of community development. (F)

834-350 Geographic-Land Information Systems 3 cr.

See 416-350.

834-351 Elements of Cartography 3 cr.

See 416-351.

834-353 Air Photo Interpretation 3 cr.

See 416-353.

834-356 Environmental Impact Analysis 3 cr.

Procedural requirements of the National Environmental Protection Act; state NEPA equivalents; interdisciplinary approaches to environmental impact analysis, assessment of alternatives; social science and natural science approaches to substantive types of impacts, emphasizing social impact analysis. (F)

834-365 Impressions of South Africa 3 cr.

South Africa is examined from a variety of perspectives—those of the Africans, the colonial administrators, the entrepreneurs, and the world community—to understand how different peoples, each with their own values, technology and institutions, have created the spatial variations and conflict in Southern Africa. (J)

834-368 Geopolitics of World Regions 3 cr.

Impact of geographic factors on political behavior and relationships, including concepts such as political space, political territoriality, the organization of space, the nature of boundaries, and movement and migration as political and social processes. (F)

834-372 Analysis of the Great Lakes Region of North America 3 cr.

A systematic analysis of the areas surrounding the Great Lakes of the United States and Canada; internal and external relationships, economic activities, regional change and problems. (S)

834-377 Analysis of Northern Lands 3 cr.

A topical and regional analysis of the subarctic and arctic area of North America and Eurasia; regional emphasis on Alaska, northern Canada and Scandinavia. Field trip required. (F)

834-392 Analysis of South Asia 3 cr.

Regions of South Asian countries in various stages of development. Emphasis on the interaction of physical and human resources. (J)

834-395 Seminar: Transportation Systems in Wisconsin 3 cr.

An analysis of the character of intercity rail, highway, water, pipeline, and air transportation in Wisconsin, including existing problems and evaluation of plans for the future. (J)

834-421 Techniques and Methods of Regional Planning 3 cr.

The application of basic tools for urban and regional planning; sources of quantitative data and other information; techniques and methods of analysis of population, economics, land use, housing and transportation. (S)

834-454 Remote Sensing of the Environment 3 cr.

See 362-454.

834-472 Senior Research Colloquium 3 cr.

A seminar focusing on regional problems relating to land use, economic development, outdoor recreation, transportation, or other topics; includes professional quality student research projects. (F,S)

834-478 Senior Distinction in Regional Analysis 3 cr.

See *Courses with Variable Content*.

834-481 Student-Led Courses 1-4 cr.

See *Courses with Variable Content*.

834-483X Selected Topics 1-4 cr.

See *Courses with Variable Content*.

834-484 Senior Honors Project 3 cr.

See *Courses with Variable Content*.

834-497 Internship 3-12 cr.

See *Courses with Variable Content*.

834-498 Independent Study 1-4 cr.

See *Courses with Variable Content*.

867 Senior Seminars

867-401 The Role of International Organizations 3 cr.

Examines the role of international organizations in support of scientific and cultural developments, including working conditions and nature of activities as well as the global problems and decision-making processes involved. (J)

867-402 Images of Woman and Man 3 cr.

Western man has created clear-cut images of woman and man as interdependent (but not equal) opposites. These complex, far-reaching, and powerful strategies for organizing experience are examined. Alternatives to traditional modes of treating men and women are considered and continuity and change debated. (F,S)

867-406 Science and the Quality of Life 3 cr.

Students conduct indepth analyses on the impact of selected scientific and technological developments on the quality of contemporary life using the analytic tools developed in their respective concentrations/majors. This process helps students develop expertise in practical problem analysis and communicating. (F,S)

867-410 Biopolitics 3 cr.

A study of "biology" and its possible effects on society; biologists and their attitudes toward ethical practices in research; the applications of research findings and the relation of political and national concerns to science and research; and the desires, attitudes and welfare of society related to "biology."

867-412 The Impact of Science and Technology on Society 3 cr.

Examines technology from both historical and present day perspectives and makes projections for the future, and attempts to examine the responsibility of science and technology to society and vice versa. Mechanisms used by government, industry, and the public for maintaining and developing responsible technology are also examined. (S)

867-413 Imagination and Myth 3 cr.

Instead of presenting myths as false stories or repositories of ancient beliefs, this course investigates their ongoing potential to shape culture. Focusing on traditional American Indian stories and their metamorphosis into contemporary literature, it shows how to recognize, interpret and evaluate the power of myths. (F)

867-415 Applied Imagination 3 cr.

Examines the nature and uses of a variety of practical means for defining and creatively developing solutions for contemporary problems of a largely tangible nature. Emphasis is on developing logic, scientific and personal creativity and using these to make decisions. (S)

867-418 Science as Metaphor 3 cr.

Students examine use of metaphor in explanations of various aspects of the world in which we live. Examples are taken from natural science and other fields depending on particular student expertise and interest. (F)

867-420 The Organization in Modern Society 3 cr.

Examines the role of the modern organization in society. Attention is focused on evolution of the organization as a framework for accomplishing individual, organizational, and societal goals and on the environment—external and internal—that influences the organization in fulfilling its purpose. (S)

867-421 Science Fiction and the Future 3 cr.

Examines probable and improbable alternative futures as viewed through the work of leading science fiction writers. Special attention to moral and ethical implications of new technology, new forms of social control and organization, changing religious perspectives, and new lifestyles. (F,S)

867-424 Stereotypes and Minority Groups 3 cr.

Explores why human beings stereotype each other and why society creates minority groups; how stereotypes affect those who stereotype and those who are stereotyped; how the maintenance of minority groups affects the oppressors and the oppressed; and what we should do about stereotyping and maintenance of minority groups. (F)

867-426 The Search for an Ideal Community 3 cr.

Examines the kinds of ideal communities envisioned by a variety of groups from a variety of cultures. Explores the values inherent in such planning and the problems addressed by planners.

867-430 Value, Reason, and Action in Art and Society 3 cr.

An examination of the concept of action in abstract and applied contents. We begin with a philosophy of action, move to the function of action in art, then consider historical actions from the disciplines represented within the seminar, and end with the design, perpetration, and evaluation of selected actions.

867-432 Rebels and Their Causes 3 cr.

This seminar focuses on the lives and rebellions of individual figures of the modern world. After introductory lectures and readings, each student selects one rebel from the period of 1780-1990 ("the long revolution") and researches the historical context, life, and significance of the actions of that rebel. (F,J)

867-433 Cultural Evolutionism: A Predictive Model of the Future 3 cr.

The theory of cultural evolutionism is presented and several hypotheses are drawn from it and applied to designated problem areas in modern industrialized cultures around the world. Students examine various implications derived from testing this theory based upon their individual interests and research efforts.

867-435 American Rural Society and Social Change 3 cr.

Examines general issues and trends in social change and American rural society and agriculture in historical and contemporary perspective. Students make seminar presentations focusing upon rural social and agricultural issues in Wisconsin. (S)

867-439 Topics in Human Rights 3 cr.

Explores the basic question of what human rights are or should be and the social engineering that might be required to effectively implement a human rights policy. (F,S)

867-440 Global Arms Control and Alternative Investments 3 cr.

The world cannot afford unending hostility; the cost of "defense" is more than a trillion dollars and these expenditures have not succeeded in either maintaining or increasing any nation's sense of security. This seminar examines ways to establish and verify arms control agreements and it seeks alternative investments for the improvement of the quality of life.

867-441 Worldviews: Perceptions That Shape Actions and Values 3 cr.

This seminar assumes that people (and indeed societies) adhere to a worldview by which they make sense of their lives and act consistently. This seminar will explore some worldviews and encourage students to explore contemporary problems within this conceptual framework. (F)

867-442 Language: Power and Style 3 cr.

Examines the powers that different styles of language, including professional jargon, have on us and asks students to formulate and understand the consequences of various attitudes towards their own use of language. (S)

867-443 The Scientific Perspective and the Human Self Image 3 cr.

Examines the scientific method and its impact on humans' view of themselves and their social institutions. This course studies the fundamental assumptions, processes and limitations of science on personal identity, family and human experiences such as love, altruism and free will.

867-444 Liberal Learning and Decision Making 3 cr.

Explores the question, "what is there about liberal learning which affects the quality of decision making?" This seminar focuses on such dimensions as critical thinking, information processing, empathy, and commitment. Students will be able to relate their prior studies to decisions of both personal (career/life) and policy issues. (S)

867-445 Conservatism 3 cr.

Conservatism as value, attitude, belief, program and ideology, emphasizing English and American political and cultural traditions; the historical development of the concept since the eighteenth century, and its application to current issues.

867-446 Varieties of Educational Experience 3 cr.

Through reading and discussion of biographies and autobiographies, this course studies the purposes and outcomes of education. Focuses on relationships between informal and formal learning, between the purposes of individuals and purposes of schools, and on the outcomes of educational interactions and tensions.

867-447 Indian Treaty Rights 3 cr.

Federal Court-awarded treaty rights for Indians have created great controversies. This course studies the antecedents and consequences of such decisions and their underlying issues, such as interest group politics, state-federal relations, and natural resource allocation.

867-448 Lost and Found Landscapes 3 cr.

Acquaints the senior student with the objects, concepts, and ways of living that have been lost through time but which deeply affect the way we arrange our present world. In addition, the student will learn to use primary and secondary sources in local history and cultural geography and gain an appreciation for the past that lies about us. (J)

867-449 Common Differences in American Culture 3 cr.

Examines American culture through a comparison of middle class, Indians, black, Chinese, and Jewish Americans. Students analyze various sources of tension and conflict, including gender, race ethnicity, and generation, and explore how these conflicts have been, or might be, resolved. (F)

867-450 Hispanic Culture in the United States 3 cr.

Provides a greater personal and intellectual understanding of the cultural backgrounds of Hispanic groups. Topics include family structure, street gangs, employment, language practices, traditional folk beliefs, illegal immigration and other public policy issues. (J)

867-451 Time: Biophysical and Sociocultural Perceptions 3 cr.

In one aspect or another, time-study cuts across all disciplines. This seminar introduces students to the comparative study of time which is of fundamental importance in science, religion, philosophy, literature, history, and mythology.

867-452 Societal Impacts of Disturbing the Earth 3 cr.

Modern society is still challenged by natural or human-induced disturbances of Earth's physical systems, such as major earthquakes and global warming. The causes, impacts and possible solutions of several contemporary problems having wide-ranging implications will be examined from an inter-disciplinary perspective.

867-453 Moral and Ethical Values in Drama 3 cr.

The course focuses upon various dilemmas in selected plays and films in order to explore and examine current ethical issues.

867-454 Concepts of the Individual 3 cr.

This seminar examines the culturally important concept of the "individual" by viewing it from the perspective of many disciplines and life experiences. A major theme of the seminar is that of Individual versus Community, and where our culture stands on that continuum.

867-455 Art and Society 3 cr.

A study of the inter-relationships between art and modern society, examining both the effects of society upon art (including commissions, the arts business, and censorship), and the effects of art upon society (how society understands, reacts to, and values art and artists).

875 Social Change and Development**875-203 Prejudice and the Human Condition 3 cr.**

Origins, functions and consequences of prejudice in relation to intergroup competition and conflict; impact of prejudice on the victims; potential means for reducing the role of prejudice in human relations. (S)

875-204 Freedom and Social Control 3 cr.

What freedom means in formal or legal terms; review of the ways in which day-to-day freedoms are compromised; discussion of legitimate uses of freedom and social control. (FO)

875-235 Perspectives on Human Sexuality 3 cr.

Study of human sexuality from the perspective of several disciplines. Examines theories of sexuality, changing, sexual attitudes and behaviors in the context of gender and ethnicity, varieties of sexual expression, legal issues, sexual offenses, sex industries, and ethics. (S)

875-241 Women and Changing Values 3 cr.

Traditional restrictions placed on women and men in family roles, sexual behavior, economics, politics and religion; discussion of possible new roles and values; whether traditional values and roles are still valid; how individuals can adapt to change. (F)

875-265 Folk Music and Social Change 3 cr.

Folk and popular music as a form of socio-political expression and protest in modern societies. Explores a variety of musical developments in different countries to understand the history of common people through their songs and the socio-political movements which accompanied them.

875-270 Third World: Development or Despair 3 cr.

Causes and consequences of development and underdevelopment in selected nations and regions; examines themes such as natural resources, imperialism, neocolonialism, population, education, food and fuel, employment, health and political power, and possible futures for the futures for the world's poor. (F,S)

875-273 Blood, Honor and Envy: Values in Southern Europe 3 cr.

Examines some values themes found in historical and contemporary society in southern Europe, including honor and shame, family loyalty, envy, male and female relationships, and political organization. (F)

875-275 The Vietnam War in Historical Perspective 3 cr.

The conflicts and upheavals in Indochina from World War II to the present, especially the Vietnam War and the role of the United States in Indochina, its effects, and the Indochinese context of revolution and change. (J)

875-281 Student-Led Courses 1-4 cr.

See Courses with Variable Content.

875-283X Selected Topics 1-4 cr.

See Courses with Variable Content.

875-298 Independent Study 1-4 cr.

See Courses with Variable Content.

875-303 Criminal Justice Process 3 cr.

Issues concerning policing, the court system and the system of corrections; ethical problems such as police use of deadly force, police corruption and brutality, nature and scope of plea bargaining, disparities in sentencing. (S)

875-320 Constitutional Law 3 cr.

Interpretations of the Constitution and the development of U.S. legal system. The law as a parameter and a molder of processes in society; current trends in constitutional law, implications for our development, and social options available if different interpretations occur. (S)

875-325 Law in Society 3 cr.

The place of law in society and in relationship with other social institutions, as viewed from historical and cross-cultural perspectives. (F)

875-330 Law and the Judicial Process 3 cr.
See 778-330.

875-333 Social Change in Selected Areas 3 cr.
Processes and strategies of social change and development in a selected nation or set of nations. Course may be repeated for credit with different area. (F,S)

875-340 Women, Work and Family 3 cr.
The problems women encounter as workers; implications of such issues as women's double shift, differential wage scales and job segregation; socioeconomic variables which have shaped women's place in the economic system; strategies for change. (F)

875-342 Women, Myth and Identity 3 cr.
Archetypal and mythological images of women and their influence upon contemporary images of women and their roles. Prevailing images of women in our own and other cultures and discussion of their universality. (S)

875-345 Women, Race and Culture 3 cr.
The changing position of women in selected preindustrial, developing and industrial societies and the cultural, social, political and economic institutions which shape women's lives worldwide. (S)

875-348 Women and the Law 3 cr.
The changing legal status of women in relationship to other social forces; major historical landmarks in the development of women's legal rights and the current status of such areas as property rights, family law and employment opportunity; legal tools in the struggle for equality.

875-360 Models and Social Change 3 cr.
The value-oriented problems of defining social change; use and construction of models as analytical tools in the study of social change. (S)

875-361 Historical Perspectives on Social Change 3 cr.
Application of concepts and models of social change to the processes of social change through time; historical processes of social change and the values implicit in them. (F)

875-367 Structure of Evil and Western Culture 3 cr.
Traditional conceptions of good and evil enshrined in Western culture as ideals for human experience and behavior as seen by authors who argue that these cultural values are negative or evil rather than positive or good. (SO)

875-380 Families and Sexuality: Politics and Public Policy Issues 3 cr.
See 481-380.

875-400 Environmental Law 3 cr.
See 950-378.

875-440 Women and Religion 3 cr.
Historical view of organized religions in the Judeo-Christian tradition and their influence in shaping roles and rules for women and men. (F)

875-461 History, Politics and Social Criticism 3 cr.
Examination of contemporary social criticism on both the Left and Right of American political life with attention to both the historical perspectives drawn upon and the visions of past, present and future provided by selected writers from across the spectrum of intellectual politics.

875-470 Senior Seminar in Social Change and Development 3 cr.
Rigorous analysis of an important social change issue or of the work of an important social change theorist. (S)

875-478 Senior Distinction in Social Change and Development 3 cr.
See Courses with Variable Content.

875-481 Student-Led Courses 1-4 cr.
See Courses with Variable Content.

875-483X Selected Topics 1-4 cr.
See Courses with Variable Content.

875-484 Senior Honors Project 3 cr.
See Courses with Variable Content.

875-497 Internship 3-12 cr.
See Courses with Variable Content.

875-498 Independent Study 1-4 cr.
See Courses with Variable Content.

892 Social Services

892-202 Introduction to Social Services 3 cr.
Overview of career opportunities in the human services; explores such fields of practice as aging, corrections, alcohol and substance abuse, child welfare, mental health and the developmentally disabled. (F)

892-205 Personal Values and Social Reform 3 cr.
See 493-205.

892-257 Training in Social Service Skills and Techniques 3 cr.
Developing and increasing skills and awareness required for competent behavior as a helping person. (F)

892-275 American Social Welfare 3 cr.
Overview of the institution of American social welfare; how the U.S. has developed social policies and services to meet social problems and institutional arrangements that provide people with resources and services to meet their needs. (F)

892-281 Student-Led Courses 1-4 cr.
See Courses with Variable Content.

892-283X Selected Topics 1-4 cr.
See Courses with Variable Content.

892-300 Field Experience in a Social Service Agency 1-3 cr.
Introductory exposure to working in a social services agency; professionally supervised program of observation and assistance in the agency. (F,S)

892-305 The Social Work Profession 3 cr.
Orientation to the knowledge, skills and values of professional social work practice. Definition of professional competencies expected of a Bachelor of Social Work graduate and their relationship to field training experience. (F)

892-360 Social Service Delivery Systems and Cultural Differences 3 cr.
Social service programs of culturally and technologically different societies; nature of the differences between the care-giving institutions are related to the cultures from which they have emerged. (J,summer)

892-370 Principles of Social Service Methods I 3 cr.
Applications of concepts important to the understanding of individual, group, organizational and community dynamics to generalist social work practice. (S)

892-371 Human Behavior and the Social Environment 3 cr.
Examines the biological, psychological, social-structural and cultural sources of the behavior of individuals and organizations from the perspective of systems analysis, human diversity and goal-directed behavior; applications to social work practice. (S)

892-402, 403 Field Practicum I, II 5, 5 cr.
Actual social service work through placement in a social service agency. (F,S)

892-411 Social Work Methods II 3 cr.
Applications of social work methods to stimulate the clients and the placement agency into greater effectiveness in the direction of their goals; dual focus of client change and organizational change using general problem-solving methods. (F)

892-420 Social Work Methods III 3 cr.
Theory and methods of planned change interventions; implementation of change efforts across client systems of all sizes; integration and relationship of theory to field practicum experience. (S)

892-430 Social Policy Analysis 3 cr.
Analyzing and formulating social policy; development of skills in policy analysis and intervention; integration of experience in senior field practica. (F)

892-460 Evaluation of Practice 3 cr.
Introduction to the principles of program evaluation research, including design and implementation of research projects. (S)

892-481 Student-Led Courses 1-4 cr.
See Courses with Variable Content.

892-483X Selected Topics 1-4 cr.
See Courses with Variable Content.

892-497 Internship 3-12 cr.
See Courses with Variable Content.

892-498 Independent Study 1-4 cr.
See Courses with Variable Content.

900 Sociology

900-202 Introduction to Sociology 3 cr.
Major sociological concepts and ideas and their application to contemporary problems of societies. (F,S)

900-203 Minority Groups 3 cr.
The character of racial, religious, and ethnic minority groups; social and economic adjustments in American society; the role of private and public agencies.

900-283X Selected Topics 1-4 cr.
See Courses with Variable Content.

900-298 Independent Study 1-4 cr.
See Courses with Variable Content.

900-301 Foundations for Social Research 3 cr.
The nature of science, theory, methodology and statistics. Emphasizes identifying and interpreting relationships between social phenomena by applying the conceptual tools provided in the course to specific problems. (S)

900-302 Class, Status, and Power 3 cr.
Class, status and power as determinants of group interests, preferences, ideologies and struggles; examination at the national and international levels. (SE)

900-304 Deviant Behavior 3 cr.
Foundations of morality and the relationship between morality and deviance; positive and negative aspects of both deviance and conformity. (SO)

900-307 Social Theory 3 cr.
Critical analysis of classical and contemporary social theories with attention to the social and intellectual context and contemporary application. (SO)

900-308 Sociology of the Family 3 cr.
A sociological approach to marriage and families in American society; historical changes in family life; the problems of defining family; social class; ethnicity and gender as key variables in family power; life transitions; and divorce and remarriage. (F,S)

900-311 Collective Behavior and Social Movements 3 cr.
Structure and processes of crowds, social movements and masses; societal contexts and relationships to social change. (SE)

900-375 Sociology of Sexuality and Intimate Relations 3 cr.
The social construction of intimacy and sexuality in the development of self and personal life with emphasis on gender and intimate experience; changing ideas of love and erotic pleasure; and mass cultural influences on intimate and sexual relations. (FE)

900-404 Criminology 3 cr.
The relationship of crime and society, focusing on causes of crime. (F)

900-483X Selected Topics 1-4 cr.
See Courses with Variable Content.

900-497 Internship 3-12 cr.
See Courses with Variable Content.

900-498 Independent Study 1-4 cr.
See Courses with Variable Content.

915 Theatre

915-283X Selected Topics 1-4 cr.
See Courses with Variable Content.

915-298 Independent Study 1-4 cr.
See Courses with Variable Content.

915-483X Selected Topics 1-4 cr.
See Courses with Variable Content.

915-497 Internship 3-12 cr.
See Courses with Variable Content.

915-498 Independent Study 1-4 cr.
See Courses with Variable Content.

Acting

915-131 Beginning Acting 3 cr.
Develops a basic organic approach to acting technique through theatre games, vocal and physical exercises and improvisation. Development of skills and vocabulary for the actor's sense of self and ability to adapt to a variety of performance situations. (F)

915-133 Performing for Non-Majors 3 cr.
Introduction to basic acting and performing techniques through class exercises. Acting style and technique are also analyzed through attendance at two or more public performances. (S)

915-141 Movement for Theatre 2 cr.
Techniques in self-awareness, body warmups, breathing, nonverbal communication, improvisation; basic dance forms of ballet, modern and jazz as they relate to musical theatre. (F)

915-231 Intermediate Acting 3 cr.
Scene work in realistic dramas; practice in techniques of script analysis and character development. Repeatable to 6 cr. (F)

915-305 Audition Techniques for the Actor 3 cr.
Preparation of classic and contemporary monologues and scenes, professional resumes and photos; dealing with the business aspects of establishing a career as an actor. (S)

915-331 Advanced Acting 3 cr.
Scene work in poetic drama and period plays; techniques of verse interpretation, research into production history and performance styles; use of appropriate movement, manners and behavior. Repeatable to 6 cr. (F)

Dance

915-128 Beginning Jazz Dance 2 cr.
Introduces the beginning dance student to the techniques, theories and practice of the jazz genre. Repeatable to 6 cr. (F,S)

915-137 Beginning Ballet 2 cr.
Development of strength, flexibility, coordination, rhythm and correct body placement as these elements pertain to the technical and stylistic demands of ballet upon the human body. Repeatable to 6 cr. (F,S)

915-138 Continuing Beginning Ballet 2 cr.
Continuing development of strength, flexibility, coordination, rhythm and correct body placement as these elements pertain to the technical and stylistic demands of ballet upon the human body. (S)

915-145 Beginning Modern Dance 2 cr.

The use of the medium of modern dance, both technically and stylistically, to develop strength, flexibility, coordination and rhythm in the human body, leading to physical self-expression. Repeatable to 6 cr. (F)

915-228 Intermediate Jazz Dance 3 cr.

Continued study and execution of the style and techniques of jazz dance. Study of the styles of major choreographers in American musical theatre. Repeatable to 4 cr. (F,S)

915-237 Intermediate Ballet 3 cr.

Progression from Elementary Ballet with more complex rhythmical, spatial and technical problems. Introduction of pointe work for women. Repeatable to 9 cr. (F,S)

915-245 Intermediate Modern Dance 2 cr.

Progression from Elementary Modern Dance with more complex technical problems; understanding and executing major modern dance styles. Repeatable to 8 cr. (S)

915-340 Dance History 3 cr.

Origins and chronological development of dance styles, including ballet, modern, jazz, musical theatre and social dance. Major works and personalities influencing dance from aboriginal cultures to the present day. (SO)

915-440 Choreography 2 cr.

Technical forms and applications for composition of movement. Study of rhythmic patterns and their relationships to movement, creative content, musical interpretation, projection and dynamics. Includes movement and placement for large ensembles. (SE)

Technical Theatre**915-220 Stage Management 3 cr.**

Procedures and functions of the professional and nonprofessional stage manager; includes skills such as department organization, scheduling procedures and budget management. (S)

915-221 Theatre Production Techniques I: Stagecraft 3 cr.

Organization and operation of theatre productions: beginning stagecraft, lighting and sound. Participation in a theatre production (minimum 40 hours) required. (F)

915-222 Theatre Production Techniques II: Costume/Makeup 3 cr.

Organization and operation of theatre productions: costuming, makeup, and introductory costume design. Participation in a theatre production (minimum 40 hours) required. (S)

915-224 Scenography: Introduction to Theatre Design 3 cr.

Theatrical design, specifically scenic, lighting and costume design; the visual interpretation of theatrical literature. (F)

915-321 Scene Design 3 cr.

Practical techniques of scene design: mechanical drawing, rendering and model building for the theatre. Develops ability to create the visual and mechanical environment to support the presentation of theatre pieces. (SE)

915-322 Costume Design 3 cr.

History of costumes as they relate to the theatre; costume design in relation to the play and the actor; study of the processes of costume design: fabric, color and line, mass, and light. Participation in a theatre production (minimum 40 hours) required. (FO)

915-323 Stage Lighting 3 cr.

Aesthetic practice of design of lighting in theatrical production: composition and psychological effects of stage lighting; contemporary equipment and control systems. Participation in a theatre production (minimum 40 hours) required. (F)

915-325 Three-Dimensional Stage Makeup 3 cr.

Principles and applications of stage makeup: materials, light and color, and character analysis. Participation in a theatre production (minimum 40 hours) required. (FE)

915-423 Advanced Stage Lighting 3 cr.

Aesthetic practice of lighting in theatrical production, emphasizing programming and analysis. Practical application of the tools used in lighting. (SO)

915-424 Advanced Technical Practices 3 cr.

Modern theatre technology: electronics, optics, scene painting, pattern drafting and stage mechanics and the artistic potentialities of these technologies. Participation in a theatre production (minimum 40 hours) required. (F,S)

Theatre History/Literature/Criticism**915-235, 335 Performance Practicum 1-3 cr. ea.**

Participation in a theatre production with the opportunity to become involved in areas of greatest interest. May include technical work as well as performance in plays on or off campus. Repeatable each semester. (F,J,S)

915-309, 310 Theatre History I, II 3, 3 cr.

Theatre art and craft: its functions in and significance to the different cultures in which it has thrived. (F,S)

915-351, 352 Directing I, II 3, 3 cr.

Theories and techniques of theatrical staging and relationship of the director to the actors. Study of dramas, dramatists, critics and directors; staging and directing exercises. (F,SO)

915-403, 404 Seminar in Theatre Arts 3, 3 cr.

Individual or small group study focused on a specific area or areas of theatre interest of various periods and cultures.

915-405 Theatre Management 3 cr.

Theatre management at the professional and nonprofessional levels: organization and classes of professional and nonprofessional theatres; financial or business management; box office procedures; promotion and publicity techniques and strategies. (SE)

915-409 Theatre Criticism 3 cr.

Major statements in western theatre criticism from the Greeks to the present. The approach is one of historical development, together with applied criticism. (SE)

950 Urban and Public Affairs**950-102 Introduction to Public Policy 3 cr.**

Contemporary issues in American public policy. Substantive public policies such as those dealing with the American economy, energy, crime, environmental quality, the welfare state and social programs. Models of the policy process are also considered. (F,J)

950-200 Introduction to Urban Studies 3 cr.

The richness and complexity of the human experience in the modern city. Examines the city as an arena in which interrelationships between enduring human concerns and social institutions are expressed and asks how the city influences these as well as how the established institutions and concerns influence the city. (F,S)

950-201 Problem Analysis and Decision Making 3 cr.

Theories and methods for identifying and analyzing problems and issues and developing alternative problem-solving strategies; the role of facts and values in problem identification, criteria for distinguishing between private and public problems, skills in problem analysis and problem-solving. (S)

950-210 Drawing Systems for the Designer 3 cr.

The theory and practical application of various drawing systems, including orthographics, axiometrics, and perspectives, and their use as aids in the design process. (J)

950-215 Introduction to Public Administration 3 cr.

Examines the principal tools and methods for conducting public affairs, the external and internal elements affecting public agencies, and the role of these elements and the human dimension in creating and implementing public policies and programs. (F)

950-281 Student-Led Courses 1-4 cr.*See Courses with Variable Content.***950-283X Selected Topics 1-4 cr.***See Courses with Variable Content.***950-298 Independent Study 1-4 cr.***See Courses with Variable Content.***950-302 Urban Behavior 3 cr.**

The life that people live in cities and how we perceive and form impressions about urban areas, how we use and interact with others in these urban areas. (SE)

950-303 Urban Sociology 3 cr.

The social and psychological consequences of urban life and the political and economic forces which resulted in the modern city and urban problems such as crime, poverty, housing and public services. (FE)

950-306 Regulatory Policy and Administration 3 cr.*See 778-306.***950-309 Urban and Regional Economic Behavior 3 cr.**

Basic concepts in the economics of regions and urban areas, such as industrial location theory, central place theory, land rent theory, economic base theory, and input-output analysis; applications to problems of economic development, urbanization and place prosperity. (F)

950-313 Cities: Past, Present and Future 3 cr.

Analysis of human settlement and the influence of social, economic and technological change on urban structure and the aesthetic qualities of cityscapes in historical and cross-cultural settings. (S)

950-325 Behavior in Designed Environments 3 cr.

How the physical development of indoor and outdoor living spaces, including their location, form and design, influence and shape human behavior; contributing variables and techniques of measuring environment-behavior relationships. (F)

950-330 Environmental Politics and Policy 3 cr.*See 778-301.***950-331 Urban Politics and Policy 3 cr.***See 778-305.***950-341 Cities in Literature and Art 3 cr.**

Focuses on U.S. arts and culture; what novels, poems, paintings, photographs and other art works can tell us about cities; how the images created by writers and artists relate to their own urban experience and to ours; how American urban imagery affects our urban realities and possibilities.

950-344 Leadership in Organizations 3 cr.

Roles, functions and environments of organizational supervisors, project leaders, executives, managers, administrators and other administrative agents, especially in public enterprises; the relationships between the behavior of administrative agents and work group performance in organizational and program settings. (S)

950-345 Women in American Perspective 3 cr.

Various contributions and changing situations of women in American society covering the colonial, frontier, Jeffersonian, urban-industrial, and modern periods. Includes study of the turn-of-the-century women's movement and the impact of sex-role problems on contemporary women from different socio-economic, ethnic, and personal backgrounds.

950-351 Transportation and the City 3 cr.

The impact of the transportation subsystem of the city upon other urban subsystems (residential, commercial) and upon urban dwellers. (F)

950-363 Urban Aesthetics 3 cr.

The physical and visual form of the American urban place. The city is analyzed as a response to the aesthetic and value systems of its inhabitants to the history of American urbanization and to those bureaucratic systems which impact its form. Field trips required.

950-375 Women's Strategies for Change 3 cr.

Differing theoretical approaches to change for women provide a framework for examining alternative strategies, their assumptions and effects. Reading and discussion of a range of personal, economic, political, social and global issues compelling efforts toward change. (S)

950-376 Administrative Law 3 cr.

Administrative law in the American federal (intergovernmental) system; fundamentals of administrative law; connections between administrative law issues and issues of public policy; and legal dimensions of administrative problems.

950-378 Environmental Law 3 cr.

An overview of major environmental laws, including their historical development, structure and implementation by federal, state and local agencies. (FO)

950-379 Law in Society 3 cr.

The place of law in society and in relationship with other social institutions, as viewed from historical and cross-cultural perspectives. (F)

950-402 Resource Economics Analysis 3 cr.*See 298-402.***950-406 Administration of State and Local Government 3 cr.**

The structure and operation of state and local governments and their administration of public policies and programs; emphasizes issues of importance to each level, the interaction between levels, and Wisconsin as a case study. (FE)

950-407 Urban and Regional Economic Analysis 3 cr.

Advanced theory and methods in urban and regional economics. Local issues of economic development, resource management, public finance and labor market analysis. (F)

950-408 Public Policy Analysis 3 cr.*See 778-408.***950-409 Public Finance and Fiscal Policy 3 cr.***See 298-306.***950-412 Urban Planning I 3 cr.**

Examines planning theory, focusing on models of rationality, valuation processes, political decision-making, governmental structure and fiscal policies. (F)

950-413 Urban Planning II: Community Project 3-6 cr.

Field research laboratory focusing on the urban planning and urban design projects in northeastern Wisconsin in which students participate in planning/design teams and complete projects for community clients.

950-415 Public and Nonprofit Budgeting 3 cr.

The purposes and attributes of major public budgetary systems; principles and methods in designing and managing relationships among program planning, policy planning and budgetary operations; applications of analytical and decision-assisting tools in public budgetary operations. (S)

950-436 Environmental Design Studio I 3 cr.

Introduces use of creative problem solving techniques in defining, analyzing, and solving problems in the built environment at the scale of the individual. Emphasizes basic graphic and verbal presentation techniques and relationships between form, the natural environment, people, and function.

950-437 Environmental Design Studio II 3 cr.*See 242-437.*

950-438 Environmental Design Studio III 3 cr.

Projects at the urban scale: design teams analyze physical, social, economic, historical, and administrative aspects of specific problems. Students formulate urban design programs and produce policies, plans, and designs.

950-439 Environmental Design Studio IV 3 cr.

See 242-439.

950-451 Decision Theory and Methods 3 cr.

Quantitative and qualitative dimensions of decision-making; usefulness of various theories and methods of making decisions in individual, group, organizational and policy-making contexts. (F)

950-452 Planning Theory and Methods 3 cr.

Planning for public and not-for-profit agencies: theory and practical significance of planning; the political and administrative setting of planning operations; and methods of planning analysis such as strategic planning. (S)

950-461 Urban and Public Affairs Laboratory 3 cr.

A multi-disciplinary investigation into a public policy issue selected from areas within urban studies and public and environmental administration. Includes issues such as political processes, environmental policies, and urban social issues, including housing and transportation and policy planning.

950-481 Student-Led Courses 1-4 cr.

See Courses with Variable Content.

950-483X Selected Topics 1-4 cr.

See Courses with Variable Content.

950-484 Senior Honors Project 3 cr.

See Courses with Variable Content.

950-497 Internship 3-12 cr.

See Courses with Variable Content.

950-498 Independent Study 1-4 cr.

See Courses with Variable Content.

ADMISSION



Admission for Degree-Seeking Students

Study at the university level requires competence in academic skills. Preparation for university study is best achieved by a rigorous high school program. In order to assist its staff to assess an applicant's preparedness to successfully complete college level work, the university has set standards for students seeking admission.

Although the university has strong admission requirements, it is guided by a philosophy of "personalized admission." Consideration is given for experiences since high school, special circumstances, and socio-economic background. For these reasons, students not meeting the standard admission policy are reviewed individually. The review committee examines each student's record and determines whether or not admission may be granted on a fully matriculated or probationary and conditional basis.

Enrollment Limitations

Admission requirements described here may be changed if necessary in order to comply with UW System-mandated enrollment management steps.

Requirements for New Freshmen

To qualify for admission to UWGB, a student should:

- be a graduate of a recognized high school or its equivalent (as defined by University of Wisconsin Policy);
- submit official ACT scores;
- rank in the upper half of the graduating class;
- present 16 credits of college preparatory or academic coursework.

Unit distribution must be:

English (3 from composition and literature)	4 credits
Social Studies	3 credits
Mathematics (algebra and above)	2 credits
Science	2 credits
Academic Electives*	3 credits
Other Electives**	2 credits
TOTAL	16 credits

*From the areas of English, speech, advanced math, social studies, science and foreign language.

**Additional units in the above areas and/or in the fine arts, computer science, or other academic areas are required.

International students who cannot provide class rank or ACT scores may be admitted on the basis of high school graduation and academic work that equates to at least a "B" average and demonstrates English proficiency shown by earning a TOEFL score of at least 500.

Other Ways to Qualify

UW-Green Bay also accepts its obligation to respond to the educational needs of special groups of students. Specific requirements for such groups are used by the admission review committee to determine whether admission may be offered or denied.

Students lacking rank in class or academic unit requirements. The admissions review committee will consider such applicants based on factors described in the following. Admission will not be granted based on meeting a single criterion.

- An ACT composite score of 20 or greater; or
- A score above 50th percentile on the School and College Ability Test (SCAT) and the California Achievement Test—Reading, and demonstration of acceptable writing ability; or

—Successful completion of additional coursework at another institution, whether or not for credit, which indicates either that deficiencies have been corrected or that the student has demonstrated ability to succeed in college; or

—Consideration for returning adults, minorities, veterans, or other individuals who, on the basis of testing, experience, or other generally accepted indicators are judged by the admissions review committee to have a reasonable chance of being successful at UW-Green Bay.

GED applicants. The admissions review committee will consider students who have completed the tests for the General Education Development (GED) and are two years beyond their high school graduation date based on:

—review of high school work completed.

—a combined GED score of at least 265 with no individual test below 50th percentile.

—an acceptable admission test score of at least 50th percentile on the School and College Ability Tests (SCAT) and the California Achievement Test—Reading, and demonstration of acceptable writing ability.

Students with individual scores below 50th percentile may be considered if additional coursework has been taken to improve ability in that area. Since a GED test may be taken only once if a passing score is earned, successful additional work may be presented as evidence of ability.

Educational opportunity program. This program provides extra academic assistance to a limited number of specially selected handicapped or low-income or first generation college students who have the potential to succeed in college but who lack some of the necessary background knowledge or skills. Assistance is provided through orientation, personal advising, academic skills development courses, and tutoring. The admissions review committee will consider for admission applicants who:

—meet general high school graduation requirements or their equivalent.

—take the campus admission tests and score above the 40th percentile on the SCAT and California Reading, and demonstrate basic readiness for college work.

—meet EOP participation guidelines and be recommended for the program after interviews with EOP staff.

Green Bay Correctional Institute program. The admissions review committee will consider for admission applicants who are:

—high school graduates or equivalent.

—receive satisfactory score on admission tests (scoring above the 40th percentile on the SCAT and California Reading).

—present recommendation of program coordinator.

Enrollment at UW-Green Bay while at GBCI does not provide for automatic continued enrollment when released. Students must reapply as regular matriculants.

Admission Status

The admission review committee will determine the appropriate admission status—regular or probationary/conditional—for each applicant.

Transfer Admission Requirements

Students who have attended college after high school graduation should fulfill the following requirements:

- Transfer and advanced standing students should have a 2.0 grade point average (4.0 scale) on at least 15 credits of transferable coursework. (See definition of transferable coursework in section on information for transfer students.) A maximum of four semester credits in physical education may be used in calculating the grade point average for determining admissibility.

- Students with less than a 2.0 grade point average on transferable coursework may be considered for admission if they would have met UWGB freshman admission requirements, and if they would not have attained a suspension action had they earned the same academic record at UWGB.

Application Procedures for Degree-Seeking Students

Application. Degree-seeking students applying to UWGB should submit the University of Wisconsin undergraduate application. This application is available through counseling offices of Wisconsin high schools, from the Office of Admissions at UWGB, or any of the UW System campuses.

Transcripts. New freshmen must request that a copy of the high school transcript be sent directly to the Office of Admissions at UWGB. Many students are admitted to the university on the basis of grades earned through the junior year in high school, plus a listing of subjects carried in the senior year, and therefore may receive a permit to register before high school graduation. The university must receive a copy of the transcript when such students graduate.

Others may be asked to provide grades through the senior year to assist the admissions review committee in making the best possible evaluation of their potential for achievement.

Students who hold GED diplomas must have an official score report for the GED and a partial transcript from any regular high school attended sent directly to UWGB by the agency or school.

Transfer students must request that official transcripts be sent directly to UWGB from all schools attended since high school. Transfer students with fewer than 15 transferable credits or less than a 2.0 grade point average must also have a high school transcript sent directly to UWGB.

All students who have attended nursing, business, and vocational and technical schools must submit those transcripts as well. (Transcripts from training schools attended as part of military service are not required.) Students must submit the records whether or not the work was completed and regardless of their desire to request UWGB credit for the courses. Credits earned in a noncollege parallel program at a vocational-technical college generally are not transferable to UWGB. Students who took general education and/or liberal arts courses from such institutions are encouraged to seek credit through examination at UWGB.

Dates. Application dates for admission to UWGB are: (Earlier deadlines may apply if enrollment limits are reached.)

Fall Semester:	October 1 through August 10
January Interim:	October 1 through December 15
Spring Semester:	October 1 through January 10
Summer Session:	October 1 through May 30

Fee. A non-refundable \$10 application fee is required of anyone applying for admission as a new freshman or as a transfer student from an institution outside the University of Wisconsin System. Applicants previously enrolled at a University of Wisconsin System school as nondegree-seeking students must also pay the application fee.

ACT Scores

Current, official American College Testing (ACT) scores are required for:

- all new freshmen;
- all transfer and reentry students who have not satisfactorily completed at least one college-level course in English composition and mathematics;
- special students who want to enroll in an English composition or mathematics or computer science course.

Current ACT scores are scores from a test date not more than two years prior to the first day of classes for the term of enrollment.

Other students must have official ACT score reports on file, but these need not be current:

- freshman-sophomore level transfer students, even though they have satisfactorily completed at least one college-level course in English composition and mathematics;
- students seeking admission to teacher preparation programs;
- students who wish to be certified as eligible for intercollegiate athletics participation.

ACT test scores are used to provide a basis for course level placement in English composition, mathematics, and computer science; to provide alternative bases for new freshman admission; and to provide future benchmark data for assessing verbal and quantitative skills developed by freshmen and sophomores. The ACT policy also complies with University of Wisconsin System Regents policy and complies with requirements of the Wisconsin Department of Public Instruction for teacher certification candidates.

Information for Transfer Students

Credit Evaluations

Transfer students will receive an official credit evaluation to determine what courses and credits can be accepted to fulfill UWGB requirements. The accreditation status of the previous institution or institutions attended and the quality of a student's achievement are factors for determining course and credit transferability. Students may not be able to enroll for some UW-Green Bay courses until after credit evaluation has been completed.

Credit evaluations will be started after all transcripts have arrived at UWGB and the student has been admitted. If a student is enrolled at another college when accepted at UWGB, a tentative evaluation will be completed and sent; the final evaluation will be held until a final transcript showing grades from the last term is received. Then the evaluation will be completed and mailed directly to the student.

A student who has taken independent study courses at other institutions must supply titles and descriptions for these courses when applying to UWGB so that these can be evaluated.

General-Education Requirements

A student who transfers to UWGB must satisfy general-education requirements by completing one three-credit senior seminar course and completing or transferring other courses which:

- satisfy the English competency requirement (0 to 6 credits, depending on ACT or other placement test scores).
- meet the breadth requirements of nine credits each in the humanities and fine arts, natural sciences, and social sciences. At least one course focused on values or issues must be completed in one of the three areas.
- fulfill the three-credit ethnic studies requirement.
- fulfill the three-credit other culture requirement, either by taking or transferring a course approved for this requirement or through another approved other-culture experience.
- satisfy the writing emphasis requirement (3 to 12 credits, depending on the number of credits transferred). Writing emphasis courses are offered in most subject areas and may be used to simultaneously fulfill other general-education, major, minor, and professional program requirements.

Transfer students will be informed in writing by the Registrar's Office of their standing with respect to fulfilling general-education requirements on both the tentative and final credit evaluations. They should read the description of these requirements in the section of this catalog on general academic information.

Transferable Coursework

Students coming to UWGB may transfer up to 72 credits of coursework. In order to be credited as transferable coursework these criteria must be met:

- The course must be compatible with the curriculum offerings at UWGB. For example, courses such as typing and shorthand may be appropriate at a university which prepares teachers for high school business programs, but courses such as this do not fall within the scope of the UWGB curriculum.
- The course must be successfully completed at a regionally accredited college or university.
- Each course must have a "D" grade or better in order to receive degree credit.

Special Students

(Students Not Seeking Degrees)

Students who want to take selected courses for credit but do not have the immediate intention of earning a degree at UWGB may enroll as special students. A special student is identified as a nonmatriculated student but he or she may earn regular credit which is permanently recorded for possible future use. Special students should be prudent in course selections and the number of credits accumulated. For example, an excessive number of electives may not apply to degree requirements if the student decides to change to degree-seeking status in the future. Certain opportunities, such as financial aid, for which degree-seeking students may be eligible, are not available to special students. Special students are subject to all normal academic regulations and Regent's policies.

Normally, a student must have graduated from high school at least two years prior to the semester for which he or she is seeking special student admission. Exceptions are described in the categories below.

A student who has been denied degree-seeking status for a given semester at UWGB may not enroll as a special student for that semester. Also, a student not in good standing at another college may be denied special student status at UWGB.

Special student categories include:

Special (SPL): Students who have graduated from high school or earned a General Educational Development (GED) diploma at least two years prior to the term they wish to enroll at UWGB.

Post Baccalaureate (PBS) or Graduate (GSP) Special: Students who have already earned a baccalaureate degree (or higher) and are enrolled in undergraduate-level (PBS) or graduate-level (GSP) coursework but are not pursuing a degree at UWGB.

High School (HSO, HSP, HSS) Special: Superior high school students may enroll for UWGB coursework while attending high school or during the summer.

High school specials must normally be seniors or juniors in high school and must rank in the upper half of their respective classes. Enrollment in UWGB courses requires the approval of the high school. Credits earned by students before graduation from high school will be held in escrow.

Summer Session Only (SSO): Students enrolled at another college or university and current year high school graduates who have been admitted to another college or university for the fall session may apply for Summer Session Only admission. Such admission carries no commitment for permission to register for the regular UWGB academic year. Students from other colleges or universities must be eligible to continue work at their respective institutions and are responsible for determining if their institutions will accept credits earned at UWGB.

Application Procedures for Special Students

Nondegree-seeking students applying for admission should submit a Special Student Application, available from the Office of Admissions at UWGB. Usually this is the only information required, however some individuals may be asked to submit additional records based upon individual circumstances.

High School Special students must submit the following materials in addition to the application:

- A. an official high school transcript.
 - B. the high school special student statement form, and
 - C. the principal/counselor recommendation form.
- (Forms "B" and "C" are available from the Office of Admissions.)

Summer Session Only students must submit an official high school transcript if they are current-year high school graduates.

No application fee is required of special students.

Other Admission Information

Adult Students and Veterans

UWGB provides many opportunities for adults who have never pursued higher education and for those who interrupted their education to work, raise a family, or fulfill a military obligation. These opportunities can sometimes be provided for adults who do not meet all of the standard admission requirements. Prospective adult students are urged to write or call the UWGB Admissions Office or the Adult Services Office.

Teacher Preparation

Students who expect to seek teaching licensure should review the section on education programs elsewhere in this catalog. The State of Wisconsin requires that high school transcripts be on file for all students who earn licenses to teach. Therefore, transfer students and students who have already earned a degree will be asked to submit high school records.

A student who will earn teaching licensure for the first time should apply as a degree-seeking student. Only students who are renewing their licenses may apply and enroll as special students.

Educational Opportunity Program

A limited number of students who do not meet normal entrance requirements may be admitted to the university under the Educational Opportunity Program (EOP). Such students must show good potential for academic success. Early application is essential.

A primary goal of EOP is to assure that students admitted under the program as freshmen will be able to complete their sophomore, junior and senior years.

Permanent Resident Non-Native English Speakers

Permanent resident applicants who qualify for admission but lack some English language proficiency will be required to take the English-as-a-Second-Language placement test to determine appropriate English course placement. Information is available from the coordinator of International Student Services.

International Student Admission

UWGB enrolls students from more than 30 countries and actively seeks the cultural diversification that international students contribute to the campus.

Admission for international students is based upon scholastic achievement, ability to use the English language, and ability to finance an education.

An international student must have a recognized certificate of completion from a good secondary school and proof of being a very good student. Since all UWGB coursework is conducted in English, an applicant from abroad must take the Test of English as a Foreign Language (TOEFL), administered by the Educational Testing Service, Princeton, New Jersey. The test is given several times each year in many major cities of the world. Information about it is usually available at American embassies and consulates, offices of the U.S. Information Service, U.S. educational commissions and foundations abroad, and other locations.

International students must be prepared to finance their educations. Only a limited number of partial tuition remission scholarships exist. In addition, it is difficult to gain permission from the U.S. Immigration and Naturalization Service to work off campus, so international students should not anticipate financing an education by income from employment.

UWGB has an office for international student services which notifies international applicants when they have been accepted and issues the necessary Certificate of Eligibility (U.S. Department of Justice, Immigration and Naturalization Service, Form I-20) to admitted students.

Further information on international student admission is available in the brochure, *Information for International Students*.

Admissions Appeals

A student who has been denied admission may appeal that decision by appearing in person before the Admission Appeals Committee. This committee meets approximately two weeks before the beginning of each semester. Students may contact the Office of Admission for exact dates and times.

Graduate Program Admission

The basic policy of personalized admission applies to the graduate as well as the undergraduate program. The applicant's total experience is always considered. Entry as a provisional student is possible for those not meeting the minimum requirements. Evidence of success as a provisional student will gain admission to degree candidate status. Minimum requirements for entry into the degree program are:

- a baccalaureate degree.
- a 3.0 grade point in the major field of study, measured on a 4.0 scale.

Candidates for entry must submit:

- a completed application form, including a statement of the student's intended area of study and educational objectives;
- a transcript of grades for all previous undergraduate and graduate work;
- three letters of recommendation;
- an application fee of \$20;
- non-native English speakers must submit a TOEFL score;
- international applicants must submit proof of financial support.

The graduate program is summarized in the section of this catalog on academic programs. A separate catalog is available describing the program in detail.

COSTS

Tuition and Fees

The university publishes a fee schedule each semester. It is available from the Office of the Registrar. Fees vary depending upon the student's state residence, undergraduate or graduate classification, and full-time or part-time enrollment. In addition to general tuition and fees, students are assessed special course fees for certain classes, particularly for studio art courses. The Board of Regents reserves the right to change tuition and fees without notice.

When they register, students should obtain an up-to-date fee information schedule which specifies fee payment dates and procedures; costs; and refund and fee assessment dates.

The following fee information applied to spring semester 1990. It can be useful in estimating average costs of attending the university on a semester basis. The new fee schedule printed each semester shows actual costs.

A part-time undergraduate student registering for 11 credits or fewer pays on a per credit basis. Per credit payment applies to a part-time graduate student registering for eight credits or fewer. In 1989-90, Wisconsin undergraduate students paid \$70.70 and graduate students paid \$117.10 per credit. Nonresident undergraduate students paid \$210.70 and graduate students paid \$340.10 per credit for part-time enrollment. Minnesota undergraduate students paid \$73.95 per credit and graduate level students paid \$108.10 per credit.

All fees and tuition are due at the time of registration and for regular semesters must be paid on or before the Friday of the first week of classes. Late payment penalties go into effect after that date. Information about fees, including late payment penalties and the refund schedule for official withdrawal or reduction of credits is contained in the *Timetable*.

January Interim

Students enrolling for the January interim do not pay additional fees if they are registered full time in the preceding or following semester unless total credits exceed the full-time plateau of 12-18 credits. If enrolled for less than full time, fees are assessed at the regular per-credit rate.

Summer Session

Fees for summer session are based on the number of credits elected and are subject to change without notice by the Board of Regents. Summer fee schedules are announced in the *Timetable* or a separate fee information sheet.

Costs Per Semester	Undergraduate Student	Graduate Student
Spring Semester, 1990		
Tuition and Fees		
Wisconsin Resident	\$ 840.75	\$1,047.25
Non-Resident	\$2,521.25	\$3,055.75
Minnesota Resident	\$ 880.25	\$ 963.25
Books and Supplies (average)		
	\$ 225.00	\$ 225.00
On Campus Housing (double occupancy)		
	\$ 550.00	\$ 550.00
On Campus Food Plan		
Plan A	\$ 450.00	\$ 450.00
Plan B	\$ 625.00	\$ 625.00

Total undergraduate cost per semester for a Wisconsin resident living on campus: \$2,066.00 (Food Plan A)

Note: Students will need additional funds for transportation, clothing, personal, medical and miscellaneous expenses. Students living at home with parents and students living off campus will have variable costs which are considered in establishing the financial aid budgets used to determine need.

FINANCIAL AID

Objectives

The primary objective of the Student Financial Aid Office is to assure that no academically qualified student is denied an education for lack of financial resources. Financial assistance in a variety of forms is available to students who have financial need. By completing the necessary applications, students are automatically considered for scholarships, grants, loans, or work-study for which they may qualify. The Financial Aid Office can provide detailed information about aid programs and scholarships.

Eligibility

In order to qualify for most aid programs funded by the federal or state government, a student must:

- be a U.S. citizen or an eligible non-citizen (permanent resident);
- be accepted for admission and enroll in a program leading to a degree;
- show financial need as determined by the institution;
- have registered with Selective Service, if required to do so;
- not be in default on a previous student loan nor owe a refund on a previous student aid grant;
- be classified as a resident of Wisconsin to be eligible for the Wisconsin state programs;
- use funds only for education-related expenses;
- notify the institution and lenders of any change of address;
- maintain satisfactory progress toward a degree as defined by the institution.

Application Procedures

Students should apply for financial aid as early as possible prior to their semester of enrollment. Students applying for financial aid must have been admitted or be enrolled on at least a half-time basis (6 credits undergraduate; 4 credits graduate) before receiving a financial aid award. Following are specific application procedures.

- New freshmen apply for admission to the university and indicate desire to be considered for financial aid.
- Transfer students must complete an admissions application and one of the applications for financial aid. Also, financial aid transcripts must be sent from all postsecondary institutions attended whether or not aid was received.
- All students obtain a needs analysis document—either a Financial Aid Form (FAF) or a Family Financial Statement (FFS)—from the high school counselor or the Financial Aid Office. Complete and submit the form as soon as possible to the appropriate processor as instructed on the form.
- Students should submit to the Financial Aid Office all copies of the student aid report received from their aid processor.
- Respond quickly and accurately to all requests for additional information.

Students who apply are considered for all types of financial aid for which they are eligible. An application for aid may be filed before the university issues a permit to register, but a student must be admitted before UWGB can make an offer of aid.

Determination of Need

To help judge student need and award aid fairly, the university asks self-supporting students and parents of dependent students to fill out a confidential application for financial aid. This form is analyzed by one of the processing agencies and then reviewed by a counselor in the Financial Aid Office. On the basis of this financial statement, the university can determine the difference between what the parent and student can provide and what the cost of education will be.

As part of the determination of financial need, students are expected to commit a portion of their assets toward their education expenses. In addition, students are expected to contribute through earnings.

Aid Awards

Rarely can students meet all their expenses through one type of financial aid. Also, few loan or grant programs for undergraduate students can pay the total educational bill. This means that assistance generally must come from a combination of sources. A student may be selected to receive a loan and grant, a scholarship and a loan, a loan and a job, or some other combination. A student need not accept the whole package to receive part of it.

Awards are based on the total cost of supporting a student for an academic year. Assistance given beyond costs for fees and books should go toward meeting board and miscellaneous expenses.

Aid awards are based on the cost of full-time enrollment (12 credits for undergraduates; 9 credits for graduates) unless informed differently by the student.

Citizenship and Residency

All aid programs require U.S. citizenship or permanent residency with the exception of the International Student Scholarship. To be eligible for Wisconsin grants students must be residents of the State of Wisconsin under Section 36.27 of the Wisconsin Statutes. Students are classified as residents or nonresidents at the time of admission to the university by the Office of the Registrar.

Standards of Academic Progress

The individual student is responsible for being aware of academic standards of progress required in order to continue eligibility for financial aid. Eligibility is based upon the total number of semesters for which the student has been enrolled and on successfully completing a minimum number of credit hours within a given time span. A complete description of the university's policy and tables showing the number of credits required to continue eligibility for aid are located in the appendix to this catalog.

Refund and Repayment

If enrollment status changes during the refund and repayment period, it is the student's responsibility to repay any funds he or she receives which cannot reasonably be attributed to meeting educational costs at UWGB. The amount of repayment is based upon Federal Department of Education regulations (paragraph 668.21 of the federal financial aid regulations). Complete refund/repayment policy is in the appendix of this catalog.

Deadlines

Application priority date for all financial aid is April 15. Students whose aid files are complete by the priority date are generally notified between May 1 and June 15 of their aid award or denial.

The university cannot guarantee grant, loan, or job assistance to those applying after the priority date. Late applications will be accepted and awards will be made as long as funds are available.

Late applicants (those applications not received prior to six weeks before classes begin) should be prepared to pay all of their initial expenses from their own resources. *Late payment assessments will not be waived for late applicants.*

Types of Financial Aid

Grants

Pell Grant. Federally funded grants to needy students range from \$200 to \$2,300 (determined by a federal schedule). Students who wish to apply for any financial aid are required to apply for the Pell Grant by checking a section of the FAF or FFS or completing the Federal Financial Aid Application.

Supplemental Educational Opportunity Grants (SEOG). Federally funded grants to students who have exceptional financial need. SEOG awards may not exceed \$4,000 in one year of undergraduate study. The actual amount a student may receive is determined by need, funding available, and university policy.

Wisconsin Higher Education Grants. State-appropriated grants awarded by the Higher Education Aids Board. Awards range from \$250 to \$1,800. Students may receive these funds for a maximum of 10 semesters.

Wisconsin Indian Student Assistance Grant. Grants of up to \$1,800 per year awarded to students of at least one-fourth Native American descent who are residents of Wisconsin. Amount of the grant is based upon financial need. Additional funds on a matching basis are available to most Indian students from the U.S. Bureau of Indian Affairs or individual tribes. The grant may be received for up to five years of study.

Lawton Grants. Available to sophomore, junior, or senior Black, Hispanic, Southeast Asian, or Native American students, with an annual maximum of \$2,000 and a cumulative maximum of \$8,000. The award is based on need and is intended to help reduce student indebtedness. The minority affairs coordinator assists in identifying eligible students.

Wisconsin Talent Incentive Grants. Need-based awards for nontraditional and disadvantaged students, determined by the Wisconsin Education Opportunity Center or the Financial Aid Office.

Minnesota-Wisconsin Compact Fee Remission. Nonresident fee remission for any Minnesota resident attending a Wisconsin public university. Students from Minnesota need pay only a special fee amount. Students must apply directly to the Minnesota Higher Education Coordinating Commission, Suite 901, Capitol Square, 500 Cedar Street, St. Paul, MN 55101.

Vietnam Era Veterans Grant. Made available to eligible Wisconsin veterans who served in the armed forces between August 5, 1964, and July 1, 1975. The yearly grant of up to \$200 for single and \$400 for married veterans is determined by a special application form.

Vocational Rehabilitation Grant. Aid covering tuition and books provided to students with a disability as determined by the Department of Vocational Rehabilitation. The amount is included with other financial aid. Students with disabilities should contact their regional Department of Vocational Rehabilitation.

Loans

Perkins Loan. Loans may be made up to \$9,000 cumulative maximum as an undergraduate student. Interest is currently five percent and both interest and principle payments are deferred until six months after the student leaves school.

A first-time borrower after July 1, 1987, has a grace period of nine months after graduation, leaving school, or attending less than half time. Current borrowers have a six-month grace period before loan repayment begins.

Cancellation of all or a portion of the principle borrowed is available for teachers of the handicapped and mentally retarded, teachers employed in schools in low-income areas, and preschool teachers in Head Start programs. Deferments of up to three years may be obtained while serving as a Peace Corps/Vista volunteer or on active duty in the Armed Forces of the United States. Perkins Loan program regulations may be changed by Congress.

Stafford Student Loans. (Formerly Guaranteed Student Loans) Students may borrow under this program from participating private lending institutions, such as banks, savings and loan associations, and credit unions. The program is administered jointly by the private lending institutions, the student's home state guarantee agency, and the university.

Depending upon the total amount borrowed, the student has up to 10 years to repay the loan at a present eight percent interest rate, after he or she has permanently left school. Undergraduate freshmen and sophomores may borrow up to \$2,625 per fiscal year, juniors and seniors may borrow up to \$4,000 per fiscal year for a total maximum accumulation of \$17,250. Graduate students may borrow up to \$7,500 per fiscal year for a total aggregate amount of \$54,750.

PLUS/SLS Loans. PLUS loans are provided for parents, while the SLS loan is designed for independent students. Both loan programs are non-need based and provide additional funds for educational expenses. The interest rate can change quarterly and it is best to check with your lender. Like the Stafford Student Loan Program, these loans may be made by a lender such as a bank, credit union, or savings and loan association.

PLUS enables parents to borrow up to \$4,000 per year, to a total of \$20,000, for each child who is enrolled at least half-time and is a dependent student. Under SLS, graduate students and independent undergraduates may borrow up to \$4,000 per year, to a total of \$20,000. The amount parents and students are eligible for is determined by the Financial Aid Office.

Loan Counseling

Counseling on the various loan programs is available to students at any time. If a student actually borrows under Perkins or Stafford Student Loan, a minimum of one loan counseling session or interview is required before completing their course of study or at the time of their departure from the university.

Sample schedules for loan repayment are available in the financial aid award booklet and the student loan counseling booklet. Both are available at the Financial Aid Office.

Before a student accepts an offered loan, it should be reviewed. Any or all of the amount offered may be accepted. Students should not accept all of a loan if it is not needed. If a job has been offered, students are urged to accept it. Often a job is the best way to put what otherwise might be "waste time" to good use and debt may be kept to a minimum.

Student Employment

Enrolled students may use the employment services of the office of Student Financial Aid. Students may apply any time during the year but they cannot be referred to job openings until they have registered for classes. On-campus student employment openings are generally categorized under two programs: college work-study and regular employment. The university also offers assistance in locating part-time employment off campus through the Job Location and Development Program.

College work-study. As a part of the financial aid award, work-study is based upon financial need. Wages are paid partly by the employer and partly by the federal government. Total earnings are limited to the amount of financial need. Once the student earns the allowable amount, employment must cease or be switched to regular part-time employment.

Regular employment. Students may apply and be employed on campus as jobs are available. However, students whose financial need has been met by aid programs may not earn additional funds on campus without an adjustment to their financial aid award. Off-campus jobs are listed on the bulletin board outside the Financial Aid Office.

Job Location and Development (JLD). The JLD program solicits and posts part-time job opportunities for students from off-campus employers. Information about the jobs is obtained in the Student Employment Office.

The rate of pay for student jobs on and off campus generally ranges from \$3.80 to \$18 an hour. The exact rate depends on the complexity of the job. The chart below shows possible expected earnings (before taxes and other deductions) in a school year of about 34 weeks.

Hours worked weekly at \$3.80 per hour:

10 hours	\$1,292
12 hours	\$1,550
15 hours	\$1,938

Other Programs

Veterans Educational Assistance. The primary source of information for programs administered by the Veterans Administration or the Wisconsin Department of Veterans' Affairs is the veterans' service officer of the county from which the veteran departed for service, or where he/she now claims residence. The veteran may also seek assistance from the veterans' officer on campus.

Veterans should submit the certificate of eligibility to the Office of the Registrar for enrollment certification and transmittal to the Veterans Administration regional office. A special section on the final registration form must be completed to be certified for benefits for the ensuing term.

War Orphans Educational Assistance. The War Orphans Educational Assistance Act provides educational benefits for children of permanently disabled or deceased veterans. The veteran must have died or become disabled as a result of service in the Armed Forces during the Spanish-American War, World War I, or since September 15, 1950.

Financial aid for graduate students. Financial aid in the form of teaching assistantships, which carry a stipend of about \$6,392 and provide eligibility for waiver of out-of-state tuition, are available to graduate students by applying directly to the Office of Graduate Studies. Work-study, regular employment, and student loans are also available to graduate students by means of the regular financial aid application process.

Advanced Opportunity Grant. The Advanced Opportunity Grant is available to graduate minority students. The amount of the grant varies and eligibility is determined by a prioritizing scale.

Scholarships

Scholarships for students who attend UWGB come from many sources and recognize a variety of talents, achievements, interests, and needs. Some scholarships are available to new students, some are available to continuing students, and others may be awarded to students in both categories. Amounts of the scholarship awards vary. Students who want specific information about scholarships should contact the Financial Aid Office.

Following is a list of UWGB scholarships by name:

Alumni Association Scholarship
 Arthur Atkisson Memorial Scholarship
 G. Harvey Benham Memorial Scholarship
 Frank Byrne Memorial Fund
 James E. Casperson Memorial Scholarship
 David Christenson Memorial Fund
 Victor Crambeau Education Fund
 Coryl Crandall Memorial Scholarship
 Thomas E. Daniels Memorial Scholarship
 Albert Einstein-Mahatma Gandhi Scholarship
 Founders Association Adult Student Scholarship
 Founders Association Continuing Student Leadership and Academic Excellence Scholarships
 Founders Association New Student Scholarships
 Friends of the Arts, Inc. Scholarships
 German-American Society Scholarship
 Bidwell K. Gage Memorial Scholarships
 Lucy Pekham Gfroerer Trust
 H.F. Hagemester Jr. Memorial Art Scholarship
 Hugh C. and Mary Higley Scholarship
 Johnson Foundation Research Grants
 Herbert Fisk Johnson Awards for Excellence
 Lucy Krehma Education Scholarship
 Althea Steele Lederer Memorial Scholarships
 Sidney and Ruth Morris Scholarship
 Music Educators National Conference (MENC) Scholarship
 Music Scholarships
 William F. Prevetti Scholarship Fund
 John M. Rose Scholarships
 Rotary Free Enterprise Award
 Walter and Gertrude Scherf Scholarships
 Science and Mathematics Scholarships
 Show/Jazz Choir Scholarships
 Ralph R. Stein Memorial Scholarship
 Theater Scholarships
 Oliver and Margaret Trampe Scholarships
 University League Scholarship
 Byron L. Walter Family Scholarship
 Wisconsin Public Service Corp.
 Associated Kellogg Bank
 Business Scholarships
 Wisconsin Rural Rehabilitation Corporation Scholarship
 Women in Business Scholarship

ACADEMIC RULES AND REGULATIONS



Definitions

Credit—a quantitative unit used to measure effort devoted to reading, discussion, lecture, and other activities associated with the learning process. In theory, earning one credit requires a minimum of 15 hours of classroom time and an additional 30 hours of out-of-classroom effort. An average student carrying a 15-credit semester load should expect to commit at least 45 hours per week to class attendance, study, and preparation.

Credit Load—the total credits a student is carrying as a program at a given time in a term, for example, at registration or at the end of the semester. All credits, regardless of grading status, count toward credit load for certain purposes.

Maximum Credit Load—a specific limitation of the number of credits a student may carry at any time during a term. For a student in good standing, maximum load for a semester is 18 credits as of the first day of classes. Before the first day of classes, students may enroll no more than 16 credits. A student on probation who has a grade point average of 2.0 or better is limited to 15 credits. A student on probation with a GPA of less than 2.0 is limited to 13 credits.

Minimum Credit Load—a specific minimum number of credits (excluding audit credits) that a student must carry to be eligible for a variety of programs and benefits, such as athletics, financial aid, family health insurance coverage, summer employment, and loan repayment referrals.

Attempted or Grade Point Credits—the number of credits taken for a grade that will affect the grade point average. Some attempted credits may not count toward degree credits. Some physical education courses, for example, may not result in degree credit and do not affect the grade point average.

Degree Credits—those credits that count toward the 124 credits required for a bachelor's degree. Certain courses in physical education and all academic support courses do not result in degree credits even though they may have a credit value assigned for measuring credit load for some purposes. Some physical education credits may be held in escrow and added to the total earned credits at graduation.

Escrow Credits—due to the limitations and complexity of the physical education credit policy, such credits are withheld from computation of attempted and degree credits until all other graduation requirements are fulfilled.

Completed Credits—the number of credits (excluding audit credits) for which a final grade is received. Pass-no credit credits passed, degree credits, and attempted credits are included. Temporary grades of I or N are excluded.

Audited Credits—credits for courses in which a student chooses to enroll as an auditor. These credits are counted for maximum credit load and fee assessment, but they are of no significance for any other purpose, such as graduation or grade point average. Enrollment as an auditor is subject to special conditions.

P-NC Credits—pass-no credit is a specific grading option. These credits have no effect on grade point average, but, if passed, may add to the degree credits earned. Students complete a special request form to elect P-NC grading.

Grade Point Average (GPA)—a numerical value derived from dividing the number of grade points earned by the number of credits attempted on a regular grade basis. P-NC, incomplete, and audit grades and credits have no effect on grade point average. Only courses attempted at UWGB are included in a student's GPA.

Example of GPA for a Semester

Course	Grade	Credits	Grade Points
Art 105	A	3	12
Math 104	BC	4	10
History 205	C	4	08
English 093 (Academic Support)	P	3	00
Total		11	30

30 divided by 11 equals 2.72 grade point average

Cumulative Grade Point Average—GPA for all completed terms at UWGB. It is calculated by dividing the cumulative total grade points earned by the cumulative total grade point credits.

Probation—a nonpunitive warning status assigned to a student who shows lack of academic progress as measured by successfully completed credits or for inadequate performance as measured by grade point average. Probation is an advisory warning that improved performance is necessary to continue as a student.

Academic Suspension—a status assigned when a student's record of academic progress and/or achievement is unacceptable. Suspended students are not permitted to continue to enroll at the university.

Good Standing—a status assigned when a student is making adequate academic progress and his or her cumulative grade point average is 2.00 or better.

Academic Standing

Every student is expected to maintain certain standards of academic achievement in all work carried at the university. Standards are described in terms of quality of work as measured by the semester and cumulative grade point averages, and by quantity of work satisfactorily completed, as measured by the proportion of the attempted credit load completed each semester.

Certain exceptions are allowed for part-time students, but unless otherwise stated, part-time students are expected to meet the same academic achievement standards as any other student.

Academic standings are reviewed at the end of each term. A revised standing is reported to every student on the final grade report issued after each term.

Grading System and Grade Points

Grade point averages indicate academic and class standing and are a means of measuring the quality of a student's academic work. Grade point averages are computed on a 4.0 basis. See chart for letter grade point values.

A student who elects to take courses on a pass-no credit basis should be aware of certain restrictions. See the special section on P-NC grading.

Since grading standards differ from institution to institution, grades received from other institutions are not used in computing grade point averages.

Grade Point Values

Letter Grade	Grade Points Per Credit
A (Excellent)	4.0
AB (Very good)	3.5
B (Good)	3.0
BC (Above average)	2.5
C (Average)	2.0
D (Poor)	1.0
F (Unacceptable)	0.0
WF (Unofficial withdrawal)	0.0
P (A "C" grade or better for undergraduate courses)	No effect
NC (No credit; letter grade of less than "C")	No effect
U (Unsatisfactory audit)	No effect
S (Satisfactory audit)	No effect
N (No acceptable report from instructor—temporary grade)	No effect until an acceptable grade is submitted.
I (Incomplete; temporary grade)	No effect until removed or lapsed into tentative grade assigned if required work is not completed. Work must be completed by deadline set by the instructor, or the last day of classes for the following semester, whichever comes first.

Probation and Academic Suspension

The university is concerned about students whose academic achievements indicate that they are unable to meet expectations of their instructors or that they are experiencing other problems that may interfere with their studies. A probation action is an advisory warning that a student should take action to improve his or her achievement. An academic suspension action is taken when the university feels that the student's academic achievement record to date indicates a need to interrupt enrolled status to reassess and reevaluate goals and plans.

A student who is placed on probation or academic suspension should give careful consideration to factors involved. The university encourages such students to seek assistance from counselors, advisers, and instructors. It also provides help through various testing services and study skills development programs.

Every student is expected to maintain at least a C average (2.0 cumulative grade point average) on all work carried. Failure to achieve a C average in any term will result in probation, continued probation, or academic suspension action at the end of that term. Academic suspension actions will not be taken solely on the basis of inadequate achievement in the January interim for students who were not enrolled in the fall semester, however.

Each student is expected to complete a certain portion of the credits for which he or she originally enrolled. Failure to meet this standard in a given semester will result in a status of probation, continued probation, or academic suspension. Students complete a course by earning a grade of A, AB, B, BC, C, D, F, WF, P, or NC. This excludes previously passed courses which are being retaken voluntarily.

A student on probation may return to good standing by fulfilling certain requirements.

Tables adjacent show the two measures of achievement—grade point average and completed credits—and actions that result from failure to meet them.

Students who enroll for an original credit load of fewer than six credits are exempt from completion requirements. A student may drop at least one course from his or her original credit load without incurring an academic suspension or probation status. (For example, a student enrolled for an original credit load of 12 credits could drop one five-credit course without incurring a probation or academic suspension.)

Academic suspension status is assigned for a period of one semester for the first suspension. If a student is suspended for a second time, the status is for two semesters. Students who are suspended must apply for readmission to the university if they want to return. Such readmission may be granted or denied.

A student who is suspended at the end of the fall semester may enroll in the January interim with the understanding that he or she is not eligible to continue for the spring semester unless achievements during the January interim result in a return to good standing or continued probation. A student who is suspended at the end of the spring semester may enroll in the summer session with the understanding that he or she is not eligible to continue for the fall semester unless achievements during the summer session result in a return to good standing or continued probation.

Conditional matriculants must meet special contractual requirements specified at the time of admission. When a CM student is removed from that status, he or she must then meet all normal requirements. The admission review committee makes determination for academic suspension actions or continued conditional matriculant status for students enrolled in that classification.

For a Student in Good Standing

Grade Point Requirement and Action

- 1.0 to 1.99 end of semester or term cumulative GPA results in probation
- 0.999 or less end of semester cumulative GPA results in an academic suspension status
- action on part-time students is withheld until they have attempted at least 12 credits at UWGB

Credit Completion Requirement and Action

original credit load*	credits completed	status
12 or more	8 or less	probation
9-11	5 or less	probation
6-8	2 or less	probation

For a Student on Probation

Grade Point Requirement and Action

- 1.50 to 1.999 end of semester or term cumulative GPA results in continued probation for one term
- 1.49 or less end of semester cumulative GPA results in a suspension status
- 2.0 or better end of semester or term GPA and a 2.0 cumulative GPA results in a return to good standing

Credit Completion Requirement and Action

original credit load*	credits completed	status
12 or more	8 or less	academic suspension
9-11	5 or less	academic suspension
6-8	2 or less	academic suspension
12 or more	9-11	continued probation
9-11	6-8	continued probation
6-8	3-5	continued probation
12 or more	12 or more	return to good standing if cumulative GPA is 2.0 or better
9-11	9 or more	
6-8	6 or more	

For a Student on Continued Probation

Grade Point Requirement and Action

- less than 2.0 cumulative GPA results in an academic suspension status
- 2.0 or better end of semester or term GPA and a 2.0 cumulative GPA results in a return to good standing

Credit Completion Requirements and Action

- same as for a student on probation

*calculated at the end of the course add period

Appeals

Academic probation is a nonpunitive warning and is not subject to an appeal.

Academic suspension status may be appealed to the vice-chancellor for academic affairs through his or her designated representative, the associate vice-chancellor for institutional research. The vice-chancellor may seek advice from the academic actions committee. Appeals must be filed within seven working days from the date printed on the grade slip or student record report. A student who is allowed to continue as a result of an appeal is on continued probation and is subject to any special conditions that may be designated. An academic suspension provides time for a student to give careful thought to the circumstances that resulted in the suspension action. Suspended students may seek appropriate noncredit remedial help, and reassess their goals in the context of the academic achievement record they have compiled. Appeals must include a clear explanation of the problems that resulted in inadequate achievement and a statement explaining how the student proposes to resolve those problems.

Students planning appeal should consider:

- Are the relevant facts and dates clearly stated and documented?
- Are the extenuating circumstances cited of an inforceable nature?
- Are relevant recommendations from the instructor(s) included, if this is appropriate?
- Do statements in the appeal distinguish between needs and wants?
- Is the educational rationale for the request clearly stated?

Limited Rights To Appeal An Academic Suspension Action

A student who earns an academic suspension action must file written appeal for an exception within seven working days from the date printed on the grade slip or the student record report. Record reports are mailed to students at the end of each term. Failure to meet the seven-day deadline results in an assumption on the part of the university that the student plans no appeal.

The university's assumption of no appeal can result in:

- cancellation of housing in University Village;
- cancellation of advance registration for the next semester.

Appeals are filed with the associate vice-chancellor through the Office of the Registrar.

If an appeal is filed before the seven-day deadline, a student can expect to know the outcome of the appeal within seven working days of the date the appeal was filed. If the student wants notification of results by mail, he or she must enclose a self-addressed, stamped envelope with the appeal. If no other arrangement is made, a student may pick up a copy of the appeal results at window 7 of the Registrar's Office.

According to academic rules and regulations, a student who is suspended at the end of the fall semester may complete the January interim and a student who is suspended at the end of the spring semester may complete the summer session. However, continuation in either of these special terms does not change the requirement to file an appeal within the seven-day deadline nor does it guarantee permission to register for the following semester.

If the appeal is denied by the vice-chancellor's designee, a student has the right of further and final appeal to the student-faculty academic actions committee providing the second appeal is filed within five working days of the denial. Second appeals should be filed at window 7 of the Registrar's Office. As a part of a written appeal, students may request a personal appearance before the committee when it meets to review the appeal. The chairperson will notify the student of the day and time of the scheduled appeals meeting.

Grade slips are mailed by first-class mail on this schedule:

End of fall semester on the Friday before the January interim, using the local address of record.

End of January interim on the Friday after the January interim, using the local address of record.

End of spring semester on the second Monday after the end of final exams, using the home or permanent address of record.

End of summer session on the Friday after the last day of classes for the eight-week session, using the home or permanent address of record.

Students may choose to have all mailings made to a single address. This option must be indicated on an address correction form supplied by the Office of the Registrar.

Mail forwarding is a student's responsibility. Written notice of a change of address to all mailers is also a student's responsibility. Student failure to provide a prompt forwarding or proper notification of change of address is not an acceptable excuse for exceptions in the appeal process.

Readmission

Readmission after an academic suspension is not an automatic process. The Office of Admissions may deny or grant readmission subject to specific requirements or conditions. A student who is readmitted after an academic suspension is always readmitted on probation and is subject to normal standards of progress and achievement. An application for readmission should be submitted to the director of admissions at least 30 days before the desired term of admission to allow for the full review process.

Grades and Grade Appeals

Each student receives a grade from the instructor of a course at the end of a semester or session. Instructors must forward grades to the Registrar's Office no later than 96 hours after the final examination. Information on current grading policies is sent to instructors each semester along with grade rosters.

If a student is dissatisfied and wishes to appeal a particular course grade, he or she must first contact the instructor who issued the grade. If the student is still dissatisfied, he or she may appeal further to the concentration or professional program chairperson. The chairperson, in turn, consults with the course instructor. If a student wishes to appeal still further, he or she contacts the appropriate academic dean who also consults with the instructor and the appropriate chairperson. The dean or chairperson acts in an advisory capacity to the student and the instructor.

Grade Changes

All final grades—except for incompletes (I)—become permanent grades after the last day of classes for the next semester. Any discussions with faculty regarding grade levels or missing (N) grades must be pursued within this time period.

Grade Changes for Graduating Seniors

Grades for graduating students become permanent and unchangeable for any reason after a period of 15 working days following the end of a semester or summer session.

Incompletes

If a student is unable to take or complete a final examination or other course work, due to unusual but acceptable circumstances, he or she may arrange with the instructor to receive an incomplete. The incomplete grade is filed with two tentative grades: one indicates the quality of the work to date; the second is to be assigned if no more work is completed. A specific deadline is set for completing the work required to remove the incomplete. The instructor files an incomplete removal form, stating both the conditions for removal and the deadline, before an incomplete grade is accepted for recording. If a

course is incomplete, a student's grade point average and degree credits remain undetermined until the permanent grade is established. However, a tentative academic action may be assigned on the basis of grades and credits received in other courses. Tentative actions are reviewed after the incomplete has been converted into a permanent grade.

Incompletes for Graduating Seniors

Seniors expecting to graduate must remove pending incompletes by the end of the sixth week of their final semester of attendance. Outstanding incompletes are considered as I grades and do not count toward degree credits or grade points for purposes of estimating eligibility for graduation and possible honors.

Students who expect to graduate in December must have all incompletes removed within 15 working days following the end of the January Interim. Students who expect to graduate in May must have all incompletes removed within 15 working days following the end of the spring semester.

Removal of Incompletes

The course instructor sets a specific deadline for removal of an incomplete and informs the student, the Office of the Registrar, and the academic unit chairperson. If no earlier deadline is specified, an incomplete (I) must be removed no later than the last day of classes for the next semester. If no other grade is submitted by the instructor within this period, incomplete grades become a permanent grade of F. The student's grade point average and earned credits reflect the F grade.

A student may file a special petition for an exception to the incomplete removal deadline if bona fide unanticipated extenuating circumstances prevented compliance with the removal deadline. These circumstances might be valid:

- The student has serious physical or mental health problems which are documented by statements from a physician or professional counselor.
- The student has had a death or serious illness in the immediate family and this is documented by a physician's statement.
- The course instructor is on leave during the semester for removal.

For graduating seniors, all I grades must be converted to a permanent passing or failing grade before the commencement date. All grades on the record become permanent as of that date with no possibility for removal or change.

An incomplete grade is normally a temporary grade given due to circumstances explained in the previous paragraph.

Repeating Courses

A student may choose to repeat any course. Repeated courses are designated with a letter R after the course title on the transcript. When a repeated course is complete, the original grade and entry on the transcript remain. However, the credits, grade, and grade points earned for the most recent completion are used to calculate cumulative attempted credits, grade points earned, and grade point average. Courses repeated at another institution have no effect on grade point average at UWGB.

Repeated courses do not count toward fulfilling standards of progress requirements or for probation and academic suspension status purposes unless the previous grade was NC, F, WF, S, or U.

The university does not guarantee the right to retake any course. Courses may be deactivated, discontinued, or offered on a different schedule.

A course repeat card should be filed with the Office of the Registrar to ensure that a recalculation of the grade point average is completed.

Course Prerequisites

Course prerequisites are shown in the descriptions of many courses in the *Timetable*. They are indicated by the designation P. Prerequisites indicate the minimum level of proficiency or background knowledge needed to successfully achieve course objectives.

Exceptions to prerequisites may be made by the course instructor or the instructional unit chairperson. Students who do not meet prerequisites are responsible for seeking approval for exceptions before enrolling in a course. Students who do not observe prerequisites will not be allowed to enroll in a course.

Recommended Prior Courses

Recommended prior courses are also designated in course descriptions by the designation Rec. Recommended courses are basically advisory and are usually lower-level courses. Students who have the knowledge or skill recommended for a course may enroll without completing prior recommended courses, but they do so at their own risk. Students can not expect a course instructor to hold back the progress of a class for those who have not taken the recommended prior courses. If students misjudge their ability to take a course without the recommended prior courses, they may get a much lower grade than they would wish. They also run the risk of feeling compelled to drop the course, thereby losing tuition and book and materials costs.

In performance courses requiring an audition, students are responsible for making their own arrangements for the audition before classes begin.

Audit Enrollment

If enrollment capacities permit, a student may audit a course if space is available after students enrolled for credit are accommodated. Special policies apply to senior citizen guest students and disabled guest students. These policies are published in the *Timetable* for each term.

Class Attendance

A student is expected to attend all class sessions. If, for any reason, a student is unable to attend classes during the first week of classes, he or she is responsible for notifying the instructor(s), in writing, of the reason for nonattendance and indicate intentions to complete the course. Failure to attend classes during the first week of the semester may result in an administrative drop by the instructor. Registered students are obligated to pay all fees and penalties as listed on the fee schedule. Failure to attend class does not alter academic or financial obligations.

Maximum and Minimum Credit Loads

A student in good academic standing may register for any number of credits up to a maximum of 18 credits per semester after the first day of classes. No more than 16 credits may be enrolled prior to the first class day. A student is not allowed to register for credits in excess of 18 without written permission from the vice-chancellor's designee, the director of academic advising. This written permission must be gained before the first day of classes. Normally, only honors students are considered for credit overloads.

Course adds that would exceed the 18-credit maximum are not processed if prior permission for an overload has not been granted. Prior permission means approval before the first day of classes or registration, whichever occurs first.

A student may register for or reduce a program below 12 credits in a semester with the understanding that for certain purposes he or she will be considered a part-time student. A student who reduces the credit load below 12 credits should check with the appropriate offices about the effect on financial aid, government benefits, athletic eligibility, health insurance coverage, and other programs with credit load eligibility limits. Standards of progress for probation and academic suspension status purposes may be affected.

Maximum Credit Load for Students on Probation

A student on academic probation with a cumulative grade point average of 2.0 or better is limited to a maximum of 15 credits; a student on academic probation with less than a 2.0 GPA is limited to four courses or 13 credits, whichever is greater.

Course Adds and Drops

Course Adds.

After final registration, students may add other courses to their programs if such additions do not exceed the maximum credit load limitation and if adds are completed before a specific deadline. During a normal semester the add period is limited to the first two weeks of classes. For shorter terms, an earlier deadline is in effect. A student may petition for an exception if unforeseeable extenuating circumstances prevented deadline compliance.

Course Drops.

The course drop deadline is established to give students ample opportunity to discover what content a course will cover, the type of readings and projects to be assigned, the instructor's teaching style, and the methods of evaluation. In some courses, feedback from a formal evaluation process may not be available before the drop deadline. In such cases, it is the student's responsibility to contact the instructor before the drop deadline to obtain information useful in making the drop decision. Therefore, lack of feedback in the form of grades on papers or exams is not acceptable to justify a late drop.

If a student decides that a course does not fulfill expectations, an early drop permits the student to devote a greater portion of available study time and effort to remaining courses, and the instructor is able to devote more time and effort to students participating in the course. The six-week deadline for 14-week semester courses provides adequate opportunity to make drop decisions.

The phases of the course drop policy are:

Through the third day of the second week of a 14-week semester—

- student may drop any course without the instructor's signature
- permanent records show no drop

Fourth day of the second week through sixth week—

- course appears on permanent record with the symbol W (withdrew) or DR (dropped)

Seventh through 14th weeks—

- no official drops allowed; WF grade or F appears on transcript

See table for terms or classes of a shorter duration than 14 weeks, showing established pro rata deadlines. A course week always ends on a Friday. All courses beginning or ending on nonstandard session weeks have a nonstandard drop deadline.

Course Drop Timetable

Course Length in Weeks	Drop Deadline—End of Course Session Week	"W" or "DR" Symbol Recorded After
1	Tuesday, Week 1	Monday, Week 1
2	Thursday, Week 1	Monday, Week 1
3	Tuesday, Week 2	Tuesday, Week 1
4	Thursday, Week 2	Tuesday, Week 1
5	Monday, Week 3	Wednesday, Week 1
6	Wednesday, Week 3	Wednesday, Week 1
7	Friday, Week 3	Thursday, Week 1
8	Tuesday, Week 4	Friday, Week 2
9	Thursday, Week 4	Friday, Week 2
10	Monday, Week 5	Monday, Week 2
11	Thursday, Week 5	Monday, Week 2
12	Monday, Week 6	Tuesday, Week 2
13	Wednesday, Week 6	Tuesday, Week 2
14 or more (normal semester course)	Friday, Week 6	Wednesday, Week 2

Withdrawal From the University

A student who desires to withdraw from all academic course work at any time after completing the study list request form or final registration must see a counselor in the Student Counseling and Development Office or an adviser in the Office of Academic Advising. A complete withdrawal without failure may be requested at any time before 4:30 p.m. on the afternoon of the last day of regularly scheduled classes during the 12th week of a semester, the sixth week of an eight-week summer session, or the second week of January interim. If a student has not attended classes or taken the final examination in a course, a grade of WF (unofficial withdrawal) is given unless official withdrawal procedures are followed.

A decision to withdraw should be given careful consideration in terms of academic retention and probation policy, veteran's benefits, financial aid, family health insurance coverage, student loan repayment deferral, and other situations which have specific consequences from withdrawal. A student who withdraws from two consecutive semesters must seek readmission to the university to enroll again.

Withdrawal from the fourth day of week two through the 12th week of a semester results in permanent recording of all courses of record at that time with a symbol of W (withdrew) after each course. The W is not a grade and has no effect on grade point average.

Students should be aware that if they withdraw after the end of the second week of a semester, it does count as a semester of enrollment for academic progress standards and does result in a probation action. If a student can provide evidence that withdrawal is necessary due to unforeseeable extenuating circumstances, he or she may be allowed to withdraw without a probation action if the evidence is provided at the time of withdrawal.

Withdrawal by a student with an original credit load of less than six credits does not result in a probation or academic suspension action.

Late Program Changes and Withdrawals

A student may receive permission to drop a course or courses after the six-week deadline, or make a complete withdrawal after the normal 12-week deadline, if one of these criteria can be verified:

- the student has serious mental or physical health problems verified by statement from a physician or professional counselor;
- there is a death or prolonged serious illness in the immediate family, also verified by the family physician.

Under the circumstances above, a counselor in the Student Counseling and Development Office or an adviser in the Office of Academic Advising may grant permission for a late drop or withdrawal. If a student has any other reason for requesting a late drop or withdrawal, he or she should direct a written appeal, stating the circumstances, to the associate vice-chancellor, who is the vice-chancellor's designee.

Pass-No Credit Enrollment

Students may choose the pass-no credit (P-NC) grading option if they do not want a regular grade in a course that would affect their grade point average. The decision to take a course on a P-NC basis must be made within the first two weeks of a semester, the first week of an eight-week summer session, or the first two days of a January interim. The P-NC request form must be filed with the study list request form, the program change form, or the final registration form.

Some courses may not be elected on a pass-no credit basis if they are taken to fulfill certain requirements. These include:

- general education courses, including senior seminars;
- interdisciplinary or disciplinary major courses (300 or 400 level);
- courses used to fulfill the English composition requirement;
- professional program courses (300-400 level) including all courses in the teaching majors and minors, except student teaching;
- interdisciplinary or disciplinary minor courses;
- senior honors (484) projects and/or distinction in the major (478) projects;
- independent study (298/498) courses.

Electives may be taken on a P-NC basis. Nondegree credit courses (such as Academic Support Program courses) and student teaching are offered exclusively on a P-NC basis.

If students have any doubt as to whether a P-NC graded course can count for degree requirements, they should consult the Office of the Registrar before the P-NC change deadline.

For pass-no credit, grades of A, AB, B, BC, or C, are designated "pass." The grade is recorded on the final grade slip and the permanent record cards as a P. P grades are not used in computing grade point average, but the earned credits do count toward graduation.

Grades of D, F, or WF appear on the grade slip as NC or "no credit." An NC does not affect grade point average, nor does it add to earned credits.

A student may elect P-NC grading, for example, if he or she would like to explore a completely new area of interest but cannot estimate the difficulty of the work required and the level of other students in the course.

Since instructors generally do not know which students are taking their courses on pass-no credit, they record a letter grade. The letter grade is changed to P-NC by the computer. The letter grade will be reported only upon the student's written request and the written request of an academic official from the college, university, or the prospective employer to whom the grade is being sent. Even though the grade can be released in this way, students are cautioned about taking courses on a P-NC basis.

Students considering applying for graduate or professional schools or transferring to another undergraduate campus should keep in mind that P-NC grading may have an adverse effect on admission. Graduate and professional schools generally prefer letter grades, because such grades enable them to better judge potential for academic success.

Program Declaration and Advisers

All students, with the exception of undergraduate and graduate specials, must have an academic adviser and should select an appropriate adviser from the listing preceding each academic program section in the *Timetable*. Student's study list request forms must be reviewed by the adviser, and will not be processed for registration without the adviser's signature of approval. All matriculated undergraduates who have 36 or more earned credits completed must select a faculty adviser. Prior to completion of 36 credits, a student has the option of seeking academic advising from the Academic Advising Office or from any faculty adviser. Since faculty advisers often are not readily available during vacation periods, students should make an effort to schedule advising appointments while classes are still in session. Faculty advisers may be available during vacation periods by appointment, at regular scheduled orientation programs, and during the "wrap-up" registration week at the end of January. For students who have filed an approved academic plan, the requirement for an adviser's signature is waived.

Students who have not selected a major (UND-undecided) should see an adviser in the Academic Advising Office (SS 1930).

Independent and Internship Study

Regular semester add and drop deadlines apply to independent and internship study.

Students may receive credit for independent study under the course numbers 298 for lower-level work or 498 for upper-level work. Enrollment may be for one to four credits per course.

To arrange for independent study, a student should find an instructor who will support the study. The student must prepare a statement of objectives and a list of readings and/or research projects that will fulfill the objectives. The proposal must be described on a form available for the purpose. This written proposal, approved by the instructor, must be filed in the Office of the Registrar at the time of registration or course addition.

Independent study courses are subject to these limitations:

- Independent studies cannot duplicate a regular UWGB course; independent study is intended to expand the curriculum.
- A freshman or sophomore must have a minimum cumulative grade point average of 2.5 and a junior or senior must have a minimum of 2.0 to do independent study.
- Independent study cannot be elected on audit or pass-no credit basis.
- Independent study may be taken only with a regular member of the UWGB faculty or academic staff.

Honors

Senior Distinction in the Major

Senior distinction in the major is different from all-university honors. Some students may be eligible for both recognitions of excellence. A project for distinction in the major must be separate from any project for summa cum laude honors.

To be eligible for senior distinction in the major, a student must:

- have a minimum 3.50 GPA for all courses indicated on the academic plan for the major;
- have a minimum 3.75 GPA for all upper-level courses indicated on the academic plan for the major;
- complete a senior distinction project in the major.

Senior distinction in the major projects should be planned during the junior year. Students should enroll for honors study (478 course number) during the first semester of registration with senior standing (84 or more degree credits) to ensure adequate time to complete it by graduation. Students should plan with sponsoring faculty during the junior year to determine that possible special needs for library resources, equipment, supplies, or field research will be available. Distinction projects must be completed by the end of the sixth week of the semester of graduation (or be certified by sponsoring faculty that the course will be finished before the end of the semester).

Regular semester add and drop deadlines apply to distinction in the major projects. No P-NC grading is permitted.

Graduation or Degree Honors

Honors requirements for students who earn baccalaureate degrees are:

- cum laude designation requires a cumulative grade point average from 3.5 to 3.749;
- magna cum laude designation requires a cumulative grade point average of 3.75 or higher;
- summa cum laude designation requires a cumulative grade point average of 3.75 or higher and successful completion of a senior honors project (484 course number).

The cumulative grade point average must be achieved on the basis of a minimum of 60 regularly graded (not P-NC or audit) credits taken in residence at UWGB. Senior honors projects should be planned during the junior year. Enrollment should be completed during the first semester of registration with senior standing (84 or more degree credits) to ensure time for completion before graduation. Students should consult with faculty during the junior year to plan for special library resources, equipment, supplies, or field research that may be necessary. Honors projects must be completed by the end of the sixth week of the semester of graduation (or be certified by the sponsoring instructor that the course will be finished before the end of the semester).

Time Limitation Policy

Effective with the 1981-82 fall semester and thereafter, an undergraduate who is enrolled for the first time as a matriculated (degree candidate) student at UWGB is subject to a time limitation policy for fulfilling general degree requirements.

Students are encouraged to fulfill lower-level general degree requirements as soon as possible because these constitute the broad liberal education base for further studies at the upper level. General degree requirements are defined as the general education requirements in the three domains of knowledge—social sciences, natural sciences and mathematics, and humanities and fine arts—and the English composition competency requirement; the other-culture studies requirement; and one-half (six credits of lower-level courses) of the writing emphasis requirement; or similar equivalent requirements that may be placed in effect in the future. Senior seminar is excluded.

Stipulations of the limitation policy are:

- A student is assured of the right to follow general degree requirements stated in the catalog in effect at the time he or she first enrolled as a matriculated degree candidate. This right extends for a maximum period of five years from the date of first matriculation. Any period of voluntary or involuntary absence from the university is counted toward the five-year time limit. If the required courses are still available, a student may petition to extend the five-year limit. If a set of requirements is fulfilled within the five-year period, those requirements will be honored even if the actual graduation date extends beyond the five-year period.
- If new general degree requirements are made effective within a student's five-year limit period, he or she has a right to elect to fulfill those new requirements. If this option is exercised, a student has a five-year limit to fulfill the new requirements.
- If, within a five-year limitation period, the university discontinues a general education sequence course, and the student has already taken the first course in a sequence, the university has an obligation to devise reasonable substitutions that will not place the student at a disadvantage within his or her five-year limit.
- A student may always exercise an option to fulfill general degree requirements stated in the catalog in effect at the time he or she is ready to graduate.
- Excluding senior seminar and the English composition competency requirement, any set of general degree requirements which was specified on the academic plan prior to September 7, 1978, will be honored indefinitely if that set has been completely fulfilled.
- A student enrolled prior to September 7, 1978, who was following general degree requirements of that period should consult with the Academic Advising Office on how distribution, LES, or USP courses completed during that time may be used under the general-education requirement system.

FINANCIAL AID REFUND PAYMENTS

Students receiving financial aid who drop credits must repay financial aid funds they have received. The amount of repayment is based upon federal Department of Education regulations (paragraph 668.21 of the federal financial aid regulations).

Students will be notified in writing about the amount of repayment due after the Financial Aid Office is notified about the withdrawal or credit drop. **The aid must be repaid by the student before future aid may be granted.** Also, failure to repay or to make appropriate arrangements will result in a hold being placed on the release of the student's official university records.

The calculated refund amount of federal and state funds will be returned to funding sources as indicated:

Federal funds—	State funds—	Other funds—
Perkins	WHEG	BIA
SEOG	TIP	Institutional
GSL	Tuition grants	Student
PELL	WIG	
	Lawton	
	AOP	

Students enrolled for sessions of less than the usual term duration who drop credits or withdraw, shall have a proportional repayment calculated on an individual basis.

Students who wish to appeal the amount of repayment due may provide written documentation of the request and should discuss the situation with a financial aid counselor.

Refund and Repayment Schedule

Fall/Spring Semesters

Action During Week	Tuition Refund	Repayment of Aid for Noninstitutional Costs
1	100%	100%
2	80%	80%
3	60%	75%
4	40%	70%
5	0	63%
6	0	56%
7	0	49%
8	0	42%
9	0	35%
10	0	28%
11	0	21%
12	0	14%
13	0	7%
14	0	7%
15	0	0
16	0	0
17	0	0
18	0	0

Summer Session

Action During Week	Tuition Refund	Repayment of Aid for Noninstitutional Costs
1	100%	100%
2	70%	80%
3	30%	70%
4	0	60%
5	0	45%
6	0	30%
7	0	15%
8	0	0

ACADEMIC PROGRESS / FINANCIAL AID

The university's policy for standards of academic progress required to remain eligible for financial aid is governed by federal regulations published in the October 6, 1983 Federal Register Part 668.16. Following is a statement of the policy that has been enforced for UWGB aid recipients. It has been in effect since January 1, 1984 and revised based on the Reauthorization Education Bill signed October 17, 1986.

Undergraduate Students

Duration of Eligibility. Students enrolling on a **full-time** basis (12 credits or more) are eligible to receive financial aid for a maximum of 6 years or 12 semesters. Students enrolling on a **part-time** basis (6 to 11 credits) are eligible to receive financial aid for a maximum of 11 years or 22 part-time semesters. If a student enrolls for some semesters as a full-time student and for others as a part-time student, a proportional total number of semesters will be computed. Attendance during summer session for 6 credits or more will be counted as one part-time semester.

Credit Hours to be Completed. A student must have successfully completed the following minimum cumulative credits by the end of the designated academic year and the minimum credits per semester as a full or part-time student. Students starting mid-year (spring term) will be reviewed for partial year compliance at the end of that term.

Extended Degree students must satisfactorily complete contract work in progress before new aid may be provided for an equivalent of 12 full-time semesters.

Credit Completion Scale

Undergraduate Students Full Time			Undergraduate Students Part Time		
Year In School	Semesters Completed	Required Cumulative Credits	Year In School	Semesters Completed	Required Cumulative Credits
1	1/2	9/18	1	1/2	3/6
2	3/4	27/36	2	3/4	12/18
3	5/6	46/57	3	5/6	24/30
4	7/8	67/78	4	7/8	36/42
5	9/10	90/102	5	9/10	48/54
6	11/12	114/126 +	6	11/12	60/66
Students must complete a minimum of 9-12 credits per semester depending upon year in school.			7	13/14	72/78
			8	15/16	84/90
			9	17/18	96/102
			10	19/20	108/114
			11	21/22	120/126 +

Students must complete a minimum of 3 credits for the first two semesters and 6 credits thereafter.

Graduate Students

Duration of Eligibility. Graduate students enrolled in a Master's Degree program may receive financial aid for a maximum of 3 years or 6 semesters as full-time students and for a maximum of 5 years or 10 semesters as part-time students. Attendance during summer school for 3 or more credits will be counted as one part-time semester.

Credit Hours to be Completed. A graduate student who receives financial aid must complete a minimum of 6 credits per semester as a full-time student or 3 credits per semester as a part-time student. The student must also successfully complete the following cumulative number of credits by the end of each year.

General Information About Aid Eligibility

Credit hour enrollment will be established by the number of credits for which the student is enrolled as of the end of the second week of classes for any term.

Successful completion means that a grade of A, AB, B, BC, C, D, or P was earned, exclusive of previously passed courses which are being retaken voluntarily.

Other aid regulations must be adhered to, and may limit aid awards to students because of other program regulations.

Non-degree students (specials) are not generally eligible for financial assistance.

Review. A review of each aid recipient's eligibility will be made at the end of the academic year (between spring and fall semesters).

Notification of probation or ineligibility will be sent to students at that time. Students on probation will be reviewed at the end of the next semester to determine continued aid eligibility. Students will be eligible to receive aid during the initial probationary warning period.

Ineligibility for Aid. A student not making adequate progress will be ineligible for additional aid. In order to again become eligible for aid, the student must enroll and earn sufficient credits to regain good standing according to the credit completion scale. The student must enroll and make up the deficiency without aid before future assistance can be provided.

Appeal Procedure. If a student is denied aid due to lack of progress, the student may appeal the determination by writing a letter explaining the reasons for lack of progress and providing evidence of mitigating circumstances. The appeal must be submitted to the financial aid office. The financial aid staff will review the appeals in committee and reach a final determination.

Starting Point. Effective September 1984, each student will have a semester starting point calculated from which future completion requirements will be measured. This starting point will be either the total number of semesters for which a student has been enrolled or the cumulative total of successfully completed credits, whichever is most advantageous to the student. For transfer students, the starting point will be determined by the cumulative total of successfully transferred credits.

Completion Scale. Based upon the required credit completion scale, the student must achieve both the cumulative total and per semester credits for the subsequent semester in order to avoid probationary or termination status.

This policy is subject to review as needed. For questions or additional information contact the Financial Aid Office (414) 465-2075.

Credit Completion Scale

Graduate Students Full Time			Graduate Students Part Time		
Year In School	Semesters Completed	Required Cumulative Credits	Year In School	Semesters Completed	Required Cumulative Credits
1	1/2	6/12	1	1/2	3/6
2	3/4	18/24	2	3/4	9/12
3	5/6	30/36	3	5/6	15/18
			4	7/8	24/27
			5	9/10	31/36

UW-CENTERS COURSE EQUIVALENCIES

Key to UWGB Course Prefixes

107	Accounting
156	Anthropology
168	Art
204	Biology
216	Business Administration
225	Chemistry
242	Communication and the Arts
246	Communication Processes
255	Community Sciences
266	Computer Science
296	Earth Science
298	Economics
302	Education
416	Geography
448	History
478	Human Biology
481	Human Development
493	Humanistic Studies
552	Literature and Language: English-American
554	Literature and Language: French
556	Literature and Language: German
558	Literature and Language: Spanish
600	Mathematics
644	Military Science
670	Music
672	Music-Applied
678	Environmental Science
689	Nursing
694	Nutritional Sciences
736	Philosophy
742	Physical Education
754	Physics
778	Political Science
820	Psychology
834	Regional Analysis
875	Social Change and Development
892	Social Services
900	Sociology
915	Theatre
950	Urban and Public Affairs

*No 478-203, 204 for full credit.

**CS ZOO 234 plus PHS 235 is equivalent to Green Bay 478-203, 204.

***Applied music course number determined by instrument and proficiency level.

Center System Courses	UWGB Courses
Anthropology	
ANT 100	156 elective
ANT 102	156 elective
ANT 105	478/156-110
ANT 200	156-100
ANT 204	156-100
ANT 222	156 elective
ANT 250	875-345
ANT 291	156 elective
ANT 299	156 elective
ANT 300	156 elective
ANT 301	246-322
ANT 302	156 elective
ANT 303	478 elective
ANT 308	156 elective
ANT 314	156-301
ANT 322	156 elective
ANT 325	156-301
ANT 341	156 elective
ANT 343	156 elective
ANT 350	156-340
ANT 351	156 elective
ANT 353	156-301
Art	
ART 100	168 elective
ART 101	168-105
ART 102	168 elective
ART 103	168-302
ART 104	168-105
ART 105	168-105
ART 106	168 elective
ART 107	168 elective
ART 108	168-302
ART 109	168-302
ART 111	168-107
ART 112	168-106
ART 113	168 elective
ART 114	168-106
ART 115	168-106
ART 121	168-210
ART 122	168-314
ART 125	168-311
ART 131	168-220
ART 133	168-220
ART 134	168-220
ART 141	168-270
ART 154	168-230
ART 161	246/168-243
ART 170	168 elective
ART 172	168-260
ART 180	242 elective
ART 181	242-102
ART 183	242-103
ART 185	242 elective
ART 187	242-202
ART 188	242 elective
ART 201	168-302
ART 202	168-402
ART 209	168-402
ART 210	168-402
ART 222	168-414
ART 225	168-410

Center System Courses	UWGB Courses
ART 231	168-321
ART 232	168-421
ART 235	168-321
ART 236	168-321
ART 237	168-421
ART 238	168-421
ART 241	168-377
ART 243	168-373
ART 245	168-375
ART 247	168-371
ART 254	168-331
ART 255	168-431
ART 261	168/246-343
ART 272	168-364
ART 291	168 elective
ART 299	168 elective
Astronomy	
AST 100	678-141
AST 101	678 elective
AST 200	678-141
AST 291	678 elective
Biological Sciences	
BAC 101	204-302
BAC 299	204 elective
BOT 100	204 elective
BIO 107	678-102
BIO 109	204 elective
BIO 116	204 elective
BOT 130	204-202 & 203 (plus CS ZOO 101)
BIO 151 & 152	204-202 & 203
BIO 160	204 elective
BIO 230	204 elective
BOT 231	204 elective
BOT 240	204-240
BIO 250	368-302
BIO 260	204-303
BOT 291	204 elective
BOT 299	204 elective
FOR 120	678-286
WIL 140	678-188
NAT 170	678 elective
PHS 170	478 elective*
PHS 202	Both courses equal 478-203,
PHS 203	478-204
PHS 230	478-203 & 204
PHS 235	478 elective**
ZOO 101	204-202 & 203 (plus CS BOT 130)
ZOO 103	678-102
ZOO 105	478-102
ZOO 140	678-188
ZOO 155	478-206
ZOO 170	478 elective*
ZOO 234	478 elective**
ZOO 237	204 elective
ZOO 277	204-342
ZOO 291	204 elective
ZOO 299	204 elective

Center System Courses	UWGB Courses
ZOO 315	678-403 (plus CS ZOO 316)
ZOO 316	678-403 (plus CS ZOO 315)
ZOO 350	204 elective
Business and Economics	
BUS 101	216-202
BUS 110	216-282
BUS 194	General elective
BUS 201	107-300
BUS 202	107-301
BUS 204	107-302
BUS 210	216 elective
BUS 243	216 elective
BUS 297	216 elective
BUS 299	216 elective
ECO 101	298-102
ECO 203	298-202
ECO 204	298-203
ECO 230	298-330
ECO 243	298 elective
ECO 250	298 elective
ECO 297	298 elective
ECO 299	298 elective
Chemistry	
CHE 100	No transfer
CHE 112	225-101
CHE 123	225 elective
CHE 124	225 elective
CHE 125	225-108
CHE 145	225-211
CHE 155	225-212
CHE 203	225 elective
CHE 211	225 elective
CHE 214	225 elective
CHE 244	225-311
CHE 290	225 elective
CHE 299	225 elective
CHE 343	225-302
CHE 352	225-304, 305
CHE 363	225-303
Communication Arts	
COM 100	246-253
COM 101	246-166
COM 102	246 elective
COM 103	246-133
COM 110	246 elective
COM 130	242-141
COM 131	709-235
COM 150	242-210
COM 160	246 elective
COM 201	246-102
COM 202	246 elective
COM 203	246-203
COM 204	246 elective
COM 220	246 elective
COM 221	246-307
COM 230	246 elective
COM 232	709-131
COM 234	709-221
COM 266	246 elective

Center System Courses	UWGB Courses	Center System Courses	UWGB Courses	Center System Courses	UWGB Courses	Center System Courses	UWGB Courses
COM 268	246-333	ENG 260	552-214	SPA 226	558 elective	HIS 118	448-275
COM 298	246 elective	ENG 261	552-215	SPA 235	493 elective	HIS 119	448-203
COM 299	246 elective	ENG 262	552-216	SPA 236	493 elective	HIS 120	448-204
COM 348	915 elective	ENG 263	552-217	SPA 237	552 elective	HIS 123	448 elective
COM 349	915 elective	ENG 264	552 elective	SPA 277	552 elective	HIS 124	448 elective
Computer Science		ENG 265	552 elective	SPA 291	558 elective	HIS 126	448 elective
CPS 100	General elective	ENG 266	552 elective	SPA 299	558 elective	HIS 127	448-100
CPS 101	General elective	ENG 267	552 elective	Geography		HIS 150	448 elective
CPS 105	General elective	ENG 270	552 elective	GEO 101	416-202	HIS 160	448 elective
CPS 110	266-155	ENG 272	552 elective	GEO 104	296 elective	HIS 198	242-210
CPS 113	266-256	ENG 274	493-106	GEO 107	416-250	HIS 211	448 elective
CPS 111	(Faculty members	ENG 275	552 elective	GEO 110	416-102	HIS 213	448 elective
CPS 120	will review compu-	ENG 276	552 elective	GEO 115	416-215	HIS 215	448 elective
CPS 130	ter science trans- fer courses individ- ually. Center Sys- tem courses do not necessarily parallel UWGB courses.)	ENG 278	552 elective	GEO 120	416-120	HIS 216	448-325
CPS 131	266-255	ENG 280	552 elective	GEO 121	296 elective	HIS 219	448-315
CPS 133	See note above.	ENG 290	552 elective	GEO 123	834-222	HIS 222	448-352
CPS 210	See note above.	ENG 299	552 elective	GEO 124	296-202	HIS 254	448-324
CPS 211	See note above.	ENG 351	552 elective	GEO 125	416-120	HIS 255	448 elective
CPS 213	266-256	ENG 353	552 elective	GEO 130	678-102	HIS 256	448 elective
CPS 231	See note above.	ENG 355	552 elective	GEO 200	416 elective	HIS 257	448 elective
CPS 240	See note above.	ENG 370	552 elective	GEO 277	416 elective	HIS 259	448 elective
CPS 241	See note above.	ENG 380	552 elective	GEO 291	416 elective	HIS 260	448 elective
CPS 243	See note above.	Foreign Language		GEO 297	416 elective	HIS 270	493-251
CPS 250	See note above.	FRE 101	554-101	GEO 299	416 elective	HIS 278	448 elective
CPS 251	See note above.	FRE 105	554-102	GEO 300	416 elective	HIS 280	448 elective
CPS 252	266-151	FRE 118	554 elective	GEO 324	416 elective	HIS 283	448 elective
CPS 253	266-256	FRE 119	554 elective	GEO 341	416-371	HIS 285	448 elective
CPS 254	See note above.	FRE 201	554-201	GEO 342	416-235	HIS 286	448 elective
CPS 255	See note above.	FRE 205	554-202	GEO 347	416 elective	HIS 288	448 elective
CPS 260	See note above.	FRE 215	554 elective	GEO 348	416 elective	HIS 289	448-310
CPS 270	266-257	FRE 216	554 elective	GEO 349	834-382	HIS 290	448-311
CPS 291	266 elective	FRE 219	554 elective	GEO 350	678-303	HIS 293	448 elective
CPS 299	266 elective	FRE 221	554 elective	Geology and Meteorology		HIS 297	448 elective
Education		FRE 222	554 elective	GLG 100	296-102	Interdisciplinary Studies	
EDU 100	302 elective	FRE 223	554 elective	GLG 101	296-202	INT 100	General elective
EDU 200	302 elective	FRE 225	554-225	GLG 102	296-203	INT 101	875 elective
EDU 283	302-308	FRE 226	554 elective	GLG 104	296 elective	INT 105	General elective
EDU 300	302-410	FRE 276	552 elective	GLG 107	416-250	INT 210	General elective
EDU 330	820-315	FRE 277	552 elective	GLG 130	296 elective	INT 230	General elective
Engineering		FRE 291	554 elective	GLG 131	416-250	INT 231	General elective
EGR 100	No transfer	FRE 299	554 elective	GLG 135	678-342	INT 290	General elective
EGR 106	246-390	GER 101	556-101	GLG 169	678-342	Learning Resources	
GRA 102	678-105	GER 105	556-102	GLG 291	296-350	LEA 100	No transfer
GRA 113	No transfer	GER 118	556 elective	GLG 297	296 elective	LEA 101	No transfer
MEC 201	678-313	GER 119	556 elective	GLG 299	296 elective	LEA 102	No transfer
MEC 202	678-314	GER 201	556-201	GLG 301	296-441	LEA 104	No transfer
MEC 203	678-316	GER 205	556-202	GLG 302	296-442	LEA 105	No transfer
English and Literature		GER 221	556 elective	GLG 306	296 elective	LEA 106	No transfer
ENG 101	552-100	GER 222	556 elective	GLG 309	296-380	Lecture (University Forum)	
ENG 102	552-105	GER 223	556 elective	GLG 314	296-350	LEC 101	General elective
ENG 201	552 elective	GER 225	556-225	GLG 343	296-470	LEC 102	No transfer
ENG 202	552 elective	GER 226	556 elective	GLG 350	296 elective	Mathematics	
ENG 203	552-212 or 213	GER 276	552 elective	MLG 100	296-222	MAT 081	No transfer
ENG 204	552-212 or 213	GER 277	552 elective	History		MAT 091	No transfer
ENG 210	552 elective	GER 291	556 elective	HIS 101	448-205	MAT 105	600-101
ENG 220	242-160	GER 299	556 elective	HIS 102	448-206	MAT 110	600-104 (plus CS MAT 113)
ENG 250	552-104	SPA 101	558-101	HIS 105	493-101	MAT 113	600-104 (plus CS MAT 110)
ENG 251	552 elective	SPA 105	558-102	HIS 106	493-102	MAT 117	600-260
ENG 253	552 elective	SPA 118	558 elective	HIS 111	448-201	MAT 124	600-104
ENG 255	552 elective	SPA 119	558 elective	HIS 112	448-201	MAT 130	600-281
		SPA 201	558-201	(CS 111 & 112 equal 448-201 plus elective)		MAT 132	600-282
		SPA 205	558-202	HIS 114	448 elective	MAT 140	600 elective
		SPA 219	558 elective	HIS 115	448-202		
		SPA 221	558 elective				
		SPA 222	558 elective				
		SPA 225	558-225				

Center System Courses	UWGB Courses
MAT 211	600-201
MAT 212	600 elective
MAT 220	600 elective
MAT 221	600-202
MAT 222	600-203
MAT 223	600-209
MAT 224	600 elective
MAT 230	600-242
MAT 240	600-260
MAT 262	600-320
MAT 271	600-305
MAT 272	600 elective
MAT 290	600 elective
MAT 299	600 elective
Military Science	
MLS 101	644 elective
MLS 205	644 elective
MLS 213	742-116
MLS 251	644 elective
MLS 302	644 elective
MLS 303	644 elective
Music***	
MUS 070	672-151
MUS 071	672-241
MUS 072	672-261
MUS 073	672-164
MUS 074	672-143
MUS 075	672-163
MUS 076	672-144
MUS 077	672-145
MUS 078	672-146
MUS 079	672-153
MUS 107	670 elective
MUS 115	670-341
MUS 121	670-341
MUS 130	670-342
MUS 131	670-101
MUS 132	670-101
MUS 136	670-342
MUS 145	670-345
MUS 147	670-343
MUS 148	670-343
MUS 154	670-343
MUS 160	670-345
MUS 170	670-101
MUS 171	670-115
MUS 172	670-152, 116
MUS 173	242-121
MUS 174	242-121
MUS 271	670-251
MUS 272	670-252
MUS 273	242 elective
MUS 275	670-251
MUS 276	670-252
MUS 280	670-333
MUS 281	670-348
MUS 295	670 elective
MUS 299	670 elective
Philosophy	
PHI 101	736-101
PHI 102	736-105
PHI 103	736 elective
PHI 106	736 elective
PHI 201	736 elective
PHI 202	736 elective

Center System Courses	UWGB Courses
PHI 210	736 elective
PHI 211	736-111
PHI 220	736-212
PHI 226	736-207
PHI 230	General elective
PHI 231	General elective
PHI 232	General elective
PHI 241	736-102
PHI 243	216-487
PHI 244	736 elective
PHI 248	478-205
PHI 253	736-211
PHI 258	736 elective
PHI 291	736 elective
PHI 299	736 elective
Physical Education	
(A maximum of 4 credits Physical Education accepted in transfer.)	
PED 001	742-141
PED 002	742 elective
PED 005	742-161
PED 006	742 elective
PED 007	742 elective
PED 008	742 elective
PED 009	742-145
PED 010	742 elective
PED 012	742-157
PED 014	742 elective
PED 016	742-154
PED 017	742-254
PED 018	742-170
PED 019	742-122
PED 021	742 elective
PED 022	742 elective
PED 024	742-131
PED 025	742 elective
PED 026	742-125
PED 027	742-121
PED 028	742 elective
PED 029	742 elective
PED 030	742 elective
PED 031	742 elective
PED 032	742-144
PED 033	742 elective
PED 034	742 elective
PED 037	742 elective
PED 038	742 elective
PED 039	742 elective
PED 040	742 elective
PED 041	742-196
PED 042	742-296
PED 043	742-197
PED 044	742 elective
PED 046	742 elective
PED 047	742-126
PED 048	742-226
PED 055	742-101
PED 056	742-201
PED 058	742-204
PED 061	742-208
PED 101	742-141
PED 102	742 elective
PED 104	742 elective
PED 105	742 elective
PED 106	742-190

Center System Courses	UWGB Courses
PED 107	742 elective
PED 108	742 elective
PED 109	742-145
PED 110	742-157
PED 111	742-196
PED 112	742 elective
PED 113	742-101
PED 114	742-201
PED 115	742-170
PED 116	742-154
PED 117	742-166
PED 118	742-122
PED 121	742-116
PED 122	742-205
PED 123	742-117
PED 201	742 elective
PED 202	742 elective
PED 203	742 elective
PED 204	742 elective
PED 205	742-406
PED 206	742 elective
PED 207	742 elective
PED 208	742 elective
PED 211	742 elective
PED 212	742 elective
PED 213	742-116
PED 214	742 elective
PED 215	742 elective
PED 216	742 elective
PED 217	742-402
PED 291	742 elective
PED 299	742 elective
Physics	
PHY 107	754-180
PHY 110	754 elective
PHY 120	754 elective
PHY 141	754-103
PHY 142	754-104
PHY 201	754-201
PHY 202	754-202
PHY 205	754 elective
PHY 211	754-201
PHY 212	754-202
PHY 213	754 elective
PHY 291	754 elective
PHY 299	754 elective
Political Science	
POL 101	778-100
POL 104	778-101
POL 106	778-351
POL 199	778 elective
POL 201	778-340
POL 206	778-353
POL 219	778-102
POL 220	778 elective
POL 221	778 elective
POL 225	778 elective
POL 231	General elective
POL 275	778-360
POL 298	778 elective
POL 299	778 elective
POL 308	778-310
POL 352	778 elective
POL 385	778 elective

Center System Courses	UWGB Courses
Psychology	
PSY 201	820-102
PSY 202	820-102
PSY 203	820 elective
PSY 205	820-205
PSY 208	481-336
PSY 210	255-205
PSY 224	255-205
PSY 225	820-300
PSY 250	481-210
PSY 254	820 elective
PSY 299	820 elective
PSY 307	820-429
PSY 309	820-435
PSY 311	820 elective
PSY 330	820-202
PSY 360	481-331
PSY 361	481-332
PSY 362	481-343
Sociology	
SOC 101	900-202
SOC 120	900-308
SOC 125	900 elective
SOC 130	900 elective
SOC 131	900 elective
SOC 134	900-203
SOC 138	900 elective
SOC 160	900-375
SOC 170	900 elective
SOC 250	900 elective
SOC 291	900 elective
SOC 293	900 elective
SOC 299	900 elective
SOC 335	900 elective
SOC 357	900-301
Women's Studies	
WOM 101	875 elective
WOM 138	900 elective
WOM 202	736 elective
WOM 231	General elective
WOM 250	875-345
WOM 291	875 elective
WOM 299	875 elective

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Abraham, Jerome B., Associate Professor of Communication and the Arts (music); B.M., M.M., UW-Madison.

Abrahams, Paul P., Associate Professor of Humanistic Studies (history); B.A., M.A., Syracuse; Ph.D., UW-Madison.

Alesch, Daniel J., Chairperson and Professor of Business Administration (planning and decision making); B.S., M.S., UW-Madison; M.A., Ph.D., UCLA.

Baba, Ronald K., Associate Professor of Urban and Public Affairs (environmental design); B.A., M.A., Southern California; Ph.D., Texas.

Baer, Betty L., Chairperson and Associate Professor of Social Services; B.A., West Virginia; M.S.S., Syracuse; Ph.D., Pittsburgh.

Baker, Bela O., Associate Professor of Social Change and Development (psychology); B.A., San Jose State; Ph.D., UC-Berkeley.

Bauer, Robert J., Dean of Professional Studies and Outreach and Director of Bands and Professor of Communication and the Arts (music); B.S., M.A., Minnesota.

Baulieu, Forrest B., Assistant Professor of Natural and Applied Sciences (computer science); B.S., Manhattan; M.S., Ph.D., Massachusetts-Amherst.

Benzow, Jeffrey, Assistant Professor of Communication and the Arts (graphic design); B.A., UW-Green Bay.

Berk, Laurey R., Senior Lecturer in Business Administration (finance); B.S., UW-Madison; M.B.A., UW-Oshkosh.

Better, Maurice B., Associate Professor of Business Administration and University Extension (labor relations); B.S., M.B.A., UCLA; M.S., Ph.D., UW-Madison.

Bremer, Sidney H., Associate Professor of Urban and Public Affairs (women's studies); B.A., Stanford; M.A., UC-Berkeley; Ph.D., Stanford.

Brickley, Julie R., Associate Professor of Social Change and Development (women's studies); B.A., UW-Madison; M.A., UW-Milwaukee; Ph.D., Union.

Bryan, Dennis L., Associate Professor of Education (curriculum and evaluation); B.S., M.E., Western Michigan; Ed.D., Michigan State.

Burtard, Iris, Assistant Professor of Business Administration (accounting); B.B.A., UW-Whitewater; M.B.A., UW-Madison.

Charnon, Margaret E., Associate Professor of Communication and the Arts (music); B.A., Milton; M.M., Northwestern.

Chavez, Trinidad Jose, Jr., Director of Choral Activities and Professor of Communication and the Arts (music); B.M.E., Eastern New Mexico; M.M.E., Wichita State.

Chern, Jo A., Senior Lecturer in Student Support Services and Humanistic Studies (composition); B.A., M.A., Ohio State.

Churchill, Thomas, Associate Professor of Humanistic Studies (English); B.A., M.A., Ph.D., Washington.

Clampitt, Phillip, Associate Professor of Communication and the Arts (communications); B.A., Oklahoma; M.A., Southwest Texas State; Ph.D., Kansas.

Clark, Orville V., Associate Professor of Humanistic Studies (philosophy); B.A., M.A., Oklahoma; Ph.D., Pennsylvania State.

- Cohrs, Arthur L.**, Professor of Communication and the Arts (music); B.M., UW-Madison; M.M., Rochester.
- Collins, Kevin J.**, Assistant Director of Bands and Assistant Professor of Communication and the Arts (music); B.M., Michigan; M.M., Texas-Austin.
- Conley, William C.**, Associate Professor of Business Administration (statistics); B.A., Albion; M.A., Western Michigan; M.S., Ph.D., Windsor.
- Core, Philip**, Assistant Professor of Humanistic Studies (Spanish); B.A., M.A., Houston; Ph.D., Stanford.
- Cruz, Julia**, Assistant Professor of Humanistic Studies (Spanish); B.A., M.A., Texas-Austin; Ph.D., Colegio de Mexico.
- Curl, Linda**, Lecturer in Natural and Applied Sciences (computer science); B.S., Michigan; R.N., Bellin Hospital School of Nursing; M.S., UW-Green Bay.
- Damkoehler, David L.**, Associate Professor of Communication and the Arts (art); B.S., UW-Oshkosh; M.F.A., Kent State.
- Davis, Gregory J.**, Assistant Professor of Natural and Applied Sciences (mathematics); B.S., UW-Green Bay; M.A., Ph.D., Northwestern.
- Day, Harold J.**, Professor of Natural and Applied Sciences (engineering); B.S., M.S., Ph.D., UW-Madison.
- Deese, Dawson, C.**, Associate Professor of Human Biology (biochemistry); B.S., North Carolina Agr. & Tech; M.S., Tuskegee; Ph.D., UW-Madison.
- Dell, Jerry R.**, Associate Professor of Communication and the Arts (photography); B.A., Illinois.
- Deprey, Ann**, Lecturer in Student Support Services (composition); B.A., St. Norbert; M.A., Roosevelt.
- Dutch, Steven L.**, Associate Professor of Natural and Applied Sciences (geology); B.A., UC-Berkeley; M. Phil., Ph.D., Columbia.
- Elicker, James G.**, Instructor of Human Development and Education (early childhood); B.S., Cornell; Ed.M., Harvard.
- Emmons, Carol**, Assistant Professor of Communication and the Arts (art history); B.S., UW-Stevens Point; B.F.A., M.F.A., UW-Milwaukee.
- Entwistle, Jeffrey**, Associate Professor of Communication and the Arts (theatre); B.A., Bridgewater State; M.F.A., Michigan State.
- Erdmann, Louis O.**, Visiting Professor of Communication and the Arts (theatre); B.A., North Central (Illinois); M.A., Kent State; Ph.D., Ohio State.
- Fischbach, Fritz A.**, Professor of Natural and Applied Sciences (physics); B.S., M.S., Ph.D., UW-Madison.
- Fleurant, Kenneth J.**, Associate Professor of Humanistic Studies (French); B.A., Holy Cross; M.A., Ph.D., Princeton.
- Franke, Lawrence C.**, Senior Lecturer in Business Administration (accounting); B.A., Illinois-Chicago; M.S., Northern Illinois.
- Frisch, Jack E.**, Professor of Communication and the Arts (theatre); B.A., M.A., Ph.D., UW-Madison.
- Galaty, David H.**, Associate Professor of Humanistic Studies (history of science); B.A., Trinity; Ph.D., Johns Hopkins.
- Galt, Anthony H.**, Professor of Social Change and Development (anthropology); A.B., UC-Berkeley; Ph.D., UC-Riverside.
- Gandre, Donald A.**, Chairperson and Professor of Regional Analysis (geography); B.S., Arizona State; M.S., Illinois; Ph.D., UW-Madison.
- Gaworek, Norbert H.**, Associate Professor of Humanistic Studies (history); B.A., M.A., Ph.D., UW-Madison.
- Ghanty, A. Sam**, Associate Professor of Business Administration (finance); B.S., UW-Madison; B.S., University of Phnom Penh (Cambodia); M.S., M.B.A., Ph.D., UW-Madison.
- Girard, Dennis M.**, Associate Professor of Natural and Applied Sciences (statistics); B.S., M.A., Detroit; Ph.D., Ohio State.
- Greenberg, Martin H.**, Professor of Regional Analysis (political science); B.B.A., Miami; M.A., Ph.D., Connecticut.
- Greif, Gary F.**, Associate Professor of Humanistic Studies (philosophy); B.A., M.A., Gonzaga; Ph.D., Toronto.
- Grosso, Cheryl**, Lecturer in Communication and the Arts (music); B.A., UW-Green Bay; M.F.A., California Institute of the Arts.
- Groves, Walter B.**, Associate Professor of Social Change and Development (criminal justice); B.S., Western Michigan; M.S., Ph.D., SUNY-Albany.
- Ham, Jennifer**, Instructor of Humanistic Studies (German); B.A., Moravian College; M.A., Rutgers.
- Harden, Donald F.**, Associate Chancellor and Professor of Community Sciences; B.A., M.A., Ph.D., Michigan State.
- Harris, Hallett, Jr.**, Director of Institute for Land and Water Studies and Professor of Natural and Applied Sciences (biology); B.A., Coe; M.S., Ph.D., Iowa State.
- Harris, John H.**, Associate Professor of Business Administration (management); B.B.A., UW-Madison; M.B.A., American; Ph.D., Kentucky.
- Havens, Elmer A.**, Professor of Humanistic Studies (English); B.A., Cornell College; B.D., Drew; M.A., Ph.D., UW-Madison.
- Heatwole, Craig**, Director of Center for Public Affairs and Assistant Professor of Urban and Public Affairs (public administration); B.S., UW-Oshkosh; M.A., Ph.D., Kansas.
- Herrscher, Walter J.**, Chairperson and Professor of Humanistic Studies (English); B.A., Elmhurst; M.A., Northwestern; Ph.D., UW-Madison.
- Heuer, Curtis P.**, Chairperson and Associate Professor of Communication and the Arts (art); B.A., Valparaiso; M.A., M.F.A., Northern Illinois.
- Hoehn, Carol S.**, Lecturer in Communication and the Arts (dance); B.A., Butler University.
- Hoehn, Jerri**, Lecturer in Nursing; B.S.N., UW-Oshkosh.
- Holly, James N.**, Director of Business Development Center and Assistant Professor of Business Administration (organizational communication); B.S., U.S. Air Force Academy; B.S., M.B.A., Florida Atlantic; Ph.D., Illinois.
- Howe, Robert W.**, Curator of Richter Natural History Museum and Associate Professor of Natural and Applied Sciences (biology); B.S., Notre Dame; M.S., Ph.D., UW-Madison; Ph.D., New England.
- Hu, Tian-You**, Assistant Professor of Natural and Applied Sciences (mathematics); B.S., M.S., Zhongshan University (Guangzhou, China); M.A., Pittsburgh.
- Hughes, Fergus P.**, Professor of Human Development (psychology); B.A., St. John's University; M.A., Ph.D., Syracuse.
- Hussin, Brent**, Lecturer in Business Administration (computer systems); B.A., M.A., UW-Green Bay.
- Hutchison, Earl Ray, Jr.**, Assistant Professor of Urban and Public Affairs (sociology); B.A., Harpur College, SUNY-Binghamton; M.A., Ph.D., Chicago.
- Ihrke, Charles A.**, Associate Professor of Human Biology (biology); B.S., UW-Oshkosh; M.S., Nebraska; Ph.D., Oregon State.
- Ives, Lovell G.**, Director of Jazz Activities and Professor of Communication and the Arts (music); B.M., UW-Stevens Point; M.M.E., Vandercook College of Music.

Jaeckel, Wayne L., Associate Professor of Communication and the Arts (music); B.S.M., UW-Stevens Point; M.M., Michigan State.

Johnson, Warren V., Assistant Professor of Human Biology (biochemistry); B.A., Minnesota-Duluth; M.S., UW-Milwaukee; Ph.D., Iowa.

Jowett, David, Associate Director of Computer Center and Professor of Natural and Applied Sciences (statistics); B.S., Northern Wales; Ph.D., University of Wales.

Kangayappan, Kumaraswamy, Associate Professor of Regional Analysis (economics); B.A., Madras (India); M.A., Annamalai (India); M.A., Ph.D., UW-Madison.

Kaye, Harvey J., Professor of Social Change and Development (sociology); B.A., Rutgers; M.A., London; Ph.D., Louisiana State.

Kellogg, Peter J., Associate Professor of Humanistic Studies (history); B.S., Davidson; M.A., Ph.D., Northwestern.

Kersten, Frederick L., Professor of Humanistic Studies (philosophy); B.A., Lawrence; M.A., Ph.D., New School for Social Research.

Kline, Susan M., Assistant Professor of Communication and the Arts (theatre); B.A., UW-Green Bay; M.F.A., Michigan State.

Koch, Kathryn A., Assistant Professor of Education (reading); B.A., M.S., Ph.D., Purdue.

Korithoski, Theodor P., Assistant Professor of Education (mathematics education); B.S., Idaho State; M.A., Ed.D., Montana.

Kraft, Michael E., Professor of Urban and Public Affairs (political science); A.B., UC-Riverside; M.A., Ph.D., Yale.

Kubsch, Mimi, Instructor in Nursing; B.A., California State-Long Beach; M.N., UCLA.

Kuepper, William G., Vice-Chancellor for Academic Affairs and Professor of Regional Analysis (geography); B.S., M.S., Ph.D., UW-Madison.

Laatsch, William G., Associate Professor of Regional Analysis (geography); B.S., Carroll; M.A., Oklahoma; Ph.D., Alberta.

Lanz, Robert W., Associate Professor of Natural and Applied Sciences (engineering); B.S., M.S., Ph.D., UW-Madison.

Larmouth, Donald W., Dean of Arts, Sciences and Graduate Programs and Professor of Communication and the Arts (linguistics); B.A., Minnesota; M.A., Ph.D., Chicago.

Laughlin, Margaret, A., Director of Center for Economics Education and Associate Professor of Education (social studies education); B.A., M.A., California State-Sacramento; Ed.D., Southern California.

Lauter, Estella, Professor of Humanistic Studies (women's studies); B.A., Ph.D., Rochester.

Littig, David M., Associate Professor of Urban and Public Affairs (political science); A.B., Indiana; M.S., Ph.D., UW-Madison.

Lockard, Craig A., Chairperson and Professor of Social Change and Development (history); B.A., University of Redlands; M.A., Hawaii; Ph.D., UW-Madison.

Logan, Richard D., Professor of Human Development (anthropology); A.B., Harvard; Ph.D., Chicago.

Mannino, Joseph A., Associate Professor of Human Biology (physiology); B.S., Western Michigan; M.A., Ph.D., Wayne State.

Marker, James C., Assistant Professor of Human Biology (physiology); B.S., Weber State; M.S., Utah State; Ph.D., Brigham Young.

Marshall, Helaine W., Assistant Professor of Communication and the Arts (linguistics/English as a second language); B.A., M.A., Tufts; M.Ed., Ph.D., Columbia University.

Matter, Charles, Associate Professor of Communication and the Arts (psychology); A.B., Lycoming; Ph.D., Washington.

McCartney, Donald H., Senior Lecturer in Business Administration (marketing); A.B., Indiana; M.B.A., UW-Oshkosh.

McIntosh, Thomas H., Professor of Natural and Applied Sciences (earth science); B.S., M.S., Ph.D., Iowa State.

Mehra, Anjani K., Professor of Natural and Applied Sciences (physics); B.S., M.S., Allahabad (India); Ph.D., I.I.T., Kapur (India).

Mendelsohn, Robert A., Associate Professor of Urban and Public Affairs (psychology); B.S., Cornell; M.A., Ph.D., Michigan.

Meredith, Sarah, Assistant Professor of Communication and the Arts (music); B.M., Iowa State; M.M., Northwestern; D.M.A., Iowa.

Meyer, James M., Lecturer in Student Support Services (mathematics); B.S., M.B.A., Washington University; M.A., Maryland.

Meyer, Timothy P., Professor of Communication and the Arts (mass media); B.A., UW-Madison; M.A., Ph.D., Ohio University.

Mielke, Bruce, Associate Professor of Natural and Applied Sciences (computer science); B.S., M.S., Ph.D., UW-Milwaukee.

Miller, Hugh, Assistant Professor of Urban and Public Affairs (public administration); B.A., Michigan State; M.P.A., Ph.D., American University.

Moran, Joseph M., Professor of Natural and Applied Sciences (earth science); B.S., M.S., Boston College; Ph.D., UW-Madison.

Morgan, Michael D., Curator of Herbarium and Associate Professor Natural and Applied Sciences (biology); B.A., Butler; M.S., Ph.D., Illinois.

Murphy, Michael W., Associate Dean for General Education and Faculty Development and Associate Professor of Humanistic Studies (English); B.A., Marquette; M.A., Ph.D., UW-Madison.

Murray, James M., Director of Bureau of Business and Economic Research and Professor of Business Administration (economics); B.A., B.S., M.A., North Dakota; Ph.D., Oregon.

Nagy, Robert A., Instructor of Business Administration; B.B.A., St. Michael's College; M.A., Middle Tennessee State.

Nair, V.M.G., Professor of Natural and Applied Sciences (biology); B.S., Madras Christian (India); M.S., Aligarh (India); Ph.D., UW-Madison.

Niedzwiedz, William R., Associate Professor of Regional Analysis (geography); B.S., M.S., Massachusetts-Amherst; Ph.D., Virginia Polytechnic.

Noll, Lorraine, Associate Professor of Nursing; B.S.N., Alverno; M.S., UW-Oshkosh.

Noppe, Ilene C., Assistant Professor of Human Development (psychology); B.A., Lake Forest; Ph.D., Temple.

Noppe, Lloyd D., Chairperson and Associate Professor of Human Development (psychology); B.A., Lake Forest; Ph.D., Temple.

Norman, Jack C., Professor of Natural and Applied Sciences (chemistry); B.S., New Hampshire; Ph.D., UW-Madison.

Null, Gilbert T., Associate Professor of Humanistic Studies (philosophy); B.A., UC-Santa Cruz; M.A., Ph.D., New School for Social Research.

Obenberger, Robert W., Associate Professor of Business Administration (marketing); B.S., UW-Whitewater; M.S., Northern Illinois; Ph.D., Louisiana State.

O'Grady, Terence J., Professor of Communication and the Arts (musicology); B.M., M.S., Ph.D., UW-Madison.

O'Hearn, George T., Chairperson and Professor of Education; B.S., M.S., Ph.D., UW-Madison.

Outcalt, David L., Chancellor and Professor of Natural and Applied Sciences (mathematics); B.A., Pomona; M.A., Claremont; Ph.D., Ohio; D.P.A., Kyung Hee University.

- Petrakopoulos, Nikitas L.**, Associate Professor of Natural and Applied Sciences (mathematics); B.A., Columbia; M.S., Ph.D., NYU.
- Pollis, Carol A.**, Dean of Humanities, Social Sciences and General Education and Professor of Social Change and Development (sociology); B.A., M.A., Oklahoma; Ph.D., Oklahoma State.
- Pollis, Nicholas P.**, Professor of Urban and Public Affairs (psychology); B.A., Johns Hopkins; Ph.D., Oklahoma.
- Prange, W. Werner**, Professor of Humanistic Studies (German); Abitur, Paedagogium Bad Godesberg (W. Germany); Ph.D., Bonn (W. Germany).
- Presnell, Richard W.**, Associate Professor of Education (environmental education); B.A., M.A., Iowa; Ph.D., Cornell.
- Prindiville, Mary D.**, Lecturer in Student Support Services (composition); B.A., B.S., UW-Oshkosh; M.A., UW-Milwaukee.
- Pum, Janis A.**, Lecturer in Athletics and Physical Education; Women's Tennis Coach and Cheerleader Adviser; B.S., UW-Madison; M.A., Ball State.
- Pum, Robert J.**, Professor of Communication and the Arts (art education); B.S., M.S., UW-Madison; Ed.D., Ball State.
- Rhyner, Charles R.**, Professor of Natural and Applied Sciences (physics); B.S., M.S., Ph.D., UW-Madison.
- Ritch, Donna L.**, Assistant Professor of Human Biology (physiology); B.S., M.S., Youngstown State; Ph.D., Pennsylvania State.
- Rodeheaver, Dean**, Associate Professor of Human Development (psychology); B.A., M.A., Ph.D., West Virginia.
- Rodesch, Jerrold C.**, Associate Professor of Humanistic Studies (history); B.S., UW-Madison; M.A., Ph.D., Rutgers.
- Rowen, Cynthia J.**, Lecturer in Student Support Services (mathematics); B.S., UW-Green Bay.
- Sager, Dorothea B.**, Chairperson and Associate Professor of Human Biology (physiology); B.A., Lawrence; M.S., Iowa; Ph.D., UW-Madison.
- Sager, Paul E.**, Director of Cofrin Arboretum and UWGB Natural Areas and Professor of Natural and Applied Sciences (biology); B.S., Michigan; M.S., Ph.D., UW-Madison.
- Sagrillo, Marilyn E.**, Senior Lecturer in Business Administration (accounting); B.S., M.S., Northern Illinois; C.P.A.
- Salisbury, Joyce E.**, Director of International Education and Associate Professor of Humanistic Studies (history); B.A., M.A., Ph.D., Rutgers.
- Schwartz, Leander J.**, Professor of Natural and Applied Sciences (biology); B.S., UW-Platteville; M.S., Ph.D., UW-Madison.
- Selk, Ann E.**, Senior Lecturer in Business Administration (accounting); B.B.A., M.B.A., UW-Milwaukee.
- Sell, Nancy J.**, Professor of Natural and Applied Sciences (engineering); B.A., Lawrence; M.S., Institute of Paper Chemistry; M.S., Ph.D., Northwestern.
- Sewall, Timothy J.**, Assistant Professor of Human Development and Education (psychology); B.S., UW-Green Bay; M.Ed., James Madison; Ph.D., UW-Madison.
- Shariff, Ismail**, Professor of Regional Analysis (economics); B.A., M.A., Mysore (India); Ph.D., UW-Madison.
- Shay, William A.**, Associate Professor of Natural and Applied Sciences (computer science); B.A., St. Mary's (Minnesota); M.A., Ph.D., UW-Milwaukee.
- Sherrell, Richard E.**, Secretary of the Faculty and Professor of Communication and the Arts (theatre); B.A., Pomona; B.D., Chicago; Ph.D., Claremont.
- Smith, Larry J.**, Associate Professor of Social Change and Development (economics); B.A., Oklahoma State; M.A., Ph.D., Chicago.
- Smith, William M.**, Professor of Regional Analysis (psychology); B.A., UCLA; M.S., Ph.D., George Washington.
- Sonenfield, Irwin C.**, Professor of Humanistic Studies (music); B.M., Stetson; M.M., Florida State; Ph.D., UW-Madison.
- Sridhar, Sandhya**, Assistant Professor of Business Administration (organizational behavior); B.A., M.A., Bombay (India); Ph.D., Ohio State.
- Stambler, Peter L.**, Professor of Humanistic Studies; B.A., Yale; M.F.A., Carnegie-Mellon; Ph.D., Syracuse.
- Starkey, Ronald H.**, Associate Professor of Natural and Applied Sciences (chemistry); B.A., Augsburg; M.S., Ph.D., Michigan.
- Stearney, Michael C.**, Assistant Director and Lecturer in Educational Support Services (mathematics); B.S., UW-Green Bay; M.S., UW-Milwaukee.
- Stevens, Richard J.**, Associate Professor of Human Biology (biophysics); B.S., Rochester; M.S., Ph.D., Illinois.
- Stieglitz, Ronald D.**, Associate Dean of Graduate Studies and Professor of Natural and Applied Sciences (geology); B.S., UW-Milwaukee; M.S., Ph.D., Illinois.
- Stohs, Joanne M.**, Assistant Professor of Human Development (sociology); B.A., Cleveland State; M.S., Nebraska; Ph.D., Chicago.
- Swinerton, Elwin N., Jr.**, Associate Professor of Urban and Public Affairs (political science); B.A., M.A., Massachusetts-Amherst; Ph.D., Kentucky.
- Tansey, Richard R.**, Instructor in Business Administration (marketing); B.A., West Florida; M.A., Florida State; M.B.A., Houston; Ph.D., Texas-Austin.
- Tasch, Thomas J.**, Associate Professor of Humanistic Studies (art); B.F.A., Illinois; M.A., Kansas State.
- Thompson, Phillip E.**, Associate Professor of Education (English education); B.A., Beloit; M.S., UW-Madison; Ph.D., Illinois.
- Thron, E. Michael**, Professor of Humanistic Studies (English); B.A., M.A., Ph.D., Nebraska.
- Thron, Joan E.**, Senior Lecturer in Humanistic Studies (composition); B.A., Emory; M.A., UW-Madison.
- Tollers, Jeffrey B.**, Assistant Professor of Business Administration (accounting); B.A., J.D., UW-Madison.
- Tompkins, Francine M.**, Assistant Professor of Education (special education); B.A., M.A., Ph.D., Michigan State.
- Troyer, Michael D.**, Associate Professor of Business Administration (economics); B.A., Cornell; M.A., Ph.D., Duke.
- Tucker-Allen, Sallie**, Chairperson and Associate Professor of Nursing; B.S., Hampton; M.S., Hunter; Ph.D., Northwestern.
- Van Koevering, Thomas E.**, Associate Professor of Natural and Applied Sciences (science education); B.S., Western Michigan; M.A., Michigan; Ph.D., Western Michigan.
- Walter, Lynn Ellen**, Associate Professor of Social Change and Development (women's studies); B.A., Illinois; Ph.D., UW-Madison.
- Wang, (Andrea) Rau-Sheu**, Assistant Professor of Human Biology (nutritional sciences); B.S., Province College (Taichung, Taiwan); M.S., Ph.D., Nebraska.
- Wardall, Gary G.**, Lecturer in Natural and Applied Sciences (mathematics); B.S., M.A., UW-Madison.
- Wenger, Robert B.**, Chairperson of Environmental Science and Professor of Natural and Applied Sciences (mathematics); B.S., Eastern Mennonite; M.A., Pennsylvania State; Ph.D., Pittsburgh.

White, Rolfe E., Associate Professor of Social Services; B.A., M.S.W., Case Western Reserve; Ph.D., Laurence (California).

Wichowski, Harriet C., Instructor in Nursing; B.S., Barry University; M.S., Michigan.

Wiersma, James H., Associate Professor of Natural and Applied Sciences (chemistry); B.S., UW-Oshkosh; M.S., Ph.D., Missouri-Kansas City.

Winzzenz, Karon E., Curator of Art and Associate Professor of Communication and the Arts (art); B.S., Lawrence; B.S., UW-Madison; M.F.A., UW-Milwaukee.

Witherell, Louise R., Professor of Humanistic Studies (French); B.A., Toledo; M.A., Ph.D., UW-Madison.

Zehms, Karl M., Associate Professor of Business Administration (accounting); B.B.A., M.B.A., Ph.D., UW-Madison.

University of Wisconsin-Green Bay

Emeriti

Guilford, Harry G., Professor Emeritus of Human Biology; Ph.B., Ph.M., Ph.D., UW-Madison.

Hartley, Eugene, Dean Emeritus; A.B., A.M., Ph.D., Columbia.

Hartley, Ruth, Professor Emeritus of Human Development; A.B., Cornell; A.M., Ph.D., Columbia.

Kaufman, William C., Professor Emeritus of Human Biology; B.A., Minnesota; M.S., Illinois; Ph.D., Washington.

Kazar, Michael R., Professor Emeritus of Education and Communication and the Arts and Associate Director of Arts, University Extension; B.S., Milwaukee State Teachers; M.S., UW-Madison.

Loomer, Allison P., Associate Professor Emeritus of Natural and Applied Sciences; B.A., M.A., Acadia.

McIntosh, Elaine N., Professor Emeritus of Human Biology; A.B., Augustana; M.A., South Dakota; Ph.D., Iowa State.

Randall, Donna Z., Assistant Professor Emeritus of Human Biology; B.S., St. Teresa; M.S., UW-Madison.

Reed, John F., Professor Emeritus of Environmental Sciences; A.B., Dartmouth; M.A., Ph.D., Duke.

Sanders, Norris M., Associate Professor Emeritus of Education; B.S., M.S., Ph.D., UW-Madison.

Theile, Juanita R., Associate Professor Emeritus of Nursing; B.S.N., St. Mary's, Notre Dame; M.S.N., St. Louis; Ed.D., Drake.

Weidner, Edward W., Chancellor Emeritus and Professor Emeritus of Political Science; B.A., M.A., Ph.D., Minnesota.

White, Keith L., Professor Emeritus of Natural and Applied Sciences; B.S., UW-Madison; M.S., Montana; Ph.D., UW-Madison.

University of Wisconsin-Green Bay

Professional Staff

Anderson, Debra L., Associate Academic Librarian, Special Collections; A.A., Rochester Community College; B.S., M.A., Mankato State; M.A., UW-Madison.

Backes, Cyril J., Assistant Chancellor for Fiscal and Administrative Services.

Barr, Mari R., Special Assistant to the Chancellor and Director of Affirmative Action/Equal Opportunity; B.S., UW-Stevens Point; M.S., UW-Oshkosh.

Barry, Thomas E., Director of Personnel Services; B.S., UW-Eau Claire.

Bartlett, Dorma Z., Associate Director and Senior Academic Librarian, Bibliographic Operations; B.A., Michigan; M.A., UW-Oshkosh.

Bennett, Richard, Head Coach, Men's Basketball; M.S., UW-Superior.

Blohowiak, Diane E., Associate Information Processing Consultant, Computer Center; B.S., M.S., UW-Green Bay.

Brown, Betty D., Senior University Relations Specialist, University Communications; B.A., Milwaukee-Downer.

Bruss, Lyle R., Director of Facilities Planning; B.S., UW-Oshkosh; M.E., Illinois; Ph.D., UW-Madison.

Buethe, Frank A., Outreach Program Manager, Business Development Center; B.A., Dartmouth; M.B.A., Pennsylvania.

Carlson, Laura L., Administrative Program Manager/Still Photography, Media Resources; B.F.A., M.A., UW-Superior.

Chambers, Dennis, Athletic Trainer/Assistant to the Athletic Director; B.S., Nebraska-Lincoln.

Cherry, John, Bursar; B.S., UW-Stevens Point.

Christensen, Mona L., Outreach Specialist in Youth Opportunities Program; B.A., UW-Green Bay.

Christensen, Rhonda J., Adviser, Extended Degree Program; B.G.S., UW-Green Bay.

Clark, Marilyn, Adviser, Extended Degree Program; B.A., UW-Milwaukee.

Conklin, Scott W., Instructional Program Manager, Arts and Performances; B.A., Beloit College.

Cook, Ann L., Student Services Specialist, Children's Center; B.S., UW-Green Bay.

Davitt, Christine, Associate Academic Curator of Art; B.S., UW-Madison; M.F.A., UW-Milwaukee.

Dawson, Cecily, Assistant Athletic Trainer, Intercollegiate Athletics; B.S., Northern Michigan.

De Cleene, Barbara A., Information Processing Consultant in Computer Services; B.S., UW-Green Bay.

DeForest Hicks, Sally, Administrative Program Specialist in Personnel; B.S., Michigan Technological University.

Dell, Virginia C., Editor and Printing Manager, University Communications; B.J., Missouri-Columbia; MEAS, UW-Green Bay.

DeVillers, Lauren J., Outreach Specialist, Outreach and Arts and Performances; B.A., UW-Green Bay.

Devine, John R., Administrative Program Manager in Alumni Assn. and Government Specialist; B.S., UW-Green Bay.

Dhuey, Ronald A., Associate Vice-Chancellor for Institutional Research; B.S., M.S., UW-Stout.

Dougherty, Daniel B., Student Services Program Manager, Student Housing; B.A., M.A., Eastern Illinois.

Erdman, Thomas C., Associate Academic Curator in Natural History Museum.

Erwin, Linda Ann, Senior Administrative Program Manager and Director, Arts and Performances.

Evans, Joan E., Adviser for Degree Summary, Registrar's Office; B.S., UW-Stevens Point.

Fewless, Gary A., Instructional Specialist in Natural and Applied Sciences; B.S., M.S., UW-Green Bay.

Frane, Louis S., Senior Information Processing Consultant in Computer Center.

Garot, David J., Associate Media Specialist in Media Resources/Photography; B.A., UW-Green Bay.

Gee, Ada Jan, Assistant Women's Basketball Coach; B.A., Colorado College; M.A., Ball State.

Gollnick, William A., Assistant Chancellor for American Intercultural Programs; B.S., UW-Green Bay; Ed.M., Harvard.

Gorbette, Richard D., Director of Student Union/Student Life Programs; B.S., UW-Stevens Point; M.A., Ball State.

Grant, Patrea A. Wisnicky, Specialist, Student Life Programs; B.S., UW-Green Bay.

Gustafson, Ruth, Administrative Program Specialist to the Chancellor.

Guyette, Orville R., Administrative Program Manager, Extended Degree Program; B.A., California State-Stanislaus.

Haegers, Thomas C., Director of Housing and Student Services Program Manager; B.S., UW-Stevens Point; M.A., Ball State.

Halron, Sandra M., Assistant Director in Academic Advising; B.S., UW-Green Bay.

Hammerle, Carol A., Associate Athletic Director (Women); Head Coach, Women's Basketball; M.S., Northern Michigan.

Hansen, Leanne, Associate Academic Librarian, Bibliographic Operations; B.S., Central Michigan; M.L.I.S., UW-Milwaukee.

Harriman, Roger A., Pool Director and Lecturer in Physical Education; Head Coach, Women's and Men's Diving and Swimming; B.S., Minnesota-Duluth; M.A., Northern Michigan.

Hartley, Allan C., Senior Student Services Program Manager, Adult Student Services; B.S., Tufts; M.S., Syracuse; Ph.D., Iowa.

Harvey-Jacobs, Pamela K., Assistant Director, Admissions and Orientation; B.A., UW-Green Bay.

Heideman, Michael D., Assistant Men's Basketball Coach; B.S., M.S., UW-LaCrosse.

Helein, Timothy J., Recreation Specialist in Phoenix Sports Center; B.S., UW-Oshkosh.

Heleniak, Mary, Artist in University Communications; B.A., Carleton.

Hensen, Paul J., Director and Senior Adviser, Academic Advising; B.S., M.S., UW-Oshkosh.

Hensrud, Neil B., Assistant Director, Continuing Education, in Business Outreach and Lecturer in Business Administration; B.S., M.Ed., Ed.D., North Dakota.

Hodek, Roger N., Director of Computer Services and Senior Information Processing Consultant; B.S., UW-Green Bay.

Jameson, Richard F., Director of Protective Services.

Jansen, Richard G., Associate Dean of Students and Director of Counseling and Student Development Center; B.A., UW-Madison; M.S.W., UC-Berkeley.

Jennings, JoAnne, Senior Adviser in Academic Advising.

Johnson, Rue E., Special Assistant to the Chancellor.

Kasten, Ruth Ann, Administrative Program Specialist, Office of Development.

Kasuboski, Anne, Associate Academic Librarian, Government Publications; M.S., UW-Milwaukee.

Kazar, Stephen, Program Manager in Admissions and Orientation and Coordinator of International Student Services; B.S., M.S., UW-LaCrosse.

Kelsey, Duane K., Senior Facilities Planning Specialist in Facilities Planning and Management.

Kenealy, Kay Lynn, Program Manager in Student Life; B.A., Carroll; M.S., Moorhead State.

Kerksieck, Phillip J., Program Manager, University Housing; B.S., UW-Stevens Point; M.S., UW-Madison.

Kiefer, F. Irene, Director of University Communications; A.B., Indiana.

Kieper, David G., Senior Information Processing Consultant, Computer Services; B.S., UW-Green Bay.

Killinger, John, Supervisor of Administrative Computer Programming; B.S., UW-Stevens Point.

King, John L., Associate Adviser, Extended Degree Program; B.A., UW-Green Bay.

Kostroski, Lawrence P., Outreach Program Manager in Small Business Outreach and Small Business Development Center, and Senior Lecturer in Business Administration; B.A., St. Norbert; M.B.A., UW-Oshkosh.

Kuebler, James H., Director of Facilities Management; B.S., Illinois.

Lampe, Richard J., Student Services Program Manager in Student Union; B.A., UW-Eau Claire; M.S., UW-Madison.

Mach, Gary W., Senior Administrative Program Manager for Technical Support Services, Media Resources.

MacKay, Coral L., Senior Adviser, Academic Advising; B.A., Carroll.

Madzarevic, Frank, Student Services Program Manager, Phoenix Sports Center; B.S., UW-Green Bay.

Maguire, Patricia, Student Services Program Manager and Adviser in Adult Student Services and Women's Center; B.S., UW-Green Bay.

Maki, Thomas D., Administrative Officer for Auxiliary Services.

Mancoske, Marcella M., Registrar and Administrative Program Manager; B.A., St. Norbert.

Mannino, Joan M. Robb, Academic Librarian, Interlibrary Services; B.S., Cornell; M.A. UW-Madison.

Marinetti, Michael E., Administrative Program Specialist in Institute for Research and Adviser in Extended Degree; B.A., MEAS, UW-Green Bay.

Massey, DeAnne E., Program Manager, Student Activities and Union; B.S., UW-Green Bay.

Martinson, Stephen D., University Relations Specialist, University Communications; B.A., Sioux Falls College; M.A., UW-Superior.

McArthur, Lori S., Women's Volleyball and Softball Coach.

McCary, Marilyn J., Administrative Program Manager, Athletics/Intramurals.

Mielke, Janice M., University Relations Specialist, University Communications; B.A., M.A., UW-Milwaukee.

Mommaerts, Barbara H., Director of Placement and Career Planning; B.S., M.S., UW-Oshkosh.

Moutry, Deborah, Adviser in Minority Student Services; B.A., UW-Green Bay; M.S.E., UW-Oshkosh.

Niquette, Paul, Director of University Purchasing; B.B.A., UW-Milwaukee.

Novak, Robert M., Director of Community Relations and Information Center; B.S., UW-Oshkosh; M.A., Northern Michigan.

Olski, Katharine J., Director and Senior Adviser in Extended Degree Program and Individualized Learning Programs; B.A., MEAS, UW-Green Bay.

Olson, Ellen R., Senior Adviser, Financial Aid; B.S., UW-Stevens Point; M.S., Southern Illinois-Carbondale.

Olson, Gerald H., Dean of Students; B.S., UW-LaCrosse; M.S., UW-Madison.

Parish, Tracy L., Specialist, Children's Center; B.S., UW-Stevens Point.

Pletcher, Kathy, Associate Director and Senior Academic Librarian for User Operations; A.B., M.S., Illinois.

Powers, Terry J., Assistant Soccer Coach and Assistant Sports Information Director; B.A., UW-Green Bay.

Prechter, Keith J., Administrative Officer for Budgetary Planning; B.B.A., UW-Madison.

Pritchard, Robert M., Assistant Director of Financial Aids and Senior Adviser in Student Development Center; B.S., UW-Milwaukee; M.S., UW-Oshkosh.

Quigley, Timothy R., Promotions Director in Athletics.

Raduenz, Les R., Assistant Director, Physical Plant and Senior Facilities Planning Specialist in Facilities Management; B.S., UW-Madison.

Ratajczak, Robert R., Instructional Specialist, Communication and the Arts; B.A., UW-Green Bay.

Rheinschmidt, Alan, Director of Institutional Services and Risk Management; B.A., UW-Milwaukee.

Ronnenberg, Ron R., Director, Financial Aid and Student Employment; B.S., M.S., UW-LaCrosse.

Rothe, Kurt B., Executive Director of Learning Resources; B.M., St. Norbert; M.M., UW-Madison; M.A., Michigan.

Sampson, Christopher D., University Relations Specialist in University Communications and Athletics; B.A., UW-Madison.

Santaga, Aldo P., Associate Athletic Director and Head Soccer Coach; Intercollegiate Athletics and Intramurals.

Schoenbeck, Patricia Marie, Director of Children's Center; B.S., UW-Green Bay.

Seidl, Anne M., Student Health Nurse, Student Health Services; R.N., Holy Family School of Nursing.

Shakal, Charles, Administrative Program Manager in Arts and Performances; B.A., UW-Green Bay; M.A., UW-Madison.

Shepardson, Timothy M., Program Manager in Placement and Career Planning; B.S., M.S., UW-LaCrosse.

Skorczewski, Robert J., Jr., Outreach Program Manager for Lifelong Learning; Credit; B.S., UW-Green Bay; M.S., UW-Milwaukee.

Smith, Gregory L., Counselor in Student Development Center and Coordinator of Handicapped Services; B.S., UW-Green Bay; M.S.E., UW-Oshkosh.

Spangenberg, Richard, Computer Programmer; B.S., UW-Green Bay.

Spielmann, Daniel, Senior University Legal Counsel and Athletic Director and Lecturer in Business Administration; B.A., J.D., UW-Madison.

Sorelle, Patrick, Administrative Program Manager of Phoenix Bookstore; B.S., M.B.A., Northern Michigan.

Steffens, Judith A., Instructional Specialist in School Services Bureau; B.S., MEAS, UW-Green Bay.

Stipe, MiLissa O., Adviser in Credit Outreach for Green Bay Correctional Institution and Lifelong Learning; B.A., UW-Green Bay.

Sucharski, Ralph J., Student Health Nurse, Health Services; B.S., UW-Green Bay; R.N., Bellin Hospital School of Nursing.

Swan, Karen K., Director of Health Services; B.S.N., UW-Eau Claire.

Swan, Stephen G., Assistant Men's Basketball Coach; B.A., UW-Eau Claire.

Thornton, Jan, Director, Outreach; B.S., UW-Whitewater; M.A., UW-Madison.

Tillis, Jennifer M., Academic Librarian, Collection Management; B.A., M.A., UW-Milwaukee.

Toepel, Timothy E., Administrative Program Manager in Media Services; B.A., UW-Madison; M.S., UW-LaCrosse.

Vanderperren, Roger J., Director, Media Resources; B.S., UW-Madison.

Van de Ven, Myron J., Director of Admissions and Enrollment Services; B.A., St. John's University; M.Ed., Wyoming.

Van Oudenhoven, Sally, Program Manager for Credit Evaluation, Registrar's Office; B.A., UW-Eau Claire.

Vigue, Denise J. Ortiz, Adviser, Minority Student Services; B.S., UW-Green Bay.

Wallich, Lynn R., Senior Administrative Program Specialist in School Services Bureau; B.S., UW-Oshkosh; M.S., Ed.S., UW-Milwaukee; Ph.D., UW-Madison.

Wilde-Johnson, Amy, Adviser for Admissions and High School Relations, Admissions and Orientation; A.D., Kendall College; B.A., Mundelein College.

Wilke, Dina J., Counselor, Counseling and Student Development Center; M.S.W., UW-Milwaukee.

Wiseman, Charles L., Controller in Fiscal and Administrative Services; B.S., Southeast Missouri State.

Zinkl, Andrew R., Academic Librarian, Reference and Data Base Services; A.B., Marquette; M.A. Creighton; M.A.L.S., UW-Milwaukee.

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2. Theatre Hall (TH)
3. Student Services (SS)
4. Student Union
5. Library Learning Center (LC)
6. Instructional Services (IS)
7. Environmental Sciences (ES)
8. Laboratory Sciences (LS)
9. Ross Hall
10. Wood Hall
11. Circle Entrance
12. Welcoming Booth
13. Visitor Parking
- 14a. Student Apartments
- 14b. Student Residence Halls
15. Ecumenical Center
16. Phoenix Sports Center
17. Physical Plant/Stores Center
18. Utility Control Center
19. Children's Center
20. Language House
21. Bayshore Center
22. Dock Facility
23. Shorewood Center
24. Equipment Service Building
25. Golf Course
26. Tennis Courts
27. Playing Fields
28. Soccer Field
29. Arboretum Ponds
30. Amphitheater
31. Community Park
32. Parking
33. Weather Station
34. Observation Tower
35. Dock Hut
36. Housing Services Center
37. Old Green Bay Room Entrance

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