

**1996-1998
Undergraduate Catalog**



University of Wisconsin-Green Bay

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1996-1998 UNDERGRADUATE CATALOG

How To Use This Catalog

This catalog provides information about the undergraduate academic programs, facilities, services, and campus life at the University of Wisconsin-Green Bay. It describes what the University offers. It tells what the University expects a student to do 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 catalog sections, students should plan their individual programs with the help of the University's professional academic advisers and faculty advisers for their majors. They may also wish to peruse other publications of the University, such as those described below.

Many UW-Green Bay publications, including this catalog, may be accessed electronically via Internet: [Http://www.uwgb.edu](http://www.uwgb.edu).

Current Information

Current fee and tuition information is distributed as far in advance of each session as possible by the Office of the Registrar. If fees and tuition have been set by the Board of Regents before the printing deadlines, they appear in the University's *Timetable*, which is published for each fall, spring and summer/intercession. If the information is available too late for the *Timetable*, it is printed as a fee information sheet. The most up-to-date information on fees is available through these publications, by calling the Office of the Registrar, or by accessing the UW-Green Bay homepage via Internet.

Changes in course schedules for each session which occur too late to be included in the timetables are listed on addenda sheets given to students at the time of registration and are posted at the Registrar's Office.

Effective Dates

This catalog is in effect from July 1, 1996, until it is superseded by a new catalog. Policies of the previous catalog are in effect until June 30, 1996, unless they are changed by official announcement.

University Policy

The provisions of this catalog are not to be regarded as an irrevocable contract between a student and the University of Wisconsin-Green Bay.

The information in this book was accurate at the time of its printing, but changes occur 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 individual students' interests 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.

Changes in curriculum or graduation requirements are not made retroactive unless the change is to a student's advantage and it can be accommodated with the time span of years normally required for graduation.

Other Publications

Course Listing

(available from Admissions Office)
Lists course schedules 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 information on registration, descriptions of new courses, tuition and fees, academic rules and regulations, etc.

Student Handbook

(available from Dean of Students Office)
Information about life on the campus and in the community.

Prospectus

(available from Admissions Office)
A summary of information for prospective students.

Program of Study Flyers

(available from Admissions Office)
Individual flyers with detailed information on each academic program.

Housing Brochure

(available from the Admissions Office)
A brochure about on-campus residence halls and student apartments.

Extended Degree Program Catalog

(available from Extended Degree Office)
Describes external degree program for adults who want to complete a bachelor's degree.

Graduate Studies Catalog

(available from Graduate Studies Office)
Provides information about the University's master's degree programs.

For More Information

The University address is:
University of Wisconsin-Green Bay
2420 Nicolet Drive
Green Bay WI 54311-7001

Campus E-mail
uwgb@uwgb.edu

Campus Information Center
414-465-2000

TDD
(Telecommunications Device for the Deaf)
414-465-2841

Academic Advice
Academic Advising Office
414-465-2362

**Applications, Undergraduate Catalogs,
Campus Visits, General Information**
Admissions Office
414-465-2111

Career Counseling
Career Counseling and Placement Office
414-465-2163

**Continuing Education,
Credit and Non-Credit Courses**
Office of Outreach and Extension
414-465-2102

Disabled Services
Educational Support Services
414-465-2849

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

Graduate Studies
Associate Dean for Graduate Studies
414-465-2123

Housing Off Campus
Dean of Students
414-465-2152

Housing On Campus
Residence Life Office
414-465-2040

International Education
Office of International Education
414-465-2484

Multicultural Programs
American Intercultural Center
414-465-2720

Payment Options
Office of the Bursar
414-465-2628

Prior Learning Evaluation
Extended Degree Office
414-465-2423

**Student Records, Transcripts, Residency,
Credit Evaluation**
Registrar's Office
414-465-2055

THE UNIVERSITY OF WISCONSIN-GREEN BAY

Students

- UW-Green Bay enrolls more than 5,000 undergraduate students and approximately 250 master's degree students each year.
- One half or more of the freshmen in each recent class entering UWGB have graduated in the upper quarter of their high school class.
- UW-Green Bay typically attracts students from nearly every state in the U.S. and nearly every county in Wisconsin.
- International students from 46 countries in Africa, Asia, North America, South America and Europe and from three U.S. territories have attended UWGB in recent years.

Degrees

UW-Green Bay offers the following degrees:

- Bachelor of Arts (B.A.)
- Bachelor of Science (B.S.)
- Bachelor of Music (B.M.)
- Bachelor of Social Work (B.S.W.)
- Bachelor of Science Nursing (B.S.N.)
- Bachelor of General Studies (B.G.S.)

UW-Green Bay also offers:

- a two-year Associate of Arts (A.A.) degree
- graduate studies leading to a Master of Science (M.S.) in Administrative Science
- graduate studies leading to a 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.

Individual programs with accreditations or approvals include:

- Chemistry, American Chemical Society
- Dietetics component of Nutritional Sciences, American Dietetic Association
- Music, National Association of Schools of Music
- Nursing, National League of Nursing
- Social Work, Council on Social Work Education
- Teacher Education, Wisconsin Department of Public Instruction

History

In 1965, the Wisconsin Legislature authorized a new campus of the University of Wisconsin System for northeastern Wisconsin, an area of the state served at that time by only two-year campuses. The city of Green Bay, which was then the home of a UW center enrolling approximately 1,000 students, was selected for the new university.

The Green Bay center was integrated into the new University of Wisconsin-Green Bay in 1968. The evolution of the campuses inspired the selection of the Phoenix as a UW-Green Bay symbol and mascot. There is, according to mythology, only one Phoenix in the world. Upon reaching a great age, it is consumed in



flame and reborn from the ashes. In the fall of 1969, the UW center was reborn as a new degree-granting university opening for classes with three academic buildings on land just east of the city.

Today, UWGB includes 12 major buildings for instruction and services to students and a student housing complex of 20 apartment and residence hall buildings. Other features of the campus are an arboretum linking natural areas along the University's boundary, a golf course, waterfront recreation area, a newly expanded university union, and sports center. With approximately 700 acres dedicated to university purposes, UW-Green Bay provides its community with ample open space and striking vistas of prairie, woodland and rolling terrain overlooking the waters of the bay.

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

Administration

University of Wisconsin-Green Bay

- Mark L. Perkins, Chancellor
- Howard Cohen, Provost and Vice Chancellor for Academic Affairs
- Thomas D. Maki, Assistant Chancellor for Business and Finance
- Dean Rodeheaver, Assistant Chancellor for Planning and Budget
- Nancy Kaufman, Dean of Professional Studies and Outreach
- Carol A. Pollis, Dean of Liberal Arts and Sciences

University of Wisconsin Board of Regents

- Jonathan B. Barry, Mt. Horeb
- John T. Benson, Madison
- Brigit E. Brown, La Crosse
- John Budzinski, Milwaukee
- Alfred S. De Simone, Kenosha
- C. Daniel Gelatt, La Crosse
- Michael W. Grebe, Milwaukee (Regent Vice-President)
- Kathleen J. Hempel, Green Bay
- Ruth Marcene James, Fennimore
- Phyllis M. Krutsch, Washburn
- Sheldon B. Lubar, Milwaukee
- Virginia R. Mac Neil, Bayside
- San W. Orr, Jr., Wausau
- Gerard A. Randall, Jr., Milwaukee
- Jay L. Smith, Middleton
- George K. Steil, Sr., Janesville

University of Wisconsin System

- Katharine C. Lyall, President

THE UW-GREEN BAY STUDENT EXPERIENCE



The Student Experience Is Academics Plus at UWGB

At the University of Wisconsin-Green Bay, the focus is on academics. The curriculum provides an education that is broad and deep. It does this in two ways: by centering on select problems of major importance, such as the environment, human development, or societal change, and by bringing multiple perspectives to bear on understanding and solving problems.

The student experience does not stop with academics. UW-Green Bay offers a setting for daily life that reinforces and supports the pursuit of knowledge with comfortable surroundings and modern living and learning facilities. Social life supports the educational mission by providing opportunities and facilities for participating in and enjoying the arts, student clubs and activities, athletics and recreation. Finally, while preparing for a career is not the only goal of a university education, UWGB is committed to helping each student prepare for solid career opportunities. Many of the academic programs at UW-Green Bay incorporate career-related experiences, and both faculty and staff are available to guide students toward successful life choices.

This section of the catalog provides a brief look at elements that contribute to the UWGB student experience. These elements range from the UW-Green Bay idea of interdisciplinary, problem-focused learning to campus housing, health services and cultural programming.

ACADEMICS

- Approachable faculty
- Problem-focused, interdisciplinary education
- Global perspectives
- Personalized ways to learn
- Modern facilities

- Well-qualified faculty who are committed to teaching and accessible to students.
- Interdisciplinary programs and practical problem-solving applications.
- Modern facilities.

These are what make the education experience at UW-Green Bay distinctive as a strategy for learning, as preparation for productive and fulfilling careers, and as a way for the student to develop a responsive and responsible perspective as a citizen and steward of the Earth.

Approachable Faculty

The faculty of a university play many roles. They teach and engage in scholarship. They advise students and share their expertise with the broader community. At the University of Wisconsin-Green Bay, there is no more important resource for students than the men and women of the professorate.

UW-Green Bay faculty members are well prepared for their work, with 95 percent of the 161 full-time faculty members holding the

Ph.D. or other highest credential in their fields. They are committed to teaching and to assuring a rich student experience. And they are accessible to their students.

Students who select UW-Green Bay are taught by faculty members. The few teaching assistants on the campus primarily are assigned to help faculty members in laboratory sections. Faculty members are also available to work individually with students on independent studies, internships and honors projects. These special experiences can significantly enrich a learning experience by providing personalized exploration of the student's and professor's shared academic interests.

UWGB faculty members are committed to staying current in their fields. They achieve this through the scholarly activity of doing research, writing for books and journals, and participating in professional organizations. They also remain current by working with colleagues on campus and throughout higher education, and with professionals from many fields of endeavor. This dual involvement in teaching and scholarship directly benefits

students in the classroom. It also gives students ample opportunity to assist their professors in actual research and scholarly projects.

A measure of how well UW-Green Bay achieves its purposes is found in surveys of graduates. These studies consistently show high satisfaction with faculty expertise and student-faculty relationships. Many graduates comment on the special attention and encouragement they received from their professors.

Interdisciplinary Study

The University of Wisconsin-Green Bay offers a distinctive academic program. Through it, students can acquire and integrate the knowledge and skills sought by today's employers, graduate schools and professional programs. Equally important, the academic program prepares students to understand and respond productively to change in a world where change is constant and pervasive.

Interdisciplinary Education

A significant aspect of the academic plan is the interdisciplinary component of each student's program. Just as they would elsewhere, students at UWGB major in particular subjects. The difference is the UW-Green Bay idea that students should also examine how their major subject relates to other subjects. Thus, while preparing for a particular career field, a UWGB student is able to learn how his or her chosen field fits into the context of other endeavors. This is important because it leads to qualities that are now in great demand, such as the ability to understand complex relationships, to examine things from many perspectives, and to work effectively with those from other fields. In a world in which most people can expect to change careers several times, the qualities gained through an interdisciplinary education are essential.

General Education

All students at UW-Green Bay participate in a general-education program which includes studies in the natural sciences, social sciences, humanities, and fine arts. Many general-education courses bring together different academic disciplines in one course; others are focused upon a particular dimension or approach. Some courses emphasize studies of various cultures within American society or the cultures of other countries.

The capping element of the general-education experience comes in each student's senior year with a seminar in which a particular topic or issue is examined from different intellectual perspectives.

Major Areas of Study

Students pursue in-depth preparation through a major. The major may be in a traditional disciplinary program, a professional program, or in one of the interdisciplinary programs that apply knowledge from several disciplines to a particular area of study.

Students who major in a discipline apply the Green Bay idea in a slightly different way. For them, the added dimension to their learning is provided through completing a minor in an interdisciplinary program. This enables them to understand the speciality of their disciplinary major in the context of a broad range of issues and problems.

Many students select an interdisciplinary major, recognizing that for a variety of career directions, broadly integrated preparation is highly desirable. Some of these students will also include a minor in a disciplinary program or studies in a professional program.

Focus on Problem Solving

The University's emphasis upon practical application of knowledge provides students with another significant advantage. By



applying knowledge to real experience, students learn to define problems, evaluate them, and find solutions. They gain such experience in many ways — through class projects, independent study, professional internships, and honors projects. They also can find ample opportunity to work 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. UWGB alumni and alumnae report that they value this aspect of their learning and feel well prepared for their chosen careers and for further education.

Commitment to Teaching

The emphasis upon applications of knowledge requires the support of faculty members strongly committed to excellence in teaching. One demonstration of this is that senior faculty regularly teach introductory courses as well as advanced courses and seminars. Another is that at UWGB, the quality of each student's university experience is important. This results in attention to the student's career preparation, social and cultural development, and daily life experiences, as well as intellectual progress.

A Global Perspective

• International Education

World travel, international communication, multi-national business, global issues — all are part of today's world. This makes understanding the variety of world cultures increasingly important. UW-Green Bay is committed to helping students gain awareness of other cultures. It does this in two ways.

The first way is campus-based. Informally, UWGB provides opportunities for U.S. students to interact with students and faculty from other countries. The welcoming, small city atmosphere of UW-Green Bay is attractive to many international students and faculty. They come here from all areas of the world to share their ideas and viewpoints in classroom settings and informally. UWGB regularly plays host as well to visiting international faculty members, who may come for a few days or a full year to lecture and teach.

The campus-based other-culture experience has a more formal structure, too. Credit courses are offered throughout each year to fulfill UWGB's general education requirement of three-credit other-culture study.

To further enhance students' experience, UWGB regularly plans noncredit courses, lectures, films, concerts, performances, and exhibits focusing on different lands and cultures. The result is that through their day-to-day life on campus, UW-Green Bay students can gain a cosmopolitan approach to issues and a better understanding of how other cultures view the world.

The second way UWGB provides international education is by enabling students to study abroad. Carefully selected foreign study can not only broaden a student's horizons but also enhance his or her career opportunities. And with good planning, students can incorporate foreign study into their university experience without delaying graduation. Students are advised to see the International Studies Certificate described in the academic section of this catalog.

The International Education Office on campus provides resources to help students choose the study-abroad program best suited to their needs from among the following:

Travel Courses

England, Germany, Mexico, Italy, Greece, France, Spain, Ireland, North Africa, Australia, Eastern Europe, and India are just some of the destinations that have been available to students through University-sponsored trips in recent years. Travel courses are typically offered between semesters and enable students to study abroad with a member of the UWGB faculty. These short trips provide a concentrated opportunity to experience other cultures while earning credit.

International Exchanges

Students enrolled at UWGB may study at universities abroad with which the University has exchange agreements. Currently these include the University of Kassel, Germany; Aalborg University, Denmark; University of Yucatan, Mexico; American University in Moscow; the Hague School in the Netherlands, and University of Leon in Spain. UW-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 or take advantage of UWGB's intensive Spanish language programs in San Sebastian, Spain, and Antigua, Guatemala. Students may study for a summer, semester or year at these universities with credits applicable toward UWGB graduation.

Study-Abroad Programs

Students may enroll directly at a foreign university or through a study-abroad sponsoring entity in the United States and with approval transfer the credits back to UW-Green Bay. These study-abroad opportunities are abundant — UWGB students can study almost anything almost anywhere.

• National Student Exchange

The University of Wisconsin-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 more than 100 colleges and universities across the United States. Sites in Guam, Puerto Rico, and the Virgin Islands are available, too. Students from UW-Green Bay have recently been enrolled at colleges and universities in South Carolina, New Mexico, Minnesota, Arizona, Rhode Island, Colorado, California, and Pennsylvania.

The program serves students who want to experience college life in another region of the country; or who are motivated by specific interests. For example, an earth science student might wish to spend a semester in a place that is geologically different from Wisconsin, or a student may wish to study with particular faculty members at another university, or take advantage of special courses or programs available elsewhere.

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 on campus for more information.

Personalized Ways to Learn

• Credit Alternatives

Students who choose UW-Green Bay may have taken courses or had experiences that can be applied toward their UWGB requirements.

They may wish to investigate the opportunities described here.

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 the program descriptions for mathematics and the foreign languages. The Registrar's Office can supply information.

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.

UWGB uses College Level Examination Program (CLEP) general exams in the humanities, natural sciences and social sciences and most CLEP subject 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. Challenge exams are also available for certain courses offered at UWGB.

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

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.

• Programs for Individualized Study

Extended Degree Program

Adults unable to attend traditional on-campus courses may complete their University studies through the Extended Degree Program. The fully accredited bachelor's degree program leads to the Bachelor of Arts in General Studies. Extended Degree students fulfill all academic requirements and meet the standards of educational quality characteristic of the University of Wisconsin System. For each course, students attend a limited number of on-campus Saturday classes, typically two to six. Each course is usually completed within three to six months.

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.

Requirements for the Bachelor of Arts in General Studies degree are outlined in the academic programs section of this catalog under the heading General Studies. Additional information about the degree is available from the Extended Degree Program Office.

Honors Project

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, theatre 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 students the opportunity to earn distinction in the major through a combination of grade point average and completion of a substantial project. Students seeking all-university honors must complete an honors project in addition to

achieving a specific grade point average in order to qualify for graduation with *summa cum laude* honors. Qualifications for both are described in the academic rules and regulations segment of this catalog.

Modern Learning Facilities

Modern buildings – all constructed in the last 30 years – and many unique and exceptional facilities contribute to the quality of each student's educational experience at UW-Green Bay.

Arboretum and Natural Areas

The 270-acre Cofrin Memorial Arboretum encircling the campus is a significant resource for field trips, class projects, and individual research.

UW-Green Bay offers many opportunities for undergraduate students to work on nature research projects with members of the faculty. The University also offers 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 and are then invited to present results of their work in an annual symposium.

The campus arboretum has mature upland forests, a cedar swamp, several types of restored prairie communities, old fields, ponds and wetlands, a stream, an extensive limestone outcrop of the Niagara Escarpment, and more than a half mile of bay shoreline. Other University natural areas include sites on Lake Michigan and in the interior of the Door County peninsula, providing additional land forms, vegetation communities and animal habitat for study.

These diverse landscapes offer 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

All registered students have access to the University's computing facilities for their classroom work, writing, data analysis and research. Several introductory courses have been specially designed to give students the skills to use the computer facilities effectively throughout their academic programs. Students may also enroll in many of the free, noncredit workshops offered by the University on how to use various computer tools. At the beginning of each semester, each UWGB student is automatically provided with an account which gives him or her access to the campus network, the Internet, all available campus software, and worldwide e-mail facilities.

UW-Green Bay's general student computer laboratories are located in the Instructional Services Building. Workstations are being added to the array each year, with existing equipment updated or replaced to keep facilities current. Assistance is always available in these areas during the nearly 100 hours they are open each week. General lab hours are typically 7 a.m. to 11 p.m. weekdays, 9 a.m. to 5 p.m. Saturdays, and 1 to 11 p.m. on Sundays.

The University also has several computer laboratories elsewhere on campus. These include graphic arts, music, photography, psychology, geography and business. Students in these academic areas will find a variety of equipment to meet their instructional needs. The David A. Cofrin Library on campus has computer workstations to provide students access to the catalogs of UWGB, state and



national holdings and CD ROM multimedia facilities.

Data, Video and Voice Network

The recent installation of a universal wiring system made Green Bay one of the first UW institutions to put into use a campuswide network for data, video, and voice. The data access capability is currently the most visible, enabling students, faculty, and staff to use all of the campus computing resources regardless of their location. The network is also accessible by dial-in from off campus. The data and voice wiring connects all classrooms, laboratories, faculty offices, administrative areas, and on-campus student housing. The video wiring includes these facilities and conference sites.

Herbarium

The UWGB Herbarium houses a collection of more than 20,000 specimens of vascular plants and provides many opportunities for student research, collection, and cataloging projects, including work on endangered and threatened species.

Through computer supported study, students are able to map the distribution of plants and their responses to environmental changes.

Library

Centrally located among the academic buildings of the campus is the David A. Cofrin Library, which supports the academic program with a collection of more than one million items and computer 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 30,000 rolls of microfilm backfiles. As a depository for the U.S. Government and the State of Wisconsin, the library has acquired extensive holdings of government documents. It also has collections of publications of Canada, the United Nations, and many international organizations. About half of the 850,000 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. The Special Collections Department contains historical records of northeastern Wisconsin, fine print books, rare materials including old maps and manuscripts, and the University archives. Facilities for student use are varied: quiet study areas, individual and group study rooms, a library instruction room, and general reading and study areas.

Students can conduct their research at computer workstations which provide access to the Cofrin Library's online catalog and reserve systems, as well as CD ROM databases, full text electronic newspapers and journals, census data and other resources. These computers give library access to all the UW System libraries, as well as the OCLC database of 32 million books held by libraries throughout the world. Students can access Internet resources through the Cofrin Library Web page linking them to information sites around the world.

Librarians are available to assist students in their research during most of the open access hours. The library catalog and databases are available from remote sites even when the library is not open.

DAILY LIFE

- An exceptional environment
- Resources for living
- Resources for learning

The beauty of the campus and region set the tone for daily life at UW-Green Bay. Students who choose UWGB enjoy modern living and learning facilities, an exciting natural environment, and an array of special opportunities for learning through personal experience.

An Exceptional Environment

• The Campus

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

The 700-acre site is on gently rolling terrain bordered on one side by a geological formation known as the Niagara Escarpment and the other by a prominent bay opening into Lake Michigan. An important aspect of the campus is the Cofrin Memorial Arboretum, which encircles the academic core and student housing, providing a resource for instruction and recreation. The arboretum's streams, ponds, wooded areas, prairie habitat, and bay shore environment are 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.

An Ecumenical Center adjacent to campus offers worship services, social events, and growth and support groups for students and community people of all faiths and to those of no religious affiliation. The center is supported and operated by a multi-denominational community board.

•The Community and Region

Green Bay is Wisconsin's third largest city and part of the state's fastest growing area, with a metropolitan population exceeding 200,000. The metropolitan area also ranks first in the state in growth of jobs. Green Bay is the governmental seat of Brown County.

The top employers in the region are manufacturing (particularly paper products, metal fabricating, and food products), services (especially health care and insurance), retailing and tourism. The city boasts well-tended historic neighborhoods, a revitalized river front downtown, and a foreign seaport at the mouth of the Fox River on the bay.

Community resources include theater and music organizations, a good public library system, a large public park system, a modern public museum, an amusement park, a wildlife sanctuary, a zoo, a state historic park, a botanic garden, and numerous other attractions. In early summer, community residents by the thousands meet on campus for music and entertainment at the University's Bayfest celebration. Artstreet, an annual late summer festival of performing and visual arts, takes place downtown. Not least among Green Bay's attractions are the University's NCAA Division I basketball teams—the Phoenix, and the community-owned National Football League team—the Green Bay Packers.

The city is a major media center served by daily and weekly newspapers, several AM and FM radio stations and six television stations, including affiliates of the Wisconsin Public Radio System and the Wisconsin Public Television Network.

Although many industries are located in the region, much of Northeast Wisconsin is forest and 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 is bordered on one side by Lake Michigan and on the other by the bay of Green Bay. Its landscape is characterized by farms, orchards, resorts,

small villages with art galleries and boutiques, attractive harbors, and miles of shoreline. Northern Wisconsin is known for lakes and forests and the recreational facilities of the Lake Superior region.

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

Resources for Living

Housing for Students

About 1,400 UW-Green Bay students live on campus each year. Others commute to classes from apartments or homes in the metropolitan area and neighboring communities.

On-campus student housing—known as University Village—is located in a park-like setting near the academic core. Students who wish to live on campus may request a traditional residence hall in which two students share a bedroom and study area with attached private bath or one of the one- and two-bedroom furnished apartments.

Professional staff administer University Village and each building has a resident assistant—an upperclass student with special training and knowledge about the campus and community. All buildings have coin-operated laundry facilities. A centrally-located community building has lounge, recreation, conference and computer rooms. Outdoor volleyball and basketball courts, picnic tables and grills, and the University's Phoenix Sports Center are located conveniently nearby.

Those 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.

Dining Services

Apartments in the University Village have compact kitchen and dining areas. Students living in this form of housing may elect to prepare their own meals or take advantage of the food service which is available a five-minute walk away in the University Union. Students living in the residence halls must purchase a food plan. Other students may buy food plans or simply purchase food from vending machines or in one of three dining facilities on campus—the Nicolet dining room and Phoenix Club grill, both located in the Union, and a delicatessen-type facility in the Cofrin Library.

Health Care

Health Services provides treatment for minor illness and injuries, diagnosis and referral for other conditions, information and counseling on health topics, and information on student health insurance. The staff includes registered nurses and three part-time physicians. The nurses' services are available during daytime hours, Monday through Friday, by appointments or on a walk-in basis to students with 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.

Student 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. Staff members also post numerous other openings for part-time work that becomes available on campus or in the community.

Transportation

Green Bay is a transportation center, served by major highway systems, Austin Straubel Airport, interstate buses and a metropolitan bus and taxi services. UWGB students who live off-campus may use the metropolitan bus, which provides half-hour service to and from campus weekdays and hourly service on Saturdays. Students who drive to campus purchase semester or full-year parking permits for the use of campus lots.

Retail Services

As a major retail trade center for northeastern Wisconsin, the city of Green Bay offers extensive shopping options, including a large downtown mall and entertainment district available from campus by city bus.

On campus, the University's Phoenix Bookstore is the source for books, classroom supplies, clothing, gifts and other items and the University Union's mini-grocery store has a selection of foods, health and beauty aids, and housekeeping supplies. Also available on-campus are the University of Wisconsin Credit Union, automatic teller machines, and Second Gear, a resale shop.

Public Safety

UW-Green Bay is considered a safe campus with a very low crime rate in a safe and low-crime community. To help assure the safety and security of people and property on campus, the University provides coverage by its own staff of officers 24 hours a day.

Resources for Learning

Academic Support

Tutoring and workshops are available through the Educational Support Services Office to help students improve study, mathematics and reading skills. Sessions on effective notetaking, time management, test preparation and similar subjects are also offered. The UWGB Writing Center specializes in workshops and individual assistance on writing skills. Both services are



accessible by appointment or on a walk-in basis.

American Intercultural Center

The center serves African-American, American Indian, Hispanic, and Southeast Asian students. The center exists to foster cultural identity among students of various cultures and to develop an awareness and appreciation of different cultures within the University community at large. Center staff members and students organize events for the entire University and for the community.

Counseling

Staff members in the Counseling and Student Development Center are available for confidential, one-to-one discussions on an array of student concerns. The center offers referral to community agencies.

Students learn to work through problems and develop life-long coping skills. Discussion groups and workshops focus on assertiveness, communication skills, eating disorders, stress, and other topics. Personality and interest inventory tests available at the center can help students explore their own strengths and limitations and how these affect relationships and career and academic choices.

Dean of Students

The Dean of Students is a contact person for individuals who have questions about University policies and procedures, or who may be experiencing difficulties. The office provides advice, counsel and referral, and coordinates a free legal service for students.

Disabled Services

UW-Green Bay can assist students with learning disabilities and has numerous resources to help students who have mobility, vision or hearing disabilities. 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 Educational Support Services Office include a visual enlarger, automatic page turner, accessible computer station with attached voice synthesizer, slow-speed cassette recorders, taped texts and a printing Telecommunications Device for the Deaf (TDD). The office can also arrange for student assistants to serve as notetakers, typists, readers and aides.

Information Center

Answers to questions about faculty schedules, times and locations of campus events, weather-related cancellations, and a host of other topics can be found at the Information Center, located on the David A. Cofrin Library's concourse level.

International Student Center

Each year, students from about 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.

CAREER

- Advising/career counseling
- Internships and special opportunities
- Professionally-oriented programs

Advising and career counseling professionals on the University staff help students make wise choices as they prepare for careers or graduate studies. The University responds to students' career interests in other ways, too. Through independent study, internships, undergraduate research, continuing education programs and the personal major option, students may tailor their learning to their chosen life work.

Advising/Career Counseling

Academic Advising

Professional advisers in this office assist students in selecting courses to meet their interests and fulfill their general-education requirements. Staff members serve as the primary advisers for students who have not yet declared a major.

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 Career Counseling and Placement Office. The center has a staff of professional counselors and features a computerized career information program that links values, interests, and skills to career opportunities. An extensive library at the center includes 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.

Students about to graduate can find help with resume and interviewing preparation, job search strategy, job listings, on-campus interviews and employer referrals.

Internships and Special Opportunities

Internships

Internships and field studies offer significant practical experience and opportunities to "sample" career fields while in college. Through University-arranged internships, students earn academic credit for working and learning on campus or with businesses and organizations in the community. Internships are developed with the help of faculty advisers.

Typical on-campus internships have included work in human resources, 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 with businesses; in social services units of hospitals and mental health centers; with the Red Cross and United Way; in radio and television; 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 placement is called a "practicum" or "field experience."

Independent Study

Independent study is an opportunity for students to individualize their academic programs and gain significant learning experiences. It is frequently chosen by students who have specific career or graduate study interests that they wish to pursue more fully.

Independent study allows students to earn credit for exploring special interests in depth outside of a classroom setting. In order to undertake independent study for credit, a student must identify an appropriate topic and 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.

Continuing Education Opportunities

Noncredit courses, workshops, conferences, and seminars, planned by the Office of Outreach and University of Wisconsin-Extension are scheduled throughout the year on campus and in the community. Professional development and continuing education opportunities are available for those in fields

including education, governmental affairs and business. Courses, workshops and summer camps on many topics are available for children and adults.

The Outreach/Extension service also offers counseling to small firms through its Small Business Development Center. Noncredit programs and enrollment procedures are described in special publications.

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.

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

Undergraduate Research

Research experience can greatly enhance a student's qualifications for graduate or professional school and future employment. Many UW-Green Bay students gain valuable field experience and experience in laboratory situations by working with faculty members who are engaged in research. A student interested in research may also enroll in research-oriented courses or engage in research through independent study or a senior honors project.

Professionally-Oriented Programs

Many career-related options can be found in the preceding pages and in the individual descriptions of academic programs that follow in this catalog. Almost all of the narrative descriptions offer insight into how the major, minor or certificate program can be applied to a field of work; some suggest interesting combinations of study and recommend appropriate graduate study or special emphases.

SOCIAL LIFE

- Special facilities
- Organizations and activities
- Athletics and recreation

The university experience is centered on classrooms and formal learning, but it is enriched by the many campus offerings which can be part of a student's social life. Student organizations and activities, special facilities for the arts and entertainment, and athletics and recreation provide an exciting array.

Special Facilities

Galleries

The University provides three gallery settings for presentation of visual arts: the Lawton Gallery in Theatre Hall, the mezzanine gallery in the Weidner Center for the Performing Arts and the 407 Gallery in the Studio Arts Building. Their purpose is to enhance and complement the University's academic program by presenting quality examples of professional artwork produced by state, regional and national artists, and by exhibiting the work of faculty members and students. Their commitment is to illuminate aesthetic, stylistic, technical, and conceptual issues through developing and renting exhibitions in a wide range of styles, media and content. The gallery program also presents lectures, artists' workshops and residencies, and interpretive gallery talks.

Student exhibitions are featured each year, with acceptance of work for the show considered a significant achievement. Arts management students can earn credit and gain experience in all aspects of curatorial and gallery practice by working in the galleries. The 407 Gallery is fully student-managed as an arts management project and students assist with the Midwest Photography Invitational exhibit, which is prepared biennially for a national tour.

Richter Natural History Museum

A gem among campus-held natural history collections in the United States is the UWGB Richter Natural History Museum. Undergraduate students from a variety of majors and professionals from across the country make use of the unique resource.

The museum is based on a large collection of bird eggs, nests, and study skins gathered by the late Carl H. Richter, who was one of North America's foremost amateur oologists. It includes more than 10,500 egg sets, some of which are dated as early as 1884. The collection includes a large series of vertebrate specimens, Indian artifacts, mollusks and butterflies, geological specimens, historical document, and photographs. The museum holdings also preserve Richter's extensive field notes and papers.

The Richter Museum houses more than 90 percent of the North American avian species and subspecies, including endangered species such as whooping crane, snail kite, and Kirkland's warbler, and several extinct species. 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 related books, journals, and reprints. Holdings represent nearly 100 percent of the locally breeding bird species, 95 percent of the mammals, 80 percent of the reptiles, amphibians and fishes.

Specimen collections continue to grow through contributions from students, faculty and other researchers.

University Union

The University Union is a hub of student activity, providing dining rooms, a fireplace lounge, student mailroom, student organization offices, game rooms, conference facilities, a convenience store and other facilities.

Built in 1977 and expanded in 1985 and 1993, the facility is one of the busiest buildings on the campus.

University Theatre

Performing arts facilities at UW-Green Bay support many facets of education, both for those pursuing studies in the performing arts and those learning about and enjoying theatre as members of the audience.

University Theatre is a well-equipped 450-seat hall with proscenium stage and computerized lighting facilities located in Theatre Hall. Adjacent spaces are a flexible "black box" theatre, acting studio, dance studio, costume shop, and scene shop. Computer-aided scene, lighting, and costume design is also possible.

University Theatre is home for UW-Green Bay productions, with casting open and by audition for several mainstage works directed by faculty each year. Students work on all aspects of the productions. The smaller "black box" theatre is the venue each year for productions that are entirely student-run, including direction and sometimes featuring plays written by students.

Weidner Center for the Performing Arts

The Edward W. Weidner Center for the Performing Arts brings full seasons of visiting artists and touring Broadway productions to the campus and serves as the home of the Green Bay Symphony Orchestra, Pamiro Opera Company and other performance groups.

Opened in 1993 as a joint campus and community facility, the Weidner features state-of-the-art acoustics, the 2,000-seat Cofrin Family Hall, 200-seat Fort Howard Hall, and dance studio and small-performance facilities. The \$20 million center attracts about a quarter million patrons a year. Stage and technical facilities are capable of handling large touring shows such as "Les Miserables" and "Phantom of the Opera" and major symphony orchestras.

UWGB students and faculty perform at the Weidner throughout the year, and opportunities exist for students to work and do internships at the center.

While tickets for touring productions reflect national price standards, there are a variety of less costly shows each season and UWGB students often obtain remaining tickets at bargain prices shortly before performances.

Organizations and Activities

Clubs, Organizations and Entertainment

Through co-curricular involvement and campus activities, students learn and demonstrate skills, expand their college educational experiences, and simply have fun. Students initiate leisure programs through the Good Times Programming Board and other campus organizations. These include films, live entertainment, dances, theme weeks, trips and tournaments.

In a typical year about 95 clubs and other organizations are active on campus. These include club sports, Greek clubs, media, music, athletics, cultural awareness, arts and humanities, religious, student government, and professional career-oriented groups. UWGB has a variety of special interest groups which provide service, political involvement and leisure-time activities and offer the chance to work on environmental interests or social action and change. Students are responsible for *The Fourth Estate*, the weekly student newspaper. *Sheephead Revue* is the student-edited literary publication.

Professional staff of the Student Life Office provide advice and leadership training to individual students and the student organizations that plan activities.

Students and the Arts

Campus music, theatre and dance ensembles offer entertainment as well as opportunities for student performers regardless of their academic majors. Participating students can earn general education credit for their work.

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 Wind Ensemble, and the New Music Ensemble. The same is true for choral groups including Concert Choir and University Chorus. Students may perform in the University's pep band. They may also receive credit for participation in the Green Bay Symphony Orchestra.

The University Theatre presents several faculty-directed mainstage productions each year, including musicals, drama, children's theatre and comedies. Alternate Theatre, which

is a student group, and a formal studio program through the theatre department, give students the chance to write and direct as well as act. In these programs, students can participate in set construction, scene painting, lighting, costume design, publicity, and other tasks. Dance program participants may also take part in theatre productions and perform at athletic events.

The University's galleries feature juried student exhibits. Gallery internships offer students opportunities to help prepare and present campus and touring 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 and prose readings are other events on the



calendar of entertainment and cultural programs.

Student Government

The Student Government Association is the student governance body and is composed of all registered students. Leadership is provided by five subgroups - Student Senate, Segregated University Fee Allocation Committee (SUFAC), Residence Hall and Apartment Association (RHAA), Good Times Programming Board, and the University Union Board. Student Senate is the legislative branch, with authority to help make and review policies concerning student life on campus. Members of SUFAC manage the allocation of student fees to student organizations and programs. RHAA members organize special programs for on-campus residents and work with University administrators to develop campus housing policies. Good Times Programming Board plans social, cultural, educational and

recreational events. The Union Board is composed of representatives of the other four subgroups, student employees of the food service contractor on campus, and students at large. The Board's role is to oversee the University Union.

Athletics and Recreation

Recreation and Sports

Depending on the season, enthusiasts can jog along arboretum trails, play golf, sun at a waterfront park, sail, windsurf, or cross-country ski, all without leaving the UW-Green Bay campus. State parks and other recreation areas are a short drive away in the Green Bay community and adjacent resort country of scenic Door County.

The Phoenix Sports Center is the campus center of intramural and athletic-related activity. It 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.

Outdoor tennis courts, softball diamonds, and soccer and all-purpose playing fields are located near to the Phoenix Sports Center and student housing.

Intercollegiate Athletics

Basketball and soccer are the major competitive sports that bring national attention to the UW-Green Bay. In recent seasons the UWGB men's basketball team has been ranked in the top 25 programs nationally and both the men's and women's basketball teams have been invited to NCAA Division I post-season tournaments. UWGB's swimming-diving teams and members of the tennis team have won conference championships. Nordic ski team members competed in recent years in the U.S. Ski Association Nationals and World University Games in Spain.

Scholarship sports on campus are basketball, cross-country running, cross-country skiing, soccer, swimming and diving, and tennis for men and women; women's softball and volleyball, and men's golf.

GENERAL EDUCATION REQUIREMENTS

Contact the Office of Academic Advising for information on advising, petitions, and all other matters pertaining to the general education requirements.

Purpose

The general education requirements are intended to help students broaden their intellectual horizons, strengthen academic skills, develop and explore new interests, and critically analyze issues and clarify values. They provide a foundation of knowledge for future course work and for lifelong learning.

The general education requirements have these specific objectives for students:

- to improve reading, writing, speaking, and discussion skills; analytical thinking skills; and library research skills;
- to provide a knowledge of some of the major intellectual traditions in the arts and humanities, social sciences, and natural sciences, and an understanding of the different ways knowledge is defined, sought after, and put to use in those domains;
- to increase awareness and understanding of issues and values which affect a student both as an individual and as a member of society, and to improve the ability to critically analyze those issues and values;
- to provide an understanding of different cultures, a respect for cultural diversity, and an awareness of the causes and effects of stereotyping, racism, and ethnocentrism;
- to enhance the ability to see relationships among major areas of knowledge and to apply an interdisciplinary perspective to problem-solving and decision-making tasks.

Required: 40 to 51 credits

The general education requirements must be completed before graduation. **Most are intended to be completed during the freshman and sophomore years.** Courses taken to fulfill the Other Culture and Ethnic Studies requirements **may not** overlap with courses taken to fulfill the Breadth Requirement. However, courses taken to complete the Writing Emphasis Requirement may overlap with courses taken to fulfill most other requirements, including requirements in the major, minor, and professional programs. For assistance in planning the general education program, the student should see an adviser in the Office of Academic Advising. Students may use campus computer terminals accessing the Student On-Line Access Program (SOAP) to review their progress on general education requirements.

Writing and Mathematics Competency Requirements

All new freshmen are required to complete the American College Testing Program (ACT) examination and the Wisconsin Mathematics Placement Test (WMPT). Those students whose scores on the English portion of the ACT and/or the WMPT indicate a low probability for success in those subjects at the college level must complete remedial courses by the end of the second semester of enrollment at UWGB. Students may need to complete up to six credits of necessary coursework to fulfill the English competency requirement. To meet the mathematics competency requirement, a three-credit algebra course may be required. More



information on the ACT, WMPT, and English and mathematics course placement can be found in the *University Testing Requirements* section in this catalog.

Writing Emphasis Requirement: 4 courses

To fulfill this requirement, students must complete four writing emphasis courses. At least two courses must be at the upper level. Courses taken to fulfill the Writing Emphasis Requirement **may** overlap with courses taken to fulfill the Breadth, Other Culture, and Ethnic Studies requirements and/or requirements in the major, minor, or professional program.

Breadth Requirement: 31 to 33 credits

Breadth requirements provide students the opportunity to learn the distinctive approaches and some of the important subject matter and significant issues within broad areas of knowledge. Students must complete from 31 to 33 credits in the following areas: the fine arts (three credits), the humanities (nine credits), the social sciences (nine credits), and the natural sciences (10 to 12 credits). When selecting breadth courses, no more than two courses with the same prefix number may be used in any one area.

Fine Arts, 3 credits

Three credits are required from either of the following two lists of courses.

FA: History/Appreciation

- 242-102 History of the Visual Arts: Ancient to Medieval
- 242-103 History of the Visual Arts: Renaissance to French Revolution
- 242-121 Masters and Masterpieces of Music
- 242-141 Introduction to the Performing Arts
- 242-142 Performing Arts Perspective: Experience and Evaluation
- 242-202 Concepts and Issues of Modern Art
- 242-221 Popular Music Since 1955
- 242-261 Aesthetic Awareness: Foundations
- 242-272 Women in the Arts
- 242-327 Cross Cultural Communication: Jazz History
- 242-328 Cross Cultural Communication: American Show Music
- 242-329 Cross Cultural Communication: World Music
- 915-309 Theatre History I
- 915-310 Theatre History II
- 915-340 Dance History

FA: Studio/Performance

- 168-106 Design Methods
- 168-107 Two-Dimensional Design
- 168-210 Introduction to Painting
- 168-230 Introduction to Ceramics
- 168-260 Introduction to Art Metals
- 670-242 Jazz and Pop Literature, 2 credits
- 672-xxx *Applied Music Performance (University Chorus, Concert Choir, Symphonic Band, Jazz Combo, Show Choir, Ensembles in Wind, New Music, Jazz, Vocal Jazz, String, Woodwind, Brass, and Percussion)
- 915-131 Beginning Acting (concurrent enrollment in Performance Practicum)
- 915-134 Basic Stage Movement, 1 credit
- 915-128 *Jazz Dance I, 1 credit
- 915-228 *Jazz Dance II, 2 credits
- 915-137 *Ballet I, 1 credit
- 915-138 *Ballet II, 2 credits
- 915-141 Musical Theatre Dance I, 1 credit
- 915-145 *Modern Dance I, 1 credit

- 915-245 *Modern Dance II, 2 credits
 915-161 *Tap Dance I, 1 credit
 915-261 *Tap Dance II, 1 credit
 915-
 -235/335 Performance Practicum:
 Production Crews, 1 credit
 -236/336 Performance Practicum:
 Cast Member, 1 credit
 -238/338 Performance Practicum:
 Scene Shop, 1 credit
 -239/339 Performance Practicum:
 Costume Shop, 1 credit

*Repeatable courses. For purposes of general education, each course may be repeated for a total of 3 credits.

Humanities, 9 credits

One course is required from each of the following three lists of courses.

H-1: Introduction to Western Culture I (Origins through the Renaissance)

- 493-101 Foundations of Western Culture I
 493-201 Introduction to the Humanities I
 493-107 Great Books I: Ancient through Renaissance

H-2: Introduction to Western Culture II (Seventeenth Century to Modern)

- 493-102 Foundations of Western Culture II
 493-202 Introduction to the Humanities II
 493-108 Great Books II: 17th Century to Present

H-3: The Role of Humanities in Issues Confronting Individuals and Society

- 351-104 Introduction to Literature
 351-206 Women in Literature
 351-214 Introduction to English Literature I
 351-215 Introduction to English Literature II
 351-216 Introduction to American Literature I
 351-217 Introduction to American Literature II

 448-201 Ancient Civilization
 448-203 History of Europe 1300-1815
 448-204 History of Europe 1815-Present
 448-205 History of United States 1600-1865
 448-206 History of United States 1865-Present
 448-208 Development of Modern Science in Western Society

 736-101 Introduction to Philosophy
 736-102 Problems in Ethics
 736-105 Introduction to Social and Political Philosophy
 736-208 Science and Human Values
 736-211 The Arts and Human Existence
 736-212 Philosophy of Science
 736-213 Ancient Philosophy
 736-214 Modern Philosophy

Social Science, 9 credits

Students are required to choose two courses (six credits) in two different areas from the SS-1 list of courses, and one course (three credits) from the SS-2 list.

SS-1: Content, Methods and Concepts of Social Science Disciplines

- 156-100 Varieties of World Culture
 298-202 Macroeconomic Analysis
 416/951-102 World Regions and Concepts
 448-100 History of the Modern World
 481-210 Introduction to Human Development
 778-100 World Politics
 778-101 American Government and Politics
 820-102 Introduction to Psychology
 875-241 Introduction to Women's Studies
 900-202 Introduction to Sociology

SS-2: Application of Social Science Principles to Social Issues

- 302-206 Cultural Images in Materials for Children and Adolescents
 778/835-202 Introduction to Public Policy
 778/875-230 Law and the Judicial Process



- 875-204 Freedom and Social Control
 875-235 Perspectives on Human Sexuality
 875-265 Music, Politics and Social Change
 875-270 The Third World
 448/875-275 The Vietnam War in Historical Perspective
 900-203 Minority Groups
 951-200 Introduction to Urban Studies
 951-205 Urban Social Problems

 156-304 Family, Kin and Community
 156-320 Myth, Ritual and Religion
 416-342 Settlement Geography
 416-371 Geography of U.S. and Canada
 481-336 Gender Role Development
 481-342 Cross Cultural Human Development
 481-344 Death: Final Stage of Life
 778-353 Politics of Developing Nations
 835-323 Land-Use Controls
 875-340 Women, Work and Family
 875-345 Women, Race and Culture

Natural Sciences, 10-12 credits

Students are required to choose a minimum of one course from each of the following three lists of courses. Students who do not wish to complete a lab science course must complete four courses (12 credits). The fourth course may be selected from either the ES1 or the NS2 list.

HB1: Human Biology Introduction

- 204-202 Principles of Biology I w/lab (4 cr)
 478-102 Introduction to Human Biology

ES1: Environmental Science Introduction

- 225-108 General Chemistry w/lab (5 cr)
 225-211 Principles of Chemistry I w/lab (5 cr)
 296-202 Physical Geology w/lab (4 cr)
 754-103 Fundamentals of Physics I w/lab (5 cr)
 754-201 Principles of Physics I w/lab (5 cr)
 296-102 Introduction to Earth Science
 296/416-222 Ocean of Air: Weather and Climate
 362-102 Introduction to Environmental Science
 362/754-141 Astronomy
 754-180 Concepts of Physics (754-181 Lab 1 cr.)

NS2: Natural Sciences Issues

- 156/478-364 Human Variability
 362-142 Exploration of the Universe
 362-188 Issues in Biological Conservation
 362-190 The Emergence of Western Technology
 362-260 Energy and Society
 362-284 Land Conservation and Husbandry
 362-286 Forest Vegetation of Wisconsin
 362-303 Conservation of Natural Resources
 362-472 Biological Resource Management II
 478-205 Biotechnology and Human Values
 478-206 Fertility, Reproduction and Family Planning
 478-217 Human Disease and Society
 478-310 Human Genetics
 478-313 Brain Functions in Human Behavior
 689-215 Personal Health Issues
 694-142 Food and Nutritional Health
 694-250 World Food and Population Issues
 694-300 Human Nutrition
 694-302 Nutrition and Culture

Other Culture Requirement: 3 credits

The Other Culture Requirement helps students understand values and ways of life outside the United States so that they are more aware of and sensitive to global issues and problems. Courses used to fulfill the Other Culture Requirement cannot be used for other parts of the general education requirement.

OC: Courses Appropriate for Freshmen and Sophomores

- 156-100 Varieties of World Culture
 416-202 Introduction to Cultural Geography
 448-250 Traditional Asian Civilization
 448-251 Modern Asian Civilization
 493-276 Ireland: Culture and Conflict
 694-250 World Food and Population Issues
 875-270 The Third World

OC: Courses Appropriate for Juniors and Seniors

156-303	Political Economic and Environmental Anthropology
156-304	Family, Kin and Community
156-320	Myth, Ritual and Religion
242-323	Language and Human Conflict
242-329	Cross Cultural Communication: World Music
416/951-370	Geography of South America
448-307	European Thought and Culture II
448-314	History of Russian Empire
448-315	Rise and Fall of the Soviet Empire
448-325	History of Modern Germany
448-352	History of Modern China
448-354	History of Modern Southeast Asia
448-356	History of Africa
448-358	Aspects of Latin American History
481-342	Cross Cultural Human Development
493-325	Judaism, Christianity and Islam
493-326	Non-Western Religions
493-354	France Today
493-356	Contemporary German Culture
493-358	Latin America Today
493-360	Spain Today
493-376	Cultural Conflict in French Canada
694-302	Nutrition and Culture
778-351	Comparative Political Systems
778-353	Politics of Developing Nations
875-333	Social Change in a Selected Area
875-345	Women, Race and Culture
951-392	Analysis of South Asia

One of the following will also fulfill the Other Culture Requirement:

1. Completion of a second year (fourth semester) of a foreign language at the college level or any course beyond this level or completion of an upper-level course from a foreign language external to the United States. Courses with variable content (course numbers 498, 497, 478, and 484) may be approved for other culture by use of special petition.
2. Completion of any approved UW-Green Bay trip outside the United States, or study abroad programs, or student exchange programs outside the United States. Students should contact the Office of International Education for information on opportunities in international education.
3. Substantial living experience outside the United States. The Associate Dean of General Education or a designated member of the General Education Council may grant a waiver of the Other Culture Requirement to students from the United States who file a petition for waiver based on documented prior experience living in a foreign country.
4. Students who are not residents of the United States will satisfy the requirement by residence and course work at UW-Green Bay.

Ethnic Studies Requirement: 3 credits

The three-credit Ethnic Studies Requirement helps students understand the causes and results of stereotyping and racism, and develop an appreciation of cultural diversity within the United States. Courses used to complete this requirement cannot be used for other parts of the general education requirement.

Et.S: Courses Appropriate for Freshmen and Sophomores

242/493-225	American Indian Studies: Arts and Ceremonial Traditions
242/493-226	American Indian Studies: Wisconsin Indians
302-206	Cultural Images in Materials for Children and Adolescents
448-207	Roots of Black America



493-211	Human Relations and the Humanities: Understanding Discrimination
493-212	Human Relations and the Humanities: Cultural Diversity
900-203	Minority Groups

Et.S: Courses Appropriate for Juniors and Seniors

242-301	Communication and the Arts: Oneida Language Project
242-327	Cross Cultural Communication: Jazz History
351-336	American Ethnic Literature
448-340	Topics in African American History
493-371	American Indian Art and Artists
493-372	American Indian Mythology and Literature
493-374	Wisconsin Indians Ethnohistory
900-303	Race and Ethnic Relations
951-323	Asian Americans
951-324	Latino Communities in the U.S.

Senior Seminar Requirement: 3 credits

The Senior Seminar serves as the unifying interdisciplinary experience in a student's general education program. The seminars are organized around significant intellectual and social issues of our time and stress the values and problems associated with seeking interdisciplinary solutions to such issues. Students must have senior standing (84 earned credits) to enroll in the senior seminar courses. These courses are not part of any major or minor program and **may not** overlap with any other requirements in general education or with requirements in majors, minors, or professional programs.

The senior seminars are:

867-402	Images of Woman and Man
867-406	Science and the Quality of Life
867-412	The Impact of Science and Technology on Society
867-413	Imagination and Myth
867-415	Applied Imagination: Problem Solving Through Science and Creativity
867-418	Science as Metaphor
867-420	The Organization in Modern Society
867-424	Stereotypes and Minority Groups
867-426	The Search for an Ideal Community
867-430	Value, Reason and Action in Art and Society
867-432	Rebels and Their Causes
867-433	Cultural Evolutionism: A Predictive Model of the Future
867-439	Topics in Human Rights
867-440	Global Arms Control and Alternative Investments
867-441	Worldviews: Perceptions That Shape Actions and Values
867-442	Language: Power and Style
867-443	The Scientific Perspective and the Human Self Image
867-444	Liberal Learning and Decision Making
867-446	Varieties of Educational Experience
867-448	Lost and Found Landscapes
867-449	Common Differences in American Culture
867-450	Hispanic Culture in the United States
867-451	Time: Biophysical and Sociocultural Perceptions
867-452	Societal Impacts of Disturbing the Earth
867-454	Concepts of the Individual
867-455	Art and Society
867-456	Sustainable Development
867-457	Water and Society
867-458	From Conflict to Cooperation: The European Union
867-460	Global Aspects of Health Care
867-476	Democracy in America

UNIVERSITY TESTING REQUIREMENTS

English and Mathematics Course Placement

In order to determine English and mathematics competency and appropriate course placement for students, the University uses the English portion of the American College Testing Program (ACT) examination and the Wisconsin Mathematics Placement Test (WMPT).

The following students are required to complete the ACT and/or WMPT requirement:

- all new freshmen;
- all transfers and re-entry students who have not satisfactorily completed a college-level course in English or mathematics;
- special students wishing to enroll in English or mathematics courses;
- students wishing to be eligible for intercollegiate athletics (only the ACT is needed and the report does not have to be "current").

If the ACT or WMPT is needed for course placement in English or mathematics, the scores must be from a test date not more than two years prior to the first day of classes for the term of impending enrollment.

UW-Green Bay also requires official ACT scores to comply with a policy of the UW System Board of Regents and to provide alternative admissions information on new freshmen.

Additional ACT Information

Although the University uses only the English portion of the ACT for course placement, there are many other parts that might be of value to students. Students are encouraged to review the exam in its entirety and carefully examine the results of each segment. Scores that are significantly high might serve to reinforce a decision about intended majors or careers. Scores that are significantly low might suggest a need for assistance. Valuable information about other academic areas and career options as it relates to test scores are also a part of the ACT exam.

ACT Registration

An ACT registration packet may be obtained from any high school guidance office, or from the Office of the Registrar or Office of Admissions at UW-Green Bay. The booklet in the registration packet will answer questions about the tests and the procedures for registration. **Be sure to indicate that UW-Green Bay (code number 4688) is one of the institutions to receive your score report.** Materials to help review and prepare for the ACT test are available for purchase in the Phoenix Bookstore on campus and elsewhere. For more information, call ACT at (319) 337-1000.

The Office of the Registrar at UW-Green Bay conducts residual ACT testing for those who miss a registration deadline or regular ACT test date. Residual testing is offered only for students who will register at UW-Green Bay. Residual test scores will not be sent to other institutions by ACT, WMPT, or UW-Green Bay.

ACT English Placement

The ACT English scores are used to determine if a student has satisfied UWGB's English competency requirement. The following cut-off scores are used to place students in the most appropriate course based on their current level of English performance.

ACT English score: 16 or lower

The student must take 912-093 Fundamentals of Writing followed by 352-100 College Writing. Both courses are required and must be successfully completed by the end of the second semester at UW-Green Bay. NOTE: 912-093 is a remedial course and may not count as degree credits. It is graded on a Pass-No Credit (P-NC) basis. Students referred to 912-093 who feel they have been improperly placed may retake the ACT test. Contact the Registrar's Office on campus.

ACT English score: 17-24

The student must take the 352-100 College Writing course by the end of the second semester at UW-Green Bay. Students referred to 352-100 who feel they have been improperly placed have an additional option: the College Level Examination Program (CLEP) Freshman English Test with essay. Registration for the CLEP exam can be made in the Extended Degree Office at UWGB. A passing score on the CLEP English exam will satisfy the English competency requirements and earn three degree credits.

ACT English score: 25-31

This score satisfies UW-Green Bay's English competency requirement. The student is eligible to enroll in 352-105 Expository Writing, 352-225 Writing About the Arts and Humanities, 352-226 Writing About the Social Sciences, or 352-227 Writing About the Sciences. (Some majors and minors require 352-105 or its equivalent.)

ACT English score: 32 or higher

This score satisfies UW-Green Bay's English competency requirement. The student is eligible to enroll in 352-105 Expository Writing, 352-225 Writing About the Arts and Humanities, 352-226 Writing About the Social Sciences, or 352-227 Writing About the Sciences. (Some majors and minors require 352-105 or its equivalent.) The expository writing requirement is waived for the following programs: accounting, business administration, English, geography, human biology, and nutritional sciences.

WMPT Math Placement

The Wisconsin Mathematics Placement Test (WMPT) serves as the primary instrument for determining both mathematics competency and appropriate course placement for new freshmen and transfer students who have not successfully completed a college-level mathematics course. Information on costs, testing dates and sites is available from the Office of Admissions.

New freshmen will be advised individually on their mathematics course placement at the time of their Summer Orientation, Advising and Registration (SOAR) session. Continuing, re-entry and transfer students should plan to seek assistance from advisers at other times.

UW-Green Bay 'College Base' Assessment Program

All students who have earned between 54 and 72 credits are required to complete the UWGB base assessment test. It is made up of three sessions.

The first session is a one-hour orientation that provides an opportunity to learn about assessment and how it benefits students. The second session is the actual testing and must be completed by all continuing and transfer students who have earned between 54 and 72 credits. The testing session consists of an essay writing exercise followed by a four-part multiple choice exam. The purpose of the assessment is to test the student's skills in English, mathematics, science and social studies. The assessment provides an unbiased and honest appraisal of the student's academic strengths and weaknesses. The third session allows students to review the test results so that they can make decisions on courses that will improve or enhance their academic skills during their remaining semesters at UW-Green Bay.

Students are notified by mail when it is time to complete the assessment. Although the first and third sessions are optional, the University strongly encourages students to participate in these sessions in order to derive maximum benefit from the assessment program. There are no exceptions to testing. Assessment at each UW System university is mandatory as a part of a quality assurance program agreed to by the governor of Wisconsin and president of the UW System. It is also required as a part of the accreditation by the North Central Association.

There is no cost for taking the exam. However, if a student fails to attend one of the regularly scheduled testing sessions, a fee is required for a make-up exam. Students who have a score of 257 or higher on the exam will receive one degree credit at no cost if they have participated in all three parts of the assessment program. For more information, contact the Registrar's Office.

PLANNING AN ACADEMIC PROGRAM

Components of a Degree

Component I 40-51 credits

General Education and Competency Requirements

- 0-6 credits of English competency
- 0-3 credits of mathematics competency
- 31-33 credits of breadth consisting of:
 - 3 credits of fine arts
 - 9 credits of humanities
 - 9 credits of social sciences
 - 10-12 credits of natural sciences
- 3 credits of other-culture studies
- 3 credits of ethnic studies
- four course writing emphasis
- 3 credits of senior seminar

Component II credits vary with major

Supporting Courses

Preparatory and methods courses appropriate to the major (usually supporting courses).

Component III 30-48 credits minimum

Major

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)
- OR**
3. Professional degree (either Bachelor of Science Nursing, Bachelor of Social Work, or Bachelor of Music)

Component IV credits vary

Other Options

Courses to bring total credits to minimum of 120 degree credits required for graduation such as:

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

Total 120 degree credits (minimum requirement)

Students must have a cumulative 2.0 grade point average on UW-Green Bay courses and a 2.0 grade point average for each major and/or minor. Certain majors, minors, and professional programs may have higher minimum grade point graduation requirements.

Degree Residency Requirement

1. A minimum of 31 credits must be earned at UW-Green Bay.
2. One half of the upper-level requirements for any major, minor, etc., must be earned at UW-Green Bay.
3. The minimum credit residency requirement for a major is 15 credits.
4. The minimum credit residency requirement for a minor is 9 credits.

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

A transfer student must complete the general education requirement, but the portion of that requirement which 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.

The residency requirement does not apply to Extended Degree students.

Guidelines for Majors and Minors

1. Majors will consist of a minimum of 30 credits with at least 24 credits at the upper level.
2. Minors will consist of a minimum of 18 credits with at least 12 credits at the upper level. The three exceptions are music, art, and theatre.
3. Supporting credits/courses between a major(s) and a minor(s) may not be duplicated unless they exceed the minimum of six unduplicated credits for each major or minor.
4. Within the minima, upper-level credits between a major and minor may not be double counted. The major requires 24 unduplicated upper-level credits. The minor requires 12 unduplicated upper-level credits. Upper-level credits in excess of 24 minimum for a major and 12 for a minor may be duplicated.

5. Within the minima, six upper-level credits may be duplicated between majors.
6. Supporting or upper-level courses/credits may not be duplicated between minors unless those credits are in excess of the minima.
7. Closing entries on the official transcript will include only degrees, date, major(s), minor(s), honors (if any), and teacher certification.
8. Diplomas will carry only the degree (B.A., B.S., etc.) and honors, if any.
9. Overlapping of requirements for majors, minors, and professional programs with the general education requirements, except the senior seminar, is permitted.
10. Majors, minors and professional programs may declare that their requirements are valid for a maximum period of five years following the final approval of a student's academic plan.

Programs of Study

Interdisciplinary Majors and Minors

Humanities and Fine Arts

Communication and the Arts

(aesthetic awareness, broadfield communications, environmental design, integrated communications, musical theatre, science communication, graphic communications)

Humanistic Studies

Natural Sciences

Environmental Science
Human Biology
Information Sciences
Nutritional Sciences

Social Sciences

Environmental Policy and Planning
Human Development
Public Administration
Social Change and Development
Urban and Regional Studies

Professional Studies

Business Administration
Education (major in elementary education, minor in secondary education)
Nursing (B.S.N. for R.N.s)
Social Work (B.S.W.)

Other Options

General Studies (Extended Degree Program)
Personal Major

Minors Only

American Indian Studies
Women's Studies

Disciplinary Majors and Minors

(Students who choose a disciplinary major must also complete an interdisciplinary minor.)

Humanities and Fine Arts

Art

Communication Processes

(electronic media, journalism, organizational communication, photography, public relations, speech, linguistics)

English

French

German

History

Music

Philosophy

Spanish

Theatre

(dance)



Natural Sciences and Mathematics

Biology
Chemistry
Computer Science
Earth Science
Engineering
Mathematics
Physics

Social Sciences

Anthropology (minor only)
Economics
Geography
Political Science
Psychology
Sociology (minor only)

Professional Studies

Accounting

Certificate Programs

Coaching (Athletics)
English as a Second Language
International Studies

Areas of Emphasis

Students can develop significant specializations by choosing areas of emphasis offered by many UWGB 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, human nutrition/dietetics, graphic communications, law and social change, photography, and science communication. Students can learn about other areas of emphasis by reading descriptions of related majors and minors in this catalog, and by consulting advisers.

Preprofessional Programs

The University offers a wide variety of preprofessional programs. Some programs may be completed within one or two years while others require the completion of a four-year baccalaureate program prior to transfer to the professional school. For information, contact the Academic Advising Office. The preprofessional programs are:

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

Academic Advice

Students should see an academic adviser early in their college careers. The Academic Advising Office advises all students on meeting general education requirements and is the advising source for students with fewer than 36 earned credits. Once they have earned 36 credits, students must declare a major, and thereafter, must consult a faculty adviser in their majors. Pre-business and pre-accounting 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 majors are listed in each session's *Timetable*.

For students transferring into UWGB from other universities, it is doubly important to see an adviser. New freshmen should be sure to participate in a one-day Student Orientation, Advising, and Registration (SOAR) session before beginning their studies.

PROGRAMS OF STUDY / Majors and Minors and certificate programs

Accounting

Disciplinary Major or Minor

Associate Professors — James Doering, Karl Zehms (chairperson).
Assistant Professor — Marilyn Sagrillo.
Lecturers — Brent Hussin, Ann Selk.

Accounting at UW-Green Bay provides both in-depth knowledge and the broad business background necessary to understand the role of accounting in the business world.

Graduates are qualified 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 recent alumni survey indicates that alumni perceive the accounting program very favorably, that their program of study prepared them extremely well for their careers, that the quality of the accounting faculty is "excellent," and that they would definitely recommend the program. Recent surveys also suggest that well over 30 percent of the accounting graduates pass all four parts of the C.P.A. exam during their first sitting; of those who take it a second time, 75 percent pass all four parts. These figures compare very favorably with the national averages, where the first time pass rate is approximately 20 percent.

About 95 percent of UW-Green Bay accounting graduates typically find employment in their chosen careers within six months of graduation.

The program provides considerable exposure to the liberal arts and develops the critical thinking, problem solving, interpersonal, communication, quantitative, and computer skills needed by graduates to successfully serve as leaders within modern organizations. The program also addresses contemporary organizational issues in specific classes and throughout courses, such as the role of accounting in continuous quality improvement, implementation of computer technology and advances in accounting information systems, and accounting ethics.

The accounting curriculum is a rigorous and problem-focused program comprised of three integrated elements: supporting, core, and major courses. The supporting and core courses provide breadth and introduce each student to the foundations of business knowledge, including communication, economics, statistics, computers, accounting, finance, management, and marketing. The major courses provide depth and prepare each accounting student thoroughly for a professional career. **In addition, accounting students complete a business minor which provides additional breadth.** Each student works with a faculty adviser to plan a program which meets the student's personal and professional goals.

Faculty are committed to serving the needs of business and society, and to providing an outstanding learning environment. Excellent teaching and high levels of student participation are valued. Upper-level classes frequently number fewer than 30 students, allowing for discussion and opportunities to work closely with faculty.

The program offers opportunities to meet business professionals and gain practical experience. An active accounting student organization supports these efforts and helps students to meet others with like interests. Faculty members encourage participation in the internship program, through which students learn while working in real business settings.

Entrance and Exit Requirements

Entering freshmen should declare a pre-accounting major when they enroll. To be eligible for admission to the accounting major or minor, a student must have a minimum 2.5 grade point average on a total of at least 36 earned degree credits. Transfer students who have under 36 degree credits and/or under a 2.5 grade point average, need to earn 15 degree credits at UW-Green Bay and earn a 2.5 GPA in those 15 credits.

Eligibility does not guarantee admission. Only the most qualified applicants, based upon grade point average, are admitted from the pool of eligible students. The number of students admitted is determined by availability of faculty, enrollment levels, and other considerations.

All students must have a total of 36 earned credits with a minimum 2.5 grade point average to enroll in the "gateway" courses (107-305 and 216-322, 343, and 382).

All students must meet accounting's exit requirement to graduate with the major in accounting. Students intending to graduate with the major must have a minimum of 2.5 cumulative grade point average.

Requirements for the Major

Supporting Courses, 21 credits

- 216-215 Introduction to Business Statistics, 3 credits
(or 600-260 Introductory Statistics, 4 credits)
- 216-217 Advanced Business Statistics, 3 credits
- 266-155 Microcomputers and End-User Applications, 3 credits
- 216-280 Introduction to Management Information Systems, 3 credits
- 298-202 Macro Economic Analysis, 3 credits
- 298-203 Micro Economic Analysis, 3 credits
- 352-105 Expository Writing, 3 credits
(Or one equivalent course, either
352-225 Writing About the Arts and Humanities, or
352-226 Writing About the Social Sciences, or
352-227 Writing About the Sciences)

Upper-Level Courses, 70 credits

Core courses, 38 credits:

- 107-300 Introductory Accounting, 4 credits
- 107-302 Managerial Accounting I, 3 credits
- 107-305 Legal Environment of Business, 3 credits
- 107-306 Business Law II, 4 credits
- 107-452 Advanced Microcomputer Business Applications, 3 credits
- 216-322 Introductory Marketing, 3 credits
- 216-327 Selling and Sales Management, 3 credits
(or any 216-32X/42X course)
- 216-343 Corporation Finance, 3 credits
- 216-347 Financial Markets and Institutions, 3 credits
- 216-382 Introductory Management, 3 credits
- 216-389 Organizational Behavior, 3 credits
(or any 216-36X/46X or any 216-38X/48X course)
- 216-490 Seminar in Business Problems (capstone), 3 credits

Accounting courses, 32 credits:

- 107-301 Intermediate Accounting, 4 credits
- 107-312 Managerial Accounting II, 3 credits
- 107-313 Advanced Financial Accounting I, 3 credits
- 107-314 Advanced Financial Accounting II, 3 credits
- 107-316 Governmental and Nonprofit Accounting, 3 credits
- 107-410 Introduction to Income Tax Theory and Practice, 3 credits
- 107-411 Financial Information Systems, 3 credits
- 107-412 Auditing Standards and Procedures, 4 credits
- 107-414 Managerial Accounting III, 3 credits
- 107-415 Advanced Income Tax Theory and Practice, 3 credits

Requirements for the Minor

Supporting Courses, 9 credits

- 266-155 Microcomputers and End-User Applications, 3 credits
 352-105 Expository Writing, 3 credits
 (Or one equivalent course, either
 352-225 Writing About the Arts and Humanities, or
 352-226 Writing About the Social Sciences, or
 352-227 Writing About the Sciences)

One of these:

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

Upper-Level Courses, 23 credits

- 107-300 Introductory Accounting, 4 credits
 107-301 Intermediate Accounting, 4 credits
 107-302 Managerial Accounting I, 3 credits

One of these:

- 107-305 Legal Environment of Business, 3 credits
 216-322 Introductory Marketing, 3 credits
 216-382 Introductory Management, 3 credits

One of these:

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

Two of these:

- 107-314 Advanced Financial Accounting II, 3 credits
 107-316 Governmental and Nonprofit Accounting, 3 credits
 107-410 Introduction to Income Tax Theory and Practice, 3 credits
 107-411 Financial Information Systems, 3 credits
 107-414 Managerial Accounting III, 3 credits
 107-415 Advanced Income Tax Theory and Practice, 3 credits

American Indian Studies

Interdisciplinary Minor

Associate Professors — Clifford Abbott, Orville Clark, Peter Kellogg.
 Assistant Professor — Denise Sweet (chairperson).

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

The program offers a minor through several cooperating UW-Green Bay departments. Studies include 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 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 business, history, the arts, humanities, education, and social services. It can prepare students for a variety of careers as well as fulfill personal interests.

Requirements for the Minor

Supporting Courses, 6 credits

- 242-225 American Indian Studies: Arts and Ceremonial Traditions, 3 credits
 242-226 American Indian Studies: Wisconsin Indians, 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:

- Contemporary Issues
 (i.e., mineral rights and resource protection, gaming, sacred sites)
- Tribal Law and Legal Rights
- Environmental Issues
- Social Work, History, Economics
- Repatriation and Reclamation

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
 351-336 American Ethnic Literature: American Indian Writers, 3 credits
 493-371 American Indian Art and Artists, 3 credits
 493-372 American Indian Mythology and Literature, 3 credits
 493-374 Wisconsin Indians Ethnohistory, 3 credits

Anthropology

Disciplinary Minor

Professors — Anthony H. Galt (chairperson), Richard Logan, Lynn Walter, Associate Professor — Joseph Mannino.

Anthropology has the broadest scope of all the social sciences. Anthropology is the holistic study of humans. It includes both the biology of human populations and the study of human culture and society, both in the present and the past.

Anthropologists can study evolution, prehistory, biological variation, genetics, growth and stature, gender, ethnicity, power, politics, social stratification, art, music, dance, myth, ritual, religion, economy, work, tools, warfare, farming, hunting, ecological relationships, law and legal systems, crime, folklore, language, family, the life-span, kinship, and human thought processes.

The aims are to understand social and biological groups as wholes, the institutions found within them as systems, and the meanings people in society give to things, activities, and experiences. Developing this broad kind of understanding is beneficial for almost anything a person might choose to do in the future. Skills and perceptions gained through anthropological study can be applied to many different vocational and professional interests, including international business, government work, human development, Peace Corps, 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.

A major in an interdisciplinary program combined with a minor in anthropology provides a rich educational experience that can lead to one of several interesting intellectual and vocational directions. Combinations with interdisciplinary majors in social change and development, humanistic studies, human biology, or human development are the most obvious choices, but others are also possible.

The adviser can offer suggestions about career-oriented programs to combine with anthropology. Interested students may also contact the chairperson for information sheets that explain the advantages of combining various interdisciplinary programs with anthropology. Students seeking teacher preparation should be sure to consult advisers both in anthropology and education early to make sure they meet all requirements.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Minor

Supporting Courses, 9 credits

- 156-100 Varieties of World Culture, 3 credits
- 242-160 Introduction to Language, 3 credits
- 478-102 Introduction to Human Biology, 3 credits

Upper-Level Courses, 12 credits

- 156-303 Political, Economic and Environmental Anthropology, 3 credits
- 156-304 Family, Kin, and Community, 3 credits
- 156-320 Myth, Ritual, and Religion, 3 credits

One of these:

- 156-342 Human Evolution, 3 credits
- 156-364 Human Variability, 3 credits

Art

Disciplinary Major or Minor

Professors — David Damkoebler, Jerry Dell, Carol Emmons (chairperson), Robert Pum, Karon Winzenz.

Associate Professors — Ronald Baba, Jeff Benzow, Curt Heuer, Tom Tasch.

Assistant Professor — Christine Style.

Instructional Staff — Tomas Galaty, Robert Ratajczak, Kristina Rothe, Steven Wadzinski.

The visual arts are important components of human experience. They provide a means of articulating and understanding that experience through processes of seeing, making, and thinking in terms of visual systems. The disciplinary major or minor in art includes courses in studio art and art history, other cultures, and contemporary art.

Studio art courses:

- present art making as a problem-solving process using creative methods combining intuition and imagination with critical analysis;
- provide knowledge necessary to master 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.

Art history, other cultures, and contemporary art courses:

- provide a conceptual and philosophical context by investigating stylistic characteristics of specific periods and the dynamic relationship between art and society. Refer to Communication and the Arts listings for related courses taught by art faculty.

The art discipline has three areas of emphasis. These are:

- **Studio art**, which can lead to professional practice as an artist or to related visual communication careers.
- **Art education**, which leads to credentials for teaching licensure from the Wisconsin Department of Public Instruction.
- **Art management**, which offers preparation for a wide range of careers in museums, art centers, galleries, collections, and other art organizations.

A fourth career direction is open to art majors who select a minor in Communication and the Arts with an emphasis in graphic communication. Possible careers include graphic design, art direction, advertising, and other professional work in graphic communication.

All four areas prepare students for viable careers or for entry into graduate school programs. Students 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.

Students should seek faculty advising no later than the sophomore year in order to complete an art major in a timely manner.

Students in many fields find 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 a personal interest in art;
- those seeking to add visual skills to career preparations in such interdisciplinary fields as integrated communications, communication and the arts, humanistic studies, urban and regional studies, and environmental planning;
- persons who intend it as a component of professional studies in fields such as education and business (advertising and marketing).

Art facilities include well-equipped studios in painting, drawing, sculpture, ceramics, photography, computer graphics, art metals/jewelry, fibers/textiles, papermaking and printmaking. All art students who complete 168-101 (Tools, Safety, and Materials) have access to a professional wood and metal-working laboratory, managed by a full-time staff person who provides training and technical assistance.

The art management emphasis provides opportunities to work in the Lawton Gallery and the 407 Gallery under the direction of the curator of art. Internships in regional art organizations and museums are also possible in the art management emphasis.

Active student organizations provide additional opportunities for art-related activities, as does a program of national and international visiting artists.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

(vary with the area of emphasis)

Areas of Emphasis

■ Studio Art

Supporting Courses, 31 credits required

Studio Art and Art Management have the same supporting course requirements.

Art history, 9 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

Design, 10 credits:

- 168-101 Tools, Safety, and Materials, 1 credit
- 168-105 Drawing, 3 credits
- 168-106 Design Methods, 3 credits
- 168-107 Two-Dimensional Design, 3 credits

Two-Dimensional Studios, choose 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 6 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: 1945 - Present, 3 credits

Studio courses, 18 credits:

The design core listed above is required for all upper-level studio courses. Of the total 18 credit studio requirement, a minimum of 9 credits should be selected from one studio area, in consultation with an art faculty adviser.

Required:

- 168-302 Intermediate Drawing, 3 credits

Fifteen additional credits in 300-400 level studio work must be selected with a faculty adviser. Following are **sample** studio programs.

Painting:

- 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:

- 168-311 Intermediate Painting, 3 credits
- 168-373 Intermediate Intaglio, 3 credits
- 168-377 Intermediate Lithography, 3 credits
- * 168-402 Advanced Drawing, 3 credits

Sculpture:

- 168-321 Intermediate Sculpture, 3 credits
- 168-331 Intermediate Ceramics, 3 credits
- 168-364 Intermediate Art Metals: Jewelry, 3 credits
- * 168-421 Advanced Sculpture, 3 credits

Ceramics:

- 168-321 Intermediate Sculpture, 3 credits
- 168-331 Intermediate Ceramics, 3 credits
- 168-355 Intermediate Textiles: Papermaking, 3 credits
- * 168-431 Advanced Ceramics, 3 credits

Photography:

- 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
- 168-493 Photography Portfolio, 3 credits

Art metals:

- 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:

- 168-311 Intermediate Painting, 3 credits
- 168-321 Intermediate Sculpture, 3 credits
- 168-355 Intermediate Textiles: Papermaking, 3 credits
- * 168-453 Advanced Textiles, 3 credits

Printmaking:

- 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, 3 credits

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

■ Art Management

Supporting Courses, 31 credits required

See the Studio Art emphasis. Art Management and Studio Art have the same supporting course requirements.

Upper-Level Courses, 30 credits required

Art history, 6 credits:

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

Studio courses, 12 credits:

- 168-302 Intermediate Drawing, 3 credits

Select 9 additional studio credits that include both two-dimensional and three-dimensional areas.

Art management core, 12 credits:

- 168-395 Exhibition Development and Design, 3 credits
- 168-396 Art Management: Practices, Principles, and Policy, 3 credits
- 168-495 Advanced Art Management, 3 credits
(repeatable up to 9 credits)
- 168-497 Internship in Art Management, 3-9 credits (not required)

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

- 246-133 Fundamentals of Public Address, 3 credits
- 352-105 Expository Writing, 3 credits
- 352-225 Writing About the Arts and Humanities, 3 credits

Anthropology:

- 156-100 Varieties of World Culture, 3 credits
- 156-320 Myth, Ritual and Religion, 3 credits
- 242-225 American Indian Studies: Arts and Ceremonial Traditions, 3 credits

Art history:

- 168-498 Independent Study, 1-4 credits
- 242-370 Modern American Culture, 3 credits

Students should consult with faculty in art management before selecting recommended courses. The recommended 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. Only those requirements for coursework in art are listed here. For additional information about admission to the teacher education program, consult the Education Office, or the Office of Academic Advising, or refer to the Education program description in this catalog. For advising information, see the art education adviser.

Supporting Courses, 37 credits required:**Art history, 6 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

Design, 10 credits:

- 168-101 Tools, Safety, and Materials, 1 credit
- 168-105 Drawing, 3 credits
- 168-106 Design Methods, 3 credits
- 168-107 Two-Dimensional Design, 3 credits

Studio, 21 credits:**Two-Dimensional Studios (9 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 (12 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: 1945 - Present, 3 credits

Studio art, 18 credits:

- 168-302 Intermediate Drawing, 3 credits

Fifteen elective credits should include five studio courses from the 300-400 level in drawing, painting, printmaking, photography, art metals, textiles, sculpture, or ceramics for which appropriate prerequisites have been completed.

Requirements for the Minor

(vary with the area of emphasis)

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

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

Design core, 6 credits:

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

Introductory studios, choose 6 credits:

- 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 in painting, drawing, photography, or printmaking, for which appropriate prerequisites have been completed.

■ Three-Dimensional Emphasis**Supporting Courses, 16 credits****Background, 3 credits:**

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

Design core, 7 credits:

- 168-101 Tools, Safety, and Materials, 1 credit
- 168-105 Drawing, 3 credits
- 168-106 Design Methods, 3 credits

Introductory studios, choose 6 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, 6 credits

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

■ Art History**Supporting Courses, 15 credits**

- 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

Upper-Level Courses, 6 credits

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

Biology

Disciplinary Major or Minor

Professors — Hallet J. Harris, Michael D. Morgan, V.M.G. Nair, Dorothea B. Sager, Paul E. Sager (chairperson), Leander J. Schwartz, Richard J. Stevens.

Associate Professors — Robert W. Howe, Charles A. Ihrke, Warren V. Johnson, James O. Marker, Donna L. Ritch.

Assistant Professor — Jeffrey Nekola.

The biology major prepares students for careers in cell and molecular biology, biochemistry, plant and animal biology, genetics, physiology, ecology, and field biology. 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 270-acre Cofrin Arboretum on the campus, 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 particular advantage of the UW-Green Bay program is the opportunity for undergraduate students to gain practical experience. Many students work with 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, environmental policy and planning, or business administration.

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.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 32-33 credits

- 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
- 600-104 Elementary Functions: Algebra and Trigonometry, 4 credits
- 600-260 Introductory Statistics, 4 credits

Three additional credits of mathematics from:

- 266-155 Microcomputers and End-User Applications, 3 credits
- 266-256 Introduction to Computer Science I, 4 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
- 352-105 Expository Writing, 3 credits
(Or one equivalent course: either
352-225 Writing About the Arts and Humanities, or
352-226 Writing About the Social Sciences, or
352-227 Writing About the Sciences)

Biology majors are strongly advised to consider:

- 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, 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

Upper-Level Courses, 24 credits

Core Courses, 13-14 credits

- 204-303 Genetics, 3 credits
- 362-302 Principles of Ecology, 3 credits

One of these:

- 204-302 Principles of Microbiology, 4 credits
- 204-307 Cell Biology, 4 credits

One of these:

- 204-311 Plant Physiology, 4 credits
- 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.

■ Plant Biology

- 204-304 Genetics Laboratory, 1 credit
- 204-305 Biological Microtechnique, 3 credits
- 204-310 Plant Taxonomy, 3 credits
- 204-311 Plant Physiology, 4 credits
- 204-312 Mycology, 3 credits
- 204-317 Structure of Seed Plants, 3 credits
- 204-320 Field Botany, 3 credits
- 362-363 Plants and Forest Pathology, 3 credits

■ **Animal Biology**

- 204-301 Evolutionary Processes, 3 credits
- 204-304 Genetics Laboratory, 1 credit
- 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
- 204-346 Comparative Physiology, 3 credits
- 204-347 Developmental Biology, 4 credits
- 478-318 Mammalian Reproduction, 3 credits
- 478-402 Human Physiology, 3 credits
- 478-413 Neurophysiology, 3 credits

■ **Field Botany 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 Plants and Forest Pathology, 3 credits
- 362-401 Stream Ecology, 3 credits
- 362-403 Limnology, 3 credits
- 362-475 Ecological Dynamics, 4 credits

■ **Cell/Molecular Biology**

- 204-302 Principles of Microbiology, 4 credits
- 204-305 Biological Microtechnique, 3 credits
- 204-307 Cell Biology, 4 credits
- 204-312 Mycology, 3 credits
- 204-402 Advanced Microbiology, 3 credits
- 204-407 Molecular Biology, 3 credits
- 204-408 Molecular Biology Laboratory, 1 credit
- 225-330 Biochemistry, 3 credits
- 225-331 Biochemistry Laboratory, 1 credit

For teacher preparation in the biology major, the minimum number of credits in biology is 26. In consultation with an adviser, students may complete the 26 credits from more than one emphasis area.

Requirements for the Minor

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

Supporting Courses, 18 credits

- 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

Upper-Level Courses, 13-14 credits

Complete the core courses as listed under the requirements for the major.

Business Administration

Interdisciplinary Major or Minor

Professor — David Outcalt.

Associate Professors — William Conley, James Doering, A. Sam Ghanty, John Harris, Robert Nagy, Robert Obenberger, Michael Troyer, Karl Zehms (chairperson).

Assistant Professors — Manjeet Dhatt, Marilyn Sagrillo, Peter Smith, Sandra Taylor.

Lecturers — Lucy Arendt, Brent Hussin, Donald McCartney, Ann Selk, Daniel Spielmann.

UW-Green Bay's major and minor in business administration offer the skills and broad business background needed for a lifetime of opportunity. About 90 percent of students typically find employment in business, industry, government, and other fields, or enter graduate programs within six months of graduation. UWGB students are accepted into reputable graduate schools. Many alumni are successful business leaders. A recent alumni survey indicates that alumni perceive the business administration program very favorably, that their program of study prepared them extremely well for their careers, that the quality of the business administration faculty is "excellent," and that they would definitely recommend the program.

Business students gain the breadth and depth required of today's business employees through their general education, major, and minor courses.

The program provides considerable exposure to the liberal arts and develops the critical thinking, problem solving, interpersonal, communication, quantitative, and computer skills needed by graduates to successfully serve as leaders within modern organizations. The program also addresses contemporary organizational issues in specific classes and throughout courses, such as global competition, continuous quality improvement, social responsibility and ethics, and the relationship between organizations and various environmental forces.

The business major is an interdisciplinary and problem-focused program comprised of three integrated elements: supporting, core, and emphasis courses. The supporting and core courses provide breadth and introduce each student to the foundations of business knowledge, including communication, economics, statistics, computers, accounting, finance, management, and marketing. Each business major studies extensively an area of emphasis: finance, management, or marketing. Each emphasis includes courses designed to thoroughly prepare the student in a business specialization. A unique feature of the business administration program is that students are required to develop expertise and problem-solving proficiency in at least one other field by completing a non-business minor. Each student works with a faculty adviser to plan a program which meets the student's personal and professional goals.

Faculty are committed to serving the needs of business and society, and to providing an outstanding learning environment. Excellent teaching and high levels of student participation are valued. Upper-level classes frequently number fewer than 35 students, allowing close work with faculty.

A distinctive feature of the program is that the majority of upper-level courses include a practical project component, offering the opportunity to apply the problem-solving theories and concepts learned in the classroom to real situations. Alumni say these experiences increase their value to employers, and set them apart from traditional business program graduates.

The program offers additional opportunities to meet business professionals and gain practical experience. Active student organizations in finance, marketing, and quality management support these efforts and help students to meet others with like interests. Faculty members encourage participation in the internship program, through which students learn while working in real business settings.

Program Entrance and Exit Requirements

Entering freshmen should declare a pre-business major when they enroll. To be eligible for admission to the business administration major or minor, a student must have a minimum 2.5 grade point average on a total of at least 36 earned degree credits. Transfer students under 36 degree credits and/or under a 2.5 grade point average, need to earn 15 degree credits at UW-Green Bay and earn a 2.5 GPA in those 15 credits.

Eligibility does not guarantee admission. Only the most qualified applicants, based upon grade point average, are admitted from the pool of eligible students. The number of students admitted is determined by availability of faculty, enrollment levels, and other considerations.

All students must have a total of 36 earned credits with a minimum 2.5 grade point average to enroll in the "gateway" courses (107-305 and 216-322, 343, and 382).

All students must meet business administration's exit requirement to graduate with the major in business administration. Students intending to graduate with the major must have a minimum 2.5 cumulative grade point average.

Requirements for the Major**Supporting Courses, 21 credits**

- 216-215 Introduction to Business Statistics, 3 credits
(or 600-260 Introductory Statistics, 4 credits)
- 216-217 Advanced Business Statistics, 3 credits
- 266-155 Microcomputers and End-User Applications, 3 credits
- 216-280 Introduction to Management Information Systems, 3 credits
- 298-202 Macro Economic Analysis, 3 credits
- 298-203 Micro Economic Analysis, 3 credits
- 352-105 Expository Writing, 3 credits
(Or one equivalent course, either
352-225 Writing About the Arts and Humanities, or
352-226 Writing About the Social Sciences, or
352-227 Writing About the Sciences)

Core Courses, 31 credits

- 107-300 Introductory Accounting, 4 credits
- 107-302 Managerial Accounting I, 3 credits
- 107-305 Legal Environment of Business, 3 credits
- 216-322 Introductory Marketing, 3 credits
- 216-428 Consumer Behavior, 3 credits (or any 216-32X/42X course;
216-428 is required for marketing emphasis)
- 216-343 Corporation Finance, 3 credits
- 216-347 Financial Markets and Institutions, 3 credits (or any 216-34X/
44X course; 216-347 is required for finance emphasis)
- 216-382 Introductory Management, 3 credits
- 216-389 Organizational Behavior, 3 credits (or any 216-36X/46X
course or any 216-38X/48X course; 216-389 is required for
management emphasis)
- 216-490 Seminar in Business Problems (capstone), 3 credit

Areas of Emphasis, 12 credits

Each student takes four emphasis courses selected from the area of finance, management, or marketing.

■ Finance Emphasis

- 216-442 Principles of Investment, 3 credits
- 216-445 International Financial Management, 3 credits
- 216-446 Advanced Corporation Finance, 3 credits

One of these:

- 216-447 Advanced Investments, 3 credits
- 216-450 Bank Administration, 3 credits

■ Management Emphasis

Students select one of two specializations: general or human resource management

General:

- 216-480 Quality Management, 3 credits
- 216-482 Strategic Management, 3 credits
- 216-489 Organizational Theory, 3 credits

Select one of the following:

- 107-452 Advanced Microcomputer Business Applications, 3 credits
- 216-317 Computer Optimization, 3 credits
- 216-362 Human Resource Management, 3 credits
- 216-384 Production/Operations Management, 3 credits
- 216-487 Ethics and Social Issues in Business, 3 credits
- 216-488 Rational Decision Making in Administration, 3 credits

Human Resource Management:

- 216-362 Human Resource Management, 3 credits
- 216-460 Human Resource Development, 3 credits
- 216-462 Seminar in Human Resource Management, 3 credits
- 216-467 Compensation and Benefits, 3 credits

■ Marketing Emphasis

Students select one of two specializations: marketing communications or strategic marketing

Marketing Communications:

- 216-325 Public Relations, 3 credits
- 216-327 Selling and Sales Management, 3 credits
- 216-423 Advertising, 3 credits
- 216-425 Promotional Strategy, 3 credits

Strategic Marketing:

- 216-424 Marketing Research, 3 credits
- 216-425 Promotional Strategy, 3 credits
- 216-426 Marketing Management, 3 credits

One of these:

- 216-327 Selling and Sales Management, 3 credits
- 216-427 Practicum in Marketing Research, 3 credits

Minor, 18 credits

All business administration majors must complete a nonbusiness minor, composed of at least 18 credits.

Requirements for the Minor**Supporting Courses, 18-19 credits**

- 266-155 Microcomputers and End-User Applications, 3 credits
- 298-202 Macro Economics Analysis, 3 credits
- 298-203 Micro Economics Analysis, 3 credits
- 216-215 Introduction to Business Statistics, 3 credits
(Or its equivalent: either 600-260 or 255-205)

One of these:

- 216-202 Business and Its Environment, 3 credits
- 216-282 Personal Financial Planning, 3 credits

One of these:

- 216-206 Law and the Individual, 3 credits
- 107-305 Legal Environment of Business, 3 credits

Upper-Level Courses, 13 credits

- 107-300 Introductory Accounting, 4 credits
- 216-322 Introductory Marketing, 3 credits
- 216-343 Corporation Finance, 3 credits
- 216-382 Introductory Management, 3 credits

Chemistry

Disciplinary Major or Minor

Professors — Jack C. Norman, Ronald H. Starkey (chairperson), Thomas E. Van Koevering, James H. Wiersma.

Associate Professors — Dawson C. Deese, Warren V. Johnson.

Assistant Professor — John M. Lyon.

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 undergraduate students to engage in research. The majority of UWGB chemistry majors have opportunities to work as research assistants on faculty projects, or to do their own independent projects. During advanced coursework and in research projects students gain hands-on experience using a variety of modern chemical instruments such as mass spectrometers, infrared and visible-ultraviolet spectrophotometers, nuclear magnetic resonance spectrometers, ultracentrifuge, gas-liquid chromatographs, high-performance liquid chromatographs, and gamma-ray and liquid scintillation counters.

UWGB faculty are active in research on pulp and paper, water quality, air pollution, radon, biochemistry, and molecular biology. Experience in research is very important when entering the job market and in applying to graduate and professional schools.

The UW-Green Bay chemistry program is accredited by the American Chemical Society (ACS) 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. About half of UW-Green Bay chemistry majors continue their studies in graduate or professional schools.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 29 credits

- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 362-207 Laboratory Safety, 1 credit
- 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, 28 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
- 225-320 Thermodynamics and Kinetics, 3 credits
- 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, choose 4 credits:

- 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
- 225-420 Polymer Chemistry, 3 credits

American Chemical Society-Certified Major

Required courses as stated above plus:

- 225-410 Inorganic Chemistry, 3 credits
 - 225-411 Inorganic Chemistry Laboratory, 1 credit
- One additional upper-level chemistry lecture and laboratory course (see above list of electives), 4 credits
- 225-498 Independent Study, 3 credits
 - 266-455 Microprocessors and Digital Electronics, 3 credits
 - 600-305 Ordinary Differential Equations, 3 credits

Requirements for the Minor

Supporting Courses, 11 credits

- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 362-207 Laboratory Safety, 1 credit

Upper-Level Courses, 12 credits

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

Electives include:

The electives listed for a chemistry major.

- 225-328 Physiological Chemistry, 3 credits
- 225-434 Environmental Chemistry, 3 credits
- 225-435 Environmental Chemistry Laboratory, 1 credit

Communication and the Arts

Interdisciplinary Major or Minor

Professors — Trinidad Chavez, Arthur Cohrs, David Damkoehler, Jerry Dell, Carol Emmons, Eugenia Erdmann, Louis Erdmann, Lovell Ives, Donald Larmouth, Terence O'Grady, Robert Pum, Karon Winzenz.
Associate Professors — Jeffrey Benzow, Jeffrey Entwistle (chairperson), Cheryl Grosso, Curtis Heuer, Susan Kline-Heim, Sarah Meredith, Laura Riddle.

Assistant Professors — Victoria Goff, John Salerno.

Lecturers — Marcia Meyer, Jeanellyn Schwarzenbach.

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 and 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 regional studies 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 engineering to prepare for graduate study or for careers in architecture, engineering, environmental design, urban planning, visual arts, interior design, or industrial design.

■ **Integrated communications** brings together studies of image and text to examine both the theory and process of informative and expressive communication. Study of the history, applications, and influences of print and video communications, including the transition between traditional and computer methods of generating messages integrating image and text, support the development, design, and production of a whole range of communication materials.

Students will need to acquire the knowledge to use computer-aided design and computer imaging in both DOS and Macintosh environments, knowledge of traditional photographic and print imaging and production methods, writing skills, and ability in generating solutions and strategic thinking.

Studies in this emphasis provide a contemporary liberal arts education and support advanced studies and professional work in a wide range of communication and expressive careers, among them publications management, electronic publishing, journalistic and creative writing, corporate communications, and in advertising, marketing, and public relations, copy writing, editing, advertising and editorial photography, design, art direction, and creative direction. Graduate studies associated with these fields of knowledge also are possibilities.

Available facilities include an electronic publishing graphics computer laboratory, and photography darkroom, studio, and image processing computer laboratory. Internships and practicums provide opportunities for work in the field among professionals.

■ **Musical theatre** prepares students for high-order participation in the musical theatre realm of the performing arts. This emphasis focuses on the study of history, directing, criticism, music theory, and accompanying skills in addition to the more obvious preparation in the areas of vocal production, acting, and dance. Students might combine this program with careers in secondary and elementary education or prepare for graduate school and careers in professional musical theatre performance.

■ **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

Supporting Courses, 12 credits

242-261 Aesthetic Awareness: Foundations, 3 credits

Choose nine credits 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

242-160 Introduction to Language, 3 credits

242-202 Concepts and Issues of Modern Art, 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 supporting course work may be chosen from related disciplines with the approval of the faculty adviser.

Upper-Level Courses, 24 credits

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 nine credits from:

242-327 Cross-Cultural Communication: Jazz History, 3 credits

242-328 Cross-Cultural Communication: American Show Music, 3 credits

242-329 Cross-Cultural Communication: World Music, 3 credits

242-370 Modern American Culture, 3 credits

242-375 Communication Skills: Language of Metaphor, 3 credits

242-380 The Arts: London, 3 credits

242-430 Information, 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*

Supporting Courses, 12 credits

- 242-160 Introduction to Language, 3 credits

Choose nine credits from:

- 242-141 Introduction to the Performing Arts: Theatre and Music, 3 credits
 242-142 Performing Arts Perspectives: Experience and Evaluation, 3 credits
 242-221 Popular Music Since 1955, 3 credits
 242-243 Native American Cultures: Film and Performance I, 3 credits
 242-261 Aesthetic Awareness: Foundations, 3 credits
 246-102 Introduction to Mass Communication, 3 credits

Up to six credits of supporting course work from related disciplines may be selected with the approval of a faculty adviser.

Upper-Level Courses, 24 credits

- 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 Information, Media and Society, 3 credits

Electives, choose twelve credits from:

- 242-327 Cross-Cultural Communication: Jazz History, 3 credits
 242-328 Cross-Cultural Communication: American Show Music, 3 credits
 242-329 Cross-Cultural Communication: World Music, 3 credits
 242-362 Aesthetic Awareness: Psychology of Aesthetic Perception, 3 credits
 242-380 The Arts: London, 3 credits
 246-320 History of the English Language, 3 credits
 246-326 Modern Semantics, 3 credits

■ *Environmental Design*

Supporting Courses, 15 credits

- 168-106 Design Methods, 3 credits

One of these:

- 951-210 Drawing Systems for the Designer, 3 credits
 325-105 Engineering Graphics, 3 credits

Choose nine credits 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
 242-202 Concepts and Issues of Modern Art, 3 credits
 242-231 Introduction to Graphic Communications, 4 credits
 951-200 Introduction to Urban Studies, 3 credits

Upper-Level Courses, 24 credits

Choose fifteen 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 Communications, 3-12 credits
 951-325 Behavior in Designed Environments, 3 credits
 951-412 Urban Planning, 3 credits

Choose nine credits from:

- 951-436 Environmental Design Studio I, 3 credits (individual scale)
 242-437 Environmental Design Studio II, 3 credits (small-group scale)
 951-438 Environmental Design Studio III, 3 credits (community scale)
 242-439 Environmental Design Studio IV, 3 credits (senior project)

■ *Integrated Communications*

Supporting Courses, 29 credits

- 168-101 Tools, Safety, and Materials, 1 credit
 168-106 Design Methods, 3 credits

- 168-107 Two-Dimensional Design, 3 credits
 242-231 Introduction to Graphic Communications, 4 credits
 246-102 Introduction to Mass Communications, 3 credits
 246-203 Newswriting Laboratory, 3 credits
 246-243 Introduction to Photography, 3 credits

History and Theory, 9 credits from:

History (minimum of 3 credits)

- 242-103 History of the Visual Arts: Renaissance to French Revolution, 3 credits
 242-370 Modern American Culture, 3 credits

Theory (minimum of 3 credits)

- 242-430 Information, Media and Society, 3 credits
 246-380 Communication Law, 3 credits

Upper-Level Courses, 24 credits

Graphics core, 9 credits:

- 242-331 Graphic Communications Studio I, 3 credits
 242-332 Graphic Communications Studio II, 3 credits
 242-432 Graphic Communications Workshop, 3 credits

Writing/Text Processing, 6 credits from:

- 242-375 Communication Skills: Language of Metaphor, 3 credits
 246-303 Feature Writing, 3 credits
 246-390 Scientific and Technical Writing, 3 credits

Image Processing, 6 credits from:

- 168-375 Screen Printing, 3 credits
 168-377 Lithography, 3 credits
 168-470 Advanced Printmaking, 3 credits
 246-343 Photography II, 3 credits
 246-344 Photography III, 3 credits
 246-346 Photographic Design for Print Media, 3 credits
 246-444 Time Duration Visual Media, 3 credits

Applied Practicum, 3-6 credits (3 credits required):

- 242-483 Practicum in Integrated Publishing, 3 credits
 242-497 Internship in Graphic Communications, 3 credits
 246-460 Publications Management, 3 credits

Disciplinary or Interdisciplinary Minor, 21 credits

A required minor should be selected with the aid of a faculty adviser.

Possible minors include art (printmaking, drawing, photography), communication processes (journalism, electronic media, photography), business administration, literature and language or others supporting personal interest and educational or career goals.

■ *Musical Theatre*

Supporting Courses, 44-47 credits

Music supporting courses:

- 670-115 Ear Training and Sightsinging I, 1 credit
 670-116 Ear Training and Sightsinging II, 1 credit
 670-151 Materials and Values in Music I, 3 credits
 670-152 Materials and Values in Music II, 3 credits
 672-105/106/205/206 Applied Voice Lessons, 8 credits

Two credits from:

- 672-261 Concert Choir, 1 credit

AND/OR

- 672-262 University Chorus, 1 credit

Keyboard Proficiency (variable credit), 1-4 credits

Theatre supporting courses:

- 915-128 Jazz Dance I, 1 credit
 915-131 Beginning Acting I, 3 credits
 915-137 Ballet I, 1 credit
 915-145 Modern Dance I, 1 credit
 915-161 Tap Dance I, 1 credit
 915-222 Theatre Production Techniques II: Costume and Makeup, 3 credits
 915-228 Jazz Dance II, 2 credits

- 915-231 Intermediate Acting, 3 credits
 915-261 Tap Dance II, 1 credit
 915-328 Jazz Dance III, 2 credits
 915-361 Tap Dance III, 1 credit.

Communication and the Arts supporting courses:

- 242-141 Introduction to the Performing Arts: Theatre and Music, 3 credits
 242-142 Performing Arts Perspectives: Experience and Evaluation, 3 credits

Upper-Level Courses, 33 credits

Major musical, 3 credits:

- 915-335 Performance Practicum, 3 credits

Music courses, 9 credits from:

- 670-333 Basic Conducting, 2 credits
 670-346 Keyboard Accompanying I, 1 credit
 672-305/306 Applied Voice Lessons, 2, 2 credits
 672-483 Opera Workshop, 2 credits
 (672-461 Concert Choir or 672-462 University Chorus or 672-164/364 Show Choir may be substituted)

Theatre courses, 15 credits:

- 915-305 Audition Techniques for the Actor, 3 credits
 915-310 Theatre History II, 3 credits
 915-331 Advanced Acting, 3 credits
 915-351 Directing I, 3 credits
 915-352 Directing II, 3 credits

Communication and the Arts courses, 6 credits:

- 242-328 Cross-Cultural Communication: American Show Music, 3 credits

One of these:

- 242-478 Distinction in the Major, 3 credits
 242-484 Senior Honors Project, 3 credits
 242-498 Independent Study, 3 credits

■ Science Communication

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

Supporting Courses, 37-39 credits

Choose fifteen credits in communications from:

- 242-231 Introduction to Graphic Communications, 4 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
 352-105 Expository Writing, 3 credits

OR

- 352-227 Writing About the Sciences, 3 credits

From 22 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 and earth science.

Upper-Level Courses, 30 credits

Choose eighteen credits 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 Information, Media and Society, 3 credits
 242-497 Internship in Graphic Communications, 3-12 credits
 246-303 Feature Writing, 3 credits
 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 Designing 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 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 supporting courses in a particular emphasis, remaining credits may be chosen from concentration courses with an adviser's approval.

■ Aesthetic Awareness

Supporting Courses, 9 credits

- 242-261 Aesthetic Awareness: Foundations, 3 credits

Choose the remaining 6 credits from the list of supporting courses for the major.

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

Supporting Courses, 9 credits

- 242-231 Introduction to Graphic Communications, 4 credits

Choose the remaining 6 credits from the supporting courses listed in the Integrated Communications major.

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 Communications, 3-12 credits

Choose remaining credits with faculty advice.

■ Broad-Field Communications

Supporting Courses, 9 credits

- 242-160 Introduction to Language, 3 credits

Choose the remaining 6 credits from the list of supporting courses for the major.

Upper-Level Courses, 12 credits

Choose a minimum of 6 credits from:

- 242-323 Language of Human Conflict, 3 credits
 242-375 Communication Skills: The Language of Metaphor, 3 credits
 242-430 Information, Media and Society, 3 credits

Choose remaining credits with faculty advice.

Communication Processes

Disciplinary Major or Minor

Professors — Phillip Clampitt (organizational communication) (chairperson), Jerry Dell (photography), Donald Larmouth (linguistics, scientific and technical communication, ESL), Timothy Meyer (electronic media, public relations).

Associate Professors — Clifford Abbott (linguistics), Jeffrey Benzow (graphic communication), Charles Matter (cognitive and perceptual psychology).

Assistant Professor — Victoria Goff (print journalism).

Lecturers — Marcia Meyer, Jeanellyn Schwarzenbach.

The disciplinary program in communication processes offers contemporary communication studies emphasizing comprehensive understanding of communication in traditional and new media and study in depth of particular forms of communication. Students come to understand how communication happens; how messages are put into visual and verbal codes; how messages are filtered through various media; how they are interpreted in different contexts; and how they construct those contexts.

Sending and receiving messages are essential parts of everyone's life. New information technologies tend to merge media and demand in both contemporary scholarship and in professional careers the kind of integrative knowledge provided by a major or minor in communication processes.

Before being admitted to the communication processes major, a student must earn a minimum grade point average (GPA) of 2.50 based on completion of 30 degree credits. Students not meeting the GPA minimum may contact their faculty adviser for information on appeal procedures.

Communication processes offers six areas of emphasis, although students are not required to select an 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 and 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.

■ **Photography** students come to understand photography as a problem-solving process combining imagination, intuition, critical analysis, and mastery of tools and materials, including traditional photographic means and new digital and electronic imaging systems. The integration of theoretical concepts and practical experience prepares 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 teaching 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, several communication processes courses involve students in research projects in the community.

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 public and environmental 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.

Supporting Courses, 15-18 credits

Required courses:

246-200 Communication Processes: An Introduction, 3 credits

246-201 Human Information Processing, 3 credits

Select 9-12 credits from:

* 242-160 Introduction to Language, 3 credits

* 242-231 Introduction to Graphic Communications, 4 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

246-243 Introduction to Photography, 3 credits

246-253 Practicum in Print Journalism I, 1-3 credits

Depending on the area of emphasis, additional supporting courses are required:

The emphasis in **print journalism** and the emphasis in **electronic media** require a total of 15 credits in supporting courses which must include 246-102 Introduction to Mass Communication, and 246-203 Newswriting Laboratory. 246-243 Introduction to Photography is recommended.

The emphasis in **photography** requires a total of 15 credits in supporting courses which must include 246-203 Newswriting Laboratory, and 246-243 Introduction to Photography. 246-102 Introduction to Mass Communication is recommended.

The emphasis in **organizational communication** requires a total of 15 credits in supporting courses, which must include 246-102 Introduction to Mass Communication, 246-133 Fundamentals of Public Address, and 246-203 Newswriting Laboratory.

The emphasis in **public relations** requires a total of 18 credits in supporting courses which must include 246-102 Introduction to Mass Communication, 246-133 Fundamentals of Public Address, 246-203 Newswriting Laboratory, and 246-243 Introduction to Photography.

The emphasis in **linguistics/teaching English as a second language** requires a total of 23 credits in supporting courses which must include 242-160 Introduction to Language and two years of a foreign language (14 credits) or equivalent proficiency.

Upper-Level Courses

Upper-level courses vary with each area of emphasis.

Areas of Emphasis

■ **Print Journalism, 24 credits** See required supporting courses.

Required:

- 246-303 Feature Writing, 3 credits
- 246-380 Communication Law, 3 credits

A minimum of six credits from:

- 246-353 Practicum in Print Journalism II, 1-3 credits
- 246-390 Scientific and Technical Communication, 3 credits
- 246-403 Advanced Reporting, 3 credits
- 246-460 Publications Management, 3 credits

Twelve credits from these or other faculty adviser-approved upper-level courses:

- * 242-450 The Construction of Public Images, 3 credits
- 246-305 Elements of Electronic Media, 3 credits
- 246-308 Information Technologies, 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
- 246-497 Internship in Communication Processes, 3 credits

■ **Electronic Media, 24 credits** See required supporting courses.

Required:

- 246-305 Elements of Electronic Media, 3 credits
- 246-306 Radio Broadcasting, 3 credits
- 246-307 Television Production Technologies, 3 credits
- 246-308 Information Technologies, 3 credits
- 246-309 Electronic Media Commercial Campaigns, 3 credits
- 246-380 Communication Law, 3 credits

Six credits from these or other faculty adviser-approved upper-level courses:

- * 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
- 246-445 Human Communication Theory, 3 credits
- 246-497 Internship in Communication Processes, 3 credits

■ **Photography, 24 credits** See required supporting courses.

Required, 12 credits:

- 246-343 Photography II, 3 credits
- 246-344 Photography III, 3 credits
- 246-443 Advanced Problems in Photography, 3 credits (may be taken three times)
- 246-493 Photography Portfolio, 3 credits

Twelve credits from these or other faculty adviser-approved upper-level courses:

- 242-370 Modern American Culture, 3 credits
- 246-305 Elements of Electronic Media, 3 credits
- 246-307 Television Production Techniques, 3 credits
- 246-308 Information Technologies, 3 credits
- 246-390 Scientific and Technical Writing, 3 credits
- 246-403 Advanced Reporting, 3 credits
- 246-443 Advanced Problems in Photography, 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

■ **Organizational Communication, 24 credits**

See required supporting courses.

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

Nine credits from these or other faculty adviser-approved upper-level courses:

- * 242-450 The Construction of Public Images, 3 credits
- 246-308 Information Technologies, 3 credits
- 246-445 Human Communication Theory, 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** See required supporting courses, plus 14 credits required in a foreign language (equivalent to two years of college-level study)

Required for 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

Twelve credits from:

- 246-320 History of the English language, 3 credits
- 246-326 Modern Semantics, 3 credits
- 246-337 Small Group Communication, 3 credits
- 246-445 Human Communication Theory, 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 Childhood, 3 credits

■ **Public Relations, 30 credits** See required supporting courses.

Required:

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

A minimum of 6 credits from:

- 246-353 Practicum in Print Journalism II, 3 credits
- 246-390 Scientific and Technical Communication, 3 credits
- 246-403 Advanced Reporting, 3 credits
- 246-460 Publications Management, 3 credits

Eighteen credits from these or other faculty adviser-approved upper-level courses:

- 246-308 Information Technologies, 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
- 246-444 Time Duration Visual Media, 3 credits
- 246-445 Human Communication Theory, 3 credits
- 246-497 Internship in Communication Processes, 3 credits
- * 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.

Supporting Courses, 12 credits

246-200 Communication Processes: An Introduction, 3 credits

Nine credits from:

- * 242-160 Introduction to Language, 3 credits
- * 242-231 Introduction to Graphic Communications, 4 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
- 246-243 Introduction to Photography, 3 credits
- 246-253 Practicum in Print Journalism I, 1-3 credits

Depending on the area of emphasis, additional supporting courses are required:

The emphasis in **print journalism** requires a total of 12 credits in supporting courses and must include 246-203 Newswriting Laboratory.

The emphasis in **electronic media** requires a total of 12 credits in supporting courses which must include 246-102 Introduction to Mass Communication.

The emphasis in **photography** requires a total of 15 credits in supporting courses which must include 246-243 Introduction to Photography.

The emphasis in **organizational communication** requires a total of 15 credits in supporting courses which must include 246-133 Fundamentals of Public Address.

The emphasis in **public relations** requires a total of 15 credits in supporting courses which must include 246-102 Introduction to Mass Communication, 246-133 Fundamentals of Public Address, 246-203 Newswriting Laboratory, and 246-243 Introduction to Photography.

Upper-Level Courses, 12 credits minimum

Upper-level courses vary with each area of emphasis.

Areas of Emphasis**■ Print Journalism, 12 credits** See required supporting courses.**A minimum of 6 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

Six credits from these or other faculty adviser-approved upper-level courses:

- * 242-450 The Construction of Public Images, 3 credits
- 246-308 Information Technologies, 3 credits
- 246-343 Photography II, 3 credits
- 246-380 Communication Law, 3 credits
- 246-460 Publications Management, 3 credits

■ Electronic Media, 12 credits See required supporting courses.**Required:**

- 246-305 Elements of Electronic Media, 3 credits

Nine credits from these or other faculty adviser-approved upper-level courses:

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

■ Organizational Communication, 12 credits

See required supporting courses.

Required:

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

Six credits from these or other faculty adviser-approved upper-level courses:

- * 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, 12 credits See required supporting courses.**Required:**

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

Three credits from these or other faculty adviser-approved upper-level courses:

- 246-305 Elements of Electronic Media, 3 credits
- 246-307 Television Production Techniques, 3 credits
- 246-444 Time Duration Visual Media, 3 credits
- 246-460 Publications Management, 3 credits
- 246-493 Photography Portfolio, 3 credits

■ Public Relations, 12 credits See required supporting courses.**Required:**

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

Six credits from these or other faculty adviser-approved upper-level courses:

- * 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, 29 credits required

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

Culture of a linguistic minority, minimum 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 Study 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 6 credits:

- 246-325 Applied Linguistics, 3 credits

OR

- 246-327 Error Analysis and Treatment in a Second Language Learning, 3 credits

Required:

- 246-497 Internship in Communication Processes, 3 credits minimum

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.

Computer Science

Disciplinary Major or Minor

Associate Professors — Forrest B. Baulieu, Bruce W. Mielke, William A. Shay (chairperson).
Lecturer — Linda Curl.

The field of computer science is undergoing great changes as technology advances and the need for computer software increases. Students entering this field must not see a bachelor's degree in computer science as the culmination of study in the field. Rather it should be seen as the first step in a continuing education process that will last as long as they choose to stay in the field. The goal of the computer science major is to provide students with a strong foundation upon which they can continue to build as the profession changes. Students receive instruction in areas such as software and language design, object-oriented programming, design of algorithms, operating systems, database management systems, computer graphics, computer networks, and artificial intelligence.

Computer science courses are often mistaken for programming courses. In reality, these courses require much more than learning and mastering a programming language. The heart of software design is the ability to define a problem, analyze various components, and project and evaluate potential solutions, all of which are subject to limitations and constraints inherent in a given computer. Students will understand that in industry there must be more than just a working program; good software must also be fully documented, clearly written, and easily modifiable.

There is a science to writing programs and there is also an art to writing them. The science involves understanding the language constructs and how to use them. The art of writing programs involves putting program segments together and providing documentation so as to meet the specified constraints.

Graduates of the computer science program are prepared to continue their education at the graduate level or to apply for entry-level positions in industry. Typical entry-level jobs are programmer or programmer/analyst positions.

All registered students have access to the University's computing facilities. Student accounts allow students to access the University's VAX mainframe, a wide variety of both PC-compatible and Macintosh software, the Internet, and the World Wide Web. Computer labs contain 486 and Pentium machines, Macintosh computers, and PowerPCs. Labs are open seven days per week and are staffed by consultants who provide assistance in using the facilities. Classrooms also have network connections which allow demonstrations of software and Internet applications to be integrated with classroom lectures.

Computer science courses have a strict prerequisite structure. It is imperative that students learn what courses are prerequisites for others and when they are offered. Students are strongly encouraged to talk to an adviser very early in their college career.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 26 credits

- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-203 Calculus and Analytic Geometry II, 4 credits
- 600-241 Discrete Mathematics I, 4 credits
- 600-242 Discrete Mathematics II, 4 credits
- 266-256 Introduction to Computer Science I, 4 credits
- 266-257 Introduction to Computer Science II, 4 credits
- 266-270 C Programming Language, 2 credits

Upper-Level Courses, 27 credits

- 266-351 Data Structures, 3 credits
- 266-353 Computer Organization and Programming, 3 credits
- 266-357 Theory of Programming Languages, 3 credits
- 266-358 Data Communications and Computer Networks, 3 credits
- 266-371 C++ and Object Oriented Design, 3 credits
- 266-372 Object Oriented Design and Programming, 3 credits

Electives, choose 9 credits:

- 266-350 Numerical Analysis, 3 credits
- 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
- 520-402 Expert Systems, 3 credits

Students seeking teacher certification in Computer Science must take 266-155 Microcomputers and End-User Applications, 3 credits.

Requirements for the Minor

Supporting Courses, 16 credits

- 600-241 Discrete Mathematics I, 4 credits
- 600-242 Discrete Mathematics II, 4 credits
- 266-256 Introduction to Computer Science I, 4 credits
- 266-257 Introduction to Computer Science II, 4 credits

Upper-Level Courses, 12 credits

Choose four courses, subject to the approval of an adviser.

- 266-350 Numerical Analysis, 3 credits
- 266-351 Data Structures, 3 credits
- 266-352 Computer Graphics, 3 credits
- 266-353 Computer Organization and Programming, 3 credits
- 266-357 Theory of Programming Languages, 3 credits
- 266-358 Data Communications and Computer Networks, 3 credits
- 266-371 C++ and Object Oriented Design, 3 credits
- 266-372 Object Oriented Design and Programming, 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
- 520-402 Expert Systems, 3 credits

Earth Science

Disciplinary Major or Minor

Professors — H.J. Day (emeritus), Steven I. Dutch, Thomas H. McIntosh (emeritus), Joseph M. Moran (chairperson), Ronald D. Stieglitz.

Earth science is the study of the physical components of the environment (rocks, minerals, soil, water, and air), the various processes participated in by those components, and the interactions between the physical environment and living organisms. The program's special emphasis is on environmental geology in view of the growing need to apply principles of geology to environmental issues such as natural hazard mitigation, ground water conservation, and land reclamation. In this the earth science program takes a problem-focused, interdisciplinary approach in which the physical environment is investigated as many interacting systems. Earth science thus forms the basis for earth system science.

Career opportunities for earth scientists are varied. Environmental concerns have spurred demand for earth scientists in government agencies, consulting firms, and private industry. In demand are *technically proficient earth scientists who are also skilled communicators able to bridge the gap between science and the public.*

Majors in earth science may become professional geologists or acquire the necessary background for graduate study in geology, geophysics, soil science, meteorology, climatology, hydrology, or oceanography. Those intending to pursue graduate study are advised to complement requirements for the major with courses in physics, advanced mathematics, and computer science. Alternatively, the major may be used to support another area of study.

Students interested in planning, natural resource or land management, or environmental policy issues typically select interdisciplinary minors in environmental sciences, public and environmental affairs, or urban and regional studies. For those interested in an earth system science perspective in business, earth science may be combined with business administration. Communications and the arts are an option for earth science students interested in print or electronic journalism (broadcast meteorology, for example).

Students seeking teacher certification should consult with advisers in earth science and education early in their studies to make sure that their academic program meets all state requirements for certification.

Supporting communication skills are essential for earth scientists. Earth scientists must be able to communicate with people in other fields, many of whom lack scientific training. Knowledge of foreign languages, history, and other cultures provides access to foreign technical literature and facilitates working in other regions of the world. Technical skills gained through courses in air photo interpretation, remote sensing, and computer science are invaluable for the earth scientist.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 28 credits

- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 296-202 Physical Geology, 4 credits
- 296-203 Geologic Evolution of the Earth, 3 credits
- 296-204 Geologic Evolution of the Earth Laboratory, 1 credit

At least 7 credits of mathematics, computer science, or statistics at the 200-level or above.

At least 3 credits in communications (such as 246-133 Fundamentals of Public Address, 246-390 Scientific and Technical Communication, or 352-105 Expository Writing).

Upper-Level Courses, 24 credits

- 296-432 Hydrogeology, 3 credits
- 362-320 The Soil Environment, 3 credits
- 362-330 Hydrology, 3 credits
- 362-342 Environmental Geology, 3 credits

Two of these:

- 296-340 Rock and Mineral Resources, 3 credits
- 296-402 Stratigraphy and Sedimentation, 3 credits
- 296-470 The Glacial Environment and Chronology, 3 credits
- 362-454 Remote Sensing of the Environment, 3 credits

At least two of these:

- 296-492 *Special Topics in Earth Science*, 6 credits
(Course topics vary. Typical topics include mineralogy, structural geology, geologic field methods, and geomorphic processes.)

For students intending to pursue graduate study in geology, geophysics, soil science, meteorology, climatology, or hydrology, additional course work should include at least one year of calculus, at least one year of physics, and upper-level courses in chemistry.

All students are expected to develop facility with personal computers (equivalent to 266-155 Microcomputers and End-User Applications), including familiarity with a programming language such as BASIC or Pascal.

Requirements for the Minor

Supporting Courses, 19 credits

- 296-202 Physical Geology, 4 credits
- 296-203 Geologic Evolution of the Earth, 3 credits

At least 5 credits of chemistry.

At least 7 credits of mathematics, computer science, or statistics at the 100-level or above (600-101 excluded).

Upper-Level Courses, 12 credits

- 362-342 Environmental Geology, 3 credits

Three of these:

- 296-432 Hydrogeology, 3 credits
- 296-470 The Glacial Environment and Chronology, 3 credits
- 296-492 *Special Topics in Earth Science*, 3 credits
- 362-320 The Soil Environment, 3 credits
- 362-330 Hydrology, 3 credits
- 362-454 Remote Sensing of the Environment, 3 credits

Economics

Disciplinary Major or Minor

Professors — Kumar Kangayappan, Ismail Shariff (chairperson), John Stoll.

Associate Professor — Larry Smith.

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 sustainable economic systems with or without 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 must choose an interdisciplinary minor. Many economics majors at UW-Green Bay choose a minor in business with emphases in marketing or finance. Other students select minors in one of the interdisciplinary social science programs, environmental science, or the humanities.

The broad training received by economics students in incentive based decision-making creates a variety of career opportunities. Many UW-Green Bay economics majors enter careers in business, government agencies, and nonprofit organizations directly after graduation. Individuals trained in economics are frequently employed by banks and investment firms, local and state government agencies, market research firms, insurance companies, management consulting firms, advertising agencies, labor unions, and as private entrepreneurs. Economics graduates also work in related fields such as insurance, real estate, land use planning, financial planning, credit and collection, advertising, management, statistics, systems analysis, politics and public administration. Many go on to graduate schools, where they receive advanced training in such fields as business, economics, law, public policy, and urban studies.

Students may also desire to become certified teachers. In such cases, programs should be designed jointly with appropriate advisers in both the economics and education programs at UW-Green Bay.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 16-18 credits required

- 298-202 Macro Economic Analysis, 3 credits
- 298-203 Micro Economic Analysis, 3 credits
- 298-207 Micro Economic Laboratory, 1 credit
- 600-201 Calculus for the Management and Social Sciences, 3 credits (Other equivalent or higher level calculus course will also fulfill this requirement.)

One of these:

- 600-260 Introductory Statistics, 4 credits (required)
- 255-205 Social Science Statistics, 4 credits
- 216-215 Introduction to Business Statistics, 3 credits

One of these:

- 266-155 Microcomputers and End-User Applications, 3 credits
- 266-256 Introduction to Computer Science I, 4 credits

Upper-Level Courses, 24 credits

- 298-302 Intermediate Macro Economic Theory, 3 credits
- 298-303 Intermediate Micro Economic Theory, 3 credits
- 298-307 History of Economic Thought, 3 credits
- 298-310 Introduction to Quantitative Analysis and Econometrics, 3 credits

Electives, 12 credits from:

- 298-301 Economic and Social Security, 3 credits
- 298-304 Contemporary Labor Markets, 3 credits
- 298-308 Business Cycles, 3 credits
- 298-330 Money and Banking, 3 credits
- 298-402 Environmental and Resource Economics, 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
- 298-409 Public Finance and Fiscal Policy, 3 credits
- 298-453 Cost Benefit Analysis, 3 credits
- 298-485 Managerial Economics, 3 credits
- 951-309 Urban and Regional Economic Theory, 3 credits

Requirements for the Minor

Supporting Courses, 9-10 credits required

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

One of these:

- 216-215 Introduction to Business Statistics, 3 credits
- 255-205 Social Science Statistics, 4 credits
- 266-155 Microcomputers and End-User Applications, 3 credits
- 266-256 Introduction to Computer Science I, 4 credits
- 600-201 Calculus for the Management and Social Sciences, 3 credits
- 600-260 Introductory Statistics, 4 credits

Upper-Level Courses, 12 credits

One of these:

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

Electives, 9 credits:

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

Education

Interdisciplinary Major or Minor

Professors — Margaret Laughlin, Robert Purn, Thomas Van Koevering, Associate Professors — Theodor Korithoski, Timothy Sewall, Sandra Stokes, Philip Thompson, Francine Tompkins.

Assistant Professors — Barbara Law, Patricia Ragan, Joan Simmons, Joan Thron.

UW-Green Bay's teacher education program has two goals:

- to prepare teachers to address the needs of a changing school population; and
- to prepare teachers to teach content and skills required by changes in society and the work place.

The program also provides preparation for a variety of education-related professions.

At UW-Green Bay, students seeking elementary-level (grades 1-6 or 1-8) licensure will fulfill an interdisciplinary major in education supported by a Department of Public Instruction (DPI)-approved and required subject-matter teaching minor. Upon completion, graduates will receive a bachelor's degree in education. Students may extend their qualifications to include early childhood and kindergarten education by completing additional courses and requirements.

Students who desire secondary-level teaching licensure will fulfill an interdisciplinary minor in education to support a subject-matter teaching major as required and approved by the Department of Public Instruction. They will graduate with the bachelor's degree in their major subject and an education minor.

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 background, knowledge, and instructional tools needed to become an effective teacher. These complement strong academic coursework in communications, the arts, humanities, social studies, science and mathematics.

The core program for both elementary and secondary licensure candidates include courses that address today's concerns in education: changes in schools and schooling, changes in the nature and nurture of students, and changes in society and the workplace. Early clinical experiences provide prospective teachers with experience with students in actual teaching educational settings, including work with ethnic, cultural and economic groups, adult learners, and exceptional children.

UW-Green Bay's teacher education program has been reviewed recently and received approval by the Wisconsin Department of Public Instruction.

UWGB offers teacher preparation in these subjects and grade levels:

- Early childhood/elementary-level (grades pre-school/Kindergarten-3 or pre-school/Kindergarten-6)
- Elementary-level (grades 1-6)
- Elementary/middle-level (grades 1-8)
- 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)	English (6-9 or 9-12) (M, m)
Art (K-12) (M)	English as a second language
Athletic coaching certification	(elementary, 6-12 or K-12) (M, m)
Biology (M, m)	French (6-12 or K-12) (M, m)
Chemistry (M, m)	Geography (M, m)
Computer science (M, m)	German (6-12 or K-12) (M, m)
Earth science (M, m)	History (M, m)
Economics (M, m)	Journalism/Mass media (M, m)
English: broad field certification	Mathematics (6-9) (m); 6-12 (M, m)

Music-choral (6-12) (M)	Psychology (M, m)
Music-instrumental (6-12 or K-12) (M)	Resource management (m)
Music-general (K-8 or K-12) (M)	Science: broad field certification
Native American Languages:	Social studies: broad field certification
Oneida (6-12 or K-12) (M, m)	Sociology (m)
Physical science (M)	Spanish (6-12 or K-12) (M, m)
Physics (m)	Speech (M, m)
Political science (M, m)	Theatre (M, m)

All of these programs are fully approved by the DPI for preparation for licensure as a teacher in Wisconsin. Individuals who have completed UWGB's teacher education program qualify for licensure in many 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 relating to their particular educational needs and career goals.

Examples of such career fields are environmental education and nature center programs, labor education programs, educational media, social services agencies, educational programs, education advocacy, parent education, education for the elderly, youth and adult community programs, and leisure education.

UWGB teacher preparation graduates have consistently shown excellent placement records. A survey of recent graduates revealed that approximately 90 percent were professionally placed. Seventy-five percent of those with elementary licensure and 80 percent with secondary licensure were employed in education. Employment opportunities do vary depending upon the areas of licensure and geographic area.

Program Entrance Requirements

Preliminary Application. Students planning to complete a teacher preparation program should indicate their intent when they apply for admission to UWGB.

In addition, at the time of registration, students should indicate their specific program interest: Pre-School/Kindergarten/Elementary; Elementary; Elementary/Middle School; Middle School/Secondary; or Secondary.

Admission to the University and meeting minimum requirements does not guarantee admission to teacher education. The teacher education program has established admission limits to programs because of staffing and space availability. Admission decisions are made twice a year: at the end of the fall semester and at the end of the spring semester. A committee of education faculty reviews applicant files, basing admission decisions upon the criteria described below.

Application Process and Requirements.

1. Apply and be accepted to UW-Green Bay.
2. Submit a signed Application for Admission to the UW-Green Bay teacher education program. An official education file will be created for you upon receipt of your application. This file will contain all of your documents required for admission, continuation, and graduation from the program.
3. Forty (40) university credits must be completed with a cumulative grade point average of 2.75. This grade point average is a composite grade point average based upon all college course work attempted at all colleges and universities attended, and that is deemed equivalent to UWGB's degree programs. The credits must be graded credits (i.e., credits earned by examination or through retroactive credit basis will not apply.)
4. Successfully pass all three sections of the Pre-Professional Skills Test (PPST) and submit score reports to the Education Office. Minimum scores required are 175 in reading, 174 in writing, and 173 in mathematics. For more information on the PPST, contact the Education Office or Academic Advising.
5. Complete the required reading, writing, speaking and listening proficiency requirements. The requirements can be met by taking a single course, 352-228 *Writing About Education*, and earning a grade of "C" or

better. Students may also meet this requirement by taking 246-133 Fundamentals of Public Address, and 352-105 Expository Writing or equivalent, and earning a grade of "C" or better in both.

6. Successfully complete 302-250 Field Experience in Education or the equivalent. Written documentation of successful school-based experience will be required. The prerequisite for 302-250 is sophomore standing (24 or more credits.)

7. Submit a copy of your high school transcript to the Education Office.

8. Submit the Letter of Intent to Enroll in Block I: Introduction to the Art and Science of Teaching to the Education Office.

9. Submit the K-12 Teacher Recommendation Form to the Education Office.

10. Submit the UWGB Instructor Recommendation Form to the Education Office.

11. Also, students must 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 accommodations, can perform the essential functions of a teacher. An examination and recommendation by appropriate medical and/or other professional specialist will be required if deemed necessary. The University will make reasonable accommodations for students with disabilities.

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 teaching license is not an automatic bar to application and is considered only as these substantially relate to the responsibilities of the teacher education program and eventual licensure.

In accordance with UWGB policy, persons denied admission are entitled to appeal.

Application Deadline

All of the above documents must be on file with the Education Office by the last day of classes of the semester preceding the desired semester of admission. Credits and grades required to meet the minimum requirements can be in progress and will be reviewed after final grades are recorded for that semester. It is the student's responsibility to make certain the admission application file is complete. Incomplete application files will not be reviewed for admission.

Requirements for Teacher Preparation

Students planning education majors or minors should consult an academic adviser for sound program planning. Even though students cannot be accepted into the education program until they meet program entrance requirements, early planning is essential; teacher preparation requirements are specific and complex, and require ample credit hours. **Also, DPI requirements change from time to time, making UWGB's education program requirements subject to change. Students must meet any new DPI requirements before they can expect licensure. Students are responsible for being aware of program requirements. Students should check with their Education adviser each semester for new requirements for licensure.**

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. Credit hours necessary to fulfill requirements vary, depending upon teaching subject major or minor, grade level licensure sought, and other factors. The Education Office can provide specific requirements.

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.

Following are summaries of academic program components required for a degree and preparation for licensure.

Elementary-Level Requirements

General education

Interdisciplinary major in education:

Core requirements

Professional education sequence

Teaching subject minor(s)

Pre-student-teaching clinical experiences

Student-teaching

Secondary-Level Requirements

General education

Interdisciplinary minor in education:

Core requirements

Professional education sequence

Teaching subject major(s)

Electives, if needed to total the required 120 credits

Pre-student-teaching clinical experiences

Student-teaching

Note: The faculty in education are in the process of revising the curriculum and courses in education. There are likely to be additional changes in the program. It is your responsibility to be informed concerning any new changes and/or requirements.

General Education

General education requirements for education majors and minors are specific and detailed. Students should plan their programs carefully with an adviser. Students pursuing teacher certification follow the general education requirements specified for certification which also satisfy UWGB's general education requirements. The education program's general education requirements do satisfy UWGB's lower-level general education requirements. General education requirements differ for elementary-level and secondary-level programs.

Following is a summary of general education requirements. **Contact the Academic Advising Office for a current list of courses that may be used for fulfilling the following general education requirements for the education major and minor.**

- Written and oral communication, 3-6 credits
- Mathematics, 3-13 credits
- Fine arts, 3-6 credits
- Social studies (including government), 6 credits
- Biological and physical sciences, 9-16 credits
- Humanities, including literature, 3 credits
- Western and non-western history or contemporary cultures, 3 credits
- United States history, 3 credits (for Elementary Education only)
- Human relations, 3 credits
- Two upper-level writing emphasis (WE) courses (should overlap with major and/or minor)
- Senior seminar, 3 credits

Teaching Minor(s), 22 or more credits

Students seeking elementary licensure must complete one or more minors consisting of 22 credits minimum to prepare for licensure. These minors are currently available:

- Adaptive education
- Early childhood education
- English as a second language
- English/language arts
- Environmental studies
- Language: French, German, Spanish
- Mathematics
- Oneida language
- Science
- Social studies

Teaching Major, 34 or more credits

Students seeking secondary or middle-secondary licensure must complete a teaching subject major, selected from the DPI approved majors listed near the beginning of this narrative.

Human Relations

Fulfilled by human relations courses which may be taken as part of general-education sequence, and 50 clock hours of direct involvement with adult and pupil members of specified groups.

Conservation/Environmental Education, 6-8 credits

This is a requirement for those students pursuing licensure to teach early childhood/elementary education, elementary education, elementary/middle school, and science and social studies at the middle and secondary levels.

Education Core, 9 credits**Changes in the Nature and Nurture of Students, 6 credits:**

One of these:

- 481-331 Infancy and Early Childhood, 3 credits
- 481-332 Middle Childhood and Adolescence, 3 credits (required for Secondary or Middle/Secondary Level minors)

One of these:

- 302-352 Social and Family Influences on Development and Learning, 3 credits
- 481-342 Cross-Cultural Human Development, 3 credits
- 481-436 Counseling with Children and Adolescents, 3 credits

Changes in Society and the Work Place, choose 3 credits:

- 242-430 Mass Media and Society, 3 credits
- 448-401 Transformation of American Schools, 3 credits
- 478-205 Biotechnology and Human Values, 3 credits
- 481-336 Gender Role Development, 3 credits
- 875-241 Introduction to Women's Studies, 3 credits
- 875-361 Historical Perspectives on Social Change, 3 credits
- 900-308 Sociology of the Family, 3 credits

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

(Prekindergarten-6 or prekindergarten-8)

- 302-203 Introduction to Environmental Education in the Schools, 3 credits
- 302-250 Field Experience in Education, 2 credits
- 302-280 Instructional Technologies: Evaluation, Production and Application, 3 credits
- 302-302 Teaching Social Studies in Elementary and Middle Schools, 3 credits
- 302-303 Teaching Art in Elementary and Middle Schools, 2 credits
- 302-304 Teaching Music for Elementary and Middle Teachers, 2 credits
- 302-306 Teaching Health and Physical Education in 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
- 302-361 Introduction to the Art and Science of Teaching, 8 credits
- 302-362 Integrating the Language Arts, 12 credits
- 302-402 Student Teaching in the Elementary School, 15 credits
- 302-421 Literacy and Language Development in Young Children, 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-xxx Integrated Methods for Teaching Kindergarten, 3 credits
- 302-445 Early Childhood Center Administration and Community Resource Management, 3 credits

- 302-452 Principles of Middle Level Education, 3 credits
- 481-331 Infancy and Early Childhood, 3 credits
- 481-332 Middle Childhood and Adolescence, 3 credits
- 302-333 Observation and Interpretation of Child Behavior, 3 credits
- 481-334 Play and Creative Activities in Childhood, 3 credits

- 302-336 Introduction to Experience with Young Children, 1 credit

OR

Approved, supervised experience with a group of young children

Also:

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

Prekindergarten-8 licensure requires a second minor in addition to the early childhood minor.

■ Elementary and Elementary/Middle Level

- 302-203 Introduction to Environmental Education in the Schools, 3 credits
- 302-250 Field Experience in Education, 2 credits
- 302-280 Instructional Technologies: Evaluation, Production and Application, 3 credits
- 302-302 Teaching Social Studies in Elementary and Middle Schools, 3 credits
- 302-303 Teaching Art in Elementary and Middle Schools, 2 credits
- 302-304 Teaching Music for the Elementary and Middle School Teacher, 2 credits
- 302-306 Teaching Health and Physical Education in Elementary and Middle School, 3 credits
- 302-324 Teaching Mathematics in Elementary and Middle Schools, 3 credits
- 302-325 Teaching Science in Elementary and Middle Schools, 3 credits
- 302-361 Introduction to the Art and Science of Teaching, 8 credits
- 302-362 Integrating the Language Arts, 12 credits
- 302-401/402 Student Teaching in the Middle/Elementary School, 14 credits
- 302-452 Principles of Middle Level Education, 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 Technologies: Evaluation, Production and Application, 3 credits
- 302-xxx Teaching (specific subjects) in Middle/Secondary Schools, 3 credits
- 302-351 Field Project in School Settings, 1 credit
- 302-361 Introduction to the Art and Science of Teaching, 8 credits
- 302-401/403 Student Teaching in the Middle/Secondary Schools, 14 credits
- 302-410 Introduction to the Education of Exceptional Children, 3 credits
- 302-422 Reading in the Content Areas, 3 credits

The following courses are required of specific areas of certification:

- 302-203 Introduction to Environmental Education in the Schools, 3 credits (required for social studies and science only)
- 302-420 Workshop in Economic Education, 1-3 credits (required for social studies only)
- 302-423 Communication and Thinking Skills Across the Curriculum, 3 credits (required for all areas of certification except English, art, and music)
- 302-452 Principles of Middle Level Education, 3 credits (required for grades 6-12 certification in all areas except K-12 ESL, K-12 art, and K-12 music)

Also:

A pre-student teaching clinical experience in the teaching of reading is required for all secondary licensure areas except art and music.

Engineering

Professional Major

Advisers — Harold J. Day, professor emeritus; Robert Lanz, associate professor emeritus; Patricia A. Terry, assistant professor.

Many of the engineering students at UW-Green Bay enroll in a joint program co-sponsored by UWGB and the University of Wisconsin-Milwaukee. 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.

Engineering and many 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 considered for admission into upper-level studies in the College of Engineering and Applied Science at UWM on the same basis as students who began at UWM.

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 typically complete 70 to 72 credits at UW-Green Bay toward the degree. The grade-point requirement as of fall 1995 is 2.0 for all majors listed above.

In addition, engineering students must receive a BC or better in 352-100 College Writing (or 352-105 Expository Writing, or 352-164 ESL: Reading and Expository Writing II), to qualify for the UWM English proficiency essay examination.

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

- 3 credits minimum in the arts
- 6 credits minimum in the humanities
- 6 credits minimum in the social sciences
- 3 credits in cultural diversity

The above 18 credits must consist of courses from no more than four departments, except when an extended theme demonstrating depth has been approved.

UW-Green Bay students are eligible to apply for advancement into the major at UWM at the point of transfer to UWM. The UW-Green Bay Academic Advising Office has forms. The filing deadlines are October 1 for spring semester, February 15 for summer session, and June 1 for fall semester.

There are also accredited engineering programs at UW-Madison and UW-Platteville. Most of the courses described above are also transferable to these schools (or other private or out-of-state engineering programs). Students interested in either the Madison or Platteville programs should contact a faculty adviser for more information.

Requirements for the Major

All engineering students must take:

- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 325-201 Engineering Materials, 3 credits
- 325-234 Linear Systems Analysis, 4 credits
- 325-251 Programming for Science and Engineering, 3 credits
- 325-313 Mechanics I, 3 credits
- 352-100 College Writing, 3 credits (see adviser)
- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-203 Calculus and Analytic 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

Additional courses required in civil and mechanical engineering:

- 325-105 Engineering Graphics, 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:

- 325-105 Engineering Graphics, 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 materials engineering:

- 325-316 Strength of Materials, 4 credits

English

Disciplinary Major or Minor

Professors — Elmer Havens (emeritus), Walter Herrscher (chairperson), Michael Murphy, E. Michael Thron.

Assistant Professors — Brian Sutton, Denise Sweet.

Lecturers — Jo Chern, Karla Larson, Dianne Marlett, Linda Toonen, Carol Van Egeren.

Courses in English develop students' understanding of important works of American and English literature, give them 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 study English primarily for personal growth and enrichment, the program is intended to prepare students for graduate work, teaching and the professions, as well as for a variety of occupations.

Graduates in English have found careers in personnel work, public relations, business management, journalism, politics, free-lance writing, publishing, and other fields requiring communication skills.

Because English is offered within a broad program of literature and language at UW-Green Bay, student course work may draw on faculty from French, German, and Spanish, too. The English program also offers creative writing courses, and English majors may choose an emphasis in creative writing.

Students majoring in English will choose an interdisciplinary minor. Students may choose humanistic studies, communication and the arts, human development, social change and development, or other appropriate programs. Students desiring teacher preparation in English must combine their studies in English with the professional program in education.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 9-12 credits

One of these:

- 352-105 Expository Writing, 3 credits (waived for qualified students)
- 352-225 Writing About the Arts and Humanities, 3 credits (waived for qualified students)

Minimum of 9 credits from:

- 351-104 Introduction to Literature, 3 credits
- 351-107 The Short Story, 3 credits
- 351-206 Women in Literature, 3 credits
- 351-212 Introduction to Creative Writing: Fiction, 3 credits
- 351-213 Introduction to Creative Writing: Poetry, 3 credits
- 351-214 Introduction to English Literature I, 3 credits
- 351-215 Introduction to English Literature II, 3 credits
- 351-216 Introduction to American Literature I, 3 credits
- 351-217 Introduction to American Literature II, 3 credits

Upper-Level Courses, 24 credits

- 351-323 Approaches to Literature, 3 credits
- 351-431 Shakespeare, 3-4 credits

Minimum of 3 credits (waived for those who have taken 351-214) from any pre-1800 literature course, such as:

- 351-315 The English Novel: 1700-1860, 3 credits
- 351-335 Literary Eras: Medieval, 3 credits
- 351-335 Literary Eras: Renaissance, 3 credits

Minimum of 3 credits from any English course on world literature outside the United States and Great Britain, such as:

- 351-333 Literary Themes: French Women's Autobiographical Writing, 3 credits

- 351-335 Literary Eras: New English Literature, 3 credits

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

- 351-301 Intermediate Creative Writing, 3 credits
- 351-302 Fiction Writing Workshop, 3 credits
- 351-303 Poetry Writing Workshop, 3 credits
- 351-310 Major English Drama, 3 credits
- 351-314 Major English Poetry, 3 credits
- 351-315 English Novel: 1700-1860, 3 credits
- 351-316 English Novel: 1850-Present, 3 credits
- 351-330 Major American Drama, 3 credits
- 351-331 Major American Prose Fiction, 3 credits
- 351-332 Major American Poetry, 3 credits
- 351-333 Literary Themes, 3 credits
- 351-335 Literary Eras, 3 credits
- 351-336 American Ethnic Literature, 3 credits
- 351-434 Major British Writer(s), 3 credits
- 351-490 Seminar in Literature, 3 credits
- 352-304 Advanced Expository Writing, 3 credits

Content may vary; some of above may be repeated for credit. See adviser.

Area of Emphasis

■ Creative Writing

Supporting Courses, 9-12 credits

- 351-212 Introduction to Creative Writing: Fiction, 3 credits
- 351-213 Introduction to Creative Writing: Poetry, 3 credits

One of these:

- 352-105 Expository Writing, 3 credits (waived for qualified students)
- 352-225 Writing About the Arts and Humanities, 3 credits (waived for qualified students)

And: minimum of 3 cr. supporting literature courses (see list in major).

Upper-Level Courses, 24 credits

- 351-431 Shakespeare, 3-4 credits

And six to 12 credits in creative writing courses such as:

- 351-301 Intermediate Creative Writing, 3 credits
- 351-302 Fiction Writing Workshop, 3 credits (may be repeated once)
- 351-303 Poetry Writing Workshop, 3 credits (may be repeated once)
- 351-498 Independent Study, 1-4 credits

And: minimum of 9 cr. upper-level literature courses (see list in major).

Requirements for the Minor

Supporting Courses, 9-12 credits

One of these:

- 352-105 Expository Writing, 3 credits (waived for qualified students)
- 352-225 Writing About the Arts and Humanities, 3 credits (waived for qualified students)

Minimum of 9 credits from:

- 351-104 Introduction to Literature, 3 credits
- 351-107 The Short Story, 3 credits
- 351-206 Women in Literature, 3 credits
- 351-212 Introduction to Creative Writing: Fiction, 3 credits
- 351-213 Introduction to Creative Writing: Poetry, 3 credits
- 351-214 Introduction to English Literature I, 3 credits
- 351-215 Introduction to English Literature II, 3 credits
- 351-216 Introduction to American Literature I, 3 credits
- 351-217 Introduction to American Literature II, 3 credits

Upper-Level Courses, 12 credits

- 351-431 Shakespeare, 3-4 credits

Minimum of 3 credits (waived for those who have taken 351-214) from any pre-1800 literature course (see list in major).

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

Environmental Policy and Planning

Interdisciplinary Major or Minor

Professors — Daniel J. Alesch, Michael E. Kraft, William R. Niedzwiedz, John R. Stoll.

Associate Professor — David M. Lüttig.

Assistant Professors — Scott R. Furlong, Denise L. Scheberle.

Environmental policy and planning is an environmental studies program based in the social sciences. It is designed to prepare students for a variety of challenging professions involving the planning, analysis, design, and administration of policies and programs dealing with the natural and human-made environment. It also provides an excellent preparation for graduate studies in environmental studies, public policy, public administration, law, urban and regional planning, and related fields. A major in environmental policy and planning develops knowledge and skills in the environmental sciences, planning and decision-making, public, social, economic and political processes, and the analytic capacities to participate in the processes which will shape environmental quality in the future.

All environmental policy and planning majors engage in both theoretical and applied studies, and there is considerable latitude for students to select a problem focus for study both within one of the two program emphases and in individual courses. The two program emphases which majors can choose from are public policy or planning. Applied field experience can be obtained through the internship program administered by the department. In some circumstances an internship may not be appropriate and an alternative will be worked out with an adviser.

The major in environmental policy and planning consists of a combination of three sets of requirements: required supporting and analytical tool courses, an upper-level core, and an emphasis within the major consisting of public policy or planning. In addition to the requirements in the major, there are a number of highly recommended supporting courses. Some students may have acquired competencies in these subjects without having taken the courses, whereas others may need to enroll formally in these courses. Students need to discuss these recommended courses and competencies with the program advisers to determine an appropriate course of action for their individual academic plans.

The **public policy emphasis** focuses on environmental policy development and implementation; methods of policy analysis; and political, administrative, legal, and economic issues in environmental policy. It provides students with a strong background in the public policy and administrative aspects of environmental studies and prepares students for employment in the public, nonprofit, and private market sectors as environmental policy analysts, specialists in public information, government relations, and related careers, as well as for graduate work in environmental studies, public policy, public affairs, administration, and law school.

The **planning emphasis** focuses on planning theory and methods, techniques in geographic information systems, environmental impact analysis, land use, and economic issues in environmental policy and planning. Students interested in developing skills in the planning and development of land at the community and regional levels, and in the economic issues of environmental policy and planning may want to select this emphasis. It helps prepare students for careers and graduate work in environmental planning, urban and regional planning, geography, and related fields.

A minor in environmental policy and planning is similar to the major in developing knowledge and skills in planning, decision-making, public policy, environmental sciences, political and economic processes, as well as the analytic capacities to participate in decision-making. An interdis-

ciplinary minor in environmental policy and planning may represent a good choice for students who wish to major in environmental sciences, public administration, political science, economics, urban and regional studies, social change and development, and a number of other programs.

Requirements for the Major

Recommended Supporting Courses

- 266-155 Microcomputers and End-User Applications, 3 credits
- 298-203 Micro Economic Analysis, 3 credits
- 416-250 Displays of Geographic Information, 3 credits
- 778-101 American Government and Politics, 3 credits

One of these:

- 835-215 Introduction to Public Administration, 3 credits
- 951-200 Introduction to Urban Studies, 3 credits

Required Supporting Courses, 19-21 credits

Introductory Courses:

- 255-301 Foundations for Social Research, 3 credits
- 362-102 Introduction to Environmental Science, 3 credits
- 835-202 Introduction to Public Policy, 3 credits

And one of these:

- 255-205 Social Science Statistics, 4 credits
- 600-260 Introductory Statistics, 4 credits

And at least two of the following:

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

One of these:

- 296-202 Physical Geology, 4 credits
- 296-102 Introduction to Earth Science, 3 credits

One of these:

- 362-188 Issues in Biological Conservation, 3 credits
- 362-260 Energy and Society, 3 credits

Upper-Level Courses, 15-16 credits

- 835-301 Environmental Politics and Policy, 3 credits
- 835-322 Environmental Planning, 3 credits
- 835-378 Environmental Law, 3 credits

And at least two of the following:

- 362-302 Principles of Ecology, 3 credits
- 362-303 Conservation of Natural Resources, 3 credits
- 362-330 Hydrology, 3 credits
- 362-342 Environmental Geology, 3 credits
- 362-401 Stream Ecology, 3 credits
- 362-460 Resource Management Strategy, 3 credits
- 362-471 Biological Resource Management I, 3 credits
- 362-472 Biological Resource Management II, 3 credits
- 362-475 Ecological Dynamics, 3 credits

Internship (optional)

- 835-497 Internship in Public and Environmental Affairs, 3-12 credits

Areas of Emphasis, 15 credits

■ Public Policy Emphasis

Required:

- 835-408 Public Policy Analysis, 3 credits

Four of the following, 12 credits:

- 778-410 Intergovernmental Relations, 3 credits
- 835-306 Regulatory Policy and Administration, 3 credits
- 835-314 Administrative Law, 3 credits
- 835-315 Public and Nonprofit Management, 3 credits
- 835-356 Environmental Impact Analysis, 3 credits
- 835-402 Environmental and Resource Economics, 3 credits
- 835-406 State and Local Government, 3 credits

- 835-451 Decision Theory and Methods, 3 credits
 835-453 Cost-Benefit Analysis, 3 credits
 835-461 Special Topics in Public and Environmental Affairs, 3 credits

■ Planning Emphasis

Required:

- 835-350 Geographic Information Systems, 3 credits

Four of the following, 12 credits:

- 416-351 Elements of Cartography, 3 credits
 416-353 Air Photo Interpretation, 3 credits
 835-309 Urban and Regional Economic Theory, 3 credits
 835-323 Land-Use Controls, 3 credits
 835-350 Geographic Information Systems, 3 credits
 835-356 Environmental Impact Analysis, 3 credits
 835-402 Environmental and Resource Economics, 3 credits
 835-452 Planning Theory and Methods, 3 credits
 835-461 Special Topics in Public and Environmental Affairs, 3 credits
 951-342 Community Economic Development, 3 credits
 951-351 Transportation and the City, 3 credits
 951-412 Urban and Regional Planning, 3 credits

Requirements for the Minor

Required Supporting Courses, 12 credits

Introductory courses:

- 298-203 Micro Economic Analysis, 3 credits
 362-102 Introduction to Environmental Science, 3 credits

Two of the following:

- 778-101 American Government and Politics, 3 credits
 835-202 Introduction to Public Policy, 3 credits
 835-215 Introduction to Public Administration, 3 credits

Upper-Level Requirements, 15 credits

- 835-301 Environmental Politics and Policy, 3 credits
 835-322 Environmental Planning, 3 credits

Three of the following:

- 835-306 Regulatory Policy and Administration, 3 credits
 835-309 Urban and Regional Economic Theory, 3 credits
 835-323 Land-Use Controls, 3 credits
 835-356 Environmental Impact Analysis, 3 credits
 835-378 Environmental Law, 3 credits
 835-402 Environmental and Resource Economics, 3 credits
 835-408 Public Policy Analysis, 3 credits
 835-453 Cost-Benefit Analysis, 3 credits
 951-412 Urban and Regional Planning I, 3 credits

Environmental Science

Interdisciplinary Major or Minor

Professors — Steven I. Dutch, Fritz A. Fischbach, Hallett J. Harris (chairperson), David Jowett, Anjani K. Mehra, Joseph Moran, Michael D. Morgan, V.M.G. Nair, Jack C. Norman, Charles R. Rhyner, Paul E. Sager, Leander J. Schwartz, Ronald H. Starkey, Ronald D. Stieglitz, Robert B. Wenger, James H. Wiersma.
 Associate Professors — Gregory J. Davis, Robert W. Howe, John M. Lyon, Nikitas L. Petrakopoulos.
 Assistant Professors — Tian-You Hu, Jeffrey C. Nekola, Patricia A. Terry.

Lecturers — Theresa Adsit, Gary C. Wardall.

Other Instructional Staff — Thomas C. Erdman, Gary A. Fewless, Lynn L. Frederick, Mary C. Kohrell, Clifford E. Kraft, Jane M. Rank.

Environmental science is recognized by many as one of the distinctive, essential features of the search for knowledge. The UW-Green Bay major in environmental science is designed to guide students in their quest for knowledge in this field and to help them understand, analyze, and solve environmental problems.

Environmental science requires an interdisciplinary perspective; none of the traditional disciplines by itself provides an adequate basis for understanding environmental problems and issues. Accordingly, the program of study in the environmental science major is interdisciplinary, emphasizing an integrated approach to knowledge in the field. Because the study of environmental problems requires a sound understanding of scientific principles, the environmental science major is grounded in the natural sciences and mathematics. The curriculum includes a social science component, enabling students to gain an understanding of environmental policy issues. Field experiences, internships and practica are emphasized.

While many universities are just beginning to recognize the need for environmental science programs, UW-Green Bay has had 20 years of teaching and research experience in the field. Faculty members are actively addressing environmental problems at the regional, national, and international levels. They bring the perspective gained from these experiences into the classroom and their research work provides opportunities for undergraduates to become involved in research projects.

Several facilities and resources contribute to the vitality of this major and enrich learning for students. These include the Richter Natural History Museum, the UW-Green Bay herbarium and greenhouse, the Cofrin Arboretum on campus, and several natural areas in the region.

The campus has acquired gas chromatography-mass spectroscopy, nuclear magnetic resonance spectroscopy, and Fourier transform-infrared spectroscopy chemical instrumentation systems. These instruments are capable of performing sophisticated chemical analyses which are important in environmental monitoring. Students and faculty have access to micro-computers and a Digital Equipment Corporation VAX mainframe system. Computing software resources emphasizing geographic information systems (GIS) and mathematical modeling tools also are available.

A significant number of the graduates of this major gain entry-level positions in the environmental science field. About one-third of these positions are in the public sector, and two-thirds are in the private sector in industries, business, and engineering consulting firms. As industries begin to recognize their responsibility to help create and maintain a sustainable environment, they create positions dealing with waste management, pollution control, and other environmental responsibilities. Many UWGB environmental science graduates go on to advanced study in environmental science or scientific disciplines.

Students who plan to pursue this major should emphasize science and mathematics in their high school course work. Courses in biology, chemistry, physics, and mathematics provide the needed background.

Students majoring in environmental science at UW-Green Bay select one of the two emphases:

- ecology and biological resources management
- physical resources management

Starting with the ecosystems concept as a basis, students in the **ecology and biological resources management emphasis** study problems concerned with biological resources preservation, use, and restoration. The focus of the **physical resources emphasis** is conservation and environmental quality of our physical resources: air, water, and soils. Recovery of useful materials or energy products from wastes and disposal of the remainder in an environmentally acceptable manner also is emphasized.

Requirements for the Major

Areas of Emphasis

Each area of emphasis has its own supporting and upper-level required and elective courses.

■ Ecology and Biological Resources Management

Supporting Courses, 28-29 credits

- 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
- 266-155 Microcomputers and End-User Applications, 3 credits
- 600-260 Introductory Statistics, 4 credits

One of these:

- 296-202 Physical Geology, 4 credits
- 296-222 Introduction to Weather and Climate, 3 credits

Upper-Level Courses, 34 credits

Required core courses, 19 credits:

- 362-471 Biological Resources Management I, 3 credits
- 362-472 Biological Resources Management II, 3 credits
- 362-302 Principles of Ecology, 3 credits
- 362-390 Scientific Applications of Computing, 3 credits
- 362-475 Ecological Dynamics, 4 credits

One of these:

- 362-401 Stream Ecology, 3 credits
- 362-403 Limnology, 3 credits

Field biology courses, 6 credits:

- 204-310 Plant Taxonomy, 3 credits
- 204-320 Field Botany, 3 credits
- 204-342 Ornithology, 3 credits
- 204-343 Mammalogy, 3 credits
- 362-363 Plant and Forest Pathology, 3 credits

One of these:

- 362-401 Stream Ecology, 3 credits
- 362-403 Limnology, 3 credits

Biophysical interface courses, 6 credits:

- 362-320 The Soil Environment, 3 credits
- 362-321 The Soil Environment Lab, 1 credit
- 362-342 Environmental Geology, 3 credits
- 362-350 Meteorology, 3 credits
- 362-454 Remote Sensing of the Environment, 3 credits
- 416-325 Regional Climatology, 3 credits

Socioeconomic courses, 3 credits:

- 298-402 Environmental and Resource Economics, 3 credits
- 835-301 Environmental Politics and Policy, 3 credits
- 835-356 Environmental Impact Analysis, 3 credits
- 835-378 Environmental Law, 3 credits

■ Physical Resources Management

Supporting Courses, 28-29 credits

- 266-155 Microcomputers and End-User Applications, 3 credits

- 296-202 Physical Geology, 4 credits
- 600-260 Introductory Statistics, 4 credits

One of these:

- 600-201 Calculus for the Management and Social Sciences, 3 credits
- 600-202 Calculus and Analytical Geometry I, 4 credits

And:

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:

- 362-390 Scientific Applications of Computing, 3 credits

One of these:

- 362-303 Conservation of Natural Resources, 3 credits
- 362-460 Resource Management Strategy, 3 credits

One of these:

- 362-454 Remote Sensing of the Environment, 3 credits
- 416-353 Air Photo Interpretation, 3 credits

Physical resources, 6 to 9 credits:

- 296-340 Rock and Mineral Resources, 3 credits
- 362-320 The Soil Environment, 3 credits
- 362-330 Hydrology, 3 credits
- 362-350 Meteorology, 3 credits
- 362-434 Environmental Chemistry, 3 credits
- 362-435 Environmental Chemistry Laboratory, 1 credit
- 416-325 Regional Climatology, 3 credits

Resource management, 9 credits:

- 362-318 Industrial Pollution Control Techniques, 2 credits
- 362-319 Industrial Pollution Control Field Trips, 1 credit
- 362-335 Water and Waste Water Treatment, 3 credits
- 362-342 Environmental Geology, 3 credits
- 362-415 Solar and Alternate Energy Systems, 3 credits
- 362-492 Practicum in Environmental Science, 3 credits
- 362-497 Internship, 3 credits

Socioeconomic, 3-6 credits:

- 298-402 Environmental and Resource Economics, 3 credits
- 778-301 Environmental Politics and Policy, 3 credits
- 835-306 Regulatory Policy and Administration, 3 credits
- 835-322 Environmental Planning, 3 credits
- 835-323 Land-Use Controls, 3 credits
- 835-356 Environmental Impact Analysis, 3 credits
- 835-378 Environmental Law, 3 credits
- 951-340 Economics of Land Use, 3 credits

Note: Physical resources and socioeconomic courses must total 12 credits.

Requirements for the Minor

The application of scientific principles to resource management form the core of the minor. An environmental science minor is particularly appropriate in combination with a major in one of the sciences or mathematics.

Supporting Courses, 7 credits

- 362-102 Introduction to Environmental Science, 3 credits
- 600-260 Introductory Statistics, 4 credits

Additional courses may be necessary to satisfy prerequisites for the two upper-level elective courses that a student selects.

Upper-Level Courses, 12 credits

- 362-303 Conservation of Natural Resources, 3 credits
- 362-460 Resource Management Strategy, 3 credits

Six additional credits in upper-level environmental science (362 prefix) courses.

French

Disciplinary Major or Minor

Associate Professors — Kenneth Fleurant (adviser), E. Nicole Meyer.

The French program of study is designed to help students develop practical language skills while they learn about the literature, culture and people of France and the French-speaking world. It is a major language in over forty countries on five continents. French is one of the two most important diplomatic languages, the language of business in a large part of the world, and an important research language for many disciplines.

The broad training that is part of a program in French studies (including written and oral communication skills, reading and analyzing texts, history, geography and social studies) is an excellent means to personal growth and intellectual enrichment. It is also a fine preparation for entrance into the professional world. French majors have developed successful careers in many areas of business, the service professions (such as law or teaching), and government.

In addition to the regularly scheduled array of courses, the French program also offers students the opportunity to earn degree credits while studying abroad. UW-Green Bay co-sponsors a semester program in Paris every spring and, with faculty approval, accepts credits from numerous other study-abroad programs. On campus, students can have frequent contact with authentic cultural materials outside the classroom via the World Wide Web, the latest multimedia equipment, and international television and radio reception.

French majors will also choose an interdisciplinary minor. Those interested in a broad humanities background often choose the interdisciplinary minor in humanistic studies. Other interdisciplinary programs in, for example, business, the social sciences, education, or the arts, combine with the French major to form a strong, coherent academic program. Students interested in teacher certification in French should contact the Education Office for requirements in addition to those listed here.

Students who begin their French studies at UW-Green Bay should enroll in French 101. The normal sequence of language courses is: 101, Introduction to French I; 102, Introduction to French II; 201, Intermediate French I; 202, Intermediate French II; 225, Intermediate Conversation and Composition; and 325, Advanced Conversation and Composition.

Those who have studied French in high school should select a course appropriate to their level by counting a year of high school work as equivalent to one semester of college work, or they should consult a French adviser.

Retroactive or Advanced Placement Credit. Students who have taken French in high school or who have acquired a knowledge of the language elsewhere may earn up to 14 additional credits for their previous French study by completing a course beyond French 101. With a grade of "B" or better, credit will be given for all French courses preceding the one in which the student has enrolled, to a maximum of 14 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 seven credits.

For example, a student with four years of high school French and who completes 397-225, Intermediate Conversation and Composition, with a grade of "B" will receive 14 credits for French 101, 102, 201, and 202 in addition to the three credits for French 225; a student who completes the course with a "C" receives seven retroactive credits in addition to the three credits for the course.

Requirements for the Major

Supporting Courses, 6 credits

- 397-202 Intermediate French Language II, 3 credits
(can be earned through retroactive credits)
- 397-225 Intermediate French Conversation and Composition, 3 credits

Upper-Level Courses, 24 credits

- 397-325 Advanced Conversation and Composition, 3 credits
- 397-329 Representative French Authors, 3 credits
(may be repeated when different subtitle is used)

One of these:

- 397-354 France Today, 3 credits
- 397-355 Le Monde Francophone, 3 credits

Minimum of 3 credits in additional literature from:

- 397-329 Representative French Authors, 3 credits
- 397-333 French Literary Themes, 3 credits
- 397-335 French Literary Eras, 3 credits
- 397-350 Major French Drama, 3 credits
- 397-351 Major French Fiction, 3 credits
- 397-498 Independent Study (in literature; with adviser's consent), 3 credits

Minimum of 12 credits from:

- 397-329 Representative French Authors, 3 credits
- 397-333 French Literary Themes, 3 credits
- 397-335 French Literary Eras, 3 credits
- 397-345 Advanced French Grammar and Translation, 3 credits
- 397-346 French Phonetics and Public Speaking, 3 credits
- 397-350 Major French Drama, 3 credits
- 397-351 Major French Fiction, 3 credits
- 397-354 France Today, 3 credits
- 397-355 Le Monde Francophone, 3 credits
- 397-366 Study Abroad: Paris, 3 credits
- 397-367 Business French, 3 credits
- 397-498 Independent Study (in advanced language, literature, or cultural studies; with adviser's consent)
- 493-376 Cultural Conflict in French Canada, 3 credits

(Some upper-level courses may be repeated for credit when course content varies. See adviser.)

Requirements for the Minor

Supporting Courses, 6 credits

- 397-202 Intermediate French Language II, 3 credits
(can be earned through retroactive credit)
- 397-225 Intermediate Conversation and Composition, 3 credits

Upper-Level Courses, 12 credits

- 397-325 Advanced French Conversation and Composition, 3 credits
- 397-329 Representative French Authors, 3 credits

Minimum of 6 credits from:

- 397-329 Representative French Authors, 3 credits
- 397-333 French Literary Themes, 3 credits
- 397-335 French Literary Eras, 3 credits
- 397-345 Advanced French Grammar and Translation, 3 credits
- 397-346 French Phonetics and Public Speaking, 3 credits
- 397-350 Major French Drama, 3 credits
- 397-351 Major French Fiction, 3 credits
- 397-354 France Today, 3 credits
- 397-355 Le Monde Francophone, 3 credits
- 397-366 Study Abroad: Paris, 3 credits
- 397-367 Business French, 3 credits
- 397-498 Independent Study (in advanced language, literature, or cultural studies; with adviser's consent)
- 493-376 Cultural Conflict in French Canada, 3 credits

(Some upper-level courses may be repeated for credit when course content varies. See adviser.)

General Studies

Interdisciplinary Major

Director — Katharine Olski.

A general studies major helps students to 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.

The general studies major is offered through the Extended Degree Program. It is designed to serve Wisconsin residents age 25 and over who are employed more than half time or who have family responsibilities precluding attendance at regularly scheduled traditional on-campus classes.

Each student has an individualized area of emphasis which can be career-related or focus on an area of special interest. The focus may come from the primary areas of business and economics, natural science, social science, or humanities and fine arts. Students may develop an interdisciplinary specialization of their own choice or do an in-depth study in a single discipline. The combination of elective courses, area of emphasis courses, and required courses adds up to a substantial concentration of knowledge, tailored to individual needs.

Extended Degree students complete 120 credits for a bachelor of arts degree, including 57 elective credits, 48 major requirements credits, and 15 credits in the area of emphasis. Specific coursework is selected in consultation with an Extended Degree Program adviser. The general studies major is suitable preparation for graduate work in a number of professional programs.

Requirements for the Major

Core Courses

Adult Learning Seminar, 2 credits
Problem Solving, 4 credits

Communication Skills, 6 credits

Writing/Information Skills, 2 credits
Speaking/Listening Skills, 2 credits
Numerical Skills, 2 credits

Business and Economics, 9 credits

Accounting/Finance, 3 credits
Management/Marketing, 3 credits
Economic Concepts, 3 credits

Humanities and Fine Arts, 9 credits

Choose from:
Fine Arts, 3 credits
Philosophy, 3 credits
Literature, 3 credits
History, 3 credits

Natural Science, 9 credits

Choose from:
Human or Plant Biology, 3 credits
Consumer Chemistry or Applied Physics, 3 credits
Physical Geography, 3 credits
Resource Utilization or Natural and Industrial Environment, 3 credits

Social Science, 9 credits

Contemporary Social Thought, 3 credits
Research Methods, 3 credits
Applications to Contemporary Problems, 3 credits

Area of Emphasis, 15 credits

Courses are selected to meet individual needs.

Geography

Disciplinary Major or Minor

Professors — William Luatsch, William Niedzwiedz (chairperson).

Assistant Professor — Marcelo Cruz.

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 students gain a broad education encompassing the sciences and the liberal arts.

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. Depending on their career goals, students might effectively combine geography with programs in business administration, science and environmental change, urban and regional studies, public administration, environmental policy and planning, social change and development, or 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. UW-Green Bay has a state-of-the-art GIS laboratory. Also, students are encouraged to gain practical experience through internships with agencies and organizations in the region and through practical course projects.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 10 credits required

296-202 Physical Geology, 4 credits
416-250 Displays of Geographic Information, 3 credits

One of these:

416-102 World Regions and Concepts: A Geographic Analysis, 3 credits
416-202 Introduction to Cultural Geography, 3 credits

Recommended Courses:

246-133 Fundamentals of Public Address, 3 credits
266-256 Introduction to Computer Science I, 4 credits
352-105 Expository Writing, 3 credits

One of these:

255-205 Social Science Statistics, 4 credits
600-260 Introductory Statistics, 4 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
416-421 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 The City and Its Regional Context, 3 credits
416-342 Settlement Geography, 3 credits

Regional Geography (one course required):

- 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

Geographic Techniques (two courses required):

- 362-454 Remote Sensing of the Environment, 3 credits
416-350 Geographic Information Systems, 3 credits
416-351 Elements of Cartography, 3 credits
416-353 Air Photo Interpretation, 3 credits

Geography Electives (nine credits 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 these:

- 296-202 Physical Geology, 4 credits
416-102 World Regions and Concepts: A Geographic Analysis, 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.

German

Disciplinary Major or Minor

Adviser — Jennifer Ham.

The German program provides students with the opportunity to develop communication skills in both written and spoken German along with an understanding of and appreciation for German literature and culture.

Although some students choose to study German primarily for personal growth and intellectual enrichment, the program is intended to prepare students for graduate work, teaching, and other occupations in business, industry, and government. German language and culture studies are of great professional value in such fields as music, art, law, history, anthropology, theology, communications, translating and interpreting, international business, personnel work, public relations, management, social work, government service, and politics. Furthermore, proficiency in a foreign language and understanding of other cultures are essential for peace and prosperity in a mutually interdependent world.

Because German is offered within a broad program of literature and language at UW-Green Bay, student course work may draw on faculty from English, French, and Spanish, too. In addition to opportunities that the Office of International Education offers for students to study abroad, the German program also encourages students to participate in a month of travel and instruction in Germany, or to spend a semester or a year in Germany as exchange students at the University of Kassel. A language laboratory with interactive audio equipment, computers, and international television reception also supports language practice and cultural awareness.

Students majoring in German will also 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 who begin German study at UW-Green Bay should enroll in Introduction to German 101 or Intensive German 289. The intensive German workshop aims to develop German communication competency in one semester, during which a workshop meets six hours a day, four days a week. Completing the program is equivalent to completing 15 credits in introductory and intermediate German language courses.

Students with previous German study should select a course appropriate to their level — German 102, 201, 202 or 225 — by counting a year of high school work as equivalent to a semester of college work, or they should consult the German adviser.

Retroactive or Advanced Placement Credit

Students who have taken German in high school or who have acquired a knowledge of German elsewhere may earn up to 14 additional credits for their previous German study by completing a German course beyond the 101 level. With a grade of "B" or better, German credit will be given for all German courses preceding the one in which the student has enrolled, to a maximum of 14 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 seven credits.

For example, with four years of high school German, students who complete German 225, Conversation and Composition, with a grade of "B" will receive 14 retroactive credits for German, 101, 102, 201, and 202 in addition to the three credits for German 225; students who complete the course with a "C" will receive seven retroactive credits for German 101, 102, 201, and 202 in addition to the three credits for German 225.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 6 credits

- 424-202 Intermediate German II, 3 credits
(can be earned as part of 424-289, Intensive German,
15 credits; can also be earned through retroactive credit)
- 424-225 Intermediate German Conversation and Composition, 3 credits

Upper-Level Courses, 24 credits

- 424-325 Advanced German Conversation and Composition, 3 credits

Minimum of 6 credits from:

- 424-355 Deutsche Kultur und Landeskunde, 3 credits
424-356 Contemporary German Culture, 3 credits
424-485 Semester Abroad in Germany, 3-15 credits
448-325 History of Modern Germany, 3 credits
424-361 Summer Study Abroad: German Culture, 3 credits

Minimum of 6 credits from:

- 424-329 Representative German Authors, 3 credits
424-333 German Literary Themes, 3 credits
424-335 German Literary Eras, 3 credits
424-350 Major German Drama, 3 credits
424-351 Major German Fiction, 3 credits
424-352 Major German Poetry, 3 credits

Minimum of 9 credits from courses listed above or:

- 351-323 Approaches to Literature, 3 credits
424-345 Advanced German Grammar, 3 credits
424-357 German Cinema, 3 credits
424-498 Independent Study, 3 credits

(Some upper-level courses may be repeated for credit when course content varies. See adviser)

Requirements for the Minor

Supporting Courses, 6 credits

- 424-202 Intermediate German II, 3 credits
(can be taken as part of 424-289, Intensive German, 15 credits;
can also be earned through retroactive credit)
- 424-225 Intermediate German Conversation and Composition, 3 credits

Upper-Level Courses, 12 credits

- 424-325 Advanced German Conversation and Composition, 3 credits
424-329 Representative German Authors, 3 credits

Minimum of 6 credits from:

- 424-333 German Literary Themes, 3 credits
424-335 German Literary Eras, 3 credits
424-350 Major German Drama, 3 credits
424-351 Major German Fiction, 3 credits
424-352 Major German Poetry, 3 credits
424-356 Contemporary German Culture, 3 credits
424-361 Summer Study Abroad: German Culture, 3 credits

History

Disciplinary Major or Minor

Professors — David H. Galaty, Harvey J. Kaye, Craig A. Lockard, Joyce E. Salisbury.

Associate Professors — Paul P. Abrahams, Norbert H. Gaworek (chairperson), Peter J. Kellogg, Jerrold C. Rodesch.

Assistant Professors — Gregory Aldrete, Victoria Goff, M. Alison Kibler.

History is an essential guide not only to the past, but to the present and the future. We cannot understand ourselves or our society without understanding our past, its European and non-Western roots, and the global perspective gained from a knowledge of the history of other countries and people. History helps us recognize the commonality and diversity of cultures and leads us to greater awareness of the richness and complexity of our own heritage.

A thorough training in history is the foundation of a complete education. History's rigorous intellectual discipline, and its emphasis on research and analysis, nourish intellectual growth and depth of understanding. It is ideal preparation for professional careers in many fields, particularly law, business, journalism, teaching, public relations, and for many other graduate programs.

History faculty have expertise in political, social, economic, diplomatic, cultural and intellectual history and an excellent record in teaching and scholarship. The University supports the history program with a good library, interlibrary loan facilities, and an exceptional collection of original documents in the Area Research Center.

Students majoring in history must select an interdisciplinary minor, which is an important part of UW-Green Bay's academic program. For advice on appropriate interdisciplinary minors to accompany the history major, consult with the advisers listed above.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 12 credits minimum

- 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

One of these:

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

Electives:

- 448-201 Ancient Civilization, 3 credits
448-203 History of Europe, 1300 to 1815, 3 credits
448-204 History of Europe, 1815 to Present, 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
448-275 The Vietnam War in Historical Perspective, 3 credits
448-298 Independent Study
493-226 American Indian Studies: Wisconsin Indians, 3 credits
493-250 European Economy and Society, 3 credits

Upper-Level Courses, 24 credits minimum

Students are required to take the history seminar and one three-credit course from each of the three categories listed below. Students should select the remaining 12 credits based on academic and professional need or interest.

Required:

448-480 Seminar in History, 3 credits

Category 1, U.S. History: 3 credits minimum

- 448-302 American Thought and Culture I, 3 credits
 448-303 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., 3 credits
 448-324 American Foreign Relations, 1865 to Present, 3 credits
 448-340 Topics in African-American History, 3 credits
 448-375 Great Decisions: Issues and Options in International Affairs, 3 credits
 448-380 Women in the United States: Historical and Cultural Perspectives, 3 credits
 448-401 Transformation of American Schools, 3 credits
 448-402 Political and Social History of the Modern U.S. I, 3 credits
 448-403 Political and Social History of the Modern U.S. II, 3 credits
 448-405 History of Technological Change, 3 credits
 493-374 Wisconsin Indians Ethnohistory, 3 credits

Category 2, European History: 3 credits minimum

- 448-301 History of the Middle Ages, 3 credits
 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 Rise and Fall of the Soviet Empire, 3 credits
 448-325 History of Modern Germany, 3 credits
 448-375 Great Decisions: Issues and Options in International Affairs, 3 credits
 448-404 Political and Social History of Modern Europe, 3 credits
 448-405 History of Technological Change, 3 credits
 493-341 Perspectives on Human Values: The Medieval World, 3 credits
 493-410 The Christian Heritage: Birth of Christ to 1600, 3 credits

Category 3, Non-Western History: 3 credits minimum

- 448-314 History of the Russian Empire, 3 credits
 448-315 Rise and Fall of the Soviet Empire, 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

Recommended:

- 448-484 Distinction in History, 2-4 credits
 448-497 Internship, 2-4 credits
 448-498 Independent Study, 1-4 credits
 875-361 Historical Perspectives on Social Change, 3 credits

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

Choose a minimum of 6 credits from the supporting courses listed under requirements for the major.

Upper-Level Courses, 12 credits minimum

Choose a minimum of 12 credits from the upper-level courses listed under the major, with one three-credit course selected from each of the three categories, i.e., U.S. History, European History, and Non-Western History. The Seminar in History is recommended, but not required.

Human Biology

Interdisciplinary Major or Minor

Professors — Dorothea B. Sager, Richard J. Stevens.
 Associate Professors — Charles A. Ihrke (chairperson), Warren V. Johnson, Joseph A. Mannino, James C. Marker, Donna Ritch.

Human biology focuses on the biological, physiological, anthropological, and behavioral aspects of the human organism. Core courses emphasize human structure and function, patterns of development and aging, genetics, nutrition, and human evolution and diversity.

Human biology is an appropriate major for students interested in the health sciences, medicine, dentistry, human physiology, 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 and chemistry. Students interested in pharmaceutical sales, hospital or nursing home administration, or other related health service professions should consider a human biology minor.

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

- **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.
- **health science**, which provides preparation for medical, dental or other health related professional schools including veterinary medicine or for graduate programs in biological or medical sciences.
- **exercise science**, which offers students broad training in exercise science, including exercise physiology, fitness, and human motion.
- **cytotechnology**, offered in affiliation with two schools of cytotechnology, one in Madison, and one in Rochester, Minnesota. 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.

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

Many UW-Green Bay human biology majors continue their studies in graduate or professional schools, including medical and dental schools.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses

Common courses required for ALL emphases, 11 credits:

- 204-202 Principles of Biology I, 4 credits
 600-260 Introductory Statistics, 4 credits
 352-105 Expository Writing, 3 credits
 (Or one equivalent course, either
 352-225 Writing About the Arts and Humanities, or
 352-226 Writing About the Social Sciences, or
 352-227 Writing About the Sciences)

Note: Additional supporting courses are required for each area of emphases.

Additional supporting courses: General Human Biology, 12-18 credits

- 204-203 Principles of Biology II, 4 credits
 OR
 478-204 Anatomy and Physiology, 5 credits
 225-108 General Chemistry, 5 credits
 OR

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

And select one:

- Oral communication (e.g., 246-133 Fundamentals of Public Address)
 Literature (e.g., 351-104 Introduction to Literature)
 Foreign language (one year at the college level)

Additional supporting courses: Health Science, 36 credits

- 204-203 Principles of Biology II, 4 credits
 600-104 Algebra and Trigonometry, 4 credits
 600-202 Calculus and Analytic Geometry I, 4 credits
 600-203 Calculus and Analytic Geometry II, 4 credits
 (600-202, 203 are optional if not required for medical/
 graduate school admission)
 225-211 Principles of Chemistry I, 5 credits
 225-212 Principles of Chemistry II, 5 credits
 754-103 Fundamentals of Physics I, 5 credits
 754-104 Fundamentals of Physics II, 5 credits

Additional supporting courses: Exercise Science, 15-20 credits

- 225-300 Bio-Organic Chemistry, 3 credits
 478-204 Anatomy and Physiology, 5 credits
 742-116 First Aid and Emergency Care Procedures, 2 credits
 225-108 General Chemistry, 5 credits

OR

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

Additional supporting courses: Cytotechnology, 21 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
 351-104 Introduction to Literature, 3 credits
 600-104 Algebra and Trigonometry, 4 credits

Upper-Level Core Courses

Common courses required for ALL emphases, 9 credits. Select one course in three of the four subject areas:

Genetics

- 204-303 Genetics, 3 credits
 478-310 Human Genetics, 3 credits

Human Physiology

- 478-402 Human Physiology, 3 credits
 478-350 Principles of Exercise Physiology, 4 credits
 478-320 Biology of Human Development and Senescence, 3 credits

Nutrition

- 694-300 Human Nutrition, 3 credits
 694-302 Nutrition and Culture, 3 credits

Evolution

- 478-342 Human Evolution, 3 credits
 478-364 Human Variability, 3 credits

Areas of Emphasis, 21 credits minimum

Students must complete requirements in one of the following areas of emphasis.

■ **General Human Biology Emphasis**

Upper-Level Courses

Remaining upper-level courses depend upon each student's interests and needs and should be selected with the help of an adviser.

■ **Health Science Emphasis**

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

Upper-Level Courses

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

One of these:

- 225-311 Analytical Chemistry, 4 credits
 225-330 Biochemistry, 3 credits

Select three out of the following four choices:

- 204-303 Genetics, 3 credits
 478-342 Human Evolution, 3 credits (or 478-364 Human Variability)
 478-402 Human Physiology, 3 credits
 694-300 Human Nutrition, 3 credits

Recommended:

- 204-307 Cell Biology, 4 credits
 204-340 Comparative Anatomy of Vertebrates, 4 credits
 204-347 Developmental Biology, 4 credits
 204-407 Molecular Biology, 3 credits
 204-408 Molecular Biology Laboratory, 1 credit
 225-330 Biochemistry, 3 credits
 478-413 Neurophysiology, 3 credits

■ **Exercise Science Emphasis**

Upper-Level Courses

Required:

- 478-320 Biology of Human Development and Senescence, 3 credits
 478-333 Principles of Sports Physiology, 3 credits
 478-350 Principles of Exercise Physiology, 4 credits
 478-351 Kinesiology, 4 credits
 694-300 Human Nutrition, 3 credits

One of these:

- 478-342 Human Evolution, 3 credits
 478-364 Human Variability, 3 credits

Recommended:

- 216-382 Introductory Management, 3 credits
 302-462 The Adult Learner, 3 credits
 478-402 Human Physiology, 3 credits
 478-497 Internship, 2-4 credits
 (No more than 3 credits may apply toward the major.)
 742-406 Prevention and Treatment of Athletic Injuries, 2 credits
 820-300 Experimental Psychology, 4 credits
 820-311 The Psychology of Sports and Exercise, 3 credits

■ **Cytotechnology Emphasis**

UW-Green Bay is affiliated with two schools of cytotechnology: Mayo School of Cytotechnology, Rochester, Minnesota, and the Wisconsin State Laboratory of Hygiene, UW-Madison. Students complete 92 credits at UWGB, including all general education requirements (senior seminar also), and then take an 11-month, 32-credit clinical internship at one of the cooperating institutions. After completion of the internship, students will graduate with a degree in human biology and be prepared for professional certification.

Upper-Level Courses

Choose one course from three of these four subject areas:

Genetics

- 204-303 Genetics, 3 credits
 478-310 Human Genetics, 3 credits

Human Physiology

- 478-402 Human Physiology, 3 credits

Nutrition

- 694-300 Human Nutrition, 3 credits
694-302 Nutrition and Culture, 3 credits

Evolution

- 478-342 Human Evolution, 3 credits
478-364 Human Variability, 3 credits

Recommended:

Additional upper-level courses in human biology, biology, and chemistry will depend upon students' career objectives and choice of clinical facility.

Requirements for the Minor

Students complete requirements in one of the following areas of emphasis.

■ General Emphasis

The interdisciplinary minor in human biology is taken in conjunction with a disciplinary major. It provides an overview of the field of human biology. For the minor, there must be at least 12 credits of upper-level courses that are not duplicated by major requirements.

Supporting Courses, 8-9 credits**Take both of these:**

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

Or, take both of these:

- 204-202 Principles of Biology I, 4 credits
478-204 Anatomy and Physiology, 5 credits

Upper-Level Courses, 12-13 credits**Choose one course from each area:****Genetics**

- 204-303 Genetics, 3 credits
478-310 Human Genetics, 3 credits

Human Physiology and Anatomy

- 478-350 Principles of Exercise Physiology, 4 credits
478-320 Biology of Human Development and Senescence, 3 credits
478-402 Human Physiology, 3 credits

Nutrition

- 694-300 Human Nutrition, 3 credits
694-302 Nutrition and Culture, 3 credits

Evolution

- 478-342 Human Evolution, 3 credits
478-364 Human Variability, 3 credits

■ Applied Human Biology Emphasis

Many students majoring in biology and chemistry desire a greater exposure to the interdisciplinary applications that apply science to solving biological and medical problems. This curriculum contains several laboratory courses that fulfill this need.

Supporting Courses, 19-20 credits

- 204-202 Principles of Biology I, 4 credits
225-211 Principles of Chemistry I, 5 credits
225-212 Principles of Chemistry II, 5 credits
478-207 Laboratory Safety, 1 credit

One of these:

- 204-203 Principles of Biology II, 4 credits
478-204 Anatomy and Physiology, 5 credits

Upper-Level Courses, 15 credits**Required, 7-8 credits:**

Take both of these:

- 204-407 Molecular Biology, 3 credits
204-408 Molecular Biology Laboratory, 1 credit

Or, take both of these:

- 225-330 Biochemistry, 3 credits
225-331 Biochemistry Laboratory, 1 credit

Also, one of these courses:

- 204-346 Comparative Physiology, 3 credits
478-402 Human Physiology, 3 credits
478-350 Principles of Exercise Physiology, 4 credits

Electives, choose 7-8 credits from these:

- 204-302 Microbiology, 4 credits
204-303 Genetics, 3 credits
204-304 Genetics Laboratory, 1 credit
204-307 Cell Biology, 4 credits
204-347 Developmental Biology, 4 credits
204-349 Comparative Physiology Laboratory, 1 credit
204-402 Advanced Microbiology, 3 credits
204-407 Molecular Biology, 3 credits
204-408 Molecular Biology Laboratory, 1 credit
225-303 Organic Chemistry II, 3 credits
225-305 Organic Chemistry II Laboratory, 1 credit
225-311 Analytical Chemistry, 4 credits
225-330 Biochemistry, 3 credits
225-331 Biochemistry Laboratory, 1 credit
225-413 Instrumental Analysis, 4 credits
478-351 Kinesiology, 4 credits
478-402 Human Physiology, 3 credits
478-413 Neurophysiology, 3 credits
478-498 Independent Study, 1-4 credits

Human Development

Interdisciplinary Major or Minor

Professors — Fergus P. Hughes, Richard D. Logan.
Associate Professors — Dennis N. Lorenz, Ilene C. Noppe, Lloyd D. Noppe (chairperson), Dean Rodeheaver, Timothy J. Sewall.
Assistant Professors — Ed de St. Aubin, Tracy L. Luchetta.

Human development is concerned with the flow of life from conception to death. It provides a 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. It is an interdisciplinary, liberal arts program that covers the contributions of psychologists, biologists, anthropologists, and sociologists to our understanding of the human life cycle.

Students who plan careers that involve working with or knowing about people may major or minor in human development in order to acquire a broad background about human change and behavior. Depending upon their particular directions or goals, students select one of three possible emphases within human development. Students can create other valuable programs in consultation with an adviser. For example, a human development major might be combined with minors in women's studies, American Indian studies, sociology, anthropology, or communication processes (linguistics).

Emphases in human development are:

■ **General human development** would support careers in human resources, human services, and health-related fields, or serve as a stepping stone to graduate work in human development, developmental psychology, child and adolescent development, and similar programs. Career possibilities range from youth services worker to college professor to adoption agency official to children's librarian to career consultant to student affairs dean. Some jobs require master's degrees or doctoral-level preparation.

■ **The preclinical/precounseling emphasis** is for students who want to gain pre-professional education prior to further training for mental health careers. A master's or doctoral degree is required for appropriate licensure to practice counseling or clinical psychology. Combining this emphasis with a minor or second major in psychology is advisable. Entrance into graduate school programs is highly competitive and students should plan their programs carefully with their adviser.

■ **The family studies emphasis** will help students focus upon life span changes and the interactions among social, individual, and family experiences. This emphasis serves as preparation for careers in work settings such as parent educator, human services worker, family therapist or counselor, employee assistance administrator, or childbirth instructor. Family studies can lead to graduate work in family and human development, marriage and family therapy, developmental psychology, and related areas. Some jobs require master's degrees or doctoral-level preparation.

Special Facilities

The human development program maintains the University's physiological laboratory which emphasizes student and faculty research. Human development maintains an extensive collection of psychological and educational tests for classroom, community, and scholarly use.

Program Entrance Requirements

Students will be admitted to the human development major only upon completion of a minimum of 30 credits of college-level work with a grade point average of at least 2.5 on a scale of 4.0. Transfer students need at least 15 credits and one semester at UWGB with a 2.5 gpa.

Human Development Minor

The human development minor provides a broad, interdisciplinary complement to a traditional social science major such as psychology; offers a strong, liberal arts underpinning to professional programs such as

education, social work, or business administration; or relates effectively to other interdisciplinary majors in human biology, communication and the arts, or social change and development.

Requirements for the Major

Supporting Courses, 13 credits

478-102 Introduction to Human Biology, 3 credits

One of these:

255-205 Social Science Statistics, 4 credits

600-260 Introductory Statistics, 4 credits

One of these:

481-210 Introduction to Human Development, 3 credits

820-102 Introduction to Psychology, 3 credits

One of these:

156-100 Varieties of World Culture, 3 credits

900-202 Introduction to Sociology, 3 credits

Upper-Level Requirements, 28 credits

481-440 Human Development Seminar, 1 credit

Life-span core courses, 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

Biological course, choose 3 credits:

478-310 Human Genetics, 3 credits

478-313 Brain Functions in Human Behavior, 3 credits

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

478-342 Human Evolution, 3 credits

478-364 Human Variability, 3 credits

478-402 Human Physiology, 3 credits

481-350 Developmental Psychobiology, 3 credits

820-308 Physiological Psychology, 3 credits

Regardless of the area of emphasis, one of these is also encouraged:

481-484 Senior Honors Project, 3 credits

481-497 Internship, 3 credits (in an approved agency)

481-498 Independent Study, 3 credits

Areas of Emphasis

Students choose 15 credits from an area of emphasis.

■ General Human Development Emphasis

481-435 Abnormal Behavior, 3 credits

Choose at least four courses from:

481-334 Play and Creative Activities in Childhood, 3 credits

481-336 Gender Role Development, 3 credits

481-342 Cross-Cultural Human Development, 3 credits

481-344 Death: The Final Stage of Life, 3 credits

481-420 Tests and Measurements, 3 credits

481-429 Theories of Personality, 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

■ Preclinical/Precounseling Emphasis

481-420 Tests and Measurements, 3 credits

481-429 Theories of Personality, 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

One of the following courses may be substituted for one course from the list above:

302-322 Educational Psychology, 3 credits

- 481-334 Play and Creative Activities in Childhood, 3 credits
 481-344 Death: The Final Stage of Life, 3 credits
 820-450 Health Psychology, 3 credits

■ Family Studies Emphasis

- 156-304 Family, Kin and Community, 3 credits
 481-336 Gender Role Development, 3 credits
 875-340 Women, Work and Family, 3 credits
 900-308 Sociology of the Family, 3 credits

Choose at least one of these courses:

- 481-334 Play and Creative Activities in Childhood, 3 credits
 481-342 Cross-Cultural Human Development, 3 credits
 481-436 Counseling Children and Adolescents, 3 credits

Requirements for the Minor

Supporting Courses, 6 credits

One of these:

- 481-210 Introduction to Human Development, 3 credits
 820-102 Introduction to Psychology, 3 credits

One of these:

- 156-100 Varieties of World Culture, 3 credits
 478-102 Introduction to Human Biology, 3 credits
 900-202 Introduction to Sociology, 3 credits

Upper-Level Courses, 12 credits

Select the four courses listed below, or select three courses from below and choose one course from the list of biological courses in "Requirements for the Major."

- 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 — Howard Cohen, David Galaty, Gary Greif, Elmer Havens (emeritus), Walter Herrscher, Michael Murphy, Gilbert Null, Joyce Salisbury, E. Michael Thron.

Associate Professors — Paul Abrahams, Orville Clark, Kenneth Fleurant, Norbert Gaworek, Peter Kellogg, E. Nicole Meyer, Jerrold Rodesch, Thomas Tasch.

Assistant Professors — Gregory Aldrete, Jennifer Ham, Cristina Ortiz, Brian Sutton, Denise Sweet.

Lecturers — Jo Chern, Ann Deprey, Karla Larson, Dianne Marlett, Mary Prindiville, Linda Toonen, Carol Van Egeren.

Humanistic studies offers an integrated interdisciplinary program in the humanities. It stresses the development of intellectual abilities which are critical in a world where a majority of students will make several career changes and must be well prepared for learning throughout life. The program is both professionally practical as well as personally enriching.

The program in humanistic studies provides an education which helps prepare students for careers in such fields as government, education, religion, human services, and journalism. It offers the liberal education background that recruiters often seek for positions in business and industry. The intellectual skills that humanities courses develop — the ability to write and speak effectively, to think creatively, analytically and critically, and to think contextually — are valuable in any career.

At its core is a set of courses called Perspectives on Human Values which explore how and why values have developed and been expressed in various historical periods. These interdisciplinary courses stress connections among history, philosophy, religion, music, literature, language, art, technology and science.

In addition to the core program, humanistic studies students choose courses in one of three emphases: values studies, cultural studies, or religious studies. The emphases, in conjunction with a great works requirement, are designed to educate students about the main ideas, ideals, movements and creative works that are part of our cultural heritage.

The humanistic studies program is also appropriate in combination with other courses of study. It is a natural accompaniment to majors or minors in history, philosophy, English, French, German or Spanish as well as to minors in American Indian studies and women's studies. It also provides a different dimension to the programs of students in such areas as business, psychology, sociology, political science or science. And in conjunction with other courses of study, humanistic studies is an excellent preparation for pre-professional training in law, dentistry, medicine or engineering as well as for many graduate programs. Studies have shown, for example, that nationally, humanities majors do better on widely used standardized tests for admission to graduate and professional schools than do majors in other areas.

Requirements for the Major

All humanistic studies students are expected to:

— have completed two years of foreign language study at high school level

OR

— complete two semesters of foreign language study at college level

OR

— include two upper-level electives from the cultural studies emphasis as part of their 24-credit, upper-level program.

Supporting Courses, 9 credits

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

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

Upper-Level Courses, 24 credits**Perspectives on Human Value Series**

Choose two courses, 6 credits required:

- 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 Enlightenment, 3 credits
- 493-343 Perspectives on Human Values: Romanticism to Naturalism, 3 credits
- 493-344 Perspectives on Human Values: The Modern Period, 3 credits

Great Works

Three credits required:

Course content is variable and courses may be repeated with different topics. It is recommended that students choose works created in the ages they studied in "Perspectives on Human Values."

- 493-345 Great Works of the Classical World, 1-3 credits
- 493-346 Great Works of the Medieval World, 1-3 credits
- 493-347 Great Works of the Renaissance through Enlightenment, 1-3 credits
- 493-348 Great Works of Romanticism and Naturalism, 1-3 credits
- 493-349 Great Works of the Modern World, 1-3 credits

Capstone Seminar

Required of seniors:

- 493-480 Humanities Seminar, 3 credits

Areas of Emphasis

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

■ Values Studies

- 448-380 Women in the United States: Historical and Cultural Perspectives, 3 credits
- 493-302 Human Identity, 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 Enlightenment, 3 credits
- 493-343 Perspectives on Human Values: Romanticism to Naturalism, 3 credits
- 493-344 Perspectives on Human Values: The Modern Period, 3 credits
- 736-301 Criticism of Values, 3 credits

■ Cultural Studies

- 493-354 France Today, 3 credits
- 493-356 Contemporary German Culture, 3 credits
- 493-358 Latin America Today, 3 credits
- 493-360 Spain Today, 3 credits
- 493-361 Summer Study Abroad: German Culture, 3 credits
- 493-363 January Abroad: Mexico, 2 credits
- 493-365 June Abroad: England and Its Heritage, 3 credits
- 493-366 Study Abroad: Paris, 3 credits
- 493-371 American Indian Art and Artists, 3 credits
- 493-374 Wisconsin Indians Ethnohistory, 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: Hinduism and Buddhism, 3 credits
- 493-381 Women, Myth and Identity, 3 credits
- 493-410 The Christian Heritage: Birth of Christ to 1600, 3 credits

Electives

Students must choose six elective credits from upper-level humanistic studies courses to total 24 credits in the major. With advice, credits may be chosen from upper-level courses in literature, language, history, or philosophy.

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.

Information Sciences

Interdisciplinary Major and Minor

Professors — Phillip Clampitt (communications), Dennis Girard (mathematics), Timothy Meyer (electronic media) (chairperson).
Associate Professors — Clifford Abbott (linguistics), Forrest Baulieu (computer science), Charles Matter (psychology), Bruce Mielke (computer science), William Shay (computer science).
Lecturer — Linda Curl (computer science).

The central organizing concept of this major is information — its structures in verbal, visual, and quantitative forms; its storage, processing, and communication by both machines and people. The program is new and developing. Students can expect curricular additions and changes as development proceeds.

The curriculum ranges widely across several disciplines, all of which are represented in the core requirements: computing, linguistics, cognitive psychology, communication theory, mathematics, data and information technologies, organizational communication and management, 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 information technologies.

A goal of the program is to train students to conceptualize and solve information problems. A core introductory course focuses on information problems; many of the courses are project oriented; and there are opportunities for internships and practica. In addition, each student negotiates an individual area of application. 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 sciences 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, advertising, marketing, sales, and systems analysis are some of their career areas.

The minor in information sciences focuses on information problems, information technologies, and information structures. It can be structured with or without programming skills.

In addition to the major and minor in information sciences, UW-Green Bay also offers a *disciplinary major and minor* in computer science. These options offer students considerable flexibility in combining computing with other areas (business, cartography, communications, electronic media, cognitive science, mathematics, etc.), but to be valuable that flexibility requires planning. Early consultation with faculty advisers is recommended.

Requirements for the Major

Supporting Courses, 32 credits

One year of any college-level foreign language
 266-256 Introduction to Computing Science I, 4 credits
 266-257 Introduction to Computing Science II, 4 credits
 520-210 Information Problems, 3 credits
 520-220 Controlling Bibliographic Information, 3 credits
 520-230 Visual Information, 3 credits
 600-241 Discrete Mathematics I, 4 credits
 600-242 Discrete Mathematics II, 4 credits

Upper-Level Courses, 27 credits

266-351 Data Structures, 3 credits
 266-352 Computer Graphics, 3 credits
 266-357 Theory of Programming Language, 3 credits
 520-308 Information Technologies, 3 credits
 520-440 Information and Computing Science Practicum, 3 credits
 OR
 520-497 Internship, 3-12 credits

One of these:

246-322 Modern Linguistics, 3 credits
 246-326 Modern Semantics, 3 credits

One of these:

216-382 Introductory Management, 3 credits
 246-335 Organizational Communication, 3 credits

One of these:

246-445 Human Communication Theory, 3 credits
 520-430 Information, Media and Society, 3 credits

One of these:

266-358 Data Communications and Computer Networks, 3 credits
 266-455 Microcomputers and Digital Electronics, 3 credits
 362-454 Remote Sensing of the Environment, 3 credits

Area of Emphasis, 9 credits

The emphasis represents an area of application which affords an opportunity for students to develop some 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
 520-402 Expert Systems, 3 credits

■ Computer-Based Information Systems

216-452 Advanced Microcomputer Business Applications, 3 credits
 266-451 Database Management Systems, 3 credits
 266-454 Artificial Intelligence, 3 credits

Requirements for the Minor

Supporting Courses, 6 credits

266-155 Microcomputers and End-User Applications, 3 credits
 520-210 Information Problems, 3 credits

Upper-Level Courses, 12 credits

520-308 Information Technologies, 3 credits
 520-430 Information, Media and Society, 3 credits

Two of these:

246-322 Modern Linguistics, 3 credits
 246-326 Modern Semantics, 3 credits
 246-335 Organizational Communication, 3 credits
 266-351 Data Structures, 3 credits
 820-417 Psychology of Cognitive Processes, 3 credits

International Studies

Certificate Program

Director — Joyce E. Salisbury, director, International Education.
Adviser — Stephen Kazar.

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 the international studies certificate 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.

The international studies certificate is formal recognition on the transcript that a student has successfully completed a set of courses drawn from many disciplines which provide a strong background in international studies. The certificate also attests to a student's having achieved some proficiency in a foreign language and/or some experience abroad. See the "International Education" section on page six of this catalog for a description of the study abroad opportunities that are available as one of the options for students pursuing the international studies certificate.

Students can count courses toward the certificate that they already counted toward their major or minor, so with early planning, acquiring the certificate will not delay graduation.

Requirements for the Certificate

Language and Field Experience

Competence in one major foreign language.

In addition, fulfill one of these:

- Approved study abroad experience
- Internship with a local organization with international issues

Supporting Courses, 12 credits

Select from the following:

- 448-100 History of the Modern World, 3 credits
- 493-101 Foundations of Western Culture I, 3 credits
- 493-102 Foundations of Western Culture II, 3 credits
- 778-100 World Politics, 3 credits
- 951-102 World Regions and Concepts: A Geographic Analysis, 3 credits

Regional Interest, 6 credits

Take two upper-level courses from one of the following regions:

- Asia
- Africa
- Europe
- Latin America or Caribbean or Canada

Problem Focus, 6 credits

Take two courses in one of the following areas of emphasis.

International Business:

- 216-372 Introduction to International Business, 3 credits

And choose any one of the following:

- 216-445 International Financial Management, 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
- 397-367 Business French, 3 credits

Or other relevant course in international business

International Politics:

Choose two of the following:

- 778-351 Comparative Political Systems, 3 credits
- 778-353 Politics of Developing Nations, 3 credits
- 778-360 International Politics, 3 credits

Or other relevant courses in international politics or comparative political systems

European Cultures:

Choose two from among relevant advanced language and literature courses:

- 397-367 Business French, 3 credits
- 424-356 Contemporary German Culture, 3 credits
- 908-438 Major Spanish Writer, 3 credits

Or additional relevant upper-level courses from Regional Interest-Europe category.

Or approved courses taken in study abroad programs.

Literature and Language

Disciplinary Majors and Minors in English, French, German, Spanish (see separate listings for English, French, German, Spanish)

Emeritus Professor — Elmer Havens.

Professors — Walter Herrscher (chairperson), Michael Murphy, E. Michael Thron.

Associate Professors — Kenneth Fleurant, E. Nicole Meyer.

Assistant Professors — Jennifer Ham, Cristina Ortiz, Brian Sutton, Denise Sweet.

The literature and language program offers majors and minors in English, French, German, and Spanish. All are intended to develop students' understanding of — and appreciation for — important works of literature and the richness of humanity's cultural and linguistic heritage. All seek, as well, to develop students' communication skills in both written and spoken forms.

Graduates have found satisfying careers in teaching, international business, translating and interpreting, personnel work, public relations, business management, social work, government service, and other fields. Literature and language majors are also excellent preparation for graduate study.

Certainly, proficiency in the languages of the United States and the world, as well as a literate understanding of cultural diversity both at home and abroad, are essential for peace and prosperity in a mutually interdependent world.

Because English, French, German, and Spanish are all offered within a broad program of literature and language at UW-Green Bay, student course work may draw on a particularly broadly educated faculty. The many opportunities to study abroad include England, France, Germany, Spain, Guatemala, and Mexico.

A computerized writing center and a foreign language laboratory with interactive audio equipment, computers, and international television reception also strengthens language skills and cultural awareness.

Separate entries in this catalog describe specific requirements for English, French, German, and Spanish majors and minors. Those entries provide further information, as well, about specific opportunities for study abroad.

Students who begin foreign language study at UW-Green Bay should enroll in an introductory course, numbered 101. Students who have studied a foreign language previously should select a course appropriate to their level — French, German, or Spanish 102, 201, 202, or 225 — by counting a year of high school work as equivalent to a semester of college work, or they should consult the adviser in that language.

Retroactive or Advanced Placement 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 14 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 courses in that language preceding the one in which the student has enrolled, to a maximum of 14 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 seven credits.

For example, with four years of high school Spanish, students who complete Spanish 225, Intermediate Conversation and Composition, with a grade of "B" will receive 14 retroactive credits for Spanish 101, 102, 201, 202 in addition to the three credits for Spanish 225; students who complete the course with a "C" will receive seven retroactive credits for Spanish 101, 102, 201, and 202 in addition to the three credits for Spanish 225.

Mathematics

Disciplinary Major or Minor

Professors — Dennis M. Girard, David Jowett, Robert B. Wenger.

Associate Professors — Forrest B. Baulieu, William C. Conley, Gregory Davis (chairperson), Theodor Korithoski, Bruce W. Mielke, Nikitas L. Petrakopoulos, William A. Shay.

Assistant Professor — Tian-You Hu.

Lecturers — Theresa Adsit, Linda Curl, Gary Wardall.

The mathematics discipline has undergraduate programs of study in the two areas of mathematics and statistics. A student who elects a disciplinary major in mathematics must choose an area of emphasis from one of these two 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 select this area of emphasis if they are interested in mathematics for its own sake (pure mathematics) or as a tool for analyzing and solving real-world problems (applied mathematics). Students 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 program in **statistics** provides applied courses in experimental design, multivariate statistical analysis, and applied regression analysis. 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

The University of Wisconsin System placement examination in mathematics is used to advise entering freshmen about the level at which they should enter university courses.

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.

Mathematics majors must choose a minor in an interdisciplinary program. Examples would be information sciences, environmental science, or business administration.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 12 credits required

- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-203 Calculus and Analytic Geometry II, 4 credits
- 600-209 Multivariate Calculus, 4 credits

Areas of Emphasis

Complete requirements in one of the areas of emphasis. Each emphasis has its own set of upper-level requirements.

■ *Mathematics Emphasis, 24 upper-level credits minimum*

- 600-305 Ordinary Differential Equations, 3 credits
- 600-320 Linear Algebra I, 3 credits
- 600-328 Introduction to Algebraic Structures, 3 credits
- 600-385 Foundations of Geometry, 3 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:

- 600-309 Systems of Ordinary Differential Equations, 3 credits
- 600-350 Numerical Analysis, 3 credits
- 600-355 Applied Mathematical Optimization, 3 credits
- 600-360 Theory of Probability, 3 credits
- 600-361 Mathematical Statistics, 3 credits
- 600-416 Orthogonal Functions and Partial Differential Equations, 3 credits
- 600-425 Dynamical Systems, 3 credits

Those wishing teacher preparation must add to supporting requirements:

- 266-256 Introduction to Computer Science I, 4 credits
- 600-260 Introductory Statistics, 4 credits

■ *Statistics Emphasis, 24 upper-level credits minimum*

- 600-320 Linear Algebra I, 3 credits
- 600-321 Linear Algebra II, 3 credits
- 600-360 Theory of Probability, 3 credits
- 600-361 Mathematical Statistics, 3 credits
- 600-467 Applied Regression Analysis, 3 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 grade point average 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 and Programming, 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*

- 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

Three of the following:

- 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
- 600-350 Numerical Analysis, 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
- 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

Students wishing teacher preparation must add these supporting requirements:

- 266-256 Introduction to Computer Science I, 4 credits
- 600-260 Introductory Statistics, 4 credits

■ *Statistics Emphasis, 24 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
- 600-467 Applied Regression Analysis, 3 credits

Nine additional credits from:

- 600-360 Theory of Probability, 3 credits
- 600-361 Mathematical Statistics, 3 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 grade point average of 3.00 or higher.)

Music

Disciplinary Major or Minor

Professors — Trinidad J. Chavez, Arthur L. Cohrs (chairperson), Lovell G. Ives, Terence J. O'Grady.

Associate Professors — Kevin Collins, Cheryl A. Grosso, Sarah Meredith.
Assistant Professor — John Salerno.

The University of Wisconsin-Green Bay disciplinary program in music, fully accredited by the National Association of Schools of Music (NASM), offers a program leading to a Bachelor of Music with majors in:

- **music education** (secondary instrumental or vocal music, elementary music, general music)
- **performance** (preparation for a professional career in music performance)

Or a Bachelor of Arts with major emphases in:

- **applied music**
- **jazz studies**
- **music history and literature**
- **music and business** (a joint program in the two disciplines)

All music students are required to take a sequence of music theory, history and literature courses to achieve a comprehensive intellectual understanding of music, along with skills relating to performance. Students are expected to develop a high level of skill in eartraining and sight singing. The music program emphasizes quality in vocal and instrumental music performance with many opportunities for solo and group performance on campus and in a larger community.

All students who major in music must also choose an interdisciplinary minor. While a number of interdisciplinary minors exist, the minor in communication and the arts is recommended because it helps students to integrate music with the aesthetics, history and social context of all the fine arts.

Students who elect the Bachelor of Music in music education choose education as their interdisciplinary minor since that program leads to preparation for a teaching license in the selected areas. Students may combine programs in performance and music education.

Some students who want to combine an interest in music with career possibilities in business have chosen to minor in business administration.

It is possible to choose music as a disciplinary minor and couple it with an interdisciplinary major. This program is for students who view music as an avocation, or who intend to use their musical skills within the community in a nonprofessional context.

The music program offers excellent facilities in the Studio Arts Building. Also, students benefit from the close proximity of the Edward W. Weidner Center for the Performing Arts, which features world-class performances in an acoustically-superb environment. In addition, most student concerts and recitals are held in the Weidner Center. The David A. Cofrin Library holds a fine collection of books, periodicals, musical scores, and recordings.

Three- to four-year sequences of applied instruction are available in piano, organ, guitar, voice, flute, oboe, clarinet, saxophone, bassoon, horn, trumpet, trombone, euphonium, tuba, percussion, violin, viola, cello, string bass, and electric bass. Group ensemble performance opportunities include Wind Ensemble, Symphonic Band, Concert Choir, University Chorus, Jazz Ensemble, Show/Jazz Choir, Vocal Jazz Ensemble, Jazz Combo, String Ensemble, Vocal Ensemble, as well as smaller brass, woodwind, guitar, and percussion ensembles, musical theatre and opera workshop.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Bachelor of Music

Required for all emphases:

Supporting Courses, 29-34 credits

Category 1, 24 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:

- 672-011-042 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, 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, 1 credit each, 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 variety of minor ensembles are offered each year in voice, woodwinds, brass, string, percussion, jazz, and contemporary music. Although not required at the supporting level, these minor ensembles are recommended.

Upper-Level Courses, 13-14 credits

Required for all emphases:

- 670-333 Basic Conducting, 2 credits
- 670-351 Literature and Styles in Music III, 4 credits
- 670-352 Literature and Styles in Music IV, 4 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, 1 credit each, 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

- 672- Minor Ensembles, 1 credit each, 2 credits
(2 semesters required)

- 672-342 Jazz Combo, 1 credit
- 672-343 Jazz Ensemble, 1 credit
- 672-344 Woodwind Ensemble, 1 credit
- 672-345 Brass Ensemble, 1 credit
- 672-346 Percussion Ensemble, 1 credit
- 672-350 New Music Ensemble, 1 credit
- 672-353 String Ensemble, 1 credit
- 672-354 Guitar Ensemble, 1 credit
- 672-363 Vocal Ensemble, 1 credit
- 672-364 University Singers Show Choir, 1 credit
- 672-365 Vocal Jazz Ensemble, 1 credit
- 672-366 Opera Workshop, 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.

■ Music Performance

Upper-Level Courses, 31-36 credits

- 242-327 Cross-Cultural Communication II: Jazz History, 3 credits
 242-329 Cross-Cultural Communication II: Introduction to World Music, 3 credits
 670-225 Diction for Singers I, 2 credits
 670-226 Diction for Singers II, 2 credits (vocal performance only)
 (Vocal performance majors are required to fulfill a foreign language requirement; consult a music adviser.)
 670-303 Vocal Pedagogy, 2 credits (vocal performance majors only)
 670-315 Choral Arranging, 2 credits

OR

- 670-316 Instrumental Arranging, 3 credits
 670-318 Choral Literature, 2 credits (vocal performance majors only)
 670-423 Seminar in Music Literature, 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)

(Music performance students must sign up for 2 semesters of Master Class Lab in conjunction with 300- or 400-level applied lessons.)

A minimum of 6 credits from:

- 670-241 Jazz Improvisation, 2 credits
 670-242 Jazz and Pop Literature, 2 credits
 670-303 Vocal Pedagogy, 2 credits (unless taken above)
 670-315 Choral Arranging, 2 credits (if not counted above)
 670-316 Instrumental Arranging, 3 credits (if not counted above)
 670-318 Choral Literature, 2 credits (unless taken above)
 670-341 Woodwind Techniques, 2 credits
 670-342 Brass Techniques, 2 credits
 670-343 String Techniques, 2 credits
 670-344 Choral Conducting and Rehearsal Techniques, 3 credits
 OR
 670-348 Instrumental Conducting and Rehearsal Techniques, 3 credits
 670-345 Percussion Techniques, 2 credits
 670-346 Keyboard Accompanying I, 1 credit
 670-347 Keyboard Accompanying II, 1 credit
 670-411 Composition, 3 credits
 670-417 Jazz Arranging, 2-3 credits
 670-423 Seminar in Music Literature, 3 credits
 (can be repeated once with different topic)
 670-483 Vocal Literature, 2 credits
 672-366 Opera Workshop, 1 credit

■ Music Education: Choral Licensure

Upper-Level Courses, 17 credits

- 302-317 Teaching Instrumental and Choral Music, 3 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
 670-347 Keyboard Accompanying II, 1 credit
 670- Instrumental Techniques, 2 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
 672- Applied Lessons, including a half recital, 4 credits
 (2 semesters at 2 credits each)
 672-069 Elementary Guitar, 1 credit

■ Music Education: Instrumental Licensure

Upper-Level Courses, 24 credits

- 302-317 Teaching Instrumental and Choral Music, 3 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 and Fretted Instrument Proficiency:

- 672-069 Elementary Guitar, 1 credit
 672-045 Elementary Voice I, 1 credit
 672-046 Elementary Voice II, 1 credit

OR

2 credits of applied voice

■ Music Education: General Music Licensure

Upper-Level Courses, 20-23 credits

- 302-317 Teaching Instrumental and Choral Music, 3 credits
 302-334 Teaching General Music in the Elementary School, 3 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 Accompanying I, 1 credit
 670-347 Keyboard Accompanying II, 1 credit
 670- Instrumental Techniques, 2 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
 672- Applied Lessons, including a half recital, 4 credits
 (2 semesters at 2 credits each)

Voice and Fretted Instrument Proficiency:

- 672-069 Elementary Guitar, 1 credit

Required of all students whose major is not voice

- 672-045 Elementary Voice I, 0-2 credits
 672-046 Elementary Voice II, 0-2 credits

Bachelor of Arts

■ Emphasis in Applied Music

Supporting Courses, 30 credits

- 670-115, 116 Ear Training and Sight Singing I, II, 1, 1 credit
 670-151, 152 Materials and Values in Music I, II, 3, 3 credits
 670-251, 252 Literature and Styles in Music I, II, 4, 4 credits
 672-1xx Applied Lessons, 2 credits each, 4 credits (check
Timetable for current offerings for specific instruments)
 (2 semesters required)
 672-2xx Applied Lessons, 2 credits each, 4 credits (check
Timetable for current offerings for specific instruments)
 (2 semesters required)
 672- Major Performing Ensembles, 4 credits (4 semesters required)
 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.
 672-241 Symphonic Band, 1 credit
 672-241 Wind Ensemble, 1 credit
 672-261 Concert Choir, 1 credit
 672-262 University Chorus, 1 credit
 672-011 Keyboard Musicianship I, 1 credit
 672-021 Keyboard Musicianship II, 1 credit

Upper-Level Courses, 20 credits

- 670-351 Literature and Styles in Music III, 4 credits
 670-352 Literature and Styles in Music IV, 4 credits
 670-333 Basic Conducting, 2 credits
 672-3xx Applied Lessons, 2 credits each, 4 credits (check *Timetable* for current offerings for specific instruments)(2 semesters required) (above Applied Lessons include a half recital))
 672- Major Performing Ensembles, 1 credit each, 4 credits (4 semesters required)
 The major ensemble chosen must be related to the area of applied lessons when possible.
 672-441 Symphonic Band, 1 credit
 672-441 Wind Ensemble, 1 credit
 672-461 Concert Choir, 1 credit
 672-462 University Chorus, 1 credit
 672- Minor Performing Ensembles, 2 credits (2 semesters required)
 672-342 Jazz Combo, 1 credit
 672-343 Jazz Ensemble, 1 credit
 672-344 Woodwind Ensemble, 1 credit
 672-345 Brass Ensemble, 1 credit
 672-346 Percussion Ensemble, 1 credit
 672-350 New Music Ensemble, 1 credit
 672-353 String Ensemble, 1 credit
 672-354 Guitar Ensemble, 1 credit
 672-363 Vocal Ensemble, 1 credit
 672-364 University Singers Show Choir, 1 credit
 672-165 Vocal Jazz Ensemble, 1 credit
 672-365 Vocal Jazz Ensemble, 1 credit
 672-366 Opera Workshop, 1 credit

Music Electives, 4 credits**Choose from the following:**

- 670-303 Vocal Pedagogy, 2 credits
 670-315 Choral Arranging, 2 credits
 OR
 670-316 Instrumental Arranging, 3 credits
 670-318 Choral Literature, 2 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
 670-411 Composition, 3 credits
 670-423 Seminar in Music Literature, 3 credits
 670-483 Vocal Literature, 2 credits

■ Emphasis in Jazz Studies**Supporting Courses, 36 credits**

- 670-115, 116 Ear Training and Sight Singing I, II, 1, 1 credit
 670-151, 152 Materials and Values in Music I, II, 3, 3 credits
 670-251, 252 Literature and Styles in Music I, II, 4, 4 credits
 670-241 Jazz Improvisation, 2 credits
 670-242 Jazz and Pop Literature, 2 credits
 672-1xx Applied Lessons, 2 credits each, 4 credits (check *Timetable* for current offerings for specific instruments) (2 semesters required)
 672-2xx Applied Lessons, 2 credits each, 4 credits (check *Timetable* for current offerings for specific instruments) (2 semesters required)
 672- Major Performing Ensembles, 1 credit each, 4 credits (4 semesters required)
 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.
 672-241 Symphonic Band, 1 credit

- 672-241 Wind Ensemble, 1 credit
 672-261 Concert Choir, 1 credit
 672-262 University Chorus, 1 credit

- 672-143 Jazz Ensemble, 1 credit

OR

- 672-165 Vocal Jazz Ensemble, 1 credit
 672-011 Keyboard Musicianship I, 1 credit
 672-021 Keyboard Musicianship II, 1 credit

Upper-Level Courses, 20 credits

- 670-351 Literature and Styles in Music III, 4 credits
 670-411 Composition, 3 credits
 670-417 Jazz Arranging, 2 credits
 672-3xx Applied Lessons, 2 credits each, 4 credits (check *Timetable* for current offerings for specific instruments) (2 semesters required)
 672- Major Performing Ensembles, 4 credits (4 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
 672-343 Jazz Ensemble, 1 credit each, 4 credits (4 semesters required, instrumentalists)
 OR
 672-365 Vocal Jazz Ensemble, 1 credit each, 4 credits (vocalists)

Music Electives**4 credits from the following:**

- 242-327 Cultural Cross-Communication: Jazz History, 3 credits
 242-329 Cultural Cross-Communication: World Music, 3 credits
 672-342 Jazz Combo, 1 credit (may be repeated)
 672-365 Vocal Jazz Ensemble, 1 credit (may be repeated)

■ Emphasis in Music History/Literature**Supporting Courses, 30 credits**

- 670-115, 116 Ear Training and Sight Singing I, II, 1, 1, credit
 670-151, 152 Materials and Values in Music I, II, 3, 3 credits
 670-251, 252 Literature and Styles in Music I, II, 4, 4 credits
 672-1xx Applied Lessons, 2 credits each, 4 credits (2 semesters required) (check *Timetable* for current offerings for specific instrument)
 672-2xx Applied Lessons, 2 credits each, 4 credits (2 semesters required) (check *Timetable* for current offerings for specific instrument)
 672- Major Performing Ensembles, 1 credit each, 4 credits (4 semesters required)
 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.
 672-241 Symphonic Band, 1 credit
 672-241 Wind Ensemble, 1 credit
 672-261 Concert Choir, 1 credit
 672-262 University Chorus, 1 credit
 672-011, 012 Keyboard Musicianship I, II, 1, 1 credit

Upper-Level Courses, 16 credits

- 670-351 Literature and Styles in Music III, 4 credits
 670-352 Literature and Styles in Music IV, 4 credits
 670-333 Basic Conducting, 2 credits
 670-423 Seminar in Music Literature, 3 credits
 672- Major Performing Ensembles, 1 credit each, 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

- 672- Minor Performing Ensembles, 1 credit
 672-342 Jazz Combo, 1 credit
 672-343 Jazz Ensemble, 1 credit
 672-344 Woodwind Ensemble, 1 credit
 672-345 Brass Ensemble, 1 credit
 672-346 Percussion Ensemble, 1 credit
 672-350 New Music Ensemble, 1 credit
 672-353 String Ensemble, 1 credit
 672-354 Guitar Ensemble, 1 credit
 672-363 Vocal Ensemble, 1 credit
 672-364 University Singers Show Choir, 1 credit
 672-365 Vocal Jazz Ensemble, 1 credit
 672-366 Opera Workshop, 1 credit

Music Electives, 8 credits

A minimum of 8 credits from:

- 670-315 Choral Arranging, 2 credits
 OR
 670-316 Instrumental Arranging, 3 credits
 670-411 Composition, 3 credits
 670-423 Seminar in Music Literature, 3 credits
 (may be repeated with different topic)
 242-327 Cultural Cross-Communication: Jazz History, 3 credits
 242-329 Cultural Cross-Communication: World Music, 3 credits

Requirements for the Minor

Supporting Courses, 18-22 credits

These are the same as for the majors, excluding:

- 670-251, 252 Literature and Styles in Music I, II, 8 credits
 672-2xx Applied Lessons, 2 credits (2 semesters at 2 credits each)
 (see *Timetable* for current offerings for specific instruments)
 672-031, 032
 -041, 042 Keyboard Musicianship III, IV
 (only 2 semesters required)

Upper-Level Courses, 6 credits

Required:

- 670-333 Basic Conducting, 2 credits
 672- Major/Minor Ensemble, 1 credit
 Major Ensembles
 672-441 Symphonic Band, 1 credit
 672-441 Wind Ensemble, 1 credit
 672-461 Concert Choir, 1 credit
 672-462 University Chorus, 1 credit
 Minor Ensembles
 672-342 Jazz Combo, 1 credit
 672-343 Jazz Ensemble, 1 credit
 672-344 Woodwind Ensemble, 1 credit
 672-345 Brass Ensemble, 1 credit
 672-346 Percussion Ensemble, 1 credit
 672-350 New Music Ensemble, 1 credit
 672-354 Guitar Ensemble, 1 credit
 672-363 Vocal Ensemble, 1 credit
 672-364 University Singers Show Choir, 1 credit
 672-365 Vocal Jazz Ensemble, 1 credit
 672-366 Opera Workshop, 1 credit

One of the following:

- 242-327 Cross-Cultural Communication: Jazz History, 3 credits
 242-329 Cross-Cultural Communication: World Music, 3 credits

Nursing

Bachelor of Science in Nursing for Registered Nurses

Professional Program in Nursing

Associate Professors — V. Jane Muhl (chairperson), Lorraine Noll.
 Assistant Professors — Sylvia Kubsch, Harriet Wichowski.

The professional program in nursing is designed to provide a unique professional and interdisciplinary educational experience for qualified registered nurses who seek to complete their degree and earn the Bachelor of Science in Nursing. Through its on-campus program and the UW System collaborative program, access to professional nursing education and opportunities for educational mobility for registered nurses through northeast and northern Wisconsin are provided.

The program is built upon the foundations of general education and the associate degree or diploma in nursing. It consists of courses supportive of nursing, the professional nursing curriculum, electives, and other courses required for graduation from UW-Green Bay.

The program stimulates development of a personal framework for professional nursing practice, which is grounded in nursing theory and nursing experience, enriched by interdisciplinary learning opportunities, and revealed through specific professional behaviors. The professional behaviors are developed through achievement of outcome indicators and course objectives which are consistent with the program objectives. The main concepts of the program objectives are: synthesis of professional roles, nursing process, critical thinking, communication, therapeutic nursing intervention, ethical conduct, autonomous professional behavior, client diversity, change, and professional development.

Graduates of the professional program in nursing are prepared to: (a) diagnose and treat human responses to actual or potential health problems, (b) promote holistic adaptation of individuals, families, and communities, (c) function as advocates for clients, (d) teach clients and other health care providers, (e) manage care of groups, (f) critically analyze and utilize nursing research to improve care, and (g) enact leadership roles in the profession and within society. The program provides the foundation for the master's degree in nursing and for students' continued personal and professional development.

The professional program in nursing is approved by the Wisconsin State Board of Nursing and accredited by the National League for Nursing (NLN). The program is a member agency of the National League for Nursing Council of Baccalaureate and Higher Degree Programs and the American Association of Collegiate Schools of Nursing. Kappa Pi chapter of Sigma Theta Tau, the international honor society of nursing, was established at UW-Green Bay in 1988.

Requirements for Admission to the BSN Major

- A. Graduation from an AD or diploma program accredited by a state board of nursing.
- B. Current RN license (in any state).
- C. Admission to UW-Green Bay as a degree-seeking student.
- D. A minimum grade point average of 2.25 on a 4.0 scale, based on credits earned prior to admission to the major.
- E. Submission of an application for admission to the nursing major and completion of an academic plan.
- F. Earning 28 supporting-level nursing credits through one of these three methods:
 1. Completion of all supporting nursing courses during the fall semester of 1988 or thereafter at an NLN-accredited ADN program in a Wisconsin Technical College with which UWGB has an Articulation Agreement.

2. Graduation from an NLN-accredited ADN program in a community college in a state other than Wisconsin.
3. Successful completion of the first two UWGB nursing courses:
 - 689-311 Theoretical Foundations in Nursing and
 - 689-315 Advanced Health Assessment.

Requirements for the Major

Supporting Courses, 18 credits

Students must have earned college credit for all supporting courses. Requirements can be met by taking the courses at UWGB, direct transfer of CLEP or PEP tests to UWGB, or credit for prior learning.

Students must select one required course and one elective course, with the approval of the nursing program adviser, in each of the following three content areas:

Communication

Required, choose one course:

- 246-133 Fundamentals of Public Address, 3 credits
- 246-166 Fundamentals of Interpersonal Communication, 3 credits

Electives, choose one course:

- 246-335 Organizational Communication, 3 credits
- 246-337 Small Group Communication, 3 credits
- 352-105 Expository Writing, 3 credits
- 352-225 Writing about the Arts and Humanities, 3 credits
- 352-226 Writing about the Social Sciences, 3 credits
- 352-227 Writing about the Sciences, 3 credits
- 520-308 Information Technologies, 3 credits
- 520-430 Information, Media and Society, 3 credits
- 820-416 Psychology of Intergroup Relations, 3 credits
- 820-438 Group Dynamics, 3 credits

Therapeutic Nursing Intervention

Required, choose one course:

- 296-102 Introduction to Earth Science, 3 credits
- 362-102 Introduction to Environmental Science, 3 credits
- 362-303 Conservation of Natural Resources, 3 credits

Electives, choose one course:

- 478-206 Fertility, Reproduction and Family Planning, 3 credits
- 481-331 Infancy and Early Childhood, 3 credits
- 481-332 Middle Childhood and Adolescence, 3 credits
- 481-336 Gender Role Development, 3 credits
- 481-342 Cross Cultural Human Development, 3 credits
- 481-343 Adulthood and Aging, 3 credits
- 481-344 Death: The Final Stage of Life, 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
- 694-142 Food and Nutritional Health, 3 credits
- 694-300 Human Nutrition, 3 credits
- 694-350 Life Cycle Nutrition, 3 credits
- 875-340 Women, Work and Family, 3 credits
- 900-308 Sociology of the Family, 3 credits

Critical Thinking

Required, choose one course:

- 216-215 Introduction to Business Statistics, 3 credits
- 255-205 Social Science Statistics, 4 credits
- 600-260 Introductory Statistics, 4 credits

Elective, choose one course:

- 216-206 Law and the Individual, 3 credits
- 298-203 Micro Economic Analysis, 3 credits
- 520-210 Information Problems, 3 credits
- 736-101 Introduction to Philosophy, 3 credits
- 736-111 Elementary Logic, 3 credits
- 736-212 Philosophy of Science, 3 credits
- 736-301 Criticism of Values, 3 credits
- 736-304 American Philosophy, 3 credits
- 736-324 Contemporary Philosophy, 3 credits
- 736-326 Philosophy, Politics and Law, 3 credits
- 736-406 Philosophical Problems in Psychology, 3 credits
- 835-420 Health Care Policy and Administration, 3 credits

Upper-Level Nursing Major, 30 credits

- 689-311 Theoretical Foundations in Nursing, 3 credits
- 689-315 Advanced Health Assessment, 4 credits
- 689-325 Nursing Diagnostics and Therapeutics, 4 credits
- 689-415 Gerontological Nursing, 4 credits
- 689-431 Nursing Management, 3 credits
- 689-435 Introduction to Nursing Research, 3 credits
- 689-441 Community Health Nursing, 6 credits
- 689-451 Synthesis for Nursing Practice, 3 credits

Nutritional Sciences

Interdisciplinary Major or Minor

Associate Professors — Dawson C. Deese, Charles Ihrke (chairperson), Warren V. Johnson.

Assistant Professor — Andrea Wang.

Nutritional sciences is an interdisciplinary program concerned with the study of human nutritional requirements throughout the life-span; the utilization of nutrients in health and disease; and the factors that affect the quality, quantity and availability of food. Nutrition students examine aspects of human nutritional needs; nutrient functions; food quality, preservation, and preparation; and food service.

Nutritional sciences majors choose one of three areas of emphasis. They are:

- Human Nutrition/Dietetics
- Human Nutrition
- Food Science

The **human nutrition/dietetics emphasis** prepares students to become Registered Dietitians (RD) for employment as nutritionists or nutritionist supervisors in hospitals, other health care agencies, and some businesses. The program of study is approved by the American Dietetics Association and must be followed by students who wish to become registered dietitians. Upon completion, the student receives a B.S. degree from UWGB, and, after fulfilling a clinical internship or AP4 program, is eligible to take the registration examination leading to the RD credential.

The **human nutrition emphasis** provides appropriate preparation for employment as a nutritionist or non-registered dietitian in hospitals and other health care agencies. Students also are prepared for employment in food service operations as nutritionist consultants and as entry-level food service supervisors in hospitals, nursing homes, and commercial food services.

The **food science emphasis** deals with fundamentals of food chemistry including 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 laboratory-based careers are encouraged to combine a major in chemistry with a major in this emphasis.

In addition to the careers already mentioned, nutritional sciences majors can also prepare for entrance into graduate programs or professional programs such as medicine, dentistry or pharmacy. For those interested in working in management in food-related enterprises, a major in nutritional sciences along with a minor in business administration is a worthwhile combination.

Requirements for the Major

Supporting Courses

Common courses required for All emphases, 17 credits:

- 204-202 Principles of Biology I, 4 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 266-155 Microcomputers and End-User Applications, 3 credits
- 352-105 Expository Writing, 3 credits
(Or one equivalent course, either
352-225 Writing About the Arts and Humanities, or
352-226 Writing About the Social Sciences, or
352-227 Writing About the Sciences)
- 600-260 Introductory Statistics, 4 credits

NOTE: PLUS additional supporting courses are required for each area of emphasis.

Additional supporting courses: Dietetics, 28-33 credits

- 225-108 General Chemistry, 5 credits

OR

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

- 225-300 Bio-Organic Chemistry, 3 credits
- 225-301 Bio-Organic Chemistry Laboratory, 1 credit
- 298-202 Macro Economic Analysis, 3 credits
- 478-204 Anatomy and Physiology, 5 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

Additional supporting courses: Human Nutrition, 24-29 credits

- 225-108 General Chemistry, 5 credits

OR

- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 225-300 Bio-Organic Chemistry, 3 credits
- 225-301 Bio-Organic Chemistry Laboratory, 1 credit
- 478-204 Anatomy and Physiology, 5 credits
- 694-212 Nature of Food, 4 credits
- 820-102 Introduction to Psychology, 3 credits
- 900-202 Introduction to Sociology, 3 credits

Additional supporting courses: Food Science, 28 credits

- 204-203 Principles of Biology, 4 credits
- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 600-104 Fundamentals of Algebra and Trigonometry, 4 credits
- 754-103 Fundamentals of Physics I, 5 credits
- 754-104 Fundamentals of Physics II, 5 credits

Areas of Emphasis

Students must complete requirements in one of the following areas of emphasis.

■ Human Nutrition/Dietetics Emphasis

In order to become a registered dietitian, the American Dietetic Association requires certain academic competencies. Required courses listed for this emphasis are necessary to meet A.D.A. competencies.

Upper-Level Courses, 40-41 credits

Required:

- 204-302 Principles of Microbiology, 4 credits
- 225-330 Biochemistry, 3 credits

OR

- 694-328 Physiological Chemistry, 3 credits
- 225-331 Biochemistry Laboratory, 1 credit
- 302-322 Educational Psychology, 3 credits
- 478-310 Human Genetics, 3 credits
- 478-350 Principles of Exercise Physiology, 4 credits

OR

- 478-402 Human Physiology, 3 credits
- 694-300 Human Nutrition, 3 credits
- 694-312 Quantity Food Production and Service, 4 credits
- 694-350 Life Cycle Nutrition, 3 credits
- 694-402 Food Service Administration, 3 credits
- 694-421 Community Nutrition, 4 credits
- 694-485 Advanced Human Nutrition, 3 credits
- 694-488 Nutrition in Disease, 3 credits

Recommended:

- 694-302 Nutrition and Culture, 3 credits

■ Human Nutrition Emphasis

Upper-Level Courses, 36 credits

Required:

- 204-302 Principles of Microbiology, 4 credits
- 216-382 Introductory Management, 3 credits
- 225-330 Biochemistry, 3 credits

OR

- 694-328 Physiological Chemistry, 3 credits
 225-331 Biochemistry Laboratory, 1 credit
 478-350 Principles of Exercise Physiology, 4 credits

OR

- 478-402 Human Physiology, 3 credits
 694-300 Human Nutrition, 3 credits
 694-302 Nutrition and Culture, 3 credits
 694-350 Life Cycle Nutrition, 3 credits
 694-402 Food Service Administration, 3 credits
 694-421 Community Nutrition, 4 credits
 694-485 Advanced Human Nutrition, 3 credits

Recommended:

- 478-310 Human Genetics, 3 credits
 694-312 Quantity Food Production and Service, 4 credits
 694-497 Internship, 2-4 credits (up to 3 credits may apply to the major)

■ **Food Science Emphasis****Upper-Level Courses, 34 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
 694-300 Human Nutrition, 3 credits
 694-302 Nutrition and Culture, 3 credits
 694-350 Life Cycle Nutrition, 3 credits
 694-404 Food Science, 3 credits
 694-409 Analysis of Food and Food Products, 2 credits

Recommended:

- 204-303 Genetics, 3 credits
 204-304 Genetics Laboratory, 1 credit
 478-402 Human Physiology, 3 credits
 694-485 Advanced Human Nutrition, 3 credits
 694-488 Nutrition in Disease, 3 credits

Requirements for the Minor**Supporting Courses, 13-18 credits**

- 204-202 Principles of Biology I, 4 credits
 225-108 General Chemistry, 5 credits

OR

- 225-211 Principles of Chemistry I, 5 credits
 225-212 Principles of Chemistry II, 5 credits
 225-300 Bio-Organic Chemistry, 3 credits
 225-301 Bio-Organic Chemistry Laboratory, 1 credit

OR

- 225-303 Organic Chemistry II, 3 credits
 225-305 Organic Chemistry II Laboratory, 1 credit

Upper-Level Courses, 13 credits minimum

- 204-302 Principles of Microbiology, 4 credits
 694-300 Human Nutrition, 3 credits
 694-350 Life Cycle Nutrition, 3 credits
 694-302 Nutrition and Culture, 3 credits

OR

- 694-421 Community Nutrition, 3 credits

Personal Major

Interdisciplinary Major

Director — Katharine Olski.

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 following are examples of personal majors developed by UW-Green Bay students in recent years:****Cross-Cultural Health Science****Performing Arts Engineering and Design Technology****Computer Technology and Cartography****Environmental and Conservation Education****Legal Studies****Environmental Policy Management****Cultural Perspectives in Social Science****Environmental Ethics****Global Information Analysis****The Science Writing Major****Administration: Applications of Humanistics in Service Organizations****Eastern European Studies**

The personal major requires successful completion of the components of a degree identified in the section of this catalog titled *Planning an Academic Program*. Personal major students must also fulfill the University's requirements for residency and English proficiency.

Additional information and assistance in planning a personal major are available from the Individualized Learning Program Office.

Philosophy

Disciplinary Major or Minor

Professors — Gary Greif, Gilbert Null (chairperson).
Associate Professor — Orville Clark.

The study of philosophy increases awareness and appreciation of the fundamental intellectual, aesthetic and ethical values of the world in which we live. Like mathematics, economics and chemistry, the discipline of philosophy embodies formal thought, structural relationships, abstract models, symbolic languages and deductive reasoning. Students who develop these skills gain perspective to meet problems squarely, improvise and devise solutions, and overcome unpredictable circumstances in life.

National studies of college graduate test scores attest to the success of philosophy students. They consistently score better than nearly all other majors on the Graduate Record Exam, GMAT and LSAT.

But the value of an education in philosophy extends beyond the domain of personal and academic skills.

As the global community continues to shrink and corporate America restructures, careers will increasingly demand employees who can think critically, disclose hidden assumptions and values, formulate problems clearly, and discern the impact of ideas. The flexibility provided by a background in philosophy can become a career asset.

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

Supporting Courses, 9 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
- 736-105 Introduction to Social and Political Philosophy, 3 credits
- 736-111 Elementary Logic, 3 credits (strongly recommended)
- 736-208 Science and Human Values, 3 credits
- 736-211 The Arts and Human Existence, 3 credits
- 736-212 Philosophy of Science, 3 credits

Upper-Level Courses, 24 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 Psychology, 3 credits

Requirements for the Minor

Supporting Courses, 9 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
- 736-105 Introduction to Social and Political Philosophy, 3 credits
- 736-111 Elementary Logic, 3 credits (strongly recommended)
- 736-208 Science and Human Values, 3 credits
- 736-211 The Arts and Human Existence, 3 credits
- 736-212 Philosophy of Science, 3 credits

Upper-Level Courses, 12 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 Psychology, 3 credits

Physical Education

Including Coaching Certification

Chairperson — Otis Chambers.

Lecturers, basic instruction program — Emily Bauer, Tisha Hill, Benjamin Johnson, Michael Kline, Frank Madzarevic, James Merner, Janis Pum, Robert Semling.

Lecturers, certification program — Terry Beeck, Otis Chambers, Cecily Dawson, Michael Heideman, Michael Kline.

The physical education unit does not offer a major or minor. However, a student may count up to four credits of physical education courses toward a bachelor's degree. Students are advised to consult the *Timetable* for further regulations about physical education.

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 coursework early.

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 Philosophy of Athletics and Coaching, 2 credits
- 742-403 Organization and Administration of 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, 3 credits
(prerequisite 478-102 or equivalent)
- 742-116 First Aid and Emergency Care Procedures, 3 credits
- 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

OR

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

Physics

Disciplinary Major or Minor

Professors — Fritz A. Fischbach (chairperson), Anjani K. Mehra, Charles R. Rhyner.

Based on consultation with faculty in the program, the University has determined that the major in physics will not continue as currently structured. Students who are interested in pursuing studies in physics are urged to discuss possible alternatives with the physics program chairperson. Among the related programs that may meet physics student's interests and career plans are pre-engineering (including the Northeast Wisconsin Engineering Program, a cooperative program with UW-Milwaukee), environmental science, and chemistry.

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 who are already enrolled in the physics major must select an interdisciplinary minor. Environmental sciences, information sciences, and human biology are particularly appropriate choices, depending on students' individual interests and career goals. Students are encouraged to include mathematics courses, beyond those listed as supporting courses, in their programs of study.

In addition to classrooms and laboratories, facilities at UW-Green Bay include laboratories designed for faculty-student research projects. Students have access to microcomputers and to mainframe computers. Major equipment available for classes and independent study include electronic test equipment, X-ray and laser diffraction units, multichannel analyzer, liquid scintillation counter, neutron source, storage oscilloscope, noise and vibration meters, microwave units, and infrared, ultra-violet and visible spectrophotometers.

Requirements for the Major

Supporting Courses, 32 credits

- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-203 Calculus and Analytic 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, to include the following 16 credits 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

Plus, 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 — Daniel J. Alesch, Michael E. Kraft (chairperson).
Associate Professor — David M. Littig.
Assistant Professors — Francis J. Carleton, Mark Everingham, Scott R. Furlong, Denise L. Scheberle.

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 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 public administration, urban and regional studies, environmental policy and planning, social change and development, and business administration.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Required Supporting Courses, 13 credits

Choose at least one of these:

- 778-100 World Politics, 3 credits
- 778-101 American Government and Politics, 3 credits

Choose one additional course from the above list or from these:

- 778-202 Introduction to Public Policy, 3 credits
- 778-215 Understanding Presidential Elections, 3 credits
- 778-230 Law and the Judicial Process, 3 credits
- 835-215 Introduction to Public Administration, 3 credits

Take both of these:

- 255-205 Social Science Statistics, 4 credits
- 255-301 Foundations for Social Research, 3 credits

Upper-Level Courses, 24 credits

Core courses, 9 credits:

- 778-340 Political Theory, 3 credits
- 778-360 International Politics, 3 credits

And one of these:

- 778-351 Comparative Political Systems, 3 credits
- 778-353 Politics of Developing Nations, 3 credits

Choose 15 credits from the following lists, not taken as part of the nine-credit core. At least one course must be taken from the American Government and Politics category.

American Government and Politics:

- 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
- 778-314 Administrative Law, 3 credits
- 778-316 Congress: Politics and Policy, 3 credits
- 778-318 Political Behavior, 3 credits
- 778-320 Constitutional Law, 3 credits
- 778-408 Public Policy Analysis, 3 credits
- 778-410 Intergovernmental Relations, 3 credits
- 835-378 Environmental Law, 3 credits
- 835-406 State and Local Government, 3 credits
- 951-351 Transportation and the City, 3 credits

Comparative and International Politics:

- 778-351 Comparative Political Systems, 3 credits
- 778-353 Politics of Developing Systems, 3 credits

Political Theory:

- 736-326 Philosophy, Politics, and Law, 3 credits
- 875-325 Law and Society, 3 credits

Requirements for the Minor

Required Supporting Courses, 6 credits

Choose two of these:

- 778-100 Introduction to Political Science, 3 credits
- 778-101 American Government and Politics, 3 credits
- 778-202 Introduction to Public Policy, 3 credits
- 778-215 Understanding Presidential Elections, 3 credits
- 778-230 Law and the Judicial Process, 3 credits
- 835-215 Introduction to Public Administration, 3 credits

Upper-Level Courses, 12 credits

Choose four courses with the 778 prefix from the list shown under requirements for the major in political science.

Psychology

Disciplinary Major or Minor

Professor — Fergus Hughes.

Associate Professors — Dennis Lorenz, Charles Matter (chairperson),
Illene Noppe, Lloyd Noppe, Timothy Sewall.

Assistant Professors — Adam Butler, Ed de St. Aubin, Tracy Luchetta,
Georjeanna Wilson-Doenges.

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 century, psychology has moved from being a branch of philosophy to being both an experimental science and an active helping profession. It has developed several specialized subareas with focuses spanning from the level of the nerve cell (e.g., the neural basis of memory) to that of society (e.g., the developmental consequences of the Head Start program).

A strong grasp of psychology requires knowledge of the approach and content of each of its subareas. Students gain this understanding by completing core courses. They choose additional courses to meet individual needs with the help of a psychology adviser. Those who major in psychology learn to evaluate research articles and to design, conduct and report experiments by fulfilling the research methodology requirement.

The program offers several special opportunities for students to strengthen their professional preparation. Support for advanced student research recently has been improved by the addition of four computers to the human psychology laboratory and of a diversity of sophisticated stimulation and recording equipment to the physiological psychology laboratory. In addition, internships are available for a variety of community settings.

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 firms, 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.

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. Human development is the most chosen minor, though a number of minors are also completed in human biology and in the social science interdisciplinary programs.

Grade Point Average Requirement

Beginning with those who matriculated in fall 1992, students are being admitted to the psychology major only after completing a minimum of 30 credits of college-level work with a grade point average of at least 2.5 on a 4.0 scale. To remain a psychology major and to graduate with a major, a student must maintain an overall grade point average of at least 2.5. Students who transfer to UWGB with advanced standing should consult with a psychology adviser early in their first semester here.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 10 credits

820-102 Introduction to Psychology, 3 credits

One of these:

255-205 Social Science Statistics, 4 credits

600-260 Introductory Statistics, 4 credits

One of these:

478-102 Introduction to Human Biology, 3 credits

478-313 Brain Functions in Human Behavior, 3 credits

Upper-Level Courses, 28 credits

Research Methodology:

820-300 Experimental Psychology, 4 credits

Core Courses:

A minimum of 3 credits from each of these 4 groups.

General/Experimental Psychology, 3 credits minimum

820-306 Psychology of Perception, 3 credits

820-308 Physiological Psychology, 3 credits

820-417 Psychology of Cognitive Processes, 3 credits

Social Psychology, 3 credits minimum

820-330 Social Psychology, 3 credits

820-415 Organizational Psychology, 3 credits

820-438 Group Dynamics, 3 credits

Developmental Psychology, 3 credits minimum

481-331 Infancy and Early Childhood, 3 credits

481-332 Middle Childhood and Adolescence, 3 credits

481-343 Adulthood and Aging, 3 credits

Clinical/Personality Psychology, 3 credits minimum

820-429 Theories of Personality, 3 credits

820-435 Abnormal Behavior, 3 credits

Additional Courses, 12 credits minimum:

(from core courses above or courses below)

302-322 Educational Psychology, 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

820-390 Environmental Psychology, 3 credits

820-420 Tests and Measurements, 3 credits

820-425 Advanced Physiological Psychology, 3 credits

820-430 History and Systems of Psychology, 3 credits

820-450 Health Psychology, 3 credits

820-497 Internship, 3-12 credits

Requirements for the Minor

Supporting Courses, 7 credits

820-102 Introduction to Psychology, 3 credits

One of these:

255-205 Social Science Statistics, 4 credits

600-260 Introductory Statistics, 4 credits

Upper-Level Courses, 15 credits

A minimum of three credits in each of the 4 groups of courses listed under the upper-level requirements for the major.

Public Administration

Interdisciplinary Major or Minor

Professors — Daniel J. Alesch, Michael E. Kraft, William R. Niedzwiedz, John R. Stoll.

Associate Professor — David M. Littig.

Assistant Professors — Adam B. Butler, Scott R. Furlong, Denise L. Scheberle.

The public administration major is a broad-based, interdisciplinary, social science major. It is designed to prepare students for a variety of challenging careers in public and nonprofit organizations, as well as for further study in a variety of graduate programs. Students develop proficiency in public policy analysis, policy development and implementation, organizational management and leadership, budgeting, and governmental processes. Graduates hold positions as professional administrators, policy analysts, budget specialists, program managers, personnel counselors, and health and human resource specialists. Many public administration majors pursue graduate studies in public administration, law, political science, social services, public policy, and public affairs.

All public administration majors engage in both theoretical and applied studies. Students are encouraged to gain these experiences through independent study, applied research projects, and the internship program administered by the department.

The major in public administration consists of three sets of requirements: required supporting courses, upper-level core courses, and credits in one of two areas of emphasis within the major. The areas of emphasis are public and nonprofit management and public policy.

An interdisciplinary minor in public administration fits well with a major in political science, economics, communication processes, environmental policy and planning, urban and regional studies, social change and development, and others. It prepares students to work in an administrative capacity and as a policy analyst for a variety of organizations, as well as a strong background for graduate studies in public administration, law school, public policy, public affairs, and related fields.

Requirements for the Major

Recommended Supporting Courses

- 246-133 Fundamentals of Public Address, 3 credits
- 266-155 Microcomputers and End-User Applications, 3 credits
- 298-202 Macro Economic Analysis, 3 credits
- 352-105 Expository Writing, 3 credits

Required Supporting Courses, 18-19 credits

- 255-301 Foundations for Social Research, 3 credits
- 298-203 Micro Economic Analysis, 3 credits
- 778-101 American Government and Politics, 3 credits
- 835-202 Introduction to Public Policy, 3 credits
- 835-215 Introduction to Public Administration, 3 credits

One of these:

- 216-215 Introduction to Business Statistics, 3 credits
- 255-205 Social Science Statistics, 4 credits
- 600-260 Introductory Statistics, 4 credits

Upper-Level Core, 9 credits

- 835-315 Public and Nonprofit Management, 3 credits
- 835-408 Public Policy Analysis, 3 credits
- 835-415 Public and Nonprofit Budgeting, 3 credits

Internship (optional):

- 835-497 Internship in Public and Environmental Affairs, 3-12 credits

Areas of Emphasis, 15 credits

■ Public and Nonprofit Management Emphasis

One of the following (Organizational Behavior), 3 credits:

- 820-415 Organizational Psychology, 3 credits
- 835-344 Leadership in Organizations, 3 credits

One of the following (Institutions and Processes), 3 credits:

- 778-410 Intergovernmental Relations, 3 credits
- 835-314 Administrative Law, 3 credits
- 835-406 State and Local Government, 3 credits
- 835-420 Health Care Policy and Administration, 3 credits

One of the following (Analytic Methods), 3 credits:

- 107-316 Governmental and Institutional Accounting, 3 credits
- 835-409 Public Finance and Fiscal Policy, 3 credits
- 835-451 Decision Theory and Methods, 3 credits
- 835-452 Planning Theory and Methods, 3 credits
- 835-453 Cost-Benefit Analysis, 3 credits

ALSO, two electives selected from any of the three groups of courses listed above, OR 835-461 Special Topics in Public and Environmental Affairs, OR 835-497 Public and Environmental Affairs Internship.

Other courses are also pertinent for students desiring to emphasize the field of public and nonprofit management. These can be discussed with faculty advisers.

■ Public Policy Emphasis

One of the following (Institutions and Processes), 3 credits:

- 778-316 Congress: Politics and Policy, 3 credits
- 778-410 Intergovernmental Relations, 3 credits
- 835-314 Administrative Law, 3 credits
- 835-406 State and Local Government, 3 credits

One of the following (Public Policy), 3 credits:

- 835-301 Environmental Politics and Policy, 3 credits
- 835-306 Regulatory Policy and Administration, 3 credits
- 835-378 Environmental Law, 3 credits
- 835-402 Environmental and Resource Economics, 3 credits
- 835-420 Health Care Policy and Administration, 3 credits
- 951-305 Urban Politics and Policy, 3 credits
- 951-351 Transportation and the City, 3 credits

One of the following (Analytic Methods), 3 credits:

- 107-316 Governmental and Institutional Accounting, 3 credits
- 835-409 Public Finance and Fiscal Policy, 3 credits
- 835-451 Decision Theory and Methods, 3 credits
- 835-452 Planning Theory and Methods, 3 credits
- 835-453 Cost-Benefit Analysis, 3 credits

ALSO, two electives selected from any of the three groups of courses listed above, OR 835-461 Special Topics in Public and Environmental Affairs, OR 835-497 Public and Environmental Affairs Internship.

Additional courses may be pertinent for students emphasizing Public Policy (for example, 892-275 American Social Welfare or 298-301 Economic and Social Security). These can be discussed with a faculty adviser.

Requirements for the Minor

Required Supporting Courses, 9 credits

- 778-101 American Government and Politics, 3 credits
 835-202 Introduction to Public Policy, 3 credits
 835-215 Introduction to Public Administration, 3 credits

Upper-Level Requirements, 15 credits

Core courses:

- 835-315 Public and Nonprofit Management, 3 credits

And one of these:

- 835-408 Public Policy Analysis, 3 credits
 835-415 Public and Nonprofit Budgeting, 3 credits

Three of these:

- 778-410 Intergovernmental Relations, 3 credits
 835-301 Environmental Politics and Policy, 3 credits
 835-306 Regulatory Policy and Administration, 3 credits
 835-314 Administrative Law, 3 credits
 835-344 Leadership in Organizations, 3 credits
 835-406 State and Local Government, 3 credits
 835-408 Public Policy Analysis, 3 credits
 835-415 Public and Nonprofit Budgeting, 3 credits
 835-420 Health Care Policy and Administration, 3 credits
 835-451 Decision Theory and Methods, 3 credits
 835-452 Planning Theory and Methods, 3 credits

Social Change and Development

Interdisciplinary Major or Minor

Professors — Anthony Galt, Harvey J. Kaye, Craig A. Lockard, Carol Pollis, Lynn Walter.

Associate Professor — Larry Smith (chairperson).

Assistant Professors — Francis Carleton, Mark Everingham, Alison Kibler.

A major in social change and development focuses on social processes and social problems as they are contained in systems, especially the highly interdependent world system. This perspective encourages critical understandings about possible responses to human problems. Social change and development stresses historical, comparative, and theoretical understanding because of the belief that understanding the present requires understanding the past, and understanding of our own lives and our own society requires understanding the world.

Social change and development is appropriate for individuals interested in graduate work in the social sciences, law school, journalism, international business, and a variety of careers related to community development, criminal justice, social and environmental activism, women's issues, and other social issues.

Social change and development graduates work in a wide range of careers including: business, domestic and international development, education, helping professions, journalism, law and criminal justice, library science, museum administration, and politics. Some have pursued advanced studies in fields such as anthropology, area studies, criminal justice, economics, history, international relations, law, library science, philosophy, political science, and sociology.

Majors select an area of emphasis from among the following:

- **American social issues** studies is for those interested in social problems, public issues, social criticism and strategies for change with respect to contemporary American society.
- **Criminal justice** provides preparation for careers in law enforcement and corrections and preparation for law school or graduate studies in related fields. *Currently, new students are not being accepted into the criminal justice area of emphasis within social change and development. Check with the program chairperson or adviser for further information.*
- **Global studies** focuses on international politics, development, sociocultural change, and history, especially in relationship to the nations of the South or Third World. It orients students toward careers in foreign service, international business or other international organizations, and for graduate study, and may be combined with the International Studies Certificate program.
- **Law and social change** explores the role of law in promoting or inhibiting social, political and economic change in contemporary society. It is also appropriate for students seeking admittance to law school and those interested in law-related careers.
- **Women's studies** explores historical comparative and contemporary perspectives on women's experiences. It 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 consultation with the program adviser.

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, American Indian studies, business, communication processes, economics, education, ethnic

studies, history, human development, international studies, journalism, political science, psychology, social work, sociology, urban and regional studies, and women's studies.

Requirements for the Major

Supporting Courses, 15-23 credits

448-100 History of the Modern World, 3 credits

One of these:

- 156-100 Varieties of World Culture, 3 credits
- 900-202 Introduction to Sociology, 3 credits

One of these:

- 352-105 Expository Writing, 3 credits
- 352-226 Writing About the Social Sciences, 3 credits

Also, complete one of the following options A, B, C, or D:

Option A: Foreign Language, 14 credits

Two years of a foreign language.

Option B: Research Methods, 7 credits

255-301 Foundations of Social Research, 3 credits

One of these:

- 255-205 Social Science Statistics, 4 credits
- 600-260 Introductory Statistics, 4 credits

Option C: Law and Social Change, 6 credits

736-111 Elementary Logic, 3 credits

One of these:

- 352-304 Advanced Expository Writing, 3 credits
- 736-105 Introduction to Social and Political Philosophy, 3 credits

Option D: Personalized, 6 or more credits

Upper-Level Core, 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 Senior 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 areas of emphasis. Additional supporting courses may be required.

Internship and Independent Study

The internship and independent study are optional and may be completed for any of the areas of emphases.

- 875-497 Internship in Social Change and Development, 3-12 credits
- 875-498 Independent Study in Social Change and Development, 1-4 credits

■ American 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

Required courses, 6 credits:

- 875-362 Power and Change in America, 3 credits
- 875-461 History, Politics and Social Criticism, 3 credits

Electives, choose 6 credits:

- 875-325 Law and Society, 3 credits
- 875-340 Women, Work and Family, 3 credits
- 875-343 Women and Popular Culture, 3 credits
- 900-303 Race and Ethnic Relations, 3 credits
- 900-304 Deviant Behavior, 3 credits
- 900-308 Sociology of the Family, 3 credits

■ Criminal Justice Emphasis, 12 credits

Currently, new students are not being accepted into the criminal justice area of emphasis within social change and development. Check with the program chairperson or adviser for further information.

Recommended Supporting Course, 3 credits

875-204 Freedom and Social Control, 3 credits

Upper-Level Courses, 12 credits

Required courses, 6 credits:

- 875-303 Criminal Justice Process, 3 credits
- 900-404 Criminology, 3 credits

Electives, choose 6 credits:

- 875-230 Law and the Judicial Process, 3 credits
- 875-325 Law and Society, 3 credits
- 900-304 Deviant Behavior, 3 credits

■ Global Studies Emphasis, 15 credits

Supporting Courses

Required course, 3 credits:

778-100 World Politics, 3 credits

Recommended 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

Required courses, 6 credits:

- 156-303 Political, Economic and Environmental Anthropology, 3 credits

One of these:

- 778-353 Politics of Developing Nations, 3 credits
- 778-360 International Politics, 3 credits

Electives, choose 6 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
- 875-333 Social Change in Selected Area (repeat offerings), 3 credits
- 875-345 Women, Race and Culture, 3 credits

■ Law and Social Change Emphasis, 15 credits

Supporting Courses

Required course, 3 credits:

778-101 American Government and Politics, 3 credits

Recommended courses:

- 736-102 Problems in Ethics, 3 credits
- 875-230 Law and the Judicial Process, 3 credits

Upper-Level Courses, 12 credits

Required courses, 6 credits:

- 875-320 Constitutional Law, 3 credits
- 875-325 Law and Society, 3 credits

Electives, choose 6 credits:

- 448-403 Political and Social History of the Modern U.S. II, 3 credits
- 736-326 Philosophy, Politics and Law, 3 credits
- 778-410 Intergovernmental Relations, 3 credits
- 835-314 Administrative Law, 3 credits
- 835-378 Environmental Law, 3 credits
- 875-348 Women and the Law, 2 credits
- 875-362 Power and Change in America, 3 credits
- 875-461 History, Politics and Social Criticism, 3 credits

■ **Women's Studies Emphasis, 15 credits**

Required Supporting Course, 3 credits

875-241 Introduction to Women's Studies, 3 credits

Upper-Level Courses, 12 credits

Required courses, 6 credits:

448-380 Women in the United States: Historical Perspectives, 3 credits

875-345 Women, Race and Culture, 3 credits

Electives, choose 6 credits:

875-340 Women, Work and Family, 3 credits

875-343 Women and Popular Culture, 3 credits

875-348 Women and the Law, 3 credits

875-497 Internship, 3-12 credits

875-498 Independent Study, 1-4 credits

■ **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.

Requirements for the Minor

Supporting Courses, 6 credits required

These are the same as for the major.

Upper-Level Core, 12 credits required

These are the same as for the major.

Social Work

Professional Major

Associate Professors — Ann L. McLean, Keetje J. Ramo, Rolfe White (chairperson).

Assistant Professor — Anne C. 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. It also provides preparation for graduate social work education and informed citizenship.

Graduates of the UWGB social work program secure positions in programs serving populations in need, including the elderly, children and their families, persons with developmental and other disabilities, the economically dependent, juvenile and adult offenders, and substance dependent persons.

Social work majors may elect to enroll in a child welfare sequence. The sequence, made possible by a Child Welfare Training project funded by the U.S. Department of Health and Human Services, will prepare students for careers in child welfare practice.

Practicum placements in public and tribal child welfare agencies are available selectively to qualified students. For more information on the requirements contact the Office of Social Work.

The B.S.W. program is accredited by the Council on Social Work Education.

Program Entry Requirements

Students who wish to major in social work must make formal application for admission to the program. This applies to those transferring from other institutions as well as students continuing at UW-Green Bay. Application materials are available from the Office of Social Work. To apply to the B.S.W. degree program, students must first complete 27 credits, including two supporting courses for the major (listed in Requirements for the Major), with an overall cumulative grade point average of at least 2.5. They must also demonstrate an interest in the profession and in working with people.

Each year a limited number of students are admitted to the major. The social work faculty consider the following criteria when making decisions on admission: cumulative grade point average, prior work and volunteer experience, letter(s) of reference, performance in social work and supporting courses, writing skills and understanding of one's suitability for the profession as demonstrated on a personal statement or interview. Prospective social work majors should seek advising early from social work faculty.

At the time of printing of this catalog, the social work curriculum was undergoing revision. Students should obtain an up-to-date description of requirements and courses from the Office of Social Work.

Requirements for the Major

Supporting Courses, 43 credits

- 255-205 Social Science Statistics, 4 credits
- 255-301 Foundations for Social Research, 3 credits
- 298-301 Economic and Social Security, 3 credits
- 352-105 Expository Writing, 3 credits
- 478-102 Introduction to Human Biology, 3 credits
- 481-210 Introduction to Human Development, 3 credits
- 778-101 American Government and Politics, 3 credits
- 778-202 Introduction to Public Policy, 3 credits
- 875-360 Models and Social Change, 3 credits
- 892-275 American Social Welfare, 3 credits
- 900-308 Sociology of the Family, 3 credits

One course from these:

- 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

And:

One course each from ethnic studies courses and Women's Studies, 6 credits

Upper-Level Courses, 36 credits

- 892-300 Field Experience in a Social Service Agency, 3 credits
- 892-305 The Social Work Profession, 3 credits
- 892-370 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, 4 credits
- 892-420 Social Work Methods III, 4 credits
- 892-430 Social Policy Analysis, 3 credits
- 892-460 Program Evaluation, 3 credits

Child Welfare Sequence, 12 credits

- 481-331 Infancy and Early Childhood, 3 credits
- 481-332 Middle Childhood and Adolescence, 3 credits
- 892-351 Child Welfare Services and Programs, 3 credits
- 892-483X Child Welfare, 3 credits

In addition for students pursuing the child welfare sequence, 892-402 and 403 involve practicum placement in an agency that serves children and families.

Sociology

Disciplinary Minor

Professors — Harvey J. Kaye, Carol A. Pollis.
Associate Professor — Ray Hutchison (chairperson).

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, 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.

A minor in sociology will provide additional breadth of perspective for students with interdisciplinary majors in urban and regional studies, social change and development, human development, and business administration. It also provides good preparation for students going on to graduate work in programs such as sociology, social work, nursing, psychology, and other interdisciplinary social science programs.

Requirements for the Minor

Supporting Courses, 7 credits

- 900-202 Introduction to Sociology, 3 credits

One of these:

- 255-205 Social Science Statistics, 4 credits
- 600-260 Introductory Statistics, 4 credits

Upper-Level Courses, 12 credits

- 255-301 Foundations for Social Research, 3 credits
- 900-307 Social Theory, 3 credits

Choose six credits of upper-level sociology courses from these:

- 900-302 Class, Status and Power, 3 credits
- 900-304 Deviant Behavior, 3 credits
- 900-308 Sociology of the Family, 3 credits
- 900-404 Criminology, 3 credits
- 900-483 Selected Topics, 3 credits
- 900-498 Independent Study, 1-4 credits

Spanish

Disciplinary Major or Minor

Adviser—Cristina Ortiz.

The Spanish program provides students with communication skills in both written and spoken Spanish and gives them an understanding of and appreciation for the peoples, literatures, and cultures of Spain and Latin America. Stronger ties with the Spanish-speaking world and the growing number of Spanish-speakers in the United States have significantly increased the need for teachers and speakers of Spanish.

Although some students choose to study Spanish primarily for personal growth and intellectual enrichment, 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. The Spanish major is also excellent preparation for graduate study. Certainly, proficiency in a foreign language and understanding of other cultures are essential for peace and prosperity in a mutually interdependent world.

Learning a new language is a life-long endeavor, only part of which can be accomplished in the classroom. All students of Spanish are strongly encouraged to take advantage of the opportunities faculty provide to travel and study in Spain, Mexico, Guatemala, and South America. Additionally, many ways exist to interact with the Hispanic community of Green Bay. A language laboratory with interactive audio equipment, computers, and international television reception helps language learning and cultural awareness.

Because Spanish is offered within a broad program of literature and language at UW-Green Bay, student course work may draw on faculty from English, French, and German, too. Students majoring in Spanish will also 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 preferences and goals, students may find other interdisciplinary programs appropriate, such as human development or social change and development. Students desiring teacher preparation in Spanish must combine their studies in Spanish with the professional program in education and with an interdisciplinary program.

Students who begin Spanish study at UWGB should enroll in Introduction to Spanish 101. Students with previous Spanish 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 the Spanish adviser.

Retroactive or Advanced Placement Credit

Students who have taken Spanish in high school or who acquired a knowledge of Spanish elsewhere may earn up to 14 additional credits by completing a Spanish course beyond the 101 level. With a grade of "B" or better, Spanish credit will be given for all Spanish courses preceding the one in which the student has enrolled, to a maximum of 14 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 seven credits.

For example, with four years of high school Spanish, students who complete Spanish 225, Intermediate Conversation and Composition, with a grade of "B" will receive 14 retroactive credits for Spanish 101, 102, 201, and 202 in addition to the three credits for Spanish 225; students who complete the course with a "C" will receive seven retroactive credits for Spanish 101, 102, 201, and 202 in addition to the three credits for Spanish 225.

For information on teacher certification, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

Supporting Courses, 6 credits

- 908-202 Intermediate Spanish Language II, 3 credits
(can be earned through retroactive credit)
- 908-225 Intermediate Conversation and Composition, 3 credits

Upper-Level Courses, 24 credits

Minimum of 12 credits from:

- 908-325 Advanced Spanish Conversation and Composition, 3 credits
- 908-329 Representative Spanish and Latin American Authors, 3 credits
- 908-345 Advanced Spanish Grammar, 3 credits
- 908-438 Major Spanish and Latin American Writers, 3 credits

Minimum of 3 credits from:

- 908-358 Latin America Today, 3 credits
- 908-359 The Cultures of the Americas, 3 credits

Minimum of 3 credits from:

- 908-360 Spain Today, 3 credits
- 908-361 The Cultures of Spain, 3 credits

Minimum of 6 credits from:

- 416-370 Geography of South America, 3 credits
- 448-358 Aspects of Latin American History, 3 credits
- 875-333 Social Change in a Selected Area: Latin America, 3 credits
- 908-333 Spanish and Latin American Literary Themes, 3 credits
- 908-335 Spanish and Latin American Literary Eras, 3 credits
- 908-351 Major Spanish and Latin American Fiction, 3 credits
- 908-355 Spanish and Latin American Cinema, 3 credits
- 908-358 Latin America Today, 3 credits
- 908-359 The Cultures of the Americas, 3 credits
- 908-360 Spain Today, 3 credits
- 908-361 The Cultures of Spain, 3 credits
- 908-363 January Abroad: Yucatan, 3 credits
- 908-372 Spanish Phonetics and Contrastive Linguistics, 3 credits
- 908-485 Study Abroad in Spain/Mexico/Guatemala, 3-15 credits

Some upper-level courses may be repeated for credit when course content varies. See adviser.

Requirements for the Minor

Supporting Courses, 6 credits

- 908-202 Intermediate Spanish Language II, 3 credits
(can be earned by retroactive credits)
- 908-225 Intermediate Conversation and Composition, 3 credits

Upper-Level Courses, 12 credits

- 908-325 Advanced Spanish Conversation and Composition, 3 credits
- 908-329 Representative Spanish and Latin American Authors, 3 credits

Minimum of 3 credits from:

- 908-358 Latin America Today, 3 credits
- 908-359 The Cultures of the Americas, 3 credits
- 908-360 Spain Today, 3 credits
- 908-361 The Cultures of Spain, 3 credits

Minimum of 3 credits from:

- 908-333 Spanish and Latin American Literary Themes, 3 credits
- 908-335 Spanish and Latin American Literary Eras, 3 credits
- 908-345 Advanced Spanish Grammar, 3 credits
- 908-351 Major Spanish and Latin American Fiction, 3 credits
- 908-355 Spanish and Latin American Cinema, 3 credits
- 908-358 Latin America Today, 3 credits
- 908-359 The Cultures of the Americas, 3 credits
- 908-360 Spain Today, 3 credits
- 908-361 The Cultures of Spain, 3 credits
- 908-363 January Abroad: Yucatan, 3 credits
- 908-372 Spanish Phonetics and Contrastive Linguistics, 3 credits

Theatre

Disciplinary Major or Minor

Professors — Eugenia Erdmann, Lou Erdmann.

Associate Professors — Jeffrey Entwistle, Susan Kline-Heim, Sarah Meredith, Laura Riddle.

Lecturer — Michael Ingraham.

Other instructional staff — Clara Chan, Toni Damkoehler.

Theatre graduates have been successful because this program provides a rigorous artistic/academic environment for the study and production of all forms of theatre. A balanced approach to classical, modern, experimental, musical, 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 at UW-Green Bay believe that the best way to learn theatre is to create theatre. Students are encouraged to take advantage of the four mainstage productions offered each year and to become active in the student Alternate Theatre organization that annually creates several productions. The theatre program is continually involved with the Kennedy Center's American Theatre Festival which aims to identify and promote quality in university theatrical production.

Campus facilities in Theatre Hall include the 450-seat University Theatre, the smaller, flexible Experimental Theatre space, an acting studio, a dance studio, and scene and costume shops. The Weidner Center for the Performing Arts includes as additional theatre program spaces the 2,000-seat Cofrin Family Hall and the Fort Howard Hall. In addition, Studio One at the Weidner Center is used for theatre, dance, and voice classes. A new classroom, Studio 2, is being added at the Weidner Center. Casting is open and by audition and the theatre program strongly embraces the concept of cross-cultural casting. No previous experience is required in order to be considered for role or backstage work.

Students pursuing the bachelor degree in theatre will choose one of three areas of emphasis:

- Design/Technical Theatre emphasis
- Performance emphasis (acting/directing)
- Theatre Studies emphasis

An interdisciplinary program in musical theatre is included among the emphases offered by communication and the arts.

Theatre majors must complete an interdisciplinary minor, and they typically select the aesthetic awareness track of the communication and the arts interdisciplinary program. This combination provides students with an exceptionally strong undergraduate preparation in theatre.

UWGB theatre graduates typically go on to graduate programs in acting, directing, or in design/technical theatre. Students may also find gainful employment in professional theatre by working in resident companies, children's theatre, community theatre, film companies, and summer stock.

For information on teacher certification in this program or related programs, contact the Education Office and/or the Academic Advising Office.

Requirements for the Major

(vary with the area of emphasis)

ALL theatre majors are required to pass the Comprehensive Play Reading Examination by the spring of the senior year.

Areas of Emphasis

■ Performance

Supporting courses, 28 credits required

- 242-141 Introduction to the Performing Arts: Theatre and Music, 3 credits
- 242-142 Performing Arts Perspectives: Experience and Evaluation, 3 credits
- 915-134 Basic Stage Movement, 1 credit

Acting core, 12 credits required:

- 915-131 Beginning Acting, 3 credits
- 915-231 Intermediate Acting, 3 credits
- 915-235 Performance Practicum, 3 credits
- 915-233 Voice for the Actor, 3 credits

Technical theatre core, 6 credits required:

- 915-221 Theatre Production Techniques I: Stagecraft, 3 credits
- 915-222 Theatre Production Techniques II: Costume/Make-up, 3 credits

Dance core, 3 credits required:

- 915-128 Jazz Dance I, 1 credit
- 915-137 Ballet I, 1 credit
- 915-145 Modern Dance I, 1 credit
- 915-161 Tap Dance I, 1 credit

More advanced dance courses may be selected with approval of a faculty adviser.

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/literature, 12 credits required:

- 915-309 Theatre History I, 3 credits
- 915-310 Theatre History II, 3 credits
- 915-311 Theatre History III, 3 credits

Select one from:

- 351-431 Shakespeare, 3-4 credits
- 493-349 Great Works, 3 credits (select courses with faculty adviser)

Other dramatic literature courses may be selected with the assistance of a faculty adviser.

Design, 6 credits required:

- 915-321 Scene Design, 3 credits
- 915-322 Costume Design, 3 credits
- 915-323 Stage Lighting, 3 credits
- 915-325 Three-Dimensional Stage Make-up, 3 credits
- 915-424 Advanced Technical Practices, 3 credits

Electives to strengthen upper-level preparation:

- 915-403 Seminar in Theatre Arts I, 3 credits
- 915-405 Theatre Management, 3 credits
- 915-498 Independent Study, 1-4 credits

■ Design/Technical Theatre

Supporting Courses, 28 credits required

- 242-141 Introduction to the Performing Arts: Theatre and Music, 3 credits
- 242-142 Performing Arts Perspectives: Experience and Evaluation, 3 credits
- 915-134 Basic Stage Movement, 1 credit

Design/technical theatre core, 15 credits required:

- 915-220 Stage Management, 3 credits
- 915-221 Theatre Production Techniques I: Stagecraft, 3 credits
- 915-222 Theatre Production Techniques II: Costume/Make-up, 3 credits
- 915-235 Performance Practicum, 3 credits

Select one from:

- 168-105 Drawing, 3 credits
- 168-106 Design Methods, 3 credits
- 951-210 Drawing Systems for the Designer, 3 credits

Acting core, 3 credits required:

- 915-131 Beginning Acting, 3 credits

Dance core, 3 credits required:

- 915-128 Jazz Dance I, 1 credit
- 915-137 Ballet I, 1 credit
- 915-145 Modern Dance I, 1 credit
- 915-161 Tap Dance I, 1 credit
- 915-340 Dance History, 3 credits

Upper-Level Courses, 33 credits required

- 915-351 Directing I, 3 credits
- 915-403 Seminar in Theatre Arts: Portfolio, 3 credits

Select two from:

- 915-321 Scene Design, 3 credits
- 915-322 Costume Design, 3 credits
- 915-323 Stage Lighting, 3 credits
- 915-325 Three-Dimensional Stage Make-Up, 3 credits

History/literature, 12 credits:

- 915-309 Theatre History I, 3 credits
- 915-310 Theatre History II, 3 credits
- 915-311 Theatre History III, 3 credits

Select one from:

- 351-431 Shakespeare, 3-4 credits
- 493-349 Great Works, 3 credits (select courses with faculty adviser)

Other dramatic literature courses may be selected with the assistance of a faculty adviser.

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 other upper-level design courses not selected above as three credit electives.

■ Theatre Studies

The theatre studies emphasis has been developed as an ideal second major. If this is the only major that a student chooses, then an interdisciplinary minor in Communication and the Arts is also required.

Supporting Courses, 15 credits required

- 915-131 Beginning Acting, 3 credits
- 915-134 Basic Stage Movement, 1 credit
- 915-221 Technical Practices I: Stagecraft, 3 credits
- 915-222 Technical Practices II: Costume/Makeup, 3 credits
- 915-231 Intermediate Acting, 3 credits
- 915-235/236
238/239 Performance Practicum, 2 credits

Upper-Level Courses, 24 credits required

Select two courses from:

- 915-309 Theatre History I, 3 credits
- 915-310 Theatre History II, 3 credits
- 915-311 Theatre History III, 3 credits

Required:

- 915-323 Stage Lighting, 3 credits
- 915-335 Performance Practicum, 3 credits
- 915-351 Directing I, 3 credits

Select one course from:

- 915-321 Scene Design, 3 credits
- 915-322 Costume Design, 3 credits
- 915-325 3-D Makeup, 3 credits
- 915-424 Advanced Technical Practices: Scene Painting, 3 credits

Electives required:

Any two 300- or 400-level theatre courses, 6 credits

Requirements for the Minor**■ Theatre****Supporting Courses, 12 credits required**

- 915-131 Beginning Acting, 3 credits
- 915-221 Theatre Production Techniques I: Stagecraft, 3 credits
- 915-222 Theatre Production Techniques II: Costume/Make-up, 3 credits
- 915-235 Performance Practicum, 3 credits

Upper-Level Courses, 9 credits required

Select one course from each of the following three categories:

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
- 915-311 Theatre History III, 3 credits

Design/technical theatre

- 915-321 Scene Design, 3 credits
- 915-322 Costume Design, 3 credits
- 915-323 Stage Lighting, 3 credits

■ Dance**Supporting Courses, 12 credits required**

- 915-134 Basic Stage Movement, 1 credit
- 915-137 Ballet I, 1 credit
- 915-138 Ballet II, 2 credits
- 915-145 Modern I, 1 credit
- 915-245 Modern II, 2 credits
- 915-128 Jazz I, 1 credit
- 915-228 Jazz II, 2 credits
- 915-161 Tap I, 1 credit
- 915-261 Tap II, 1 credit

Upper-Level Courses, 13 credits required

- 915-328 Jazz III, 2 credits
- 915-334 Movement Theory Analysis, 1 credit
- 915-335 Practicum (Dance), 3 credits
- 915-340 Dance History, 3 credits
- 915-361 Tap III, 1 credit
- 915-440 Choreography, 3 credits

Elective to strengthen performance preparation:

- 915-131 Beginning Acting, 3 credits (strongly suggested)

Urban and Regional Studies

Interdisciplinary Major or Minor

Professors — Kumar Kangayappan, William Laatsch, Ismail Shariff.
Associate Professor — Ronald Baba, Ray Hutchison (chairperson).
Assistant Professors — Marcelo Cruz, Georjeanna Wilson-Doenges.

Urban and regional studies provides an understanding of the social, economic, and political activities of individuals and groups within cities and regions of various sizes and locations, not only in the United States but throughout the world. Faculty in the program bring together urban and regional perspectives from a variety of disciplines, including architecture, demography, economics, ethnic studies, geography, psychology and sociology. Graduates of urban and regional studies are expected to demonstrate effective written and oral communication skills; make use of other symbolic media for effective communication, such as cartographic, statistical or mathematical skills; read, interpret, analyze, and critically evaluate difficult written material and data; and work effectively on individual and group projects. Urban and regional studies offers the interdisciplinary background necessary for a variety of careers in our rapidly changing world; employers in many fields increasingly prefer students with liberal arts majors for this reason.

The urban and regional studies major and minor offer the skills and knowledge base for a wide range of challenging and rewarding careers in both the private and public sector, including but not limited to architecture, community organization, economic development, marketing, real estate, social services, and urban and regional planning. This interdisciplinary major also provides excellent preparation for graduate study in master's and doctoral programs such as architecture, geography, political science, public administration, public policy, sociology, urban and regional planning, and related fields.

All urban and regional studies students enroll in a common set of core courses, supplemented by elective courses emphasizing the cultural, social, and spatial aspects of urban and regional studies, and urban and regional planning and policy. Internships with local public and private sector organizations, independent study courses with individual instructors, and applied research projects are especially encouraged. Internships are normally semester-long positions in public or private organizations which provide qualified students with practical experience to enrich their classroom studies. The department has maintained internship placements in public agencies including local and state planning offices and the Wisconsin Department of Natural Resources, as well as private engineering, architecture, transportation, and other commercial businesses. Internship experiences have proven to be an important enhancement to graduate school applications, and they also increase opportunities for employment after graduation.

Students may develop a major or minor emphasizing study in a broad variety of areas within urban and regional studies: minority studies, community economic development, real estate, cartography, and urban and regional planning. Students interested in architecture and urban design are encouraged to participate in the environmental design program. This interdisciplinary design program provides students with a unique opportunity to study the design process in the context of actual projects done for community clients. For the past six years students in this program have completed a series of projects which have become critical elements in the urban development plans of the Oneida Nation.

Faculty advisers will design a course of study for each student that is tailored to individual academic interests and career goals. These programs of study will frequently include internships in the local community.

Requirements for the Major

Supporting Courses, 13 credits

- 255-205 Social Science Statistics, 4 credits
- 951-102 World Regions and Concepts: A Geographic Analysis, 3 credits
- 951-200 Introduction to Urban Studies, 3 credits

One of these:

- 255-301 Foundations for Social Research, 3 credits
- 416-250 Displays of Geographic Information, 3 credits

Recommended Competency Courses

- 246-133 Fundamentals of Public Address, 3 credits
- 298-202 Macro Economic Analysis, 3 credits
- 352-105 Expository Writing, 3 credits
- 778-101 American Government and Politics, 3 credits
- 900-202 Introduction to Sociology, 3 credits

Upper-Level Courses, 27 credits

Urban and Regional Studies core, 9 credits:

- 416-341 The City and Its Regional Context, 3 credits
- 951-303 Urban Sociology, 3 credits
- 951-305 Urban Politics and Policy, 3 credits

Required senior capstone course, 3 credits:

- 951-430 Seminar in Ethics and Public Affairs, 3 credits

Electives, 15 credits:

- 416-342 Settlement Geography, 3 credits
- 778-410 Intergovernmental Relations, 3 credits
- 820-390 Environmental Psychology, 3 credits
- 835-406 State and Local Government, 3 credits
- 951-309 Urban and Regional Economic Theory, 3 credits
- 951-313 The City Through Time and Space, 3 credits
- 951-323 Asian Americans, 3 credits
- 951-324 Latino Communities in the United States, 3 credits
- 951-325 Behavior in Designed Environments, 3 credits
- 951-342 Community Economic Development, 3 credits
- 951-351 Transportation and the City, 3 credits
- 951-372 Analysis of the Great Lakes Region of North America, 3 credits
- 951-377 Analysis of Northern Lands, 3 credits
- 951-392 Analysis of South Asia, 3 credits
- 951-412 Urban and Regional Planning, 3 credits

An optional three-credit internship or laboratory course may be substituted for one course in the above lists:

- 951-461 Laboratory in Urban and Regional Studies, 3 credits
- 951-497 Internship in Urban and Regional Studies, 3 credits

Requirements for the Minor

Supporting Courses, 6 credits

One of these:

- 255-205 Social Science Statistics, 4 credits
- 416-250 Displays of Geographic Information, 3 credits

One of these:

- 951-102 World Regions and Concepts: A Geographic Analysis, 3 credits
- 951-200 Introduction to Urban Studies, 3 credits

Upper-Level Courses, 12 credits

Choose two core courses:

- 416-341 The City and Its Regional Context, 3 credits
- 951-303 Urban Sociology, 3 credits
- 951-305 Urban Politics and Policy, 3 credits

Choose two of these:

- 416-342 Settlement Geography, 3 credits
- 820-390 Environmental Psychology, 3 credits
- 951-309 Urban and Regional Economic Theory, 3 credits
- 951-313 The City Through Time and Space, 3 credits
- 951-323 Asian Americans, 3 credits
- 951-324 Latino Communities in the United States, 3 credits
- 951-325 Behavior in Designed Environments, 3 credits
- 951-342 Community Economic Development, 3 credits
- 951-351 Transportation and the City, 3 credits
- 951-372 Analysis of the Great Lakes Region of North America, 3 credits
- 951-377 Analysis of Northern Lands, 3 credits
- 951-392 Analysis of South Asia, 3 credits
- 951-412 Urban and Regional Planning, 3 credits

Women's Studies

Interdisciplinary Minor

Professors — Carol Pollis, Thea Sager, Lynn Walter.

Associate Professors — Sarah Meredith, E. Nicole Meyer, Illene Noppe, Sandra M. Stokes (chairperson).

Assistant Professors — Francis Carleton, Alison Kibler, Tracy Luchetta.

Women's studies explores women's past and present contributions to societies as persons, creators, and thinkers. It also explores the cultural, racial, and economic diversity of women's experiences as well as the scholarship concerned with the factors that affect women's lives. The minor prepares students to think critically about issues with which they will be faced all of their lives. Thus, women's studies can be seen as an essential component of a liberal arts education.

Women's studies 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 extend students' intellectual development by helping them to understand women's accomplishments and capabilities, and by looking beyond the limits of traditional gender-differentiated roles.

Any student may elect women's studies as a minor in addition to a disciplinary or interdisciplinary major. The minor is excellent preparation for further study in law as well as for graduate programs in women's studies, psychology, social work, literature, and education. Graduates with women's studies minors are working in a variety of fields, including business, social work, paralegal work, and secondary education.

Requirements for the Minor

Supporting Course, 3 credits required

- 875-241 Introduction to Women's Studies, 3 credits

Core Courses, 6 credits required

- 242-477 Women as Creative Agents, 3 credits
- 448-380 Women in the United States: Historical and Cultural Perspectives, 3 credits
- 481-336 Gender Role Development, 3 credits
- 875-345 Women, Race and Culture, 3 credits

Upper-Level Courses, 9 credits required

- 351/
- 397-333 Literary Themes: French Women's Autobiography, 3 credits
- 820-401 The Psychology of Women, 3 credits
- 875-340 Women, Work and Family, 3 credits
- 875-348 Women and the Law, 3 credits
- 875-343 Women and Popular Culture, 3 credits

Supporting and related courses:

- 242-272 Women and the Arts: Performing Arts, 3 credits
- 351-206 Women in Literature, 3 credits
- 478-206 Fertility, Reproduction and Family Planning, 3 credits
- 875-235 Perspectives on Human Sexuality, 3 credits

PREPROFESSIONAL PROGRAMS OF STUDY

Agriculture

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

UW-Green Bay 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, agricultural engineering, 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 supporting 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 the supporting 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 those listed below.

Preprofessional Courses

These supporting courses would apply to most agriculture majors:

- 225-211 Principles of Chemistry I, 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
- 352-100 College Writing, 3 credits

Choices of remaining courses depend upon the requirements of the transfer institution and major. For this reason, students should choose an intended major and transfer school early so they can plan UW-Green Bay courses to meet transfer requirements.

Because agriculture includes many different majors, pre-agriculture programs will vary. Majors include such fields as agricultural economics, agronomy, dairy science, forestry, entomology, horticulture, 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

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

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—completion of an undergraduate degree at UWGB—has some important advantages. First, an appropriately chosen undergraduate major provides a variety of career options in addition to architectural design. An interdisciplinary undergraduate major provides students with an opportunity to investigate and integrate a broad range of intellectual experiences with the practice of architecture and make more informed decisions about career directions.

Second, an undergraduate degree which combines pre-architecture studies with a specialization in a field such as graphic design, computer science, urban planning, or urban design, enhances the student's graduate school application while providing a strong foundation for entry into the profession.

The UWGB environmental design program was developed specifically to provide pre-architectural studies. It includes coursework in design methods, architectural graphics, art history, and architectural and urban design. The core of the program is a four semester sequence of studio experiences in which student design teams produce design proposal for actual clients from the Northeast Wisconsin region. In the past several years, UWGB environmental design teams have worked with the Green Bay Planning Department, the De Pere Parks and Recreation Commission, the Oconto County Economic Development Authority, and many other agencies and programs. Since 1988, design teams have aided the Oneida Nation of Wisconsin in the development of a 25-year master plan and the design of a number of capital facilities including a business park, a 200-acre wetlands park, two residential subdivisions, energy efficient housing, a police station, and a health center-nursing home complex. Students interested in combining architecture with urban scale problems add the program to a major in urban and regional studies. Those with interests in graphic design or studio art may select a major in communication and the arts.

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, Kansas, UC-Berkeley, Washington, Cincinnati, and others.

Preprofessional Program

Supporting Courses

Mathematics:

- 600-104 Elementary Functions: Algebra and Trigonometry, 4 credits
- 600-202 Calculus and Analytic Geometry I, 4 credits

Engineering and physics:

- 325-313 Mechanics I, 3 credits
- 325-316 Strength of Materials, 4 credits
- 754-103 Fundamentals of Physics I, 5 credits

Recommended electives:

- 168-105 Drawing, 3 credits
- 168-107 Two-Dimensional Design, 3 credits
- 242-102 History of the Visual Arts: Ancient to the Medieval, 3 credits
- 242-103 History of the Visual Arts: Renaissance to French Revolution, 3 credits

Core Courses

- 168-106 Design Methods, 3 credits
- 951-210 Drawing Systems for the Designer, 3 credits
- 951-436 Environmental Design Studio I, 3 credits
- 951-437 Environmental Design Studio II, 3 credits
- 951-438 Environmental Design Studio III, 3 credits
- 951-439 Environmental Design Studio IV, 3 credits

Major in Urban and Regional Studies

Supporting Courses

- 255-205 Social Science Statistics, 4 credits
- 255-301 Foundations of Social Research, 3 credits
- 835-202 Introduction to Public Policy, 3 credits
- 951-200 Introduction to Urban Studies, 3 credits

Upper-Level Required Courses

- 416-350 Geographic Information Systems, 3 credits
- 835-323 Land-Use Controls, 3 credits
- 951-303 Urban Sociology, 3 credits
- 951-340 Economics of Land Use, 3 credits
- 951-412 Urban and Regional Planning, 3 credits

Plus, the Environmental Design Studios listed as core courses, above.

Capstone Course:

- 951-430 Seminar in Ethics and Public Affairs, 3 credits

Major in Communication and the Arts

Supporting Courses

- 168-106 Design Methods, 3 credits
- 242-202 Concepts and Issues of Modern Art, 3 credits
- 242-231 Introduction to Graphic Communications, 4 credits
- 951-200 Introduction to Urban Studies, 3 credits
- 951-210 Drawing Systems for the Designer, 3 credits

Upper-Level Required Courses

- 242-331 Graphic Communications Studio I, 3 credits
- 242-332 Graphic Communications Studio II, 3 credits
- 242-370 Modern American Culture, 3 credits
- 416-350 Geographic Information Systems, 3 credits
- 950-412 Urban and Regional Planning, 3 credits

Plus, the Environmental Design Studios I through III, listed above.

Other courses, chosen with advisers, may be appropriate.

Chiropractic

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

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 Organic Chemistry I, 3 credits
- 225-304 Organic Chemistry I Laboratory, 1 credit
- 225-303 Organic Chemistry II, 3 credits
- 225-305 Organic Chemistry II Laboratory, 1 credit
- 246-133 Fundamentals of Public Address, 3 credits
- 352-105 Expository Writing, 3 credits
- 820-102 Introduction to Psychology, 3 credits

And:

- 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

English or communication courses, 6 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.)

Palmer College requires students to submit applications and official transcripts one year in advance of the date they expect to enroll. Application procedures, deadlines and admission criteria vary among schools, so it is important to contact prospective professional schools for details early in the freshman year.

Counseling

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

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. 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.

Counselors. Students seeking entry to this field may choose from among many majors including psychology, social work, sociology, human development, and social change and development. A master's degree 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 minors in 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 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. 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 and 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 coupled with interdisciplinary minors. UW-Stout has a master's degree program in vocational rehabilitation.

Dentistry

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

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. Dental schools set their own requirements. It is important that students seek information from chosen schools early so they can plan appropriately.

UW-Green Bay provides preparation for dental schools, including specific required courses. The logical major for a student in pre-dentistry is human biology. It is not required that pre-dental students complete a science major, although some dental schools favor them. Pre-dental students are advised to select majors that offers career alternatives should they fail to gain admission to dental school.

UW-Green Bay's 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 minimum courses below are required for admission into that program. Students interested in out-of-state 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 Organic Chemistry I, 3 credits
- 225-304 Organic Chemistry I Laboratory, 1 credit
- 225-303 Organic Chemistry II, 3 credits
- 225-305 Organic Chemistry II Laboratory, 1 credit

- 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:

- 352-105 Expository Writing, 3 credits
- Any literature or composition course, 3 credits

Recommended electives:

- 204-302 Principles of Microbiology, 4 credits
- 204-303 Genetics, 3 credits
- 204-304 Genetics Laboratory, 1 credit
- 204-340 Comparative Anatomy of Vertebrates, 4 credits
- 204-347 Developmental Biology, 4 credits
- 225-311 Analytical Chemistry, 4 credits
- 225-330 Biochemistry, 3 credits
- 225-331 Biochemistry Laboratory, 1 credit
- 478-402 Human Physiology, 3 credits
- 478-413 Neurophysiology, 3 credits
- 600-101 Intermediate Algebra, 3 credits
- 600-104 Elementary Functions: Algebra and Trigonometry, 4 credits
- 600-260 Introductory Statistics, 4 credits

Engineering

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

In addition to its own joint engineering program with UW-Milwaukee, offering degrees in civil, electrical, industrial, materials, and mechanical engineering (see the professional major in Engineering listed in the *Programs of Study* section), 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 from the various engineering programs and UWGB's Academic Advising Office early in their freshman year so they may plan appropriate supporting courses.

Institutions in Wisconsin offering engineering degrees are:
 UW-Madison — degrees in chemical, civil and environmental, electrical and computer, engineering mechanics, geological, industrial, material science, mechanical, metallurgical, and nuclear engineering.

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.

Advisers from some of these engineering schools visit UW-Green Bay regularly to answer questions and advise prospective students. The Academic Advising Office can provide information about such visits.

Law

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

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 an understanding of the development of social, political and economic institutions; an ability to communicate well, orally and in writing; a capacity to think clearly and analytically; and 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 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.

UW-Green Bay pre-law students have organized a Law Society. Activities include guest speakers on aspects of the law, field trips to law schools, panel discussions by members of local law firms, and mock trials. Representatives attend the National Pre-Law Forums and bring back information from law schools around the country.

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 LSAT must be taken in the junior year or early in the senior year. Law Society members help to organize an LSAT preparatory course.

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 general education requirements.

Preprofessional Courses

Oral and written competencies:

- 246-133 Fundamentals of Public Address, 3 credits
- 246-333 Persuasion and Argumentation, 3 credits
- 351-104 Introduction to Literature, 3 credits
- 352-105 Expository Writing, 3 credits
- 352-304 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 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
- 778-100 World Politics, 3 credits

- 778-101 American Government and Politics, 3 credits
- 778-310 The American Presidency, 3 credits
- 778-316 Congress: Politics and Policy, 3 credits
- 778-230 Law and the Judicial Process, 3 credits
- 778-320 Constitutional Law, 3 credits
- 778-340 Political Theory, 3 credits
- 778-360 International Politics, 3 credits
- 820-102 Introduction to Psychology, 3 credits
- 835-202 Introduction to Public Policy, 3 credits
- 835-215 Introduction to Public Administration, 3 credits
- 875-203 Prejudice and the Human Condition, 3 credits
- 875-204 Freedom and Social Control, 3 credits
- 875-340 Women, Work and Family, 3 credits
- 900-202 Introduction to Sociology, 3 credits

Creative power in thinking:

- 736-111 Elementary Logic, 3 credits
- 835-408 Public Policy Analysis, 3 credits
- 835-451 Decision Theory and Methods, 3 credits
- 875-360 Models and Social Change, 3 credits

In addition, UWGB has a number of law-related courses which may help students prepare for law school. These include:

- 107-305 Legal Environment of Business, 3 credits
- 107-306 Business Law II, 4 credits
- 216-206 Law and the Individual, 3 credits
- 835-314 Administrative Law, 3 credits
- 835-378 Environmental Law, 3 credits
- 875-230 Law and the Judicial Process, 3 credits
- 875-303 Criminal Justice Process, 3 credits
- 875-325 Law in Society, 3 credits
- 900-404 Criminology, 3 credits

Medical Technology

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

Medical technologists conduct a variety of laboratory tests to provide accurate, reliable information for monitoring health, and diagnosing and treating disease. Although much of their work is related to clinical laboratory science, other career opportunities could include research, product development, sales, laboratory computers, government agencies, public health, education and many more.

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 program accordingly.

The following list of courses represents preprofessional requirements usually required for the medical technology programs in Wisconsin. Students planning to seek admission to medical technology professional programs should acquire the preprofessional program advising guide and consult with the medical technology adviser in their freshman year.

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
- 225-304 Organic Chemistry I Laboratory, 1 credit
- 225-303 Organic Chemistry II, 3 credits
- 225-305 Organic Chemistry II Laboratory, 1 credit
- 225-311 Analytical Chemistry, 4 credits
- 225-330 Biochemistry, 3 credits
- 266-155 Microcomputers and End-User Applications, 3 credits
- 352-100 College Writing, 3 credits
- 478-204 Anatomy and Physiology, 5 credits
- 600-104 Elementary Functions: Algebra and Trigonometry, 4 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:

General education courses in social sciences and humanities.

Medicine

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

Almost all medical schools require a bachelor's degree for entrance and specify subjects that a candidate must have completed. Applicants must demonstrate exceptional ability, high aptitude in science, outstanding achievement, and must take the Medical College Admissions Test (MCAT). UW-Green Bay's premedical program has demonstrated its effectiveness. Virtually all UWGB graduates with grade point averages of 3.5 or better and high scores on the MCAT have been accepted into medical schools.

The most logical major for UW-Green Bay students interested in premedicine and human life sciences is human biology. Other majors are possible. The multidisciplinary nature of UW-Green Bay majors prepares students for professional activities in addition to medicine and more than one graduate education opportunity.

Wisconsin has two medical schools — the Medical College of Wisconsin in Milwaukee and the University of Wisconsin Medical School, Madison. Students should get requirements from any medical college they hope to attend so they can plan their undergraduate studies accordingly. The following list of required UWGB courses is based on requirements for medical colleges. In addition, students complete requirements of their 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 Organic Chemistry I, 3 credits
- 225-304 Organic Chemistry I Laboratory, 1 credit
- 225-303 Organic Chemistry II, 3 credits
- 225-305 Organic Chemistry II Laboratory, 1 credit
- 225-311 Analytical Chemistry, 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

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 Genetics, 3 credits
- 204-304 Genetics Laboratory, 1 credit
- 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

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

English:

- 352-105 Expository Writing, 3 credits
- One literature course, 3 credits

Mortuary Science

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

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

- 107-300 Introductory Accounting, 4 credits
- 107-305 Legal Environment of Business, 3 credits
- 204-202 Principles of Biology I, 4 credits
- 204-302 Principles of Microbiology, 4 credits
- 216-202 Business and Its Environment, 3 credits
- 216-206 Law and the Individual, 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
- 352-100 College Writing, 3 credits

OR

- 352-105 Expository Writing, 3 credits
- 448-100 History of the Modern World, 3 credits
- 478-204 Anatomy and Physiology, 5 credits
- 778-100 World Politics, 3 credits
- 778-101 American Government and Politics, 3 credits
- 820-102 Introduction to Psychology, 3 credits
- 900-202 Introduction to Sociology, 3 credits

Nursing

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

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 another institution. Students may select Bellin College of Nursing, another private nursing school, or one of the University of Wisconsin campuses which offer the B.S.N. These are the universities at Eau Claire, Madison, Milwaukee, and Oshkosh. Students who wish to graduate from a school other than UW-Green Bay are advised to apply to the school of choice before beginning coursework at UWGB.

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.

Prospective nurses who wish to complete courses at UWGB and then transfer into a B.S.N. program should consult an adviser early in the freshman year to insure that their studies fulfill requirements of the transfer institution.

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

352-100 College Writing, 3 credits

OR

352-105 Expository Writing, 3 credits

- 478-204 Anatomy and Physiology, 5 credits
- 481-210 Introduction to Human Development, 3 credits
- 481-343 Adulthood and Aging, 3 credits
- 600-260 Introductory Statistics, 4 credits
- 694-300 Human Nutrition, 3 credits
- 736-101 Introduction to Philosophy, 3 credits
- 736-102 Problems in Ethics, 3 credits
- 820-102 Introduction to Psychology, 3 credits
- 900-202 Introduction to Sociology, 3 credits

Occupational Therapy

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

Students can complete at least two 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 two-semester program with UW-Madison's occupational therapy program. Similar arrangements can be made with the other institutions.

Admission into any of the occupational therapy programs is competitive and is based on criteria such as cumulative grade point average, grade point average in selected courses, and completion of specific prerequisite courses. It is important for the student to consult with an adviser early in the freshman year to insure that appropriate preprofessional courses are completed.

The following UW-Green Bay courses satisfy one year of preprofessional requirements for UW-Madison.

Preprofessional Courses

- 204-202 Principles of Biology I, 4 credits
- 204-203 Principles of Biology II, 4 credits
- 225-108 General Chemistry, 5 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 352-100 College Writing, 3 credits
- 481-331 Infancy and Early Childhood, 3 credits
- 481-343 Adulthood and Aging, 3 credits
- 820-102 Introduction to Psychology, 3 credits
- 900-202 Introduction to Sociology, 3 credits

OR

900-203 Minority Groups, 3 credits

OR

900-308 Sociology of the Family, 3 credits

Also:

Literature elective, 3 credits

Optometry

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

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 (OAT) is required as well.

Advisers can help students get information about schools of optometry and their specific requirements, and plan appropriate preprofessional programs. It is important for the student to consult with an adviser early to assure that appropriate preprofessional courses are completed.

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 certain 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
- 352-105 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. A course in biochemistry is also highly recommended.

Pharmacy

Preprofessional Program

(includes pharmaceutical sciences, pharmacology, and toxicology)

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

UW-Green Bay offers courses satisfying requirements for the first two years of study for pharmacy and pharmacy-related careers. The only school of pharmacy in Wisconsin is at UW-Madison and that institution advises 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 professional school, complete an internship, and pass a licensure 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, grade point average and recommendations. Grade point averages in mathematics and science courses are particularly important. Candidates for the B.S. in pharmacy and B.S. in pharmaceutical sciences must submit Pharmaceutical College Admissions Test (PCAT) scores.

UW-Green Bay courses listed satisfy prepharmacy and pre-pharmaceutical sciences requirements at UW-Madison. NOTE: The following program is valid for fall 1996 admission only. Contact the Academic Advising Office for admission requirements for 1997 and thereafter.

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 Organic Chemistry I, 3 credits
- 225-304 Organic Chemistry I Laboratory, 1 credit
- 225-303 Organic Chemistry II, 3 credits
- 225-305 Organic Chemistry II Laboratory, 1 credit
- 298-203 Micro Economic Analysis, 3 credits
- 352-105 Expository Writing, 3 credits
- 600-202 Calculus and Analytic Geometry I, 4 credits
- 754-103 Fundamentals of Physics I, 5 credits
- 754-104 Fundamentals of Physics II, 5 credits
- 900-202 Introduction to Sociology, 3 credits

Also:

Literature courses
Electives in humanities and social sciences

Physical Therapy

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

Physical therapy programs are offered in Wisconsin at UW-Madison, UW-LaCrosse, and Marquette University in Milwaukee. Admission is competitive and entrance requirements into the physical therapy programs differ for each university. It is very important for students to consult with an adviser early so they can plan appropriately. Information on physical therapy programs in the United States can be obtained by writing to: American Physical Therapy Association, 1111 North Fairfax St., Alexandria, VA 22314.

NOTE: Effective June 1997, physical therapy will become a master's degree program which requires a bachelor's degree for admission. At UW-Green Bay the appropriate undergraduate major is human biology. Requirements for entry into the programs at Madison and LaCrosse differ slightly. Both programs require a bachelor's degree, set minimum grade point averages, and require completion of the preprofessional curriculum and actual experience in settings with patients.

The following list of UW-Green Bay courses are appropriate preprofessional preparation for physical therapy.

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
- 246-133 Fundamentals of Public Address, 3 credits
- 352-100 College Writing, 3 credits

OR

- 352-105 Expository Writing, 3 credits
- 481-331 Infancy and Early Childhood, 3 credits
- 481-343 Adulthood and Aging, 3 credits
- 481-435 Abnormal Behavior, 3 credits
- 600-260 Introductory Statistics, 4 credits
- 754-103 Fundamentals of Physics I, 5 credits
- 754-104 Fundamentals of Physics II, 5 credits
- 820-102 Introduction to Psychology, 3 credits

Also:

Literature and humanities electives

Physician Assistant

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

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. Remaining preprofessional work must be completed on the UW-Madison campus.

Admission to the physician assistant program is competitive. The admission committee evaluates academic performance, health care experience, letters of recommendation, a written essay by the applicant, and a personal interview.

UW-LaCrosse also offers a baccalaureate entry level program which entails a three-year preprofessional and a two-year professional curriculum. Prospective physician assistant students should contact advisers from the institution they plan on attending as well as advisers from UW-Green Bay to assure proper course planning.

For a student transferring to UW-Madison, the following is a typical program of courses for the freshman year at UW-Green Bay. Additional courses may be required for entry to UW-Madison and UW-LaCrosse, depending on high school credits in areas such as math and foreign language.

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
- 352-100 College Writing, 3 credits

OR

- 352-105 Expository Writing, 3 credits
- 478-204 Anatomy and Physiology, 5 credits
- 820-102 Introduction to Psychology, 3 credits

Also:

Courses in the social sciences and humanities.

Theology

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

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 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. Minors might include 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 early with the pretheology adviser. The following list of UW-Green Bay courses are appropriate preprofessional preparation for theology.

Preprofessional Courses

- 156-320 Myth, Ritual and Religion, 3 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 352-105 Expository Writing, 3 credits
- 448-100 History of the Modern World, 3 credits
- 448-201 Ancient Civilization, 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
- 448-301 The Middle Ages, 3 credits
- 448-306 History of European Thought and Culture I, 3 credits
- 448-307 European Thought and Culture II, 3 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, 3 credits
- 493-202 Introduction to Humanities II, 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: Wisconsin Tribes, 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
- 493-410 The Christian Heritage: Birth of Christ to 1600, 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:

- 351-214 Introduction to English Literature I, 3 credits
- 351-215 Introduction to English Literature II, 3 credits
- 351-216 Introduction to American Literature I, 3 credits
- 351-217 Introduction to American Literature II, 3 credits

Students should also take courses in the French, German, or Spanish languages.

Veterinary Medicine

Preprofessional Program

The following information has been prepared to assist students with the advising process for this program. In addition, the UWGB Academic Advising Office has prepared a detailed advising guide listing program and course requirements. It is a student's responsibility to contact the professional school(s) for current requirements, transfer information and advising assistance.

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 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. Increasingly, although not required for admission, having a bachelor's degree is encouraged. To qualify for admission, students must complete 60 credits of college course work including the 39 credits in science and 6 credits in writing listed below, 6 elective credits in social sciences/humanities, and 15 additional credits selected to meet personal and academic goals and objectives. Scores from the Graduate Record Exam (GRE) must also be submitted at the time of application. In addition to grade point average and GRE scores, evidence of motivation, promise of effective performance, communication skills, and breadth of experience, particularly that related to veterinary practice, are taken into consideration.

Requirements for preveterinary medicine can be met at UW-Green Bay. Most students major in human biology or in biology with a human biology or environmental science minor. Students should plan their programs with the preveterinary adviser to make certain that preveterinary requirements are met. The following UW-Green Bay courses meet preprofessional requirements at the UW-Madison College of Veterinary Medicine. Requirements for entry into other schools of veterinary medicine may vary.

Required Courses:

- 204-202 Principles of Biology I, 4 credits
- 204-303 Genetics, 3 credits
- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 225-300 Bio-Organic Chemistry, 3 credits
- 225-301 Bio-Organic Chemistry Laboratory, 1 credit
- 225-330 Biochemistry, 3 credits
- 352-100 College Writing, 3 credits
- 352-105 Expository Writing, 3 credits
- 600-260 Introductory Statistics, 4 credits
- 754-103 Fundamentals of Physics I, 5 credits
- 754-104 Fundamentals of Physics II, 5 credits

Also:

Social sciences and humanities courses, 6 credits

COURSE DESCRIPTIONS

Brief descriptions of each course are presented in the following pages of this catalog.

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 *Timetable* and in this catalog.

Instructional unit numbers:

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
325	Engineering
351	English: Literature and Language
352	English Composition: Literature and Language
362	Environmental Science
397	French: Literature and Language
416	Geography
424	German: Literature and Language
448	History
478	Human Biology
481	Human Development
493	Humanistic Studies
520	Information Sciences
600	Mathematics
670	Music
672	Applied Music
689	Nursing
694	Nutritional Sciences
736	Philosophy
742	Physical Education
754	Physics
778	Political Science
820	Psychology
835	Public and Environmental Affairs
867	Senior Seminars
875	Social Change and Development
892	Social Work
900	Sociology
908	Spanish: Literature and Language
912	Student Support Services
915	Theatre
951	Urban and Regional Studies

Abbreviations

Common abbreviations used in the course descriptions:

ARR	by arrangement with an instructor, by student
CL	cross-listed course
concurrent enroll	concurrent enrollment
concurrent reg	concurrent registration
cons inst	consent of instructor
cr	credit(s)
jr st	junior standing
min cum GPA	minimum cumulative grade point average
P	required prerequisite(s)
P-NC	pass-no credit grading
REC	recommended background preparation
soph st	sophomore standing
sr st	senior standing
TBA	to be announced or arranged

Abbreviations used to denote general education courses:

FA	Fine Arts course
H-1	Humanities: Introduction to Western Culture Part I
H-2	Humanities: Introduction to Western Culture Part II
H-3	Humanities: issues course
HB-1	Natural Sciences: Human Biology introductory course
ES-1	Natural Sciences: Environmental Science introductory course
NS-2	Natural Sciences: issues course
SS-1	Social Science: introductory course
SS-2	Social Science: issues course
OC	Other Culture course
Et.S.	Ethnic Studies course

Course Periodicity

Courses offered at regular intervals are indicated with codes in parentheses following the course description. The absence of coding indicates that a course is probably not offered on a predictable schedule. Up-to-date information on course periodicity is published in each *Timetable*.

Periodicity codes for courses offered annually:

F	Every fall semester
S	Every spring semester
F,S	Every fall and spring semester

Periodicity codes for courses offered in alternate years:

F96, F98	Fall semester 1996-97, 1998-99, etc.
S97, S99	Spring semester 1996-97, 1998-99, etc.
F97, F99	Fall semester 1997-98, 1999-00, etc.
S98, S00	Spring semester 1997-98, 1999-00, etc.

Course Prerequisites

Prerequisites describe prior conditions which must be met in order to remain enrolled in a course. Prerequisites may include completion of prior courses, earned credits, class standing, grade point average, or program admission status. To enroll a course, any prerequisites listed must be completed or be in progress at the time of registration for the course. For example, if a prerequisite for 107-301 Intermediate Accounting is 107-300, a student must either have completed 107-300 or be currently enrolled in it to register for 107-301. If prerequisite conditions are not met, the computer will cancel the registration for 107-301.

Some courses have conditions that must be met simultaneously. For example, some courses indicate another course that must be enrolled concurrently.

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 courses' "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 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 student-led courses, selected topics, independent study, senior distinction in the major, senior honors projects, and internships. General descriptions of each type of course follow. Information on how to enroll in 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.

281X, 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 consists 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 average for all courses indicated on the academic plan for the major; 3.75 gpa in upper-level 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**107-300 Introductory Accounting 4 cr.**

Principles, concepts and terminology of financial accounting including coverage of the measurement and recording of business income and transactions, current and long term assets, current and long term liabilities, corporate equity, statement of cash flows, international accounting and financial statement analysis. Computer applications, ethical considerations, and analysis of company statements are integrated into the course. P: so st; 266-155 or concurrent enroll. (F,S)

107-301 Intermediate Accounting 4 cr.

Financial accounting theory, concepts, principles and procedures relating to the measurement and reporting of cash, receivables, inventories, fixed assets, intangibles, current liabilities, bond payables, owners' equity; preparation and understanding of the balance sheet and income statement. P: 107-300. (F,S)

107-302 Managerial Accounting I 3 cr.

The use and understanding of management accounting information for planning, control, performance evaluation, decision making; product costing using traditional and activity-based costing techniques, just-in-time, cost-profit-volume relationships, budgeting, variance analysis, decentralization, relevant costing, and ethics. P: 107-300 and 266-155. (F,S)

107-305 Legal Environment of Business (formerly Business Law I) 3 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. P: 36 earned credits and min cum GPA of 2.5, or BU A or ACTG or PBM or grad classification. (F,S)

107-306 Business Law II 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. P: 107-305. (F,S)

107-312 Managerial Accounting II 3 cr.

Expands and broadens the concepts and methods presented in 107-302. Job order, process, and joint product costing systems, ABC costing, standard costing, budgeting, JIT and cost estimation. Significant exposure to current issues, practices and periodicals. Oral presentation and writing skills emphasized. P: 107-302; REC: 216-215 or 600-260; and 216-217. (F)

107-313 Advanced 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. P: 107-301. (F)

107-314 Advanced 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. P: 107-301; REC: 107-313. (S)

107-316 Governmental and Nonprofit Accounting 3 cr.

Financial and managerial accounting concepts, theory and terminology related to state and local governmental entities and not for profit organizations including universities, health care organizations, voluntary health and welfare organizations and other not for profit entities. Analysis of actual municipal financial statements. Case studies, group work and/or class presentations emphasize application of theory to actual situations including ethical considerations. P: 107-300. (F,S)

107-395 Practicum in Financial Statement Analysis 3 cr.

See 216-395.

107-410 Introduction to Income Tax Theory and Practice 3 cr.

Federal income taxation, especially tax rules and the determination of taxable income for individuals. Topics include: exclusions, deductions, passive activity losses, property transactions, nontaxable exchanges, capital gains and losses. P: 107-300; REC: 107-305. (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. P: 107-302. (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. P: 107-313 and 411. (S)

107-414 Managerial Accounting III 3 cr.

Expands and broadens the concepts and methods presented in 107-302 and 107-312. Cost concepts for decision making, cost volume profit analysis, relevant costing, capital budgeting, performance measurement, variable costing, transfer pricing, and decision making under uncertainty. Includes case analysis. P: 107-312; REC: 600-260 or 216-215. (S)

107-415 Advanced Income Tax Theory and Practice 3 cr.

Advanced topics in federal taxation, with emphasis on the federal taxation of corporations, partnerships, and exempt organizations. Estate and gift taxation and the income taxation of estates and trusts. P: 107-410. (S)

107-452 Advanced Microcomputer Business Applications 3 cr.

See 216-452.

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. P: none. SS-1/OC. (F,S)

156-303 Political, Economic and Environmental Anthropology 3 cr.

How people, nature, and culture interrelate. The approaches hunting, agriculture, and industrial societies use in adapting to the physical environment. P: 156-100. OC. (S98,S00)

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. P: jr st. SS-2/OC. (F)

156-320 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. P: jr st. SS-2/OC. (F)

156-342 Human Evolution 3 cr.

See 478-342.

156-364 Human Variability 3 cr.

See 478-364. NS-2.

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. P: 156-100 and so st. (F,S)

168 Art**168-101 Tools, Safety, and Materials 1 cr.**

Acquaints students with a wide range of materials and safe working practices and methods. Additional course fee required. P: none. (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. P: none. (F,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. Additional course fee required. P: 168-101. FA. (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. Additional course fee required. P: none. FA. (F,S)

168-210 Introduction to Painting 3 cr.

Introduction to painting techniques, principles of composition, and media, and their inherent expressive qualities and characteristics. Additional course fee required. P: none; REC: 168-105, 106, and 107. FA. (F,S)

168-220 Introduction to Sculpture 3 cr.

Survey of various sculpture media, processes, and stylistic approaches; aesthetics and history of sculpture. Additional course fee required. P: 168-101 and 106; REC: 168-105 and 107. (F,S)

168-230 Introduction to Ceramics 3 cr.

Survey of various ceramic forming and firing processes, stylistic approaches; traditional and contemporary aesthetics, and history of ceramics. Additional course fee required. P: none; REC: 168-105, 106, and 107. FA. (F,S)

168-243 Introduction to Photography 3 cr.

See 246-243. P: none; REC: 168-105, 106, and 107.

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. Additional course fee required. P: none; REC: 168-105, 106, and 107. (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. Additional course fee required. P: none; REC: 168-105, 106, and 107. FA. (F,S)

168-270 Introduction to Printmaking 3 cr.

Exploration of various printmaking media such as relief, monoprint, callograph, intaglio and lithography. Additional course fee required. P: 168-105; REC: 168-106 and 107. (F,S)

168-302 Intermediate Drawing 3 cr.

Experimental conceptual and transformative approaches to drawing. The human figure will be subject matter for half the course. Additional course fee required. P: 168-105, 106, and 107. (F,S)

168-311 Intermediate Painting 3 cr.

Techniques for personal expression; composition and development of imaginative concepts in acrylic paint and allied media. Additional course fee required. P: 168-105, 106, 107, and 210. (F,S)

168-321 Intermediate Sculpture 3 cr.

Intermediate work in sculpture including fabrication, casting, carving, and/or modeling; development of individual expression. Additional course fee required. P: 168-105, 106, 107, and 220. (F,S)

168-331 Intermediate Ceramics 3 cr.

Intermediate work in ceramic media: mold work, wheel work or hand building; aesthetics, history and technology of ceramics. Additional course fee required. P: 168-105, 106, 107, and 230. (F,S)

168-343 Photography II 3 cr.

See 246-343. P: 168-105, 106, 107, 243.

168-344 Photography III 3 cr.

See 246-344.

168-345 Designing Multiple Media Applications of Photography 3 cr.

See 246-345. P: 168-105, 106, 107, and 243.

168-355 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. Additional course fee required. P: 168-105, 106, and 107; REC: 168-250. (S)

168-364 Intermediate Art Metals: Jewelry 3 cr.

Intermediate jewelry and art metals techniques: casting, fabricating and assembling mixed-media objects. Additional course fee required. P: 168-260. (S)

168-371 Intermediate Relief Printing 3 cr.

Relief printing techniques: woodcut, collage print, linoleum cut and wood engraving. Additional course fee required. P: 168-105, 106, 107, and 270. (F96,F98)

168-373 Intermediate Intaglio 3 cr.

Intaglio techniques: dry point, aquatint and various etching procedures. Additional course fee required. P: 168-105, 106, 107, and 270. (F97,F99)

168-375 Screen Printing 3 cr.

Studio work in screen printing, including basic materials and equipment, blackout stencil making, paper stencil, pochoir, water soluble film, and photo-emulsion technique. Additional course fee required. P: 168-105, 106, and 107; and 168-270 or 243. (S97,S99)

168-377 Intermediate Lithography 3 cr.

Lithography techniques: plate lithography, drawing and process. Additional course fee required. P: 168-105, 106, 107, and 270. (F96,F98)

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. P: 242-102 and 103. (F)

168-395 Exhibition Development and Design 3 cr.

Introduction to standard practices in museum/gallery field including: exhibition installation, publicity, educational materials/events, proper handling of art and cultural objects in lecture and practicum format. Field trips required. P: jr st. (F97,F99)

168-396 Art Management: Practices, Principles, and Policy 3 cr.

Practical experience in the methods of the museum and art gallery profession; exploration of theoretical, ethical, and operational concerns within the field. Field trips required. May be repeated twice. P: 168-395. (S98,S00)

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. Additional course fee required. Repeatable to 9 cr. P: 168-302.(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. Additional course fee required. Repeatable to 9 cr. P: 168-311. (F,S)

168-421 Advanced Sculpture 3 cr.

Exploration and refinement of sculptural investigations toward meaningful and personal body of work. Additional course fee required. Repeatable to 9 cr. P: 168-321. (F,S)

168-431 Advanced Ceramics 3 cr.

Extension and development of ceramic techniques and aesthetics into a significant and personal body of work. Additional course fee required. Repeatable to 9 cr. P: 168-331. (F,S)

168-443 Advanced Problems in Photography 3 cr.

See 246-443.

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. Additional course fee required. Repeatable to 9 cr. P: 168-250 or 355. (F,S)

168-463 Advanced Art Metals: Jewelry 3 cr.

Advanced techniques in jewelry; creative research and investigation of metals and jewelry media. Additional course fee required. Repeatable to 9 cr. P: 168-364. (F,S)

168-470 Advanced Printmaking 3 cr.

Advanced techniques and individual expression in one area of printmaking: intaglio, relief, lithography or screen printing. Additional course fee required. Repeatable to 9 cr. P: 168-371 or 373 or 375 or 377. (F,S)

168-490 Contemporary Art 1945-Present 3 cr.

Art movements from abstract expressionism to the present. P: 168-390. (S)

168-493 Photography Portfolio 3 cr.

See 246-493.

168-495 Advanced Art Management 3 cr.

Continued study of speciality areas in the art management field with an emphasis on exhibition development, collection management and research. Repeatable to 9 cr. P: 168-395 and 396. (F,S)

168-497 Internship in Art Management 3-12 cr.

Internship with an outside museum or gallery. Activities are determined by the curator of art and a professional in the sponsoring institution. P: 168-395; at least 4 cr of 168-396 with minimum grade of B. (F,S)

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. P for 202: none. HB-1. (F,S). P for 203: a grade of C or better in 204-202. (F,S)

204-301 Evolutionary Processes 3 cr.

The cytological, morphological, behavioral, and geographic factors involved in the origin of species and higher taxa. P: 204-203 or transfer course 204-002.

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. P: a grade of C or better in 204-202; and 225-108 or 212. (F,S)

204-303 Genetics 3 cr.

Mechanisms of heredity and variation, their cytological and molecular basis and their implications in biological technology. P: a grade of C or better in 204-202. (F)

204-304 Genetics Laboratory 1 cr.

Basic techniques of genetic research; laboratory investigation and analysis of animal, plant, and human patterns of inheritance. P: cr or concurrent enroll in 204-303 or 478-310. (F)

204-305 Biological Microtechnique 3 cr.

Theory and practice of 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. P: 204-203; and 225-211 or 108.

204-307 Cell Biology 4 cr.

Examines the molecular organization of major cellular organelles and their functions in plant and animal cells. P: a grade of C or better in 204-202; and 225-212 or 108. (F)

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. P: 204-203 or transfer course 204-003. (S97,S99)

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. P: 204-203 or transfer course 204-003; and 225-212. (S98,S00)

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. P: 204-202. (S)

204-317 Structure of Seed Plants 3 cr.

Anatomy of seed plants, with special emphasis upon tissue differentiation and structure. P: 204-203 or transfer course 204-003. (F96,F98)

204-320 Field Botany 3 cr.

Identification and natural history of plants indigenous to northeastern Wisconsin. Field trip required. P: a grade of C or better in 204-203 or transfer course 204-003. (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. P: a grade of C or better in 204-203 or transfer course 204-002. (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. P: 204-203 or transfer course 204-002. (S98,S00)

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. P: 204-203 or transfer course 204-002. (S97,S99)

204-345 Animal Behavior 3 cr.

Biology of animal behavior patterns; behavioral interactions of animals with their environment. P: 204-202 or 478-102 or transfer course 204-002. (F96,F98)

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. P: 204-203 or transfer course 204-002; and 225-212. (S)

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. P: 204-203 or transfer course 204-002; and 204-303. (S)

204-349 Comparative Physiology Laboratory 1 cr.

Exercise in physiology of animals from different phylogenetic levels; experience in methods and apparatus for making physiological measurements; drawing conclusions from experimental results. P: 204-346 or concurrent enroll. (S97,S99)

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. P: 204-302. (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. P: 204-302 or 225-303 or 225-300. (S97,S99)

204-407 Molecular Biology 3 cr.

See 225-407.

204-408 Molecular Biology Laboratory 1 cr.

See 225-408.

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 environment; pricing, profit, finance planning, controls, ethics, environmental impact, social responsibility and other important concepts; environmental issues that challenge the business leader. P: none. (F)

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. P: none. (F,S)

216-215 Introduction to Business Statistics 3 cr.

This course provides students with an overview of applied parametric business statistics. Emphasizes application of commonly used statistical techniques to analyze and solve business-related problems. Investigation of such topics as audit sampling, discrimination in hiring and leading policies, investment risk, market analysis, and quality control. Cr will not be granted for both 216-215 and 255-205 or 600-260. P: 600-101 or transfer course 600-004; or 2 yrs high school algebra and ACT math score of 19 or higher. (F,S)

216-217 Advanced Business Statistics 3 cr.

A treatment of advanced topics in statistics applied to a wide variety of business problems. Topics include analysis of variance, linear regression, correlation, multiple linear regression, elements of time series analysis, forecasting based on time series models, quality control techniques, survey sampling, analysis of enumerative data, non-parametric statistical methods and decision analysis. Practical business examples are used to illustrate and apply the advanced statistical techniques. Computer applications are included. P: 600-260 or 216-215 or 255-205. (F,S)

216-280 Introduction to Management Information Systems 3 cr.

This course is designed to provide students with the necessary skills to work with management information systems and apply information technology to business problems. P: 266-155. (F,S)

216-282 Personal Financial Planning 3 cr.

Exploration and functional analysis of consumers' financial needs and problems in our modern and complex society; learning to formulate financial goals, implement and monitor them through specific plans, financial functions such as budgeting, investing, financing, protecting and distributing wealth; philosophies and values of consumers; legal aspects of consumer rights. P: none. (F,S)

216-303 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. P: prior written cons inst; REC: 298-203. OC.

216-372 Introduction to International Business 3 cr.

Survey of interrelationships of operations of world business; nature, functions, and environments of international business; examination and analysis of constraints such as socioeconomic, cross-cultural communication, political, financial, marketing, and management; study of state, federal, and international organizations assisting and promoting businesses in internationalizing their operations; problems and challenges facing the U.S. business. P: 298-202 and jr st. (F,S)

216-395 Practicum in Financial Statement Analysis 3 cr.

Analysis of published financial statements; reviews 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.) CL: 107-395. P: 107-300 and 216-343.

216-490 Seminar in Business Problems 3 cr.

This capstone seminar is an opportunity for Business Administration and Accounting majors to apply the theoretical, methodological, and personal knowledge and skills they have developed throughout their course of study. Topics vary. P: sr st and major in BUA or ACTG. (F,S)

*Accounting and Quantitative Methods***216-317 Computer Optimization 3 cr.**

Quantitative decision-making problems in business, including many classical business optimization problems, and new approaches to computer applications in their solutions. P: 216-217 or 266-155 or 266-256. (S)

216-452 Advanced Microcomputer Business Applications 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. CL: 107-452. P: 216-215 or 255-205 or 600-260; and 266-155. (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. P: 36 earned cr and min cum GPA of 2.5; or BUA or ACTG or PBM or grad classification; and 298-203. (F,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. P: 216-322. (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. P: 216-322. (F)

216-423 Advertising 3 cr.

Developing and executing advertising campaigns; how these campaigns fit into the total marketing mix; social, legal, and economic considerations and constraints involved in the advertising campaign planning process. P: 216-322.

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. P: 600-260 or 216-215; and 216-322; and 216-325 or 327 or 422 or 423 or 425 or 426 or 428. (F)

216-425 Promotional Strategy 3 cr.

Analysis of the environments in which persuasive efforts take place; application of concepts from behavioral sciences, promotional tools to communicate to various publics about products, services, ideas and institutions, as viewed from a promotion system perspective. P: 216-322. (F)

216-426 Marketing Management 3 cr.

Capstone course in marketing. Strategic interrelationships, development of analytical techniques and abilities, and decision making in marketing. P: sr st and 216-322; and 216-325 or 327 or 423 or 424 or 425 or 428. (S)

216-427 Practicum in Marketing Research 3 cr.

Provides students with an opportunity to apply their knowledge of marketing research in hands-on fashion. Students will be doing comprehensive marketing research projects on behalf of area businesses. P: 216-424. (S)

216-428 Consumer Behavior 3 cr.

Theories of buyer behavior, including ultimate and industrial customers, and their implications for marketing management. P: 216-322. (F)

Finance**216-342 Cases in Personal Financial Planning 3 cr.**

Practical case study approach to address basic functions of personal financial planning, formulating financial goals and objectives, investment, insurance, tax, retirement, and estate planning; basic approach to accumulating, consuming, and distributing assets in different life cycles of individuals. P: 216-282. (S)

216-343 Corporation Finance 3 cr.

Organization of basic financial management functions and principles for business; management of fixed and working capital; short-term and long-term financial planning through investment and financing decisions; domestic and international money and capital markets; ethical issues relating to business financial management. P: 36 earned cr and min cum GPA of 2.5; or BUA or ACTG or PBM or grad classification; and 107-300. (F,S)

216-344 Real Estate Principles 3 cr.

Nature of real estate ownership, importance of land contracts, title transfer, and mortgage instruments; real estate valuation, finance and investment; impacts of taxation, insuring, marketing, and laws affecting real estate (not intended to prepare students for real estate licensing examination). P: 216-343. (F)

216-345 Principles of Risk Management 3 cr.

Nature of risks, principal techniques of risk management and the bases for making decisions with respect to the management of personal and business risks. P: 216-343. (S)

216-347 Financial Markets and Institutions 3 cr.

Role of financial markets and institutions in forming and managing financial resources; examination and analysis of financial intermediation; organization and functions of the U.S. and international financial systems; structure and investment management strategies of specific financial institutions (such as banks, thrift, insurance and investment companies). P: 216-343. (F,S)

216-442 Principles of Investment 3 cr.

Fundamental concepts, theories, and techniques relating to investing; securities markets, investment vehicles and environments, economic, industry and security analyses, portfolio construction and management; active and passive investment strategies; global investment perspectives and their impacts on investors; blend of facts and theories relating to traditional and modern portfolio approaches; ethics in investment decisions; applied computer-assisted investment decisions. P: 216-343; and 216-215 or 255-205 or 600-260. (F,S)

216-445 International Financial Management 3 cr.

Conceptual framework and applications of financial management decisions of multinational firms in a global setting; survey of the international financial environment; determinants of international portfolio and direct investment capital flows; assessment and management of impacts of foreign exchange and hedging strategies; impacts of international factors on capital budgeting and financial structure decisions; multinational money and capital markets; taxation of international business. P: 216-343; REC: 216-442. (S)

216-446 Advanced Corporation Finance 3 cr.

Short-term and long-term financial decisions under risk and uncertainty; financial analysis planning and control; in-depth coverage of theories and applications of capital structure, cost of capital, dividend policies; working capital management; long-term financing decisions; valuation of mergers and acquisitions; international capital budgeting. P: 216-343; REC: 216-442 and 347. (F)

216-447 Advanced Investments 3 cr.

In-depth coverage of theories and applications of portfolio construction, analysis, and management of investment portfolios under the context of efficient and inefficient market hypotheses; computer models for portfolio construction and management; fundamental techniques in selection, analysis and management of stocks and bonds; reducing investment risk inherent in asset selection and management through the use of financial derivatives; techniques for measuring investment performance; global investment decisions. P: 216-442. (F)

216-450 Bank Administration 3 cr.

Commercial banking theories and practices from a financial management perspective; operations, administration, overall asset-liability management of commercial banks, including bank services, credit and loan pricing and analysis, investment portfolio problems, profitability, cost control, and capital budgeting and analysis; implications of deregulation or re-regulation on the financial industry. P: 216-347; REC: 216-442. (F)

Management**216-362 Human Resource Management 3 cr.**

Personnel management: human resource planning, recruitment, selection, training, motivation, fringe benefits, salary and wages, labor relations, and performance evaluation. P: 216-382. (F,S)

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. P: 36 earned cr and a min cum GPA of 2.5; or BUA or ACTG or PBM or grad classification; and 216-215 or 255-205 or 600-260. (F,S)

216-384 Production/Operations 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. P: 216-382. (S)

216-389 Organizational Behavior 3 cr.

A micro organizational behavior course examining motivation, leadership, job satisfaction, learning, group dynamics, and stress in the organizational setting. P: 216-382. (F,S)

216-460 Human Resource Development 3 cr.

This seminar focuses on the primary functions of human resource development — training and development, career development, and organizational development. Activities and processes to assist an organization in becoming a learning organization are addressed. P: 216-362. (S)

216-462 Seminar in Human Resource Management 3 cr.

Analysis of human resource problems and issues and their translation into corporate policies; urban, cultural and legal realities in human resource matters; decisions affecting the development and management of human resource policies. P: 216-362. (F97, F99)

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. P: 216-362. (F96, F98)

216-480 Quality Management 3 cr.

The course introduces the philosophical and theoretical foundations of quality management; the individuals who have developed and popularized the components of quality management, the practical tools and techniques of quality management, and the role of quality management in modern organizations. P: 216-382. (F,S)

216-482 Strategic Management 3 cr.

The course focuses on the concept of strategic planning, formulating organizational strategy, and initiating and managing the implementation process. Issues at the strategic level downward to divisional, functional, and project levels are explored in an integrative fashion. Strategic management, situation analysis, competitive analysis, strategies for single and multiple business units, and the seven planning tools of continuous improvement. P: 216-382. (F,S)

216-485 Managerial Economics 3 cr.

See 298-485.

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. P: 216-382.

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. P: 600-260 or 216-215 or 255-205. (F97, F99)

216-489 Organization Theory 3 cr.

A macro organizational behavior course examining organizational environments, structure, power and politics, conflict, innovation, technology, and culture in the organizational setting. P: 216-382. (F,S)

225 Chemistry**225-101 Fundamentals of Chemistry 3 cr.**

A chemistry course for non-science majors. This course promotes basic chemical literacy in the lecture and lab by presenting phenomena, methodology, and theory as needed to allow for an understanding of issues. Some of the issues include air pollution, global warming, water pollution, alternative energy sources, drugs and plastics. P: none. (F)

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 cr not awarded for both 225-108 and 211 or 212. P: 912-094; or 1 yr high school algebra and ACT math score of 18 or higher. ES-1. (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. P for 211: 600-101 or transfer course 600-004; or 2 yrs high school algebra and ACT math score of 25 or higher; REC: 600-104 or equiv. Full cr will not be awarded for both 225-211 and 108. ES-1. (F,S). P for 212: a grade of C or better in 225-211 and 600-104. Full cr will not be awarded for both 225-212 and 108. (F,S)

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. Full cr not given for both 225-300 and 302 or 303. P: a grade of C or better in 225-212 or 108. (S)

225-301 Bio-Organic Chemistry Laboratory 1 cr.

Optional laboratory course to accompany 225-300. Cr not granted for both 225-301 and 304. P: cr or concurrent enroll in 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. P for 302: a grade of C or better in 225-212. Full cr will not be awarded for both 225-300 and 302 or 303. (F). P for 303: a grade of C or better in 225-302. Full cr will not be awarded for both 225-303 and 300. (S)

225-304, 305 Organic Chemistry Laboratory I, II 1, 1 cr.

Basic and intermediate synthesis, basic and intermediate instrumental techniques in organic chemistry. P for 304: cr or concurrent enroll in 225-302. Cr not granted for both 225-304 and 301. (F). P for 305: a grade of C or better in 225-304 and cr or concurrent enroll in 225-303. (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. P: a grade of C or better in 225-212 and cr or concurrent enroll in 362/478-207. (F,S)

225-320 Thermodynamics and Kinetics 3 cr.

See 754-320.

225-321 Structure of Matter 3 cr.

See 754-321.

225-322 Thermodynamics and Kinetics Laboratory 1 cr.

See 754-322.

225-323 Structure of Matter Laboratory 1 cr.

See 754-323.

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. Field trip required. Full cr will not be granted for both 225-330 and 225/694-328. P: a grade of C or better in 225-303 and 204-202; or a grade of C or better in 225-300 and 301 and 204-202. (F)

225-331 Biochemistry Laboratory 1 cr.

Laboratory course to accompany 225-330. P: cr or concurrent enroll in 225-330 or 225/694-328. (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. P: a grade of C or better in 225-303; REC: 225-321. (F97,F99)

225-403 Advanced Organic Chemistry Laboratory 1 cr.

Laboratory course to accompany 225-402; advanced molecular spectroscopy, organic qualitative analysis, physical organic chemistry experiments. P: cr or concurrent enroll in 225-402. (F97,F99)

225-407 Molecular Biology 3 cr.

Molecular approaches to biological problems, emphasizing study of informational macro molecules. 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. Field trip required. CL: 204-407. P: a grade of C or better in 204-303 or 225-330; REC: 225-300 or 303. (S)

225-408 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). CL: 204-408. P: 204/225-407 or concurrent enroll; REC: 225-301 or 305. (S)

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. P: cr or concurrent enroll in 225-321. (S97,S99)

225-411 Inorganic Chemistry Laboratory 1 cr.

Laboratory course to accompany 225-410. P: cr or concurrent enroll in 225-410. (S97,S99)

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. Field trip required. P: a grade of C or better in 225-311 and cr or concurrent enroll in 225-321; REC: 225-303. (F)

225-417 Nuclear Physics and Radiochemistry 3 cr.

See 754-417.

225-418 Nuclear Physics and Radiochemistry Laboratory 1 cr.

See 754-418.

225-420 Polymer Chemistry 3 cr.

An introduction to the synthesis, characterizations, and properties of industrial polymers. P: cr or concurrent enroll in 225-321. (S97,S99)

225-434 Environmental Chemistry 3 cr.

See 362-434.

225-435 Environmental Chemistry Laboratory 1 cr.

See 362-435.

225-495 Research in Chemistry 3 cr.

P: 225-413. (F,S)

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. P: none. FA. (F)

242-103 History of the Visual Arts: Renaissance to French Revolution 3 cr.

Survey of the visual arts: early Renaissance to the modern period. P: none. FA. (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. P: none. FA. (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. Field trip required. P: none. FA. (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. P: none. FA. (S97,S99)

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. P: none. (S)

242-202 Concepts and Issues of 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. P: none. FA. (F,S)

242-210 Film and Society 3 cr.

See 493-210.

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. P: none. FA.

242-225 American Indian Studies: Arts and Ceremonial Traditions 3 cr.

See 493-225. Et.S.

242-226 American Indian Studies: Wisconsin Indians 3 cr.

See 493-226. Et.S.

242-231 Introduction to Graphic Communications 4 cr.

Basic principles and potentials of visual communication: application of design concepts, exploring aspects of printing, preparation of mechanicals, type units measurement, letterspacing and type styles as communicative devices. Additional course fee required. P: none. (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. P for 243: none. (F). P for 244: 242-243.

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. P: none. FA. (F,S)

242-272 Women in the Arts: Performing or Visual 3 cr.

Studies artistic works by women in order to re-value their place in history and development of the arts. May be repeated for cr when a different topic is studied. P: none. FA.

242-301 Communication and the Arts: Oneida Language Project 3-5 cr.

A course on the Oneida language typically offered in the Oneida community with the aid of native speakers. Emphasis varies with student interest. Tools and resources for further independent study are stressed. Repeat as needed with change of content. P: none. Et.S. (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. P: 242-160; REC: jr st. OC. (F)

242-327 Cross Cultural Communication: Jazz History 3 cr.

Cultural conflict, influence and enrichment that arise when differing traditions of the arts come into contact with jazz history. P: none. Et.S/FA. (F)

242-328 Cross Cultural Communication: American Show Music 3 cr.

Cultural conflict, influence and enrichment that arise when differing traditions of the arts come into contact with American show music. P: none. FA. (S98)

242-329 Cross Cultural Communication: World Music 3 cr.

Cultural conflict, influence and enrichment that arise when differing traditions of the arts come into contact with world music. P: none. OC/FA. (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. P for 331: 242-231; REC: 168-105, 106 or 107 or 168/246-243. Additional course fee required. (F,S). P for 332: 242-331; REC: 246-166 or 337. Additional course fee required. (F,S)

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. P: 242-261. (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. P: 242-261; REC: 481-210 or 820-102. (F96,F98)

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. P: 242-261. (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. P: none. (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. P: none; REC: General Education requirement in Arts & Humanities. (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. CL: 493-365. P: cons inst and prior trip ARR and financial deposit. OC.

242-430 Information, Media and Society 3 cr.

See 520-430.

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. Additional course fee required. Repeatable to maximum of 9 cr; only 3 cr may be applied to a minor in COA. P: 242-332; REC: 246-343 or 460 or 216-322 or 425. (F,S)

242-435 Practicum in Integrated Publishing 1-4 cr.

Comprehensive experience in designing and producing a magazine format publication from the early stages of design through to the finished printed product. Combines conventional design skills developed in the graphic communications studios and use of desktop publishing technology. Repeatable to 9 cr. P: 242-432 and jr st; REC: 246-460.

242-436 Environmental Design Studio I 3 cr.

See 951-436.

242-437 Environmental Design Studio II 3 cr.

See 951-437.

242-438 Environmental Design Studio III 3 cr.

See 951-438.

242-439 Environmental Design Studio IV 3 cr.

See 951-439.

242-450 The Construction of Public Images 3 cr.

Develops skills in reading the imagery of mass media and public environments: image problems in news, promotion, entertainment, photography, tourism, sports, landscapes and other realms. P: sr.st. (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. P: none. (S98,S00)

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. P: none. (S97,S99)

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. P: 875-241 or 242-364 or 351-206 or 242-272 or jr st.

242-497 Internship in Graphic Communications 3-12 cr.

Instruction and experience in a professional graphic environment, where students work in any area of the field (management, design, technical processes) under professional and faculty supervision. No more than three cr may be used to meet requirements for a major or minor. P: 242-432 and prior written cons inst. (F,S)

246 Communication Processes**246-100 Writing Skills Laboratory 4 cr.**

A basic course in college-level expository writing, including conventional forms of argumentation, comparison/contrast and research papers. Satisfies UWGB writing skills requirement. P: 912-093 or ACT English score of 17 or higher.

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. P: none. (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. P: none. (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. P: none. (F,S)

246-200 Communication Processes: An Introduction 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. P: none; REC: one previous communication course. (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. P: one previous communication course; REC: 246-200 or 820-102. (S)

246-203 News Writing Laboratory 3 cr.

Assignments in gathering and writing news, copy editing; emphasis on developing an objective, clear, accurate and forceful style. P: completion of UWGB writing requirement; REC: 352-105. (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. P: none.

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. CL: 168-243. P: none; REC: one previous communication or art course. (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 cr. P: completion of UWGB writing requirement and prior written cons; REC: 246-203 or 168/246-243. (F,S)

246-303 Feature Writing 3 cr.

Writing feature articles for magazines and newspapers; emphasizes information gathering, professional standards, and effective style. P: 246-203 or 352-105. (F)

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. P: 246-102; REC: 246-243. (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. P: 246-102. (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. P: 246-305. (F,S)

246-308 Information Technologies 3 cr.

See 520-308.

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. P: 246-305. (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. P: none; REC: 242-160. (F97,F99)

246-321 Sociolinguistics 3 cr.

Communication in social groups and applications of linguistics principles to the study of social and regional dialects, stylistic variation, bilingualism and language contact, nonverbal behavior, and language in culture. P: none; REC: 242-160. (F96,F98)

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. P: none; REC: 242-160. (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. P: 242-160. (S97,S99)

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. P: none; REC: 242-160. (S98,S00)

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. P: 242-160. (S98,S00)

246-333 Persuasion and Argumentation 3 cr.

Awareness, appreciation, understanding, and skill in contemporary forms and methods of oral persuasion and argumentation. P: 246-133; REC: 246-200. (S97,S99)

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. P: 246-133 or 200 or 201; REC: 246-166. (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. P: 246-133 or 200 or 201; REC: 246-166. (F)

246-337 Small Group Communication 3 cr.

The role communication plays in small group processes; focuses on development of the special communication skills needed in the small group setting. P: 246-133 or 200 or 201; REC: 246-166. (S98,S00)

246-343 Photography II 3 cr.

Black and white photography and darkroom printing techniques. Camera required. Additional course fee required. CL: 168-343. P: 246/168-243. (F,S)

246-344 Photography III 3 cr.

Black and white photography, allied media and applications of photography; photographic documentation. Camera required. Repeatable for cr with cons inst. Additional course fee required. CL: 168-344. P: 246/168-343. (F)

246-345 Designing Multiple Media Applications of Photography 3 cr.
Emphasis upon programmed multi-image designs bringing together photography, graphics and sound. 35mm camera required. CL: 168-345. P: 246/168-343.

246-346 Photographic Design for Print Media 3 cr.
Investigation of photographic design and craft for print media. Camera required. Additional course fee required. P: 246/168-343.

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. P: 246-203 or 303 or 253; REC: prior experience on 4th Estate. (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. P: jr st; REC: 9 cr in communication courses. (S98,S00)

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. P: completion of UWGB writing requirement 352-100 and Natural Science general education requirement. (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. P: 246-203; REC: 246-306 or 353. (S)

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. 35 mm camera required. Additional course fee required. May be repeated to maximum of 9 cr. CL: 168-443. P: 246/168-344. (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. CL: 168-444. P: 168/246-343. (F)

246-445 Human Communication Theory 3 cr.
Integration of a variety of theories to promote sensitivity to and understanding of the complexity of human communications, examines the construction of various communication theories, contexts and processes in communication. P: 9 cr in upper-level communication courses. (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. P: jr st and prior course work in communication; REC: 246-203 or 243 or 242-231. (S98,S00)

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. P: 246-335 or 336; REC: one course in statistics. (S)

246-493 Photography Portfolio 3 cr.
Preparation of a major portfolio, document of work samples, resumes, and supporting statements. Portfolio practices in various arenas of photography. Additional course fee required. CL: 168-493. P: sr st and 168/246-443. (F,S)

255 Community Sciences

255-205 Social Science Statistics 4 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. Not open to students who have credit for 600-260. P: 600-101; or 2 yrs high school algebra and ACT score of 19 or higher. (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. P: 216-215 or 255-205 or 600-260. (S)

266 Computer Science

266-155 Microcomputers and End-User Applications 3 cr.
An introduction to basic microcomputer skills. The emphasis is on familiarization with DOS, word processing, spreadsheets, and databases through hands-on exercises. P: 600-101 or transfer course 600-004; or 2 yrs high school algebra and ACT math score of 18 or higher. (F,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 cr will not be given for both 266-255 and 325-251. P: 600-202.

266-256, 257 Introduction to Computer Science I, II 4, 4 cr.
Basic concepts of computer science, including problem-solving, algorithmic processes, programming in a higher-level language, style and expressions, debugging and testing, aspects of string processing, recursion, internal search/sort methods, simple data structure, machine organization, assembly language and algorithm analysis. Full cr will not be given for both these courses and 325-251. P for 256: 600-101 or transfer course 600-004; or 2 yrs high school algebra and ACT math score of 25 or higher; REC: 266-155 or equiv. (F,S). P for 257: 266-256. (F,S)

266-270 C Programming Language 2 cr.
Introduction to the C language elements and syntax. Includes pointers, data structures, and process creation. P: 266-257.

266-271 COBOL Programming Language 2 cr.
Introduction to COBOL programming language, records formats, File I/O, arithmetic, control break processing, arrays, sorting, searching, and random access files. P: 266-256; REC: 266-257. (S)

266-350 Numerical Analysis 3 cr.
See 600-350.

266-351 Data Structures 3 cr.
Concepts involved in storage, retrieval and processing data. Emphasis is on the design of software with complex data retrieval needs and on non-linear structures such as generalized lists, trees, and graphs. P: 266-257 and 600-242. (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. P: 266-257 and 600-241. (S)

266-353 Computer Organization and Programming 3 cr.

Data representation, assembly language, procedure call protocols, memory, cache, and bus organizations, comparison of processor architectures, I/O systems, logic circuits, Boolean algebra. P: 266-257 and 600-242. (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. P: 266-257 and 600-241. (F)

266-358 Data Communication and Computer Networks 3 cr.

Transmission media, analog and digital signals, modulation, network topologies, local and wide area network protocols, error detection, encryption, compression, security. P: 266-257 and 270 and 600-241. (S)

266-371 C++ and Object-Oriented Design 3 cr.

This is an introduction to object-oriented design and the language C++. P: 266-257. (F)

266-372 Object-Oriented Design and Programming 3 cr.

This course covers standard object-oriented techniques used to design and program large software projects. P: 266-257 and 371. (S)

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. P: 600-203 and 266-351. (F96,F98)

266-451 Database Management Systems 3 cr.

Relational database technology, structured query language, experience on both mainframe and PC databases, security, integrity rules, design issues, normal forms, and entity-relation modeling. P: 266-351 and COBOL ability. (F)

266-452 Operating Systems 3 cr.

Techniques and philosophies behind management of computing resources such as memory management, process management, scheduling, concurrency issues, auxiliary storage management. P: 266-257 and 270; REC: 266-351 and 353. (S98)

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). P: 266-351; REC: 266-357. (P97,F99)

266-455 Microprocessors and Digital Electronics 3 cr.

See 754-455.

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. P: 266-455.

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. P: 266-353 and 357. (S98,S00)

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. Field trip required. Students will not receive cr for both 296-102 and 202. P: none. ES-1. (F,S)

296-110 Dinosaurs: Rise to Ruin 1 cr.

Explores dinosaurs, their ancestors, rise to preeminence, reasons for success and possible reasons for their extinction. P: none.

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 use of the earth's rock and mineral resources. Field trip required. Students will not receive cr for both 296-202 and 102. P: none. ES-1. (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 required. P: 296-202. (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 required. P: cr or concurrent enroll in 296-203. (S)

296-222 Ocean of Air: Weather and Climate 3 cr.

See 416-222. ES-1.

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 required. P: 296-202. (F)

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. P: 296-202 and 203. (S97,S99)

296-432 Hydrogeology 3 cr.

See 362-432.

296-470 The Glacial Environment and Chronology 3 cr.

See 416-470.

296-492 Special Topics in Earth Science 1-3 cr.

Topics not covered by regular courses, such as mineralogy-petrology, crustal movements, geologic field methods, geology of Wisconsin, and others. P: 296-203 and 204. (F,S)

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. P: none. SS-1. (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. P: none. (F,S)

298-206 Macro Economics Laboratory 1 cr.

Laboratory course to accompany 298-202. P: concurrent enroll in 298-202.

298-207 Micro Economics Laboratory 1 cr.

Laboratory course to accompany 296-203. P: concurrent enroll in 298-203. (F,S)

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. P: jr st. (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. P: 298-202. (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. P: 298-203. (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. P: 298-202 and 203. (S)

298-307 History of Economic Thought 3 cr.

Historical development of contemporary economic thought from the mercantilist period to the present emphasizing contributions of major schools of economic thought. P: jr st. (S)

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. P: 298-202 and 203. (F,S)

298-310 Introduction to Quantitative Analysis and Econometrics 3 cr.

An introduction to the use of mathematical concepts and techniques in the analysis of economic phenomena and the use of statistical methods to estimate equations describing economic events. P: 298-203; and 600-201 or 202; and 255-205 or 600-260. (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. P: 298-202. (F,S)

298-402 Environmental and Resource Economics 3 cr.

See 835-402.

298-403 International Trade 3 cr.

Theory and concepts of international trade and finance; contemporary conditions and problems in international economic relations. P: jr st and 298-202 and 203. (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. P: jr st and 298-202. (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. P: jr st and 298-202. (F)

298-409 Public Finance and Fiscal Policy 3 cr.

See 835-409.

298-453 Cost Benefit Analysis 3 cr.

See 835-453.

298-485 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. CL: 216-485. P: 298-202 and 203. (S)

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. P: none.

302-203 Introduction to Environmental Education in the Schools 3 cr.

Philosophies, instructional processes and resources for environmental education. Introduction to problem focused, multi disciplinary environmental education theory and practice; examination of ways to apply learning to future teaching roles in and out of the classroom. P: 362-102 or 302 or concurrent enroll. (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 trade books, textbooks and other instructional materials for children and adolescents; detecting negative images and building positive images. P: none. SS-2/EL.S.

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. P: so st. (F,S)

32-280 Instructional Technologies: Evaluation, Production and Application 3 cr.

This course examines computer and audio-visual materials designed, developed, and promoted for classroom use. Students will examine and use resources, explore professional literature and evaluate processes and products for future students. This course will meet the Wisconsin Department of Public Instruction P.I. 3 & 4 mandates. P: admittance to education program; REC: 302-300. (F,S)

302-300 Introduction to Education and Teaching 3 cr.

The technical skills of teaching, applications of learning theory, instructional planning, micro teaching and evaluation of teaching effectiveness; school observation and participation in instructional activities (2 1/2 hours per week). Must be completed before methods courses. P: admittance to teacher education. (F,S)

302-302 Teaching Social Studies in Elementary and Middle 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. P: admittance to teacher education and 302-300. (F,S)

302-303 Teaching Art in the Elementary and Middle 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. P: admittance to teacher education and 302-300. (F,S)

302-304 Teaching Music in the Elementary and Middle Schools 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. P: admittance to teacher education and 302-300; and 670-100 or concurrent enroll. (F,S)

302-306 Teaching Health and Physical Education in the 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. P: admittance to teacher education and 302-300. (F,S)

302-307 Teaching Reading in the Elementary and Middle Schools 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. P: admittance to teacher education and 302-300; practicum required. (F,S)

302-308 Children's Literature in Elementary and Middle Schools 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. P: jr st. (F,S)

302-309 Teaching Language Arts in the Elementary and Middle Schools 3 cr.

Develops a language arts model, rationale, basic processes and skills and assessment procedures for the language arts classroom. P: admittance to teacher education and 302-300. (F,S)

302-310 Teaching Communication Arts in the 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 communications arts classroom. P: admittance to teacher education and 302-300. (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. P: admittance to teacher education and 302-300. (F97,F99)

302-312 Teaching Social Studies in the 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. P: admittance to teacher education and 302-300. (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. P: admittance to teacher education and 302-300. (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. P: admittance to teacher education and 302-300. (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. P: admittance to teacher education and 302-300 and 242-160; REC: one additional linguistics course at 300 level. (F)

302-316 Teaching Art in the Middle and Secondary Schools 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. P: admittance to teacher education; REC: 302-250 and 300. (S98,S00)

302-317 Teaching Music in the Middle and Secondary Schools 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. P: admittance to teacher education; REC: 302-300. (F)

302-318 Reading, Thinking, and Studying in Middle and 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. P: admittance to teacher education and 302-300. (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. P: jr st. (S97,S99)

302-322 Educational Psychology 3 cr.

Psychological processes involved in teaching, learning, and their interaction: motivation, individual differences, classroom management, cognition, group processes, and educational assessment. P: 820-102 or 481-210; and so st; REC: 302-300 or course in education. (F,S)

302-324 Teaching Mathematics in the 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. P: admittance to teacher education; 302-300; and 600-281 and 282 with grade of C or better. (F,S)

302-325 Teaching Science in the 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. P: admittance to teacher education and 302-300. (F,S)

302-333 Observation and Interpretation of Child Behavior 3 cr.

Study of the behavior and development of young children in selected situations and comparisons with established child development theories and data. P: 481-331. (F)

302-334 Teaching General Music in the Elementary and Middle Schools 3 cr.

Philosophical and theoretical foundations of music education. Children's musical needs; curriculum development; traditional and contemporary methods and materials. P: admittance to teacher education and 670-252 and 302-300. (S97,S99)

302-336 Introduction to Experience with Young Children 1 cr.

Supervised work with young children in a group situation. Recommended only for students fulfilling licensure requirements for early childhood education. Must be taken on P-NC basis. P: 481-331. (F,S)

302-351 Field Project in School Settings 1 cr.

Thirty clock hours of direct experience with school children/youth in educational settings, focusing on specific educational projects identified by education faculty, school faculty, and other educators. Fulfills part of the 100-hour pre-student-teaching clinical experience requirement. Must be taken on P-NC basis. P: admittance to teacher education and 302-250. (F,S)

302-352 Social and Family Influences on Early Development and Learning 3 cr.

An ecological systems approach to understanding social and family influences that affect success or failure in the first years of school. Includes discussion of recent child development and education risk theories, research, and practitioner accounts. Survey of effective prevention and intervention programs for young children (prenatal - 8 yrs.) and families "at-risk." P: 481-210 or 820-102; REC: 481-331 or 332 or 900-308; and 302-300. (F,S)

302-362 Integrating the Language Arts 12 cr.

This second block introduces the theories and practices in language arts. Literature, communication arts, and reading combine to support reflecting on the past, examining the present, and imagining the future in the language arts classroom and across disciplines. P: 302-361. (F,S)

302-400 Perspectives on 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. P: admittance to teacher education and 302-300; REC: completion of at least one education methods course. (F)

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. Additional special course fee required for students exercised options for extra admin and travel costs. P: assignment for student teaching approved by director of student teaching. (F,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. Additional special course fee required for students exercised options for extra admin and travel costs. P: assignment for student teaching approved by director of student teaching. (F,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. Additional special course fee required for students exercised options for extra admin and travel costs. P: assignment for student teaching approved by director of student teaching. (F,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. P: jr st. (S97,S99)

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. P: admittance to teacher education; REC: 302-300. (F,S)

302-415 Counseling Role of the Classroom Teacher 3 cr.

Specific counseling and guidance skills necessary for guidance effectiveness of the classroom teacher and their implementation in the classroom. P: teaching experience or admittance to teacher education program.

302-420 Workshop in Economics Education 1-3 cr.

Workshop is designed to provide information on selected current economic topics and concepts; enables educators to examine new print and non-print instructional materials and curriculum guides; and develop learning activities appropriate to their instructional responsibilities. Different topics are selected each year for focus. Topic will be identified by subtitle with each offering. May be repeated. P: completion of at least one professional education methods course and/or teaching experience and at least one social science course.

302-421 Literacy and Language Development in Young Children 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. P: 302-300 or 481-331. (F,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. P: admittance to teacher education and 302-300. (F,S)

302-423 Communication and Thinking Skills Across the Curriculum 3 cr.

Contemporary practices for teaching communication and thinking skills will be addressed through theory, research, and simulations. One-on-one small group activities, continuing participation and student interaction will be stressed. P: admittance to teacher education. (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. P: 302-333 and 481-334 and 431; or 302-322. (F)

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. P: 302/481-441. (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. P: jr st. (F)

302-451 Field Experience in Environmental Education 1-12 cr.

Prestructures or individualized study in environmental education at environmental centers such as Trees for Tomorrow, MacKerzie Environmental Center, etc. P: advance arrangement for field experience approved by education chair. (F,S)

302-452 Principles of Middle Level Education 3 cr.

This course provides students with an introductory understanding of the philosophy and organization of middle level education. Emphasis is directed toward programmatic considerations. P: admittance to teacher education and 302-300 and 322. (F,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. P: jr st or relevant professional experience. (F)

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. P: 600-101 or transfer course 600-004; or 2 yrs high school algebra and ACT math score of 25 or higher. (F,S)

325-201 Engineering Materials 4 cr.

Basic behavior and processing of engineering materials, including metals and alloys, ceramics, and plastics. P: 225-212. (F)

325-210 Introduction to Design Techniques 3 cr.

Overview of the engineering design processes from problem definition to detailed designs, including ideation techniques, modeling, documentation, scheduling, economic analysis and professional ethics. P: none; REC: 325-105. (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. Applications to electrical, fluid, mechanical, and thermal systems. P: 600-203. (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 cr will not be granted for 266-255 or 266-256 and 325-251. P: 600-202; and 266-155 or 1 semester high school programming. (S)

325-313 Mechanics I 3 cr.

Elementary vector operations, resultant of two- and three-dimensional force systems, centroid, hydrostatic forces, equilibrium of trusses and frames, laws of friction and impending motion, moments of inertia, virtual work, stability. P: 600-202. (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. P: 325-313. (S)

325-316 Strength 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. P: 325-313. (S)

Literature and Language**351 English-American****351-104 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. P: none. H-3. (F,S)

351-107 The Short Story 3 cr.

The short story as a literary form. Stories selected may be arranged according to period, theme, nationality or author. P: none.

351-206 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. P: none. H-3. (S)

351-212 Introduction to Creative Writing: Fiction 3 cr.

A first course in the writing, appreciation, understanding and technique of fiction. P: none. (F,S)

351-213 Introduction to Creative Writing: Poetry 3 cr.

A first course in the writing, appreciation, understanding and technique of poetry. P: none. (F,S)

351-214 Introduction to English Literature I 3 cr.

Chronological survey of English literature from Anglo-Saxon times to the end of the 18th century, including such writers as Chaucer, Shakespeare, Donne, Milton, Pope, and Swift. P: none. H-3. (F)

351-215 Introduction to English Literature II 3 cr.

Chronological survey of English literature from the 19th century to the present, including such writers as Wordsworth, Shelley, Keats, Byron, Tennyson, Shaw, Conrad, Eliot and Thomas. P: none. H-3. (S)

351-216 Introduction to American Literature I 3 cr.

Chronological survey of American literature from Bradford to Melville, including such writers as Mather, Bradstreet, Paine, Irving, Cooper, Poe, Emerson and Thoreau. P: none. H-3. (F)

351-217 Introduction to American Literature II 3 cr.

From Whitman to the present, including such writers as Dickinson, Twain, James, Crane, Eliot, Porter, Fitzgerald, Hemingway, Faulkner, Cummings, Updike, Walker and Carver. P: none. H-3. (S)

351-250 Masterpieces of Foreign Literature 3 cr.

P: none.

351-301 Intermediate Creative Writing 3 cr.

Literary texts are compared with their source materials. Students writers of poetry, fiction, dramas and journalistic features develop projects based on research of historical or other source materials. P: none; REC: 351-212 or 213 or 246-203.

351-302 Fiction Writing Workshop 3 cr.

Advanced practice in the writing of fiction, including group criticism of student work. May be repeated once for cr. P: 351-212; and nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher. (F,S)

351-303 Poetry Writing Workshop 3 cr.

Advanced practice in the writing of poetry, including group criticism of student work. May be repeated once for cr. P: 351-212 and 213; and nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher. (S)

351-310 Major English Drama 3 cr.

Significant English plays from the Renaissance to the Twentieth Century, including works by Marlowe, Webster, Congreve, Shaw, and Wilde. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher.

351-314 Major English Poetry 3 cr.

English non-dramatic poetry from the early Anglo-Saxon period (in translation) through Chaucer and the Renaissance up into the modern period, including works by such major figures as Spenser, Shakespeare, Milton, Pope, Blake, Wordsworth, Keats, Tennyson, Browning and Hardy. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher.

351-315 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, Smollett, Austen, Scott, the Brontes, Thackeray, Dickens and Eliot. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher.

351-316 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. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher.

351-323 Approaches to Literature 3 cr.

Studies various ways of analyzing a literary work including historical, formal, psychological and post-structuralist; examines poems, plays, and fiction using different critical approaches. P: nine credits of literature courses; and 352-105 or 225 or English ACT score of 32 or higher. (F)

351-330 Major American Drama 3 cr.

The literary structure and qualities of plays written in the United States, usually emphasizing those by such major 20th century dramatists as Eugene O'Neill, Elmer Rice, Tennessee Williams, Arthur Miller, Lorraine Hansberry, Lillian Hellman, Edward Albee, Amiri Baraka and Luis Valdez. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher.

351-331 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. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher.

351-332 Major American Poetry 3 cr.

Examines significant differences in the voices and styles of key American poets. Content may span centuries or focus on a particular period, such as the modern and contemporary work of poets like Wallace Stevens, William Carlos Williams, Theodore Roethke, Anne Sexton, Gary Snyder, and Margaret Atwood. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher.

351-333 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 cr when a different theme is studied. CL: 397/424/908-333. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher.

351-335 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 cr when a different era is studied. CL: 397/424/908-335. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher.

351-336 American Ethnic Literature: (variable) 3 cr.

The study of literature which examines the experience of ethnic groups in America, such as African, Asian, Hispanic, and Jewish Americans, and American Indians. May be repeated for cr when content is different. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher. Et.S. (S)

351-431 Shakespeare 3-4 cr.

Study of a representative selection of Shakespeare's plays, including comedies, tragedies and histories. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher. (S)

351-434 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 cr when a different figure is studied. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher.

351-435 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 cr when a different figure is studied. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher.

351-490 Seminar in Literature 3 cr.

A study of a major writer, literary movement, or influence in literature. Extensive research on the chosen topic is required. P: nine credits of literature courses; and 352-105 or 352-225 or an English ACT score of 32 or higher. (S)

Literature and Language**352 English Composition****352-100 College Writing 3 cr.**

An introductory course in college writing, emphasizing writing as a process. Focuses on generating and organizing ideas, conducting library research, developing paragraphs, improving sentence structure; reviews conventions of punctuation, grammar, spelling, and usage as needed. P: 912-093 or ACT English score of 17 or higher. (F,S)

352-105 Expository Writing 3 cr.

College-level writing skills and principles of logical reasoning, effective organization and development of ideas. Emphasis on research skills and on academic reading and writing. P: 352-100 or 246-100 or ACT English score of 25 or higher. (F,S)

352-162 ESL: Reading and Expository Writing 4 cr.

Development of academic competence in reading, writing, listening, and speaking skills to enable non-native speakers of English to function successfully at the college level in an American university. P: ESL placement test; must be taken on graded basis. (F)

352-164 ESL: Reading and Expository Writing II 3 cr.

Development of academic competence in writing skills to enable non-native 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. P: ESL placement test or 352-162. (S)

352-225 Writing About the Arts and Humanities 3 cr.

A writing course designed to engage students in the issues raised by the arts and humanities so that each student may continue to improve his or her writing ability. P: 352-100 or ACT English score of 25 or higher; in most cases this fulfills major or minor requirement which specify 352-105 as a required course. (F,S)

352-226 Writing About the Social Sciences 3 cr.

A writing course designed to engage students in the issues raised by the social sciences so that each student may continue to improve his or her writing ability. P: 352-100 or ACT English score of 25 or higher; in most cases this fulfills major or minor requirement which specify 352-105 as a required course. (F,S)

352-227 Writing About the Sciences 3 cr.

A writing course designed to engage students in the issues raised by the sciences so that each student may continue to improve his or her writing ability. P: 352-100 or ACT English score of 25 or higher; in most cases this fulfills major or minor requirement which specify 352-105 as a required course. (F,S)

352-228 Writing About Education 3 cr.

A writing course designed to engage students in the issues raised by the field of education so that each student may continue to improve his or her writing ability. P: 352-100 or ACT English score of 25 or higher; in most cases this fulfills major or minor requirement which specify 352-105 as a required course. (F,S)

352-304 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. P: 352-105 or 225 or ACT English score of 25 or higher; REC: 6 cr of lower-level literature. (S97,S99)

352-305 Composition Practicum: Tutoring I cr.

Effective tutoring in composition requires both a working knowledge of composition theory and guided practice with students. This course will invite students to explore those theories and to reflect on their application as they work as tutors in the Writing Center. P: prior written cons inst. (S97,S99)

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. P: none. ES-1. (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 required. P: none.

362-141 Astronomy 3 cr.

See 754-141. ES-1.

362-142 Exploration 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. P: 362/754-141 or 754-103 or 201 or 225-211. NS-2. (S)

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. P: 362-102 or 204-203. NS-2. (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. P: 754-103 or 362-102 or 141 or 225-108 or 211 or 296-202. NS-2. (F)

362-207 Laboratory Safety 1 cr

See 478-207.

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. P: 362-102 or 754-103 or 225-211. NS-2. (F,S)

362-284 Land Conservation and Husbandry 3 cr.

Concepts 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. Field trip required. P: none. NS-2. (F)

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. P: 362-102 or 204-202. NS-2. (F)

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. P: 204-203. (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. P: 362-102 or 204-203 or 296-202. NS-2. (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. P: none.

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. P: 204-203.

362-315 Classical Mechanics 3 cr.

See 754-315.

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. P: 225-212. (F97,F99)

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. P: concurrent reg in 362-318. (F97,F99)

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 required. P: 225-108 or 212; REC: 296-202. (F)

362-321 The Soil Environment Laboratory 1 cr.

Field and laboratory of physical, chemical and biological properties of soils. P: none; REC: 362-284 or cr or concurrent enroll in 362-320. (F)

362-330 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. P: 296-202. (F)

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. P: 296-202 or 225-211 or 204-202. (S97,S99)

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 required. P: 296-202. (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. P: 600-203. (S98,S00)

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 trip required. P: 204-203 or transfer course 204-003. (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. P: 204-203. (S97,S99)

362-380 Radiobiology 3 cr.

An introduction to the use of radio nuclides (C-14, P-32, etc.) and sources of ionizing radiation in biology, medicine and environmental sciences. Emphasis is on the experimental methods currently used in the Life Sciences, including tracers in biology, radiation biology, nuclear medicine and radioecology. This course provides the background needed to obtain an AEC license to use radio nuclides in most tracer experiments. Full cr will not be granted for both 362-380 and 225/754-418. P: 225-211 and 204-202.

362-381 Mexico: Natural Sciences 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. P: 362-102 or 296-202.

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. P: 266-155 and 600-260. (S)

362-392 May/June 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. P: cons of inst and prior trip arranged and financial deposit. OC.

362-401 Stream Ecology 3 cr.

Structure and function of stream ecosystems. Functional relationships of feeding groups, nutrient spiraling and organic matter processing as responses to stream morphology, stream order and watershed conditions. Field sampling of northeastern Wisconsin streams. Field trip required. P: 204-203 or transfer course 204-002. (F96,F98)

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. Field trip required. P: 204-203 and 225-211; or transfer course 204-002 and 225-211. (F97,F99)

362-415 Solar and Alternate Energy Systems 3 cr.

See 754-415.

362-421 Soils and Geology of Wisconsin Field Trip 2 cr.

See 416-421.

362-432 Hydrogeology 3 cr.

Introduction to the geological and physical principles governing ground water flow. Description of aquifer properties, chemical processes, equation of flow, well hydraulics, and environmental concerns. CL: 296-432. P: 296-202 and 362-330; REC: 600-202. (S)

362-434 Environmental Chemistry 3 cr.

Physical, chemical, and biological processes affecting the composition of air and water. Chemical reactions in polluted and unpolluted environments; dispersal processes and methods of control for various pollutants. CL: 225-434. P: a grade of C or better in 225-311; and a grade of C or better in 225-300 or 302 and 303. (F)

362-435 Environmental Chemistry Laboratory 1 cr.

Basic measurement techniques used by environmental scientists to evaluate air and water quality; field methods, continuous monitoring techniques, and in-laboratory analysis techniques. Experiments demonstrate reaction kinetics, stoichiometry, thermodynamics instrumentation, and wet chemical methods. CL: 225-435. P: cr or concurrent enroll in 225/362-434. (F)

362-454 Remote Sensing of the Environment 3 cr.

Large area, small scale analysis of earth surface features by satellite imagery and data. Manual and computer-assisted manipulation of multi spectral images with respect to vegetation, geology, soils, water resources and land use. P: 296-202 or 416-250. (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. P: sr st; REC: background in economics and conservation. (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. P: 204-203. (F)

362-471 Biological Resources Management I 3 cr.

First part of a two-semester sequence about the scientific management of natural habitats, endangered species, pest species, and economically valuable plants and animals. This course emphasizes management of natural or semi-natural systems such as preserves, parks, and restored habitats. Field trip required. P: 362-302. (F)

362-472 Biological Resources Management II 3 cr.

Second part of a two-semester sequence concerning the ecological management of biological resources. Lectures and field trips address modern practices of wildlife and fisheries management, forestry, ranching, and sustainable agriculture. Field trip required. P: 362-471. NS-2. (S)

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 required. P: 600-260 and 362-302; REC: 204-303 and 600-203.

362-492 Practicum in Environmental Science 1-3 cr.

A project-based course in which students address a practical application of scientific and mathematics skills in the environmental sciences. Topics vary. P: varies, but specified for each section of the course. (F,S)

Literature and Language**397 French****397-101, 102 Introduction to the French Language I, II 4, 4 cr.**

Development of basic ability in understanding, reading, speaking and writing in French. P for 101: none. (F). P for 102: none; REC: 1 yr high school or 1 semester college French; 1 additional lab hour per week ARR. (S)

397-201, 202 Intermediate French Language I, II 3, 3 cr.

Further development of the ability to understand, read and speak French. P for 201: none; REC: 2 yrs high school or 2 semesters college French. (F). P for 202: none; REC: 3 yrs high school or 3 semesters college French. OC. (S)

397-225 Intermediate French Conversation and Composition 3 cr.

Development of greater fluency through classroom practice in conversation and composition. P: none; REC: 4 yrs high school or 4 semesters college French. OC. (F)

397-325 Advanced French Conversation and Composition 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. P: 397-225. OC. (S)

397-329 Representative French Authors 3 cr.

Important novels, plays, poems, and essays representative of major eras and movements of French 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. May be repeated when different subtitle is studied. P: 397-225. OC. (S)

397-333 Literary Themes 3 cr.

See 351-333. May repeat for cr when different theme is studied. P: 397-225. OC. (S97,S99)

397-335 Literary Eras 3 cr.

See 351-335. May repeat for cr when different era is studied. P: 397-225. OC. (F)

397-345 Advanced French Grammar and Translation 3 cr.

In-depth review and continued study of French grammar, including fundamentals of comparative English-French grammar, and basic principles of translation from French into English and English into French. P: 397-225. OC. (F97,F99)

397-346 French Phonetics and Public Speaking 3 cr.

Intensive study of French sound system to improve accuracy of pronunciation and intonation. Different accents studies. Intonation patterns needed for different social situations practiced. P: 397-225. OC. (F96,F98)

397-350 Major French Drama 3 cr.

Study of French drama either by period or by theme. May be repeated for cr when content is different. P: 397-225. OC.

397-351 Major French Prose Fiction 3 cr.

Study of French short story and/or novels either by period or by theme. P: 397-225. OC.

397-352 Major French Poetry 3 cr.

Study of French poetry either by period or by theme. P: 397-225. OC.

397-354 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. CL: 493-354. P: 397-225. OC. (F96, F98)

397-355 Le Monde Francophone 3 cr.

A study of the French-speaking (francophone) world outside of France. Students will become familiar with essential features of the geography, history, and culture of francophone countries on five continents. P: 397-225. OC. (S98,S00)

397-366 Study Abroad: Paris 2-3 cr.

See 493-366. OC.

397-367 Business French 3 cr.

Students read and discuss business articles and correspondence, cultural aspects of business communication. Areas include banking, correspondence, import-export, computers. P: 397-225. OC. (S98,S00)

416 Geography**416-102 World Regions and Concepts: A Geographic Analysis 3 cr.**

See 951-102. SS-1.

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. P: none. OC. (S)

416-222 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. CL: 296-222. P: none. ES-1. (F,S)

416-250 Displays of Geographic Information 3 cr.

The appreciation, use, and evaluation of maps and air photos as informational sources. P: none. (F)

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. P: so st; REC: 296-202. (S97,S99)

416-325 Regional Climatology 3 cr.

The elements, controls, and classification of climates; the distribution of climate types over the earth; world patterns of climate. P: so st; REC: 296-202. (S97,S99)

416-341 The City and its Regional Context 3 cr.

See 951-341.

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. P: 416-102 and jr st. SS-2. (S)

416-350 Geographic Information Systems 3 cr.

See 835-350.

416-351 Element 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. P: so st. (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. CL: 362-353. P: so st. (F)

416-370 Geography of South America 3 cr.

See 951-370. OC.

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. P: so st. SS-2. (F)

416-372 Analysis of the Great Lakes Region of North America 3 cr.

See 951-372.

416-377 Analysis of Northern Lands 3 cr.

See 951-377.

416-421 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. Field trip required. CL: 362-421. P: 296-202. (F97,F99)

416-470 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 required. CL: 296-470. P: 296-202; REC: 296-203. (S98,S00)

Literature and Language**424 German****424-101, 102 Introduction to the German Language I, II 4, 4 cr.**

Development of basic ability in understanding, reading, speaking and writing in German. P for 101: none. (F). P for 102: none; REC: 1 yr high school or 1 semester college German; one additional lab hr per week ARR. (S)

424-201, 202 Intermediate German Language I, II 3, 3 cr.

Further development of the ability to understand, read and speak German. P for 201: none; REC: 2 yrs high school or 2 semesters college German. (F). P for 202: none; REC: 3 yrs high school or 3 semesters college German. OC. (S)

424-225 Intermediate German Conversation and Composition 3 cr.

Development of greater fluency through classroom practice in conversation and composition. P: none; REC: 4 yrs high school or 4 semesters college German. OC. (F)

424-289 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. P: none; REC: 424-101; see 424-361 to enroll for trip to Germany. OC. (S)

424-325 Advanced German Conversation and Composition 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. P: 424-225. OC. (S)

424-329 Representative German Authors 3 cr.

Important novels, plays, poems, and essays representative of major eras and movements of 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. P: 424-225. OC. (F)

424-333 Literary Themes 3 cr.

See 351-333. May repeat for cr when different theme is studied. P: 424-225. OC.

424-335 Literary Eras 3 cr.

See 351-335. May repeat for cr when different era is studied. P: none; REC: 424-225. OC.

424-345 Advanced German Grammar 3 cr.

This course will assist students in improving their overall language proficiency by focusing on more challenging aspects of German syntax and semantics. P: 424-225. OC.

424-350 Major German Drama 3 cr.

Study of German drama either by period or by theme. May be repeated for cr when content is different. P: 424-225. OC.

424-351 Major German Prose Fiction 3 cr.

Study of German short story and/or novels either by period or by theme. P: 424-225. OC.

424-352 Major German Poetry 3 cr.

Study of German poetry either by period or by theme. P: 424-225. OC.

424-355 Deutsche Kultur und Landeskunde 3 cr.

Expands students' linguistic and cultural proficiency in German through discussion of German history, politics and the arts. P: 424-225. OC. (F98, F00)

424-356 Contemporary German Culture 3 cr.

See 493-356. P: 424-225. OC. (F96, F98)

424-357 German Cinema 3 cr.

See 493-357. P: 424-225. OC.

424-361 Summer Study Abroad: German Culture 3 cr.

See 493-361. P: cons inst and prior trip ARR and financial deposit; REC: 424-225. OC. (S)

424-485 Semester Abroad in Germany 6-15 cr.

A semester of study at the University of Kassel in Germany. Students register before departing; upon return, they must submit descriptions of courses taken, evaluations from professors, a formal certificate, and a letter grade. P: cons inst and prior trip ARR and financial deposit. OC. (F,S)

424-491 Seminar in German Literature 3 cr.

P: 424-225. OC.

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. P: none. SS-1. (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. P: none. H-3. (F97, F99)

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. P: none. H-3. (F)

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. P: none. H-3. (S)

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. P: none. H-3. (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. P: none. H-3. (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. P: none. Et.S. (F,S)

448-208 The 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. P: none. H-3. (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. P: none. OC. (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. P: none. OC. (S)

448-275 The Vietnam War in Historical Perspective 3 cr.

See 875-275. SS-2.

448-301 The Middle Ages 3 cr.

Examines Western European history from the last Roman Empire to the Renaissance. Focuses on primary sources and the writings of medieval historians. P: 493-101, 107 or 201. (S97, S99)

448-302, 303 American Thought and Culture I, II 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. P for 302: none; REC: jr st. (F). P for 303: none; REC: jr st. (S)

448-306 History of European Thought and Culture I 3 cr.

Development of European thought and cultural institutions from the 15th to the 18th centuries; includes the Renaissance, Reformation, Scientific Revolution, and Enlightenment. P: none; REC: jr st. (F97, F99)

448-307 History of European Thought and Culture II 3 cr.

Major trends in European arts, ideas and cultural institutions in the 19th and 20th centuries; includes romanticism, political ideologies and movements, religion, scientific thought and positivism, modernism, and current issues. P: none; REC: jr st. OC. (F96, F98)

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. P: none; REC: jr st. (S98,S00)

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. P: none; REC: jr st. (F97,F99)

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. P: none; REC: jr st. (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. P: none; REC: jr st. OC. (F96,F98)

448-315 Rise and Fall of the Soviet Empire 3 cr.

Ideological, political, economic, social, diplomatic and cultural history of Russia since the Bolshevik Revolution. P: none; REC: jr st. OC. (S97,S99)

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. P: none; REC: jr st. (F96,F98)

448-322 Economic and Business History of the U.S. 3 cr.

Development of a corporate economy and the rise of government intervention; industrial, financial, agricultural and labor reorganizations; wage and price policies and their relationship to these general themes; modernization and urbanization and the relationship between the domestic and world economy. P: none; REC: jr st. (S97,S99)

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. P: none; REC: jr st. (F97,F99)

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. P: none; REC: jr st. OC.

448-340 Topics in African American History 3 cr.

Each semester of the course will explore a significant topic in African American history such as the civil rights movement, Black Nationalism, the African American family, alienation, and affirmation. P: none; REC: jr st. Et.S. (F)

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. P: none; REC: jr st.

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. P: none; REC: jr st. OC.

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. P: none; REC: jr st. OC. (S97,S99)

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. P: none; REC: jr st. OC. (F97,F99)

448-358 Aspects of Latin American History 3 cr.

This course takes a comparative historical perspective on political and social change in modern Latin America. The principal themes concentrate on the dynamics of, and tensions between, violent revolutionary episodes and peaceful democratic experiences in the twentieth century. P: none; REC: jr st. OC. (F)

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. P: none; REC: jr st.

448-380 Women in the United States: Historical and Cultural Perspectives 3 cr.

Examines women's experiences in the past, ranging from pregnancy and single motherhood to women's struggles to win the right to vote. The course will explore a variety of women's lives, consider how studying women changes our historical perspective and focus on how interpretations of the past influence our understanding of current social issues. P: none; REC: jr st and one course in U.S. history or U.S. literature or women's studies. (F)

448-401 The Transformation of American Schools 3 cr.

The history of American education, emphasizing public primary and secondary schools and twentieth century developments. P: jr st. (F)

448-402 Political and Social History of the Modern U.S. I 3 cr.

Traces the development of political and social institutions in the U.S. from 1900 through 1945, emphasizing the evolution of social problems and the responses of political institutions. P: none; REC: jr st. (S98,S00)

448-403 Political and Social History of the Modern U.S. II 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. P: none; REC: jr st. (S97,S99)

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. P: none; REC: jr st. (F97, F99)

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. P: none; REC: jr st.

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. P: none; REC: jr st. (S)

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. P: none. HB-1. (F,S)

478-204 Anatomy and Physiology 5 cr.

Structure and function of the human body: respiratory, nervous, endocrine, urinary, circulatory, digestive, and reproductive systems. P: 204-202. (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. P: 478-102 or 204-202. NS-2. (F,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. P: 478-102 or 204-202. NS-2. (F,S)

478-207 Laboratory Safety 1 cr.

Laboratory Safety topics including current regulations, identification of hazards, chemical storage, labeling, waste management, personal protective equipment, ventilation, spill response and biosafety. Emphasis on practical applications. CL: 362-207. P: one college laboratory science course. (F)

478-217 Human Disease and Society 3 cr.

Impact of diseases in humans. Emphasizes the major diseases, their causes, individual effects, historical significance, and methods of control. P: 478-102 or 204 or 204-203. NS-2.

478-250 Fitness for Life 2 cr.

An introductory course pertaining to health related fitness, including its impact on society and the individual. Students will develop and implement a personal fitness program based on current research in the area. The role and value of fitness will be discussed in terms of physical and emotional health, heart disease, longevity, and quality of life. P: none; REC: 478-102. (S)

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. P: 204-202 or 478-102. NS-2. (S)

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. P: 478-102 or 204-202. NS-2. (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. P: 204-203 or transfer course 204-002. (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. P: 478-102 or 204 or 204-203 or transfer course 204-002. (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. P: 478-102 or 204-202; REC: 478-350. (S)

478-342 Human Evolution 3 cr.

Phylogenetic history and affinities of homo sapiens and the evidence on which they are based. CL: 156-342. P: 204-202 or 478-102 or transfer course 204-002. (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. P: 478-204 or 204-203 or transfer course 204-002. (F)

478-351 Kinesiology 4 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. P: 478-204 or 204-203 or transfer course 204-002; and 600-104. (F)

478-364 Human Variability 3 cr.

Study of living human populations, emphasizing their biological variability. Biological differences between subspecific populations, or races, from around the world, including populations living in stress environments such as high altitudes, the arctic, and deserts. CL: 156-364. P: 478-102 or 204-202. NS-2. (F,S)

478-402 Human Physiology 3 cr.

Physiological functions of major human organs other than central nervous system: cell physiology, enzymes, cell energetics; muscle function; autonomic nervous system; endocrine system; blood, oxygen and circulatory system; immune system; kidney, digestion; and the role of physiology in diseases and medicine. P: a grade of C or better in 204-203 or 478-204; and 225-108 or 212. (F)

478-413 Neurophysiology 3 cr.

Physiological mechanisms in nervous system function: human neuroanatomy; neuron chemical and electrical functions; synaptic pharmacology; sensory receptors; effects of chemicals and toxins; neural information processing in sensory and motor systems; neural bases for learning and memory; medical implications. P: a grade of C or better in 204-203 or 478-204; and 225-108 or 212. (S)

481 Human Development**481-210 Introduction to Human Development 3 cr.**

Human development from conception through death; physical development, social and emotional development, personality development, the development of language, intellectual development and creativity, and the process of human learning. P: none. SS-1. (F,S)

481-215 Issues in Human Development 3 cr.

This course examines the various issues and controversies in human development in order to illustrate how values influence the process of resolving them. Both cultural values (e.g., "individualism") and various theories of development are examined as values systems that help to shape the process of understanding people (by determining what the "facts" about people are) and particularly that influence the process of deciding what is "good" for people and what people "need." P: 481-210.

481-331 Infancy and Early Childhood 3 cr.

Current theories, methods of study and research in the study of human development from conception through the preschool years and the interrelationships among biological, sociocultural and psychological aspects of development. P: 481-210 or 820-102. (F,S)

481-332 Middle Childhood and Adolescence 3 cr.

Individual development from the elementary school years through adolescence: socio-cultural, psychological and physical growth factors in the developmental process of the older child and adolescent. Stresses interpretation of behavior from the perspectives of such theorists as Erikson and Piaget. P: 481-210 or 820-102; REC: 481-331 or equiv. (F,S)

481-334 Play and Creative Activities in Childhood 3 cr.

Concepts of the contributions of play and creative activities to physical, intellectual, emotional and social aspects of development; specific contributions of selected creative activities. P: 481-331. (F)

481-336 Gender Role Development 3 cr.

An interdisciplinary analysis of developmental changes in gender roles and gender identity throughout the life-span. P: 481-210 or 820-102. SS-2. (F,S)

481-342 Cross Cultural Human Development 3 cr.

Cultural differences in perception, cognition, language and thought, child development, child rearing, and personality; relationships between various aspects of culture and psychological functioning within non-Western cultures and American ethnic subcultures. P: 481-210 or 820-102 or 156-100; REC: social science course. SS-2/OC. (F,S)

481-343 Adulthood and Aging 3 cr.

Theory and empirical research concerning developmental processes across the adult life span; psychological, cultural and biological factors which influence development in young adulthood, middle adulthood and old age. P: 481-210 or 820-102; REC: 481-331 and 332. (F,S)

481-344 Death: The Final Stage of Life 3 cr.

Study of death and dying from different disciplinary perspectives: death anxiety; the development of attitudes toward death; the process of dying; discussion of issues such as advanced directives, death education, death rituals. P: 481-210 or 820-102. SS-2. (S)

481-350 Developmental Psychobiology 3 cr.

New brains, young minds, and early behaviors will be explored using animal and human models. P: 481-210 or 820-102; and 478-102 or 204-202. (F98,F00)

481-420 Test and Measurements 3 cr.

See 820-420.

481-429 Theories of Personality 3 cr.

See 820-429.

481-431 Cognitive Development 3 cr.

Development of cognitive functioning from infancy to adulthood: analysis of intellectual development from the major contemporary perspectives of information processing, Piagetian psychology, and behaviorism. P: any upper-level human development or psychology course. (F97,F99)

481-435 Abnormal Behavior 3 cr.

See 820-435.

481-436 Counseling With Children and Adolescents 3 cr.

Theories and principles of counseling as applied to children and adolescents; surveys different theoretical approaches and techniques for helping children and adolescents cope with developmental deviations. P: any upper-level human development course. (F,S)

481-437 Counseling With Adults and the Aged 3 cr.

Theories and principles of counseling as applied to adults and the aged; surveys different theoretical approaches and techniques for helping adults and the elderly cope with the developmental problems of the latter half of life cycle. P: 481-343; and 481/820-429 or 435. (F,S)

481-440 Human Development Seminar 1-3 cr.

The opportunity for human development majors to apply the theoretical, methodological, and personal knowledge and skills they have developed throughout their course of study. P: graduating senior majoring in human development. (F,S)

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. P: 481-343. (S97,S99)

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. P: 481-331; REC: linguistics course.

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. P for 101: none. H-1. (F). P for 102: none. H-2. (S)

493-107 Great Books I: Ancient Through Renaissance 3 cr.

An introduction to famous and influential works of Western civilization from the ancient world through the Renaissance. The works are studied in their literary, social, and historical contexts. P: none. H-1. (F,S)

493-108 Great Books II: 17th Century to Present 3 cr.

An introduction to famous and influential works of Western civilization from the 17th century to the present. The works are studied in their literary, historical, and social contexts. P: none. H-2. (F,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 covers Baroque through the Modern Period. P for 201: none. H-1. (F). P for 202: none. H-2. (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. P: none. (F,S)

493-205 Personal Values and Social Reform 3 cr.

See 892-205.

493-210 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. CL: 242-210. P: none. (F)

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. P: none. Et.S. (F)

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 Indian, 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. P: none. Et.S. (S)

493-225 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. CL: 242-225. P: none. Et.S. (S)

493-226 American Indian Studies: Wisconsin Indians 3 cr.

Historical and cultural survey of the Woodlands tribes of the Wisconsin areas, including Anishinabee (Chippewa), Menominee, Winnebago, Sauk, Fox, Potawatomi, Stockbridge-Munsee, and Oneida. CL: 242-226. P: none. EL.S. (F)

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. P: none. (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. P: none; REC: 493-250. (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. P: none. OC.

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. P: none.

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. P: none; REC: jr st.

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 environment and humanities. P: none; REC: 493-201, 202.

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. P: none; REC: jr st.

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. P: none; REC: jr st. (F96,F98)

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. P: none; REC: jr st. (S97,S99)

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. P: 493-323 and 324. OC. (F97,F99)

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. P: none; REC: jr st. OC. (S98,S00)

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. P: none; REC: jr st.

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. P: none; REC: jr st. (F,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. P: none; REC: jr st. (S)

493-342 Perspectives on Human Values: Renaissance to Enlightenment 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. P: none; REC: jr st. (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. P: none; REC: jr st. (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. P: none; REC: jr st. (F,S)

493-345 Great Works of the Classical World 1-3 cr.

The intensive study of a single great work from the Classical World (ancient Greece and Rome). May be repeated for cr each time a different work is offered. Students are advised to also take 493-340 if possible. P: none; REC: jr st. (F,S)

493-346 Great Works of the Medieval World 1-3 cr.

The intensive study of a great work of the Medieval World. May be repeated for cr each time a different work is offered. Students are advised also to take 493-341 if possible. P: none; REC: jr st. (F,S)

493-347 Great Works of the Renaissance Through the Enlightenment 1-3 cr.

The intensive study of a great work of the period Renaissance through the Enlightenment (Fifteenth Century to the Eighteenth Century). May be repeated for cr each time a different work is offered. Students are advised also to take 493-342 if possible. P: none; REC: jr st. (F,S)

493-348 Great Works of Romanticism and Naturalism 1-3 cr.

The intensive study of a great work of Romanticism or Naturalism (usually from the period from the middle of the Eighteenth Century to the end of the Nineteenth Century). May be repeated for cr each time a different work is offered. Students are advised also to take 493-343 if possible. P: none; REC: jr st. (F,S)

493-349 Great Works of the Modern World 1-3 cr.

The intensive study of a great work of the modern period (end of the Nineteenth Century to the present). May be repeated for cr each time a different work is offered. Students are advised also to take 493-344 if possible. P: none; REC: jr st. (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. CL: 397-354, P: none; REC: jr st. OC. (F96, F98)

493-355 Spanish and Latin American Cinema 3 cr.

See 908-355. P: none.

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. CL: 424-356. P: none. OC. (F96,F98)

493-357 German Cinema 3 cr.

Historical and critical introduction to the work of prominent German filmmakers and to cinematic representations of German culture. CL: 424-357. P: none. OC.

493-358 Latin America Today 3 cr.

See 908-358. OC.

493-360 Spain Today 3 cr.

Aspects of contemporary Spain, including its cultures, architecture, music, art and values. P: jr st; degree cr not granted for both 493-360 and 908-360. OC.

493-361 Summer Study 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 business, and attendance at concerts and operas. CL: 424-361. P: cons inst and prior trip ARR and financial deposit. OC. (S)

493-363 Study Abroad: Mexico 2 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. P: cons inst and prior trip ARR and financial deposit; REC: minimum one semester Spanish or equiv. OC.

493-365 Study 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. CL: 242-380. P: cons inst and prior trip ARR and financial deposit; REC: 351-214. OC.

493-366 Study Abroad: Paris 2-3 cr.

A travel course in Paris and northwestern France to study the cultural history of the city as well as to observe the daily life of its citizens. Visits to museums, churches and concert halls on the one hand, and to supermarkets, cemeteries, shops and ethnic neighborhoods on the other. CL: 397-366. P: cons inst and prior trip ARR and financial deposit; REC: jr st. OC.

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. Variable content; may repeat for cr when different title is offered. P: jr st; and 493-225 or 226. Et.S. (S)

493-372 American Indian Mythology and Literature: (variable) 3 cr.

A study of the spiritual and cultural values of the American Indian as reflected in oral and written traditions: myths, legends, and storytelling traditions, poetry and novels. Emphasis will be on the mythological and ritual functions of American Indian writing. P: 493-226 or one literature course. Et.S. (S)

493-374 Wisconsin Indians Ethnohistory 3 cr.

An in-depth study of one of the Wisconsin Indian tribes: Iroquois (Oneida), Menominee, Winnebago, or Ojibway. This variable content course covers the world view, oral traditions, and history of one tribe each semester. P: none. Et.S. (S)

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. P: none; REC: jr st. OC.

493-381 Women, Myth and Identity 3 cr.

Mythico-religious images of women continue to exert great, but often unexamined, influence on "accepted" roles for women. The course focuses initially on the very earliest images of women as revealed in Paleolithic cave art, the Mediterranean civilizations, and Judeo-Christian tradition, tracing the development and changes in these images as they affected women psychologically, socially, politically and economically. P: none.

493-386 June Abroad: Eastern Europe, Russia, Ukraine, Belarus 2-4 cr.

This field study trip provides intensive exposure to and participation in the social life, culture and history of Eastern Europe, especially Russia, Ukraine and Belarus. P: cons inst and prior trip ARR and financial deposit. OC. (S97,S99)

493-391 American Indian Seminar 3 cr.

P: 242/493-225 and 226.

493-410 The Christian Heritage: Birth of Christ to 1600 3 cr.

This course will study the development of Christianity from the birth of Christ through the Reformation. It focuses on the growth of religious ideas in original writings and art. Through this, students will gain an understanding of the powerful ideas and conflicts that continue to shape our society. P: none; REC: jr st. (F)

493-480 Humanities Seminar 3 cr.

A capstone seminar for humanities majors, examining basic approaches of various humanities disciplines. Topics vary. P: none; REC: intended for humanistic studies majors and minors, others with cons inst. (S)

520 Information Sciences**520-210 Information Problems 3 cr.**

An introduction to understanding and solving information problems, including: a survey of the field of information science; practice in algorithmic thinking; techniques for finding, assessing, organizing, and presenting information; and confrontation with ethical and value issues. P: none. (S)

520-220 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. P: none; REC: 246-200. (F97,F99)

520-230 Visual Information 3 cr.

Practices, problems, and technologies of presenting information visually. P: none. (F)

520-308 Information Technologies 3 cr.

A survey of information technologies, their operations and limitations, and how the major electronic technologies are changing and affecting both the workplace and the household. CL: 246-308. P: 246-200 or 520-210. (S)

520-402 Expert Systems 3 cr.

Students will be introduced to the techniques used to create expert systems. Each student will learn to interview experts to discover techniques that they use to solve problems, then convert these techniques into rules to make an expert system. P: 266-257 and 600-242. (F96,F98)

520-430 Information, Media and Society 3 cr.

The role of information in society, including interpersonal, mass, and institutional sources, in producing a range of effects on individuals, groups, and society as a whole; critical examination of the changing information environment in legal, economic, political, and social contexts. CL: 242-430. P: 246-102 or 200 or 520-120. (S)

520-440 Information and Computing Science Practicum 3 cr.

A project course in which teams submit proposals to work in an information problem. Projects provide experience in leadership roles, resource allocation, scheduling, documentation, client relations, and presentation. Problems typically draw on a wider array of skills than in other individual classes. P: sr st. (F,S)

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. Cr will not be granted for this course if it is taken after cr has been earned for 600-104 or 201 or 202 or 203 or 260 or 281 or 282 or a transfer course equivalent. P: 1 yr high school algebra and ACT math score of 18 or higher or completion of 912-094 or transfer course 600-004. (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. Cr will not be granted for this course if it is taken after cr has been earned for 600-202 or 203 or a transfer equivalent. P: 600-101; or 2 yrs high school algebra and ACT math score of 25 or higher or transfer course 600-004. (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 cr is not given for both 600-201 and 600-202; students who enroll in 600-202 after receiving cr for 600-201 will receive one cr for 600-202. P: 600-101 or transfer course 600-004; or 2 yrs high school algebra and ACT math score of 25 or higher. (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; application; sequences and series. P for 202: 600-104; or 4 yrs high school math, including trig, and ACT math score of 27 or higher; full cr will not be granted for both 600-202 and 201. (F,S). P for 203: 600-202. (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. P: 600-203. (F,S)

600-241 Discrete Mathematics I 4 cr.

Fundamentals of number theory, mathematical induction, matrix algebra, graphs, directed graphs and trees. P: 600-104; or 4 yrs high school math and ACT score of 27 or higher. (F)

600-242 Discrete Mathematics II 4 cr.

A continuation of Discrete Mathematics I. Sets, functions, logic, Boolean algebra and logic circuits, equivalence relations, combinatorics, recurrence relations. P: 600-241. (S)

600-260 Introductory Statistics 4 cr.

Descriptive and inferential statistics; frequency distributions; graphical techniques; measure of central tendency and of dispersion; probability regression correlation, analysis of count data, analysis of variance. Cr will not be granted for both 600-260; and 216-215 or 255-205. P: 600-101 or transfer course 600-004; or 2 yrs high school algebra and ACT math score of 19 or higher. (F,S)

600-281, 282 Conceptual Foundations of Elementary Mathematics I, II 3, 3 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 modeling in all arithmetic contexts; examines non-arithmetic topics such as geometry, probability, statistics, algebra, and programming concepts. P for 281: 600-101 or transfer course 600-004; or 2 yrs high school algebra and ACT math score of 25 or higher; cannot be taken on P-NC basis. (F,S). P for 282: 600-101 or transfer course 600-004; or 2 yrs high school algebra and ACT math score of 25 or higher; cannot be taken on P-NC basis. (F,S)

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; modeling physical and biological systems. P: 600-209. (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. P: 600-305 and 320. (F97,F99)

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. P: 600-209 and 320. (F97,F99)

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. P: 600-209 and 320. (S98,S00)

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. P for 320: 600-203. (F,S). P for 321: 600-203 and 320. (S97,S99)

600-328 Introduction to Algebraic Structures 3 cr.

Groups, rings, and fields as organizing ideas. Basic structure theorems. Applications. P: 600-203 and 320. (F)

600-350 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. CL: 266-350. P: 600-203; and 600-320 or concurrent enroll; REC: programming ability. (S97,S99)

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. P: 600-320 or concurrent enroll. (F96,F98)

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 related probability laws; random variables. P: 600-209. (F96,F98)

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. P: 600-320 and 360. (S97,S99)

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. P: 600-260.

600-385 Foundations of Geometry 3 cr.

Intuitive and deductive introductions to Euclidean, affine, hyperbolic, spherical, elliptic and projective geometries. P: 600-202. (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. P: 600-209. (F96,F98)

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. P: 600-305 and 209. (F96,F98)

600-425 Dynamical Systems 3 cr.

Fundamental concepts and techniques of discrete and continuous dynamical systems; asymptotic behavior, structural stability, elementary bifurcations, strange attractors, fractals, chaos. Applications to physical and biological systems. P: 600-209 and 320 and concurrent enroll in 600-305. (S98,S00)

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. P: 600-260.

600-467 Applied Regression Analysis 3 cr.

Techniques for fitting linear regression models are developed and applied to data. Topics include simple linear regression, multivariate regression, curvilinear regression and linearizable models. P: 600-260; REC: knowledge of MINITAB. (F)

600-492 Special Topics in Mathematics 1-3 cr.

This course brings together students and professors who have a mutual interest in some topic not otherwise available among the usual mathematics offerings. P: jr st and 600-260.

670 Music**670-100 Fundamentals of Music for the Classroom Teacher 1-3 cr.**

Fundamental skills needed to assist in the teaching of school music: introductory level music theory, piano, recorder vocal technique, and music listening. No prior skills required. P: none. (F,S)

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. P: none. (F)

670-115, 116 Ear Training and Sight Singing I, II 1, II 1, 1 cr.

Concentrated drill in all aspects of musicianship. Emphasis on sight singing and aural perception in intervals, melodies, chords and rhythms. P for 115: concurrent enroll in 670-151. (F). P for 116: 670-115; and 670-152 or concurrent enroll. (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. P for 151: music theory placement exam and concurrent enroll in 670-115. (F). P for 152: 670-151. (S)

670-225 Diction for Singers I 2 cr.

Introduction to the International Phonetic Alphabet and a specialized approach to diction study for American English and French. P: none.

670-226 Diction for Singers II 2 cr.

Specialized approach to diction study of Italian and German using the International Phonetic Alphabet. P: 670-225. (S97,S99)

670-241 Jazz Improvisation 2 cr.

Development of skills in musical improvisation: notation and function of chords, chord symbols, scales and rhythms; selected record listening and playing sessions. P: none; REC: basic playing and reading ability.

670-242 Jazz and Pop Literature 2 cr.

Open to singers or instrumentalists. Students memorize and perform standard pop and jazz literature. P: so st. FA. (S)

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. P for 251: 670-152. (F). P for 252: 670-251. (S)

670-301 Applied Music Pedagogy 1 cr.

Individual observation of private applied lessons given by UWGB faculty instructors; teaching one lower-level non-credit student in the Extension/Outreach program, or one student from the String Techniques class, with periodic observation. P: applied music through 200 level.

670-303 Vocal Pedagogy 2 cr.

This course will provide 1) a basic method of teaching and vocal production, 2) a detailed explanation of the techniques and principles of singing, and 3) a guide for the effective teaching of applied voice for the inexperienced teacher. P: jr st and 672-206. (S98,S00)

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. P: 670-252. (S97,S99)

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. P: 670-252. (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. P: 670-152. (F)

670-333 Basic Conducting 2 cr.

Detailed study of conducting techniques: practical application to choral and instrumental ensembles. P: 670-152. (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. P: none; REC: jr st. (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. P: none; REC: jr st. (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. P: none; REC: jr st. (F)

670-344 Choral Conducting and Rehearsal Techniques 3 cr.

Advanced study of conducting and rehearsal techniques for school vocal ensembles, including principles, techniques and methods of choral tone, diction and score study. P: 670-333; REC: jr st. (S)

670-345 Percussion Techniques 2 cr.

Experience in the performance, pedagogy and critical evaluation of percussion instruments, including snare drum, tympani and accessories. P: none; REC: concurrent enroll in applied instrumental lessons. (S98,S00)

670-346, 347 Keyboard Accompanying I, II 1, 1 cr.

Techniques of accompanying the vocal soloist and the choral ensemble at the piano, including laboratory experience in various types of accompaniment. P for 346: 672-042 or audition. (F,S), P for 347: 670-346.

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. P: 670-333; REC: at least one of the following: 670-341, 342, 343, or 345. (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 others 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. P for 351: 670-252. (F), P for 352: 670-351. (S)

670-411 Composition 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. Repeatable once for cr. P: 670-352. (F)

670-417 Jazz Arranging 2-3 cr.

Acquaints students with the knowledge necessary to write an artistic jazz arrangement. P: none; REC: 670-252.

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. P: 670-252. (F)

670-431 Jazz Ensemble Techniques 3 cr.

Procedures for rehearsing and teaching the jazz ensemble: daily playing experience in a jazz ensemble, writing and arrangement; studies in jazz theory, arranging, improvisation, piano, bass, guitar, drums, trumpet, trombone and saxophone. P: none; REC: jr st.

672 Applied Music**672-101-440 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. All 100 and 200 level 672-courses are FA.

672-001	Basic Piano 1 cr.
672-011, 012, 013	Keyboard Musicianship I 1 cr.
672-021, 022	Keyboard Musicianship II 1 cr.
672-031, 032	Keyboard Musicianship III 1 cr.
672-041, 042	Keyboard Musicianship IV 1 cr.
672-045, 046	Elementary Voice I, II 1 cr.
672-069	Elementary Guitar 1 cr.
672-142, 342	Jazz Combo 1 cr.
672-143, 343	Jazz Ensemble 1 cr.
672-144, 344	Woodwind Ensemble (variable) 1 cr.
672-145, 345	Brass Ensemble 1 cr.
672-146, 346	Percussion Ensemble 1 cr.
672-150, 350	New Music Ensemble 1 cr.
672-153, 353	String Ensemble 1 cr.
672-154, 354	Guitar Ensemble 1 cr.
672-163, 363	Vocal Ensemble 1 cr.

672-164, 364	University Singers Show Choir 1-2 cr.
672-165, 365	Vocal Jazz Ensemble 1 cr.
672-166, 366	Opera Workshop 2 cr.
672-241, 441	Symphonic Band 1 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.
672-449	Advanced Accompanying 1 cr.

689 Nursing**689-215 Personal Health Issues 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 healthy living. P: none, NS-2. (F,S)

689-311 Theoretical Foundations in Nursing 3 cr.

Selected nursing and interdisciplinary theories are addressed, which are fundamental to the objectives of the Professional Nursing Program. Roy's adaptation model is emphasized. Students' previous experiences in and understandings of nursing are used as bases for exploration of these theories. Teaching-learning strategies are designed to enable students to identify theoretical applications for the professional practice of nursing, particularly in the roles of provider of care, teacher, and advocate. Special fee required when offered in Rhinelander. P: R.N. license. (F,S)

689-315 Advanced Health Assessment 4 cr.

Course focuses on the components of the health history and physical examination skills across the life span. Assessment data is analyzed for actual and potential health problems. Students demonstrate the ability to complete a health history and physical examination. Special fee required when offered in Rhinelander. P: R.N. license. (F,S)

689-317 Health Assessment 4 cr.

Emphasizes essential nursing skills in the assessment process, introducing health history and physical examination techniques across the life span. P: R.N. (ADN or diploma) with one year's nursing practice. Special distance education fee required. (F,S)

689-325 Nursing Diagnostics and Therapeutics 4 cr.

Selected therapeutic nursing interventions are addressed as treatments for person's health-promoting and health-supporting responses. Nursing and interdisciplinary theories are addressed as frameworks for the professional roles of provider of care, advocate, and teacher. Clinical experiences are designed to enable implementation of interventions with children, adolescents, young adults, and/or middle-aged adults. Special fee required when offered in Rhinelander. Two hrs clinical lab ARR and 1 hr group clinical conference per week. P: admittance to BSN major; and 689-311 and 315 or concurrent enroll. (F,S)

689-341 Theoretical Foundations 4 cr.

Analysis of historical, legal, cultural, economic and social factors that influence nursing/health care delivery. Nursing theories are presented. P: R.N. (ADN or diploma) with one year's nursing practice. Special distance education fee required. (F,S)

689-415 Gerontological Nursing 4 cr.

Following 689-325, the focus on treating health-promoting and health-supporting responses is continued. Nursing and interdisciplinary theories pertaining to older adults and their families are addressed as bases for the professional roles of provider of care, teacher, and advocate. Clinical experiences are undertaken in community-based and institutional settings. Special fee required when offered in Rhinelander. Two hrs clinical lab ARR and 1 hr group clinical conference per week. P: 689-325. (F,S)

689-431 Nursing Management 3 cr.

Management, organizational, and change theories are presented as frameworks for the professional nurse's role as manager of care for aggregates. Skills in critical thinking, communication, collaboration, and self-evaluation are emphasized as keys to successful nursing management. Special fee required when offered in Rhinelander. One hr clinical lab ARR and 1 hr group clinical conference per week. P: 689-325. (S)

689-434 Nursing Research 3 cr.

Emphasizes the role of the nurse as researcher and research consumer, focusing on both qualitative and quantitative research. Special distance education fee required. P: R.N.; and 689-317 and 341.

689-435 Introduction to Nursing Research 3 cr.

An overview is provided of the professional nurse's role as research consumer with a focus on application to nursing practice. The research methods used by nursing-researchers are emphasized. The ethical implications of conducting nursing research are underscored. Strategies are presented for critical reading of nursing research reports and discussing nursing research findings with health care consumers. Special fee required when offered in Rhinelander. P: 689-325 and cr or concurrent enroll in statistics. (F,S)

689-437 Management and Leadership 4 cr.

Examines the nurse as leader and manager in a variety of contexts and settings. Theories, processes, and behaviors of leadership and management are explored. Special distance education fee required. P: R.N.; and 689-317 and 341.

689-441 Community Health Nursing 6 cr.

Combines theory and clinical practice. The focus is on provision of care for individuals, families, aggregates, and communities through the use of the Roy Adaptation Model and the nursing process as a problem-solving method. Emphasis is placed on primary, secondary, and tertiary levels of prevention. Special fee required when offered in Rhinelander. Seven hrs clinical lab ARR and 2 hrs clinical conference per week. P: 689-325. (F,S)

689-444 Community Health Nursing 3 cr.

Community health nursing principles and roles. Examines institutions involved in promoting and maintaining health of populations. Special distance education fee required. P: R.N.; and 689-317 and 341.

689-451 Synthesis for Nursing Practice 3 cr.

Synthesis of professional nursing roles introduced in previous courses. Nursing theories are analyzed in light of their value to practice. Nursing's societal involvement is emphasized. Two hrs clinical lab ARR and 1 hr group clinical conference per week. P: 689-415, 431, 435 and 441. (F,S)

694 Nutritional Sciences**694-142 Food and Nutritional Health 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. P: 478-102 or 204-202. NS-2. (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 consideration; laws, regulations and standards; political process and legislation related to health professionals. P: none. (S)

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. P: 225-108 or 1 yr high school chemistry. (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. P: 478-102 or 204-202. NS-2/OC. (F)

694-300 Human Nutrition 3 cr.

Basic course in normal nutrition, dealing with functions and requirements of essential nutrients; fundamentals of some minerals, vitamins, energy and food selections; and means of attaining an adequate diet for the adult human. P: 225-108 and 204-202. NS-2. (F,S)

694-302 Nutrition and Culture 3 cr.

Effects of environment and culture and food habits in historical perspective. Role of food in health and disease as related to humans and the biosphere. P: 204-202 or 478-102. NS-2/OC. (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. Field trips required. P: 694-212. (S)

694-328 Physiological Chemistry 3 cr.

Principles of physiological chemistry as related to structure, function and metabolism in living organisms. CL: 225-328. Full cr will not be granted for both 225-330 and 225/694-328. P: a grade of C or better in 225-300 and college level biology or nutrition course. (F)

694-350 Life Cycle Nutrition 3 cr.

Dietary management for the physiological, psychological and social needs of infants, children, adolescents, adults (particularly women during pregnancy and lactation), and the elderly; emphasis on nutrition as a foundation for positive health. P: 694-300. (F)

694-402 Foodservice Management 3 cr.

Principles of management and organization is applied to the foodservice industry using a systems concept approach. P: cr or concurrent enroll in 694-312. (S98,S00)

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. P: 225-303 or 330. (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. P: 225-301 or 304 or 311. (S)

694-421 Community Nutrition 4 cr.

Application of nutrition concepts to the public health/community nutrition setting; overview of community nutrition programs and related legislation. Field trip required. P: jr sr and 694-300. (F)

694-485 Advanced Human Nutrition 3 cr.

Physiological and biochemical principles of nutrition, theoretical concepts of human nutrition and nutritional diseases. P: cr or concurrent enroll in 225-330 or 225/694-328; and 694-300. (F)

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. P: 225-331 or concurrent enroll, and 694-485. (S)

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. P: none. H-3. (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. P: none. H-3. (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. P: none. (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. P: none. H-3. (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. P: none. (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. P: none. (F)

736-208 Science and Human Values 3 cr.

Implications of the social and natural science 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. P: none. H-3. (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. P: none.

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? P: none. (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. P: none. H-3. (S)

736-212 Philosophy of Science 3 cr.

The classical positions and current controversies on the philosophy of science. P: none. H-3. (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. P: none; REC: 736-101 or 102. H-3. (F)

736-214 Modern Philosophy 3 cr.

Major thinkers and movements representative of philosophical thought from the 17th century to the present. P: none; REC: 736-213. H-3. (S)

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. P: none; REC: jr st and one course in philosophy. (S98,S00)

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. P: none; REC: jr st and one course in philosophy. (F97,F99)

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. P: none; REC: course in philosophy. (F96,F98)

736-324 Contemporary Philosophy 3 cr.

Current philosophical movements in Europe and America, such as phenomenology, existentialism, analytic philosophy, intuitionism, pragmatism and Marxism. P: none. (S97,S99)

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. P: none; REC: course in philosophy. (S97,S99)

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. P: none; REC: course in philosophy. (F96,F98)

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. P: upper-level course in philosophy. (S98,S00)

736-406 Philosophical Problems in Psychology 3 cr.

A philosophical study of some major psychological theories in light of such issues as the possibility of freedom and the role of society in human development. P: none; REC: 2 courses in philosophy. (F97,F99)

742 Physical Education**742-101 Swimming 1 cr.**

Fundamental swimming, basic water survival skills, and safety for students with minimum swimming ability. American Red Cross certification available. P: none. (S)

742-116 First Aid and Emergency Care Procedures 3 cr.

Students will learn all aspects of first aid training such as victim assessment, and treating all types of illnesses and injuries; all skills for Professional Rescuer CPR; dealing with infectious diseases and their transmission. P: none. (F,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. P: none. (F,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. P: none. (F,S)

742-123 Exercise Leadership 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. P: none. (F,S)

742-124 Conditioning Through Running I cr.

Designed for the individual who prefers a program of vigorous exercise to one of primary recreational nature. Emphasizes cardiovascular benefits of running and the practical application of various types of running to improve physical fitness. P: none. (F,S)

742-137 Rhythmic Aerobics I 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. P: none. (F,S)

742-145 Golf I I cr.

The fundamental skills of grip, stance and stroking with irons and woods; history, equipment, rules, etiquette, safety, and strategy necessary for responsible play. P: none. (F)

742-148 Karate I I cr.

Basic techniques of striking and kicking and their defenses as used in karate; the history, philosophy and traditions of karate. P: none. (F,S)

742-154 Tennis I I 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. P: none. (F,S)

742-157 Handball I I cr.

P: none. (S)

742-159 Racquetball I I 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. P: none. (F,S)

742-197 Cross Country Skiing I I 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. Field trip required. P: none.

742-201 Swimming II I cr.

Emphasizes improvement of basic swimming techniques. Satisfactory completion enables students to enroll in subsequent aquatic courses. American Red Cross certification available. P: 742-101. (S)

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. P: 742-204. (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. Special fee required. P: none. (F,S)

742-213 Sailing II I cr.

Advanced techniques of sailing including safety, weather, and navigation. Special fee required. P: 742-101.

742-222 Nautilus Training I cr.

A resistance training program based upon the constant resistance concept and using Nautilus equipment to enhance strength and flexibility. P: none.

742-223 Exercise Leadership II I cr.

Participation in the formal calisthenics program and personal assessment and design of exercise program. Students learn leadership and elements of counseling for personal exercises; nutrition, stress control and environmental consideration. Physical readiness test is administered. P: 742-123. (S)

742-248 Karate II I 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. P: 742-148. (S)

742-254 Tennis II I 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. P: 742-154. (S)

742-259 Advanced Racquetball I cr.

Provides students with comprehensive insight into all aspects of the sport: safety, conditioning, strategy, and skill analysis for singles, doubles, and other play variation. P: 742-159. (F,S)

742-401 Philosophy of Athletics and Coaching 2 cr.

This course is designed to enable students to develop their philosophies of coaching. A thorough examination of the role of athletics in education and/or society is integral. An attempt is made to assure that the prospective coach has objectives that are consistent with our educational systems. P: none. (S)

742-402 Psychology and Sociology of Sports 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. P: none.

742-403 Organization and Administration of Athletics 2 cr.

Various phases of organizing and administering and interscholastic athletic program with application to athletics in nonacademic environments as well (e.g. boys' clubs, tennis clubs). P: none. (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. P: 478-102. (F)

742-406 Prevention and Treatment of Athletic Injuries 3 cr.

Prevention, physical conditioning, strapping, properly fitted and designed equipment, condition of the competition site, conduct of practices, and respect of existing injuries; estimation the nature an 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 definite diagnosis, and treatment of simple follow-up rehabilitation. P: 742-405 or 204-202 or 478-102. (S)

742-407 Advanced Techniques in Athletic Training 3 cr.

Introduction to advanced evaluations of injuries, treatments and modality usage, rehabilitation techniques, training room administration and organization, preparation for National Athletic Trainers' Association certification exam. P: 742-406 and 478-204. (F96,F98)

742-410/434 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. P: cons inst. (F,S)

742-435/459 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 cooperation coach. Student coach maintains daily log and consults with and is observed by CCP adviser. P: 742-410/434. (F,S)

754 Physics**754-103, 104 Fundamentals of Physics I, II 5, 5 cr.**

A non-calculus 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 science and technology. P for 103: 600-104; or 2 yrs high school algebra and ACT math score of 27 or higher; full cr will not be granted for both 754-103 and 201 or 202. ES-1. (F). P for 104: 754-103; full cr will not be granted for 754-104 and 201 or 202. (S)

754-141 Astronomy 3 cr.

A study of the solar system, stars, galaxies and universe. CL: 362-141. Field trip required. P: none. ES-1. (F,S)

754-180 Concepts of Physics 3 cr.

Survey of physics, including motion, forces, momentum, energy, solids, liquids, gases, sound, heat, electricity, magnetism, light, atomic and nuclear physics. Designed for non-science majors. Full cr will not be granted for both 754-180 and 103, 104, 201 or 202. P: none. ES-1. (F,S)

754-181 Concepts of Physics Laboratory 1 cr.

Laboratory course to accompany 754-180. Full cr will not be granted for both 754-181 and 103, 104, 201 or 202. P: cr or concurrent enroll in 754-180. ES-1. (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. P for 201: 600-202; full cr will not be granted for 754-201 and 103 and 104. ES-1. (F). P for 202: 754-201 and 600-203; full cr will not be granted for 754-202 and 103 and 104. (S)

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 system, generalized coordinate systems and Lagrangian and Hamiltonian equations. CL: 362-315. P: 754-202 and 600-209. (S97,S99)

754-317 Optics 3 cr.

Study of geometric and physical optics. Topics include optical instruments, diffraction, interference, polarization, lasers, and modern applications of optics. P: 754-202. (F97,F99)

754-318 Optics Laboratory 1 cr.

Experiments in geometric and physical optics. P: cr or concurrent enroll in 754-317. (F97,F99)

754-320 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. CL: 225-320. P: a grade of C or better in 225-212 and 754-202 and 600-203. (F)

754-321 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. CL: 225-321. P: a grade of C or better in 225-212 and 754-202 and 600-203. (S)

754-322 Thermodynamics and Kinetics Laboratory 1 cr.

Laboratory course to accompany 225/754-320. CL: 225-322. P: cr or concurrent enroll in 225/754-320. (S)

754-323 Structure of Matter Laboratory 1 cr.

Laboratory course to accompany 225/754-321. CL: 225-323. P: cr or concurrent enroll in 225/754-321. (S)

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. P: 754-202 and 600-209. (F96,F98)

754-405 Electronics for Scientists 3 cr.

Fundamentals of electronics, electronic elements, basic circuits, combinations of these into measurement and control instruments. P: 754-104 or 202; and 600-202. (S97,S99)

754-415 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 magneto hydrodynamics. CL: 362-415. P: 754-104 or 202. (S98,S00)

754-417 Nuclear Physics and Radio Chemistry 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. CL: 225-417. P: a grade of C or better in 225-212 and 754-202; REC: 225-321. (S98,S00)

754-418 Nuclear Physics and Radio Chemistry Laboratory 1 cr.

Laboratory course to accompany 225/754-417. CL: 225-418. Full cr will not be granted for both 225/754-418 and 362-380. P: cr or concurrent enroll in 225/754-417. (S98,S00)

754-455 Microprocessors and Digital Electronics 3 cr.

Digital electronics, microcomputer interfacing and microcomputer programming. CL: 266-455. P: background or prior course in electronics. (F)

778 Political Science**778-100 World Politics 3 cr.**

The course introduces students to global problems, issues and debates that have emerged since the end of the Cold War. The lectures and readings focus on contemporary political, economic and social changes primarily in Africa, Asia, Latin America, the Middle East and Eastern Europe. P: none. SS-1. (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 courts. P: none. SS-1. (F,S)

778-202 Introduction to Public Policy 3 cr.

See 835-202. SS-2.

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. P: none.

778-230 Law and the Judicial Process 3 cr.

See 875-230. SS-2.

778-301 Environmental Politics and Policy 3 cr.

See 835-301.

778-305 Urban Politics and Policy 3 cr.

See 951-305.

778-306 Regulatory Policy and Administration 3 cr.

See 835-306.

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. P: 778-101. (S98,S00)

778-314 Administrative Law 3 cr.

See 835-314.

778-316 Congress: Politics and Policy 3 cr.

Legislative institutions and policies, emphasizing the U.S. Congress. The role of legislature 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. P: 778-101. (S)

778-318 Political Behavior 3 cr.

An introduction to political behavior that approaches the topics of elections, public opinion, voting behavior, mass media, and political socialization through the application of quantitative methods of analysis. P: 778-100 or 101. (F)

778-320 Constitutional Law 3 cr.

See 875-320.

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. P: 778-100 or 101. (F)

778-351 Comparative Political Systems 3 cr.

Comparative political analysis, stressing the politics and government of major European nations and the Soviet Union. P: 778-100 or 101. OC. (S)

778-353 Politics of Developing Nations 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. P: 778-100 or 101. SS-2/OC. (F)

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. P: 778-100 or 101. (F)

778-408 Public Policy Analysis 3 cr.

See 835-408.

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. P: 778-101. (F97,F99)

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 process. P: none. SS-1. (F,S)

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. P: 255-205 or 600-260. (F,S)

820-306 Psychology of Perception 3 cr.

Examination of the physiological and psychological processes that enable us to obtain, organize, and understand information from the world. Special emphasis is given to visual perception. P: 820-102 or 481-210; and jr st. (F)

820-308 Physiological Psychology 3 cr.

Introduction to the biological bases of behavior. Basic sensory, motor, and brain mechanisms are described in reference to normal and abnormal behaviors. Drugs and hormone effects on infants and adults are also discussed. P: 820-102 or 481-210 or 478-102. (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. P: 820-102 or 481-210; and jr st. (F)

820-311 The Psychology of Sports and Exercise 3 cr.

The psychology processes 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. P: 820-102 or 330 or 900-202; REC: 478-102 and 255-205.

820-330 Social Psychology 3 cr.

An exploration of theory, method, and empirical results regarding individual behavior in groups. Major topics include social cognition, aggression, helping, and attraction. P: 820-102. (F)

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. P: jr st. (S)

820-337 Social Psychology of Relationships 3 cr.

Social psychological factors in relationships: interpersonal attraction, communication, romance, social power, equity, jealousy and conflict. P: so st and 820-330. (F,S)

820-390 Environmental Psychology 3 cr.

Human-environment relationships; examines ways in which the physical environment influences human behavior. P: 820-102 or 330. (F)

820-401 Psychology of Women 3 cr.

The psychology of women examines traditional and feminist approaches to women in psychological theory and research as frameworks for understanding women's development and experience in family, academic, work, and relationship roles. The interacting influences of biology, socialization, and cultural context are considered. P: 820-102 or 481-210. (F98,F00)

820-415 Organizational Psychology 3 cr.

Relation between social structure and psychological behavior; problems of leadership styles; communication network, decision-making processes and group productivity. P: jr st. (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 adjustment, race relations and international relations. P: jr st. (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. P: jr st; and 820-102 or 481-210. (S)

820-420 Tests and Measurements 3 cr.

Problems of measuring human characteristics, including determination of validity, reliability, and interpretive schemas for such measures. Examination of selected tests in intelligence, achievement, attitudes, interests, and personality. Typical uses of tests and methods for reviewing tests. CL: 481-420. P: jr st; and 255-205 or 600-260. (F,S)

820-425 Advanced Physiological Psychology 4 cr.

Brain and behavior: from neurons to drugs to brain transplants, current concepts, issues, and methods of neuroscience are developed through landmark discoveries. P: 820-308. (S)

820-429 Theories of Personality 3 cr.

Major ideas about the organization, function, change and development of human personality as discussed by a variety of personality theorists. CL: 481-429. P: 481-331 or 332 or 343. (F,S)

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. P: 820-102 and 300 and one upper-level 820 course; and jr st.

820-435 Abnormal Behavior 3 cr.

Deviations from normal intellectual, physical, emotional, and social development (such as retardation, psychopathology, emotional problems) throughout the life cycle; includes study of accelerated development, delayed development and disturbances in development, biological and environmental origins of deviations. CL: 481-435. P: 481-331 or 332 or 343. (F,S)

820-438 Group Dynamics 3 cr.

Psychological principles as they apply to the individual in social groups; experimental analysis of group formation, maintenance, morale and productivity. P: jr st. (F)

820-450 Health Psychology 3 cr.

This course examines the psychosocial aspects of the health-illness continuum. Topics include stress and coping, health promotion, lifestyle and health, factors in using health services, and issues of psychological adaptation to chronic illness and pain. P: 481-210 or 820-102 or 330; and 820-300.

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. P: 820-102. (S)

820-490 Problems in Environmental Psychology 3 cr.

In-depth study of one or more selected areas in environmental psychology. P: 820-390 or two lower-level psychology courses.

835 Public and Environmental Affairs**835-202 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. CL: 778-202. P: none. SS-2. (F,S)

835-215 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. P: 778-101 or 778/835-202. (F)

835-301 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 institution in response to environmental challenges, and strategies for environmental improvement. CL: 778-301. P: 778-101 or 778/835-202. (F,S)

835-306 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. CL: 778-306. P: 778-101 or 778/835-202. (S)

835-309 Urban and Regional Economic Theory 3 cr.

See 951-309.

835-314 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. CL: 778-314. P: 778-101 or 835-215. (S98,S00)

835-315 Public and Non-Profit Management 3 cr.

Covers governance institutions, implementation structures, and social action networks which are intended to achieve public purposes. Management approaches, techniques, values and analysis considered in depth. P: 778-101 or 778/835-202; REC: 835-215. (F)

835-322 Environmental Planning 3 cr.

History, processes, and impacts of environmental planning in the United States. Action forcing legislation and its effect on environmental issues and processes. Emphasizes environmental planning and implementation at the national, state, and local levels. P: 362-102 and 778/835-202. (F)

835-323 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. P: jr st. SS-2. (S)

835-344 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. P: none. (S)

835-350 Geographic Information Systems 3 cr.

Uses state-of-the-art software to integrate digitized data 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. CL: 416-350. P: none. (F,S)

835-356 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. P: jr st. (F)

835-378 Environmental Law 3 cr.

An overview of major environmental laws, including their historical development, structure and implementation by federal, state and local agencies. P: 778-100 or 101 or upper-level course in political science or public administration. (F)

835-402 Environmental and Resource Economics 3 cr.

Applications of tools and concepts in current economic decision making, with special emphasis upon common property resources management. CL: 298-402. P: jr st and 298-203. (S)

835-406 State and Local Government 3 cr.

The structure and operation of state and local governments and their administration of public policies and programs; emphasized issues of importance to each level, the interaction between levels, and Wisconsin as a case study. P: 778-101 or 835-215. (S97,S99)

835-408 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. CL: 778-408. P: 778-101 or 778/835-202. (F)

835-409 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. CL: 298-409. P: 298-203. (F)

835-415 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 operation; applications of analytical and decision-assisting tools in public budgetary operations. P: 778-101 or 778/835-202 or 835-215. (S)

835-420 Health Care Policy and Administration 3 cr.

An examination of contemporary health care problems in the United States, emerging controversies in public policy, and challenges to effective health care management. Offers exercises and projects designed to acquaint students with strategies for dealing with major health care issues in the 1990s and beyond. P: 778/835-202. (\$98,500)

835-451 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. P: 255-205 or 600-260. (F)

835-452 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. P: 255-205 or 600-260. (S)

835-453 Cost Benefit Analysis 3 cr.

An intensive analysis of the procedures involved and the conceptual basis of project evaluation from both a public and private sector viewpoint. Hands-on experience will be gained through worksheets and student projects. CL: 298-453. P: 298-203. (S)

835-461 Special Topics in Public and Environmental Affairs 3 cr.

An interdisciplinary study of public policy issues selected from public administration and environmental policy and planning. Includes issues such as health care reform, environmental policy analysis, policy planning. P: jr st and written cons inst.

867 Senior Seminars**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. P: sr st.

867-406 Science and the Quality of Life 3 cr.

Students conduct in-depth 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. P: sr st.

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. P: sr st.

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. P: sr st.

867-415 Applied Imagination: Problem Solving Through Science and Creativity 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 team assisted problem solving and defense of individual thinking styles. P: sr st.

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. P: sr st.

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. P: sr st.

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. P: sr st.

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. P: sr st.

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. P: sr st.

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. P: sr st.

867-433 Cultural Evolutionism: A Predictive Model of the Future 3 cr.

The theory of Cultural Evolutionism is presented and several hypotheses drawn from it and applied to designated problem areas in modern industrialized cultures. Students examine various implications derived from testing this theory based upon their individual interests and research efforts. In addition, the historical development of similar social evolutionary theories and predictive models of culture ranging from Bentham, to Marx, to Spencer are discussed and analyzed.

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. P: sr st.

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. P: sr st.

867-441 Worldviews: Perceptions That Shape Actions and Values 3 cr.

This seminar assumes that people (and indeed societies) adhere to a world view 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. P: sr st.

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. P: sr st.

867-443 The Scientific Perspective and 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. P: sr st.

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. P: sr st.

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 education interactions and tensions. P: sr st.

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. P: sr st.

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. P: sr st.

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. P: sr st.

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. P: sr st.

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. P: sr st.

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. Major theme of the seminar is that of Individual versus Community, and where our culture stands on the continuum. P: sr st.

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). P: sr st.

867-456 Sustainable Development 3 cr.

Explores contradictions and possibilities resulting from incompatibilities of social and economic goals and systems with global and regional ecosystem, human and physical constraints. Case studies will include global, industrial, regional and third world issues. P: sr st.

867-457 Water and Society 3 cr.

The role of water in present and past societies in both developed and developing nations. Current trends and emerging issues are identified and evaluated from different points of view including economics, technology, environment, and religion. P: sr st.

867-458 From Conflict to Cooperation: The European Union 3 cr.

Explores past, present, and future changes in the European community from socio-economic, political, and cultural perspectives, with particular emphasis on current and potential connections between Wisconsin and the European community. P: sr st.

867-460 Global Aspects of Health Care 3 cr.

This seminar examines international health problems from the perspective of different domains of knowledge. Students engage in active research to develop strategies for dealing with them.

867-476 Democracy in America 3 cr.

This seminar takes the classic study of *Democracy in America* by Alexis De Tocqueville as a starting point for the examination of current issues of democracy in American politics, society, and culture. P: sr st.

875 Social Change and Development**875-201 Fiction and American Society 13 cr.**

This course will focus on the relationship between fiction and the social sciences, particularly on how the two areas of knowledge are related in that they both attempt to show humans and human societies and cultures as they really are. It will demonstrate that there is a need for both the imaginative and scientific approaches if we are to reach some kind of understanding of our values, both personal and societal, and of the impact those two sometimes very different sets of values have on us, on our society, and on other cultures. This course is concerned with the United States; the fiction is primarily by American writers. P: none.

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. P: 820-102 or 202 or 156-100 or 900-202. (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. P: none. SS-2. (F97,F99)

875-230 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. CL: 778-230. P: any SS-1 course. SS-2. (S97,S99)

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. P: one course in social sciences. SS-2.

875-241 Introduction to Women's Studies 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. P: none. SS-1. (F,S)

875-265 Music, Politics and Social Change 3 cr.

Examines the relationship of popular and folk music to social and political change in various societies and historical periods. Case studies drawn from the United States, Europe, Africa, Latin America, the Caribbean and Southeast Asia. P: none. SS-2.

875-270 The Third World 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 world's poor. P: 156-100 or 298-102 or 202 or 778-100 or 900-202 or 448-100 or 416-102. SS-2/OC.

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 Indochinese context of revolution and change. CL: 448-275. P: none; REC: so st. SS-2.

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. P: 900-202 and 778-101. (F)

875-320 Constitutional Law 3 cr.

Builds an appreciation for the political nature of constitutional law in the United States through analysis of critical Supreme Court cases. Study given to the political and historical context of these cases as well as to implications for public policy. CL: 778-320. P: 778-101. (S)

875-325 Law and Society 3 cr.

Explores how the courts can either promote or inhibit progressive social, political, and economic changes in contemporary American society. There is a great deal of emphasis placed on how to use theory to better understand the relationship between law and society. P: 900-202 or 778-101 or 448-206 or 778-100.

875-333 Social Change in a Selected Area 3 cr.

Processes and strategies of social change and development in a selected nation or set of nations. Course may be repeated for cr with different area. P: 448-100; and 352-105 or 226; and 2 lower-level courses in political science, economics, anthropology, sociology or history. OC. (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. P: none. SS-2. (F)

875-343 Women and Popular Culture 3 cr.

Surveys representation of women in popular culture (contemporary and historical) with attention to racial and ethnic diversity of women; explores how women have shaped the production and reception of popular culture. P: 875-241 or one course in women's studies, history, sociology, or literature.

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. P: 875-241 or 156-100 or 900-202 or 448-100. SS-2/OC. (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 current status of such areas as property rights, family law and employment opportunity; legal tools in the struggle for equality. P: so st. (F97,F99)

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. P: 156-100 or 298-202 or 203 or 778-100 or 900-202; and 352-105 or 226. (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. P: 352-105 or 226; REC: 156-100 or 900-202; and 448-100 or 493-202. (F,S)

875-362 Power and Change in America 3 cr.

The study of the dynamic relations between political economy and social structure and the formation and impact of social movements, politics and ideologies in modern America. P: 900-202 or 778-101. (S97,S99)

875-375 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. P: course in women's studies and jr st.

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. P: 875-360 or 361 or 900-302 or 307. (S98,S00)

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. P: 875-360 and 361; and 352-105 or 226. (F,S)

892 Social Work**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. P: none. (F)

892-205 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. CL: 493-205. P: none. (S98,S00)

892-257 Introduction to Counseling Skills and Techniques 3 cr.

Developing and increasing skills and awareness required for competent behavior as a helping person. P: must be a residence hall assistant or BSW classification. (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. P: none; REC: 778-101 and 493-205. (F)

892-300 Field Experiences 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. P: concurrent enroll in 892-305 or 370. (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. P: admittance to BSW major. (F)

892-320 Explorations of Fields of Practice 3 cr.

Overview of social work practice and services offered in a variety of agency settings. Presentations by practitioner experts from each service setting. P: admittance to BSW major and jr st.

892-351 Child Welfare Services and Programs 3 cr.

Overview of child welfare services and programs including preventive programs, protective services, alternate care, intensive home treatment, adoption, school social work, and juvenile justice. Introduction to child welfare legislation. P: 892-305. (S)

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. P: prior written cons inst.

892-370 Social Work Methods I 3 cr.

Applications of concepts important to the understanding of individual, group, organizational and community dynamics to generalists social work practice. P: 892-305. (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. P: 892-305 and 478-102. (S)

892-402 Field Practicum I 5 cr.

Actual social service work through placement in a social service agency. Must be taken on P-NC basis. P: concurrent enroll in 892-411. (F)

892-403 Field Practicum II 5 cr.

Actual social service work through placement in a social service agency. Must be taken on P-NC basis. P: 892-402 and concurrent enroll in 892-420. (S)

892-411 Social Work Methods II 4 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. P: 892-370. (F)

892-420 Social Work Methods III 4 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. P: 892-411. (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. P: 892-275. (F)

892-460 Program Evaluation 3 cr.

Introduction to the principles of program evaluation research, including design and implementation of research projects. P: 892-411 and 255-301. (S)

900 Sociology**900-202 Introduction to Sociology 3 cr.**

Major sociological concepts and ideas and their application to contemporary problems of societies. P: none. SS-1. (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. P: 900-202 or 156-100. SS-2/Et.S. (F)

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. P: 900-202. (S98,S00)

900-303 Race and Ethnic Relations 3 cr.

Comparative study of race and ethnic relations in the United States and other countries. The focus is on theories of race relations and ethnic stratification and the importance of these issues in national and international perspective. Case studies of ethnic relations in particular countries (e.g., South Africa, Brazil, Malaysia, Lebanon, Soviet Union) will be emphasized. P: 900-202 or 203 or intro level social science course. Et.S. (S98,S00)

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. P: 900-202. (F)

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. P: 900-202. (S97,S99)

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. P: 900-202 or 481-210 or 156-100; and so st. (F)

900-375 Sociology of Sexual 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. P: 875-235 and 900-202; or 900-202 and two other social science courses.

900-404 Criminology 3 cr.

The relationship of crime and society, focusing on causes of crime. P: 900-202 and one 300-level sociology course. (S)

Literature and Language**908 Spanish****908-101, 102 Introduction to the Spanish Language I, II 4, 4 cr.**

Development of basic ability in understanding, reading, speaking and writing in Spanish. P for 101: none. (F). P for 102: none; REC: 1 yr high school or 1 semester college Spanish; one additional lab hr per week. ARR. (S)

908-201, 202 Intermediate Spanish Language I, II 3, 3 cr.

Further development of the ability to understand, read and speak Spanish. P for 201: none; REC: 2 yrs high school or 2 semesters college Spanish. (F). P for 202: none; REC: 3 yrs high school or 3 semesters college Spanish. OC. (S)

908-225 Intermediate Spanish Conversation and Composition 3 cr.

Development of greater fluency through classroom practice in conversation and composition. P: none; REC: 4 yrs high school or 4 semesters college Spanish. OC. (F)

908-325 Advanced Spanish Conversation and Composition 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. P: 908-225. OC. (S)

908-329 Representative Spanish Authors 3 cr.

Important novels, plays, poems, and essays representative of major eras and movements of Spanish 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. P: 908-225; REC: 908-325; may be repeated when different author is studied. OC. (F97,F99)

908-333 Spanish and Latin American Literary Themes 3 cr.

See 351-333. OC.

908-335 Spanish and Latin American Literary Eras 3 cr.

See 351-335. OC.

908-345 Advanced Spanish Grammar 3 cr.

In-depth review and continued study of Spanish grammar, including fundamentals of comparative Spanish-English grammar. P: 908-225. (S97,S99)

908-351 Major Spanish and Latin American Fiction 3 cr.

Study of Spanish short story and/or novels either by period or by theme. OC.

908-355 Spanish and Latin American Cinema 3 cr.

Historical and critical introduction to the work of prominent Spanish and Latin American filmmakers and to thematic representations of Spanish and Latin American cultures. CL: 493-355. P: 908-225. OC. (F98)

908-358 Latin America Today 3 cr.

Specific humanistic aspects of contemporary Latin American culture, including its history, art, literature, music and value systems. CL: 493-358. P: 908-225. OC. (F96,F98)

908-359 The Cultures of the Americas 3 cr.

A look at the three major cultural influences in Latin America: Amerindian, African, and European. The history of ethnic relations and intercultural contact in the Americas. P: 908-225. (S98,S00)

908-360 Spain Today 3 cr.

Aspects of contemporary Spain, including its cultures, architecture, music, art and values. Degree cr not granted for both 908-360 and 493-360. P: 908-225. OC. (F97,F99)

908-361 The Cultures of Spain 3 cr.

This course provides a historical overview of the many cultures that have played a role in the development of what is now Spain. P: 908-225. OC.

908-363 Study 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; emphases typically upon ancient and contemporary Maya cultures. P: Cons inst and prior trip ARR and financial deposit. OC.

908-372 Spanish Phonetics and Contrastive Linguistics 3 cr.

Survey of descriptive linguistics with emphasis on the sound system of Spanish; also includes syntax, semantics and morphology focusing on contrast between Spanish and English. P: 908-225. OC. (F96,F98)

908-438 Major Spanish Writer 3 cr.

Study of an outstanding figure in Spanish literature. Subjects will vary. P: 908-225; REC: 908-325 and 329. OC. (F96,F98)

908-485 Study Abroad in Spain/Mexico/Guatemala 3-15 cr.

Students register for this course before departing. Upon return to U.S. they must submit course descriptions and written evaluations from their professors, together with a formal certificate and a letter grade. P: cons inst and prior trip ARR and financial deposit. OC. (F,S)

912 Student Support Services**912-080 Applied Study Skills Lab 3 cr.**

Introduction to and practice with requisite college-level study skills: including time management, note taking, vocabulary development, textbook strategies, critical reading, and exam preparation. Skills are taught in an applied context in conjunction with a freshman-level introductory course. P: concurrent enroll in specified introductory course. (F,S)

912-092 Critical Reading 2 cr.

This course incorporates college level study skills with general reading improvement techniques. Emphasizes vocabulary building, comprehension improvement, reading rate and flexibility. Course format is a combination of class meetings and individual laboratory work. P: none. (S)

912-093 Fundamentals of Writing 3 cr.

The focus of this course is intended to aid students in generating written discourse which can eventually be shaped or revised into expository prose. The course is a skills course; its intent is to provide students with the fundamental skills needed for the production, correction, and style; paragraph production and organization; spelling skills; reading skills and the production or practice of limited research skills, i.e. paraphrase, summary, and documentation. Grammatical concerns are also stressed, i.e., verb tense, pronoun reference, and subject-verb agreement. Punctuation. P: none; required for English ACT score of 16 or lower. (F,S)

912-094 Elementary Algebra 3 cr.

P: none; required for ACT math score of 17 or lower. (F,S)

912-096 College Study Skills 1 cr.

Using a workshop approach, this course teaches time management, notetaking, test preparation, test taking, textbook-reading strategies, and other fundamental study skills essential for success in college. P: none.

915 Theatre**Acting****915-131 Beginning Acting I 3 cr.**

Develops a basic organic approach to acting technique through theater 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. P: concurrent enroll in 915-235/236/238/239/335/336/338/339. FA. (F)

915-141 Musical Theatre Dance I 1 cr.

Techniques in self-awareness, body warmups, breathing, nonverbal communication, improvisation; basic dance forms of ballet, modern and jazz as they relate to musical theater. P: none. FA. (F)

915-142 Musical Theatre Dance II 1 cr.

Continuation of 915-141, a study of the historical popular dances from 1910-1950, including the Charleston, Black Bottom, Maxixe, and Jive. P: 915-141. (S)

915-231 Intermediate Acting 3 cr.

Scene work in realistic dramas; practice in techniques of script analysis and character development. Repeatable to 6 cr. P: 915-131 and concurrent enroll in 915-235/236/238/239/335/336/338/339. (F)

915-233 Voice for the Actor I 3 cr.

Introduction to principles of vocal training systems used in actor training. Provides students with a working knowledge of their vocal and physical capabilities. Work on breathing, posture, and development of warm-up procedures. P: concurrent enroll in 915-235/236/238/239/335/336/338/339.

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. P: 915-131 and concurrent enroll in 915-235/236/238/239/335/336/338/339. (F)

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. P: 915-231 and concurrent enroll in 915-235/236/238/239/335/336/338/339. (S)

915-333 Voice for the Actor II 3 cr.

A strengthening of structural and tonal work explored in 915-233. Introduces stage dialects, character voices, and their healthful production. P: concurrent enroll in 915-235/236/238/239/335/336/338/339 and 915-233.

915-433 Vocal Specialization 1 cr.

Detailed production specific vocal work for special problems and/or solutions to character development and vocal production issues. P: 915-236. (F,S)

Dance**915-128 Jazz Dance I 1 cr.**

Introduces the beginning dance student to the techniques, theories and practice of the jazz genre. Repeatable to 3 cr. P: none. FA. (F,S)

915-134 Basic Stage Movement 1 cr.

Explores three basic elements of stage movement: space, dynamics and rhythm. P: none. FA. (F97,F99)

915-137 Ballet I 1 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 3 cr. P: none. FA. (F,S)

915-138 Ballet II 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. Repeatable to 8 cr. P: 915-137. FA. (S)

915-145 Modern Dance I 1 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 3 cr. P: none. FA. (F)

915-161 Tap Dance I 1 cr.

An introductory study of tap dancing, with emphasis on the basic techniques of waltz clog, soft shoe, and rhythm buck dances. Repeatable to 3 cr. P: none. FA. (F,S)

915-228 Jazz Dance II 2 cr.

Continued study and execution of the style and techniques of jazz dance. Study of the styles of major choreographers in American musical theater. Repeatable to 8 cr. P: 915-128; REC: concurrent enroll in either ballet or modern dance. FA. (F,S)

915-245 Modern Dance II 2 cr.

Progression from Elementary Modern Dance with more complex technical problems; understanding and executing major modern dance styles. Repeatable to 8 cr. P: 915-145. FA. (F)

915-261 Tap Dance II 1 cr.

Continuation of 915-161. Introduces more complex tap technique, increase speed and clarity of technique, and complexity of tap combinations and dances. Repeatable to 3 cr. P: 915-161. FA. (F)

915-328 Jazz Dance III 2 cr.

Advanced study and execution of the style and technique of Jazz Dance. A study of the styles of major choreographers in the American Musical Theatre. Competence in performance is stressed. Repeatable to 10 cr. P: 4 cr of 915-228.

915-334 Movement Theory and Analysis I cr.

Theory and analysis of dance movement for upper division dance students. P: 915-145 and 137; REC: 915-245 and 328. (S98,S00)

915-340 Dance History 3 cr.

Origins and chronological development of dance styles, including ballet, modern, jazz, musical theater and social dance. Major works and personalities influencing dance from aboriginal cultures to the present day. P: none. FA. (S98,S00)

915-361 Tap Dance III 1 cr.

Continuation of 915-261. Increase speed, clarity and complexity of technique, combinations and dances. Introduce syncopated and complex rhythms and techniques. Repeatable to 3 cr. P: 915-261. (S)

915-440 Choreography 3 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. P: 915-228 or 245. (F96,F98)

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. P: concurrent enroll in 915-235/236/238/239/335/336/338/339. (S97,S99)

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. Special fee required. P: concurrent enroll in 915-235/236/238/239/335/336/338/339. (F)

915-222 Theatre Production Techniques II: Costume and Makeup 3 cr.

Organization and operation of theatre productions: costuming, makeup and introductory costume design. Participation in a theatre production (minimum 40 hours) required. Special fee required. P: concurrent enroll in 915-235/236/238/239/335/336/338/339; REC: 915-221. (S)

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. P: concurrent enroll in 915-235/236/238/239/335/336/338/339; REC: 915-221, 222. (S97,S99)

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. Special fee required. P: concurrent enroll in 915-235/236/238/239/335/336/338/339; REC: 915-221, 222. (F97,F99)

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. Special fee required. P: concurrent enroll in 915-235/236/238/239/335/336/338/339; REC: 915-221 and 222. (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. P: concurrent enroll in 915-235/236/238/239/335/336/338/339; REC: 915-221, 222. (F96,F98)

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. P: 915-323 and concurrent enroll in 915-235/236/238/239/335/336/338/339.

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. Special fee required. Repeatable to 9 cr. P: 915-221 and 222 and concurrent enroll in 915-235/236/238/239/335/336/338/339. (F,S)

Theatre History/Literature/Criticism**915-235 Performance Practicum: Production Crews 1 cr.**

Crew member/staff participation in a theatre production. Repeatable each semester. P: none. FA. (F,S)

915-236 Performance Practicum: Cast Member 1 cr.

Performance in a theatre production. Repeatable each semester. P: none. FA. (F,S)

915-238 Performance Practicum: Scene Shop 1 cr.

Complete production work in scene shop preparation. Repeatable each semester. P: none. FA. (F,S)

915-239 Performance Practicum: Costume Shop 1 cr.

Complete production work in costume shop preparation. Repeatable each semester. P: must arrange schedule with instructor. FA. (F,S)

915-309 Theatre History I 3 cr.

Theatre art and craft: its functions in and significance to the different cultures in which it has thrived. P: concurrent enroll in 915-235/236/238/239/335/336/338/339. FA. (F)

915-310 Theatre History II 3 cr.

Theatre art and craft: its functions in and significance to the different cultures in which it has thrived. P: concurrent enroll in 915-235/236/238/239/335/336/338/339. FA. (S)

915-335 Performance Practicum: Production Crews 1 cr.

Crew member/staff participation in a theatre production. Repeatable each semester. P: jr st. FA. (F,S)

915-336 Performance Practicum: Cast Member 1 cr.

Performance in a theatre production. Repeatable each semester. P: jr st. FA. (F,S)

915-338 Performance Practicum: Scene Shop 1 cr.

Complete production work in scene shop preparation. Repeatable each semester. P: jr st. FA. (F,S)

915-339 Performance Practicum: Costume Shop 1 cr.

Complete production work in costume shop preparation. Repeatable each semester. P: jr st; must arrange schedule with instructor. FA. (F,S)

915-351 Directing I 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. P: concurrent enroll in 915-235/236/238/239/335/336/338/339. (F)

915-352 Directing II 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. P: 915-351 and concurrent enroll in 915-235/236/238/239/335/336/338/339 and 6 cr in theatre courses. (S98,S00)

915-403 Seminar in Theatre Arts 3 cr.

Individual or small group study focused on a specific area or areas of theatre interest of various periods and cultures. P: concurrent enroll in 915-235/236/238/239/335/336/338/339; REC: 12 cr in theatre arts courses.

915-404 Seminar in Theatre Arts 3 cr.

Individual or small group study focused on a specific area or areas of theatre interest of various periods and cultures. P: concurrent enroll in 915-235/236/238/239/335/336/338/339; REC: 12 cr in theatre arts courses.

915-405 Theatre Management 3 cr.

Theatre management at the professional and nonprofessional levels; organization and classes of professional and nonprofessional theaters; financial or business management; box office procedures; promotion and publicity techniques and strategies. P: concurrent enroll in 915-235/236/238/239/335/336/338/339; REC: 6 cr in theatre arts courses. (S97,S99)

951 Urban and Regional Studies**951-102 World Regions and Concepts: A Geographic Analysis 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. CL: 416-102. P: none. SS-1. (F)

951-200 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 concern influence the city. P: none. SS-2. (F,S)

951-205 Urban Social Problems 3 cr.

The course offers a basic introduction to the history, sociology, geography, economics, and politics of U.S. urban problems; examines specific problems such as jobs, housing, and public finance; and considers future prospects. P: none. SS-2. (S)

951-210 Drawing Systems for the Designer 3 cr.

The theory and practical application of various drawing systems, including orthographic, axiometrics, and perspectives, and their use as aids in the design process. P: none; REC: 168-106.

951-303 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. Field trip required. P: 951-200 or 778/835-202 or 900-202. (F)

951-305 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. CL: 778-305. P: 778-101 or 951-200. (S)

951-309 Urban and Regional Economic Theory 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. CL: 835-309. P: 298-203; REC: 298-202. (S)

951-313 The City Through Time and Space 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. P: 951-200 or 303 or 416-341. (S97,S99)

951-323 Asian Americans 3 cr.

Review of Asian immigration to the United States; formation of ethnic communities; prejudice and discrimination against Asian groups; and current issues affecting Asian Americans. P: 900-202 or 203 or 156-100 or 493-211 or 951-200. Et.S. (S98,S00)

951-324 Latino Communities in the United States 3 cr.

Review of Hispanic immigration to the United States; formation of ethnic communities; diversity of Hispanic ethnic groups; and current issues affecting Hispanics such as immigration policy and bilingual education. P: 900-202 or 203 or 156-100 or 493-211 or 951-200. Et.S. (S97,S99)

951-325 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. P: 820-102 or 330. (F)

951-335 Transportation Systems in the United States 3 cr.

Intercity transportation systems in the United States, their development, impact, present character, problems and trends. P: so st. (S)

951-341 The City and its Regional Context 3 cr.

The course will focus on two main interrelated themes in urban geography. It will explore urban places as systems operating as an entity among other cities and the surrounding region. Second, it will explore social construction of urban morphology. Field trip required. CL: 416-341. P: jr st.

951-342 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. P: 298-202 or 203; and jr st. (F)

951-351 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. P: jr st; and 778-101 or 778/835-202 or 951-200. (F97,F99)

951-370 Geography of South America 3 cr.

A survey course which will explore the physical features, resources, people, and the political economy of the American southern hemisphere. CL: 416-370. P: 416-102; REC: 362-102 or 416-222. OC. (S97,S99)

951-372 Analysis of the Great Lakes Regions 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. CL: 416-372. P: so st. (S)

951-377 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. CL: 416-377. P: so st. (F)

951-392 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. P: so st. OC.

951-412 Urban and Regional Planning I 3 cr.

Examines planning theory, focusing on models of rationality, valuation processes, political decision-making, governmental structure and fiscal policies. P: 951-102 or 200; REC: 778-101 or 835-202. (F)

951-430 Seminar in Ethics and Public Affairs 3 cr.

A capstone course for all students in Urban and Public Affairs intended to introduce a range of ethical concerns in public affairs. Through theoretical and case study readings and applied projects, students deal with ethical issues and varied responses to them. P: sr st. (F)

951-436 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. CL: 242-436. P: 168-106; REC: 951-210.

951-437 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. CL: 242-437. P: 242/951-436 and 951-210. (S)

951-438 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. CL: 242-438. P: 242/951-437.

951-439 Environmental Design Studio IV 3 cr.

Each student proposes, designs and executes a design/research project of an elected topic. Individual projects are acceptable in some instances; projects by design teams are encouraged. CL: 242-439. P: 242/951-437. (S)

951-461 Urban and Regional Affairs 3 cr.

A multi-disciplinary investigation into a special topic within urban and regional studies. Includes topics such as education, employment, housing and transportation, and urban and regional policy. P: written cons of inst.

ADMISSION

Admission Standards

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 be assured that students are prepared to successfully complete college-level work, UW-Green Bay has set standards for admission.

Although UW-Green Bay 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

As with other University of Wisconsin campuses, UW-Green Bay has an enrollment limit set by System administration. Because of this limit, students who meet minimal requirements for admission may be placed on a waiting list or denied admission due to capacity limits. Also, early application is strongly recommended. The application priority date is typically February 1 for freshmen and March 1 for transfer and reentry students.

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; (students from schools not providing class rank should have a GPA of at least 2.5 on a 4.0 scale and an ACT score of at least 20);
- present 17 credits of college preparatory or academic coursework.

Unit distribution must be:

English	4 credits
(3 from composition and literature)	
Social Studies	3 credits
Mathematics	3 credits
(algebra and above)	
Science	3 credits
Academic Electives*	2 credits
Other Electives**	2 credits
Total	17 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 for the fall term and 550 for the spring term.

Other Ways to Qualify

UW-Green Bay also responds to the educational needs of special groups of students. Specific requirements for such groups are used by the admissions 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 applicants based on a number of factors. These are described below. Generally, admission does not depend on only one factor; rather, a combination of factors are considered.

- An ACT composite score of 22 or greater.
- A score above 75th percentile on the School and College Ability Test (SCAT) and the California Achievement Test — Reading, and demonstration of acceptable writing ability.
- 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.
- 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 UWGB.

GED applicants

The admissions review committee will consider students who have completed the tests for the General Education Development (GED) or the High School Equivalency Diploma (HSED). Factors considered in these decisions include:

- 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 75th percentile on the School and College Ability Tests (SCAT) and the California Achievement Test-Reading, and demonstration of acceptable writing ability.

Students with individual GED 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 first-generation and low income college students who have the potential to succeed in college but 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 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 federal EOP participation guidelines and are recommended for the program after interview with EOP staff.

Admission Status

The admissions review committee will determine the appropriate admission status — regular or probationary/conditional — for each applicant.

Prospective students are likely to be offered direct admission if they have completed the 17 units of work outlined above and:

- class rank is in the upper 45 percent.

OR

- class rank is between the upper 46 percent and 50 percent, plus a composite ACT score is 23 or greater.
- (for schools that do not rank students) GPA is 2.75 or higher and ACT composite score is 23 or higher.

Students are likely to be placed on a waiting list for admission on a space-available basis if:

- class rank is between the upper 46 percent and 55 percent, and composite ACT is at least 20.
- (for schools that do not rank students) GPA is 2.5 or better, plus ACT composite score is 20 or higher.

Transfer Admission Requirements

Students who have attended college after high school graduation may transfer to UW-Green Bay provided that the college work has been successful. Because of enrollment limitations, the University may not be able to accommodate all students who meet the minimum requirements below. Students will be admitted directly or placed on a waiting list depending upon their academic record and time of application.

- Transfer and advanced standing students should have a minimum 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.

Students are most likely to be offered direct admission if they have a transfer grade point average of 2.5 or better with at least 24 earned transfer credits.

Students may be placed on a waiting list for transfer admission if their grade point average is between 2.0 and 2.49 and they have not earned 24 transfer credits. (University of Wisconsin Center System students who have completed the associate degree with a minimum grade point average of 2.0 will be directly admitted.)

Admission to UW-Green Bay does not guarantee admission to all majors. A number of majors have competitive admission requirements to enter the program. Refer to the *Programs of Study* section in this catalog to see if your proposed major has additional admission requirements. It is possible to be admitted to UWGB but later be unable to gain admission to a specific program.

Application Procedures for Degree-Seeking Students

Application

Degree-seeking students applying to UW-Green Bay 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 UW-Green Bay. 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. In this way, they may receive a permit to register before high school graduation. The University must receive a final copy of the transcript when such students graduate.

Changes on a transcript from what was originally reported (for example, dropped or failed classes or a drop in class rank) may alter the admission decision. A cancellation of admission may result, especially if there is a serious drop in class rank and grades.

Other students may be asked to provide grades through the senior year of high school 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 UW-Green Bay.

All students who have attended nursing, business, and vocational and technical schools must submit those transcripts as well. (Transcripts from noncollege 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 from Wisconsin Technical College System campuses may be accepted on a limited basis. Up to 15 credits of approved general

education coursework may be accepted for transfer into UWGB. In addition, many nursing programs have articulation agreements for students entering the UW-Green Bay nursing completion program that may allow for transfer of additional credits.

Dates

Application dates for admission are tentative and may change depending upon enrollment capacities. Applications submitted after priority dates below may not be considered if enrollment limits have been reached.

- Fall Semester
New freshmen: September 1 through January 31
Transfer and reentry: September 1 through February 28
- Spring Semester
All students: September 1 through December 15
- Summer Session
All students: September 1 through May 15

Fee

A non-refundable \$28 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.

Placement Testing

English: American College Test Scores

Current, official American College Testing (ACT) scores are required for:

- all new freshman;
- all transfer and reentry students who have not satisfactorily completed at least one college-level course in English composition;
- special (non-degree) students who want to enroll in an English composition 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.

ACT test scores are used to provide a basis for course level placement in English composition, and to provide 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 may be used by the Admissions Office to support a student's admission to the University.

Mathematics: Wisconsin Mathematics Placement Test

The Wisconsin Mathematics Placement Test (WMPT) is required for:

- all new freshmen;
- all transfer, reentry, and special students who have not satisfactorily completed a college-level mathematics course and who want to enroll in a mathematics course.

The WMPT is scheduled throughout the state in April and May. Students not able to take a regional test may take one of the residual tests scheduled on campus near the start of each term. The test results determine the course level placement for mathematics courses. The test fee will normally be added to the student's fee billing or paid at the time of test registration.

Information for Transfer Students

Credit Evaluation

Transfer students will receive an official credit evaluation to determine what courses and credits can be accepted to fulfill UW-Green Bay 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.

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.

General Education Requirements

A student who transfers to UW-Green Bay must satisfy general education requirements by completing or transferring courses which:

- satisfy English and mathematics competency requirements as determined by ACT scores or other placement test scores.
- meet the breadth requirements of nine credits in the humanities, nine credits in the social sciences, three credits in the fine arts, and 10 to 12 credits in the natural sciences.
- 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.

- complete a course (3 credits) for the senior seminar requirement.

Transfer students will be informed in writing by the Registrar's Office of their standing with respect to fulfilling general education requirements on the final credit evaluation. A description of these requirements is in the *General Education Requirements* section of this catalog.

Transferable Coursework

Students coming to UWGB may transfer not more than 72 credits of lower-level 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 an 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 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 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 UW-Green Bay.

Because of enrollment limits, the number of courses which may be taken by special students may be limited.

Special student categories include:

Special (SPL): Students who have not previously earned a baccalaureate degree and are not currently pursuing a degree at UWGB, are classified as specials, subject to the admission standards mentioned above.

Post Baccalaureate (PBS) or Graduate (GSP) Special: These are 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, PSEO) Special: Superior high school students may enroll for UW-Green Bay 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 quarter of their respective classes. Enrollment in UWGB courses requires the approval of the high school. UWGB 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 UW-Green Bay.

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, although 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:

- an official high school transcript;
- the high school special student statement form, and;
- the principal/counselor recommendation form.

(Forms "B" and "C" are available from the Office of Admissions.)

PSEO students must submit the items specified above for High School Special students, as well as the Wisconsin Department of Public Instruction PSEO eligibility form.

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.

Current Information

The most up-to-date admission information is available by accessing the UW-Green Bay homepage via Internet and then selecting the University's Admissions Office information: <http://www.uwgb.edu>.

Other Admission Information

Adult Students and Veterans

UW-Green Bay 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 in the *Programs of Study* segment of 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 annually enrolls students from about 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 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 education and 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 letter to the Admission Appeals Committee. This committee meets as needed each semester. Students may contact the Office of Admission for additional information.

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 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 or certificate;
- 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;
- maintain a 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. The following are specific application procedures.

- Students must submit the form Free Application for Federal Student Aid (FAFSA). The FAFSA form can be obtained from a high school guidance office or the Financial Aid Office at UW-Green Bay.
- Transfer students must submit a financial aid transcript from all postsecondary institutions attended whether or not aid was received.
- Complete and submit all requests for additional or clarifying information.

The priority date for applying for financial aid is April 15. The priority date is not a deadline; it is a date by which a student may reasonably expect to be considered for the maximum amount of financial aid available. The submission of a FAFSA is the only application needed to be considered for all federal and state grant programs, federal loan programs and need-based student employment. The FAFSA may be submitted before a student is admitted to the University. The student will receive a financial aid award after the admittance process is complete.

Determination of Need

A student's financial aid eligibility is determined from the information submitted on the FAFSA. Eligibility for specific funds is determined by federal and state guidelines, institutional awarding policies, and the balance of funds remaining at the time of the application review. Students who wish to report special circumstances should contact a campus financial aid adviser.

Aid Awards

Financial aid awards are determined and mailed to students on a weekly schedule beginning April 1. Most financial aid awards contain a combination of funding sources. Every effort is



made to meet a student's full need as determined from information on the FAFSA.

Citizenship and Residency

All aid programs require United States 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.

Disbursal and Distribution of Financial Aid

Financial aid is awarded on an academic year basis. The aid is available to students at the Office of the Bursar one week prior to the start of each semester. Financial aid funds must first be used to pay institutional charges. Contact the Bursar's Office for information about institutional charges and the dates that payments are due.

Cost of Education

The cost of education can be divided into direct educational costs and miscellaneous expenses. Direct educational costs include tuition and fees, books and supplies, University housing and University food plan. The following shows the typical semester costs for a full-time undergraduate resident student in 1995-96.

Tuition: Resident	\$1,213
(Non-resident	\$3,781)
(Minnesota resident	\$1,369)
Books and supplies:	\$ 250
Housing:	\$ 825
Food:	\$ 500
Total:	\$2,788

Miscellaneous expenses include items such as transportation, clothing and personal expenses. These costs vary depending upon the spending habits of the student. For more specific information on costs refer to the UWGB Prospectus or contact the Bursar's Office.

Financial Aid for Study Abroad Programs

Financial aid is available to students for approved study abroad programs. UW-Green Bay programs as well as programs sponsored by other institutions can be funded fully or in part through financial aid. Contact the Financial Aid Office for more information.

Types of Financial Aid

• Grants

Grant aid is a form of gift aid. The award is based on a student's financial need as determined by the information provided on the FAFSA. Students do not need to apply for individual grant programs; the FAFSA is the only application that is needed. UWGB participates in the federally funded Pell Grant program and Supplemental Educational Opportunity Grant Program. Funding to students is also provided from all of the State and UW System grant programs available. Contact the Financial Aid Office for specific program information.

• Scholarships

Scholarships are another form of gift assistance. They differ from need-based state and federal grants in that they are awarded based on a student's talents or achievements. UWGB offers a variety of scholarships ranging from our all-university Leadership and Academic Excellence Scholarship to departmental scholarships. The value of the scholarships range from \$500 to \$2000 per year. Students may use the New Student Scholarship Application to apply for all scholarships available at UWGB. The application may be obtained from a high school guidance office or the Financial Aid Office at UW-Green Bay.

• **Loans**

UW-Green Bay offers all of the loan programs that are available to students from federal and state sources. A student's eligibility for each loan program is determined by the Financial Aid Office and reflected on the student's financial aid awards. A brief description of each loan program follows.

Federal Perkins Loan

The Federal Perkins Loan is administered and awarded by UW-Green Bay. The loan is a deferred interest, deferred payment program with the interest and payments starting nine months after the student leaves school. The current interest rate is five percent. The average loan amount awarded for 1995-96 was \$1,600.

Federal Stafford Student Loan

The Federal Stafford Student Loan is a federal loan program with a need-based component and a non-need-based component. The interest rate is variable, adjusted each July and capped at 8.25 percent. The difference between the need-based and non-need-based programs is the interest deferment. The need-based program has interest and payments deferred until six months after the student leaves school. The non-need-based program defers the principal repayment but the interest must be paid monthly, or quarterly, or have the interest added to the principle at the end of each year.

- Freshmen may receive up to \$2,625 per year
- Sophomores may receive up to \$3,500 per year
- Juniors and seniors may receive up to \$5,500 per year
- Graduate students may receive up to \$8,500 per year

Federal PLUS Loan

The Federal PLUS Loan program is provided for parents to assist with educational expenses. The Federal PLUS Loan does not have the interest and principle payment deferments that exist with the Federal Stafford Student Loan program. Parents seeking more information about the Federal PLUS Loan program should contact a campus financial aid adviser.

Loan Counseling

Loan counseling is available to students at any time. All students who receive a Federal Stafford Student Loan or Federal Perkins Loan will be required to participate in an "entrance" loan information session before the aid check can be picked up. The notification and schedule of entrance sessions will be included with the student's financial aid award.

Students should assess their financial situation carefully before accepting a student loan. Options such as accepting an on-campus job may allow students to decline an offer of a student loan or decrease the amount needed. Advice on student loans may be obtained at any time by talking with an adviser in the UWGB Financial Aid Office.

• **Student Employment**

Enrolled students may use the employment services of the UWGB Financial Aid Office. Students may apply for employment at 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. Students employed on campus are



paid bi-weekly and the payroll check is available at the Bursar's Office. The payroll check is made out directly to the student and is not applied to any type of University bill. The University also offers assistance in locating part-time employment off campus through the Job Location and Development Program.

• **Federal 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. Once the student earns the allowable amount, employment must cease or be switched to regular part-time employment.

• **Regular Employment**

All students may apply and be employed on campus as jobs are available. Jobs off campus are also listed on the bulletin board outside the Financial Aid Office.

• **Job Location and Development**

The Job Location and Development program solicits and posts part-time job opportunities for all students from off-campus employers. Information about these jobs is posted and made available to students at the student employment service located in the Financial Aid Office.

• **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.

Minority Student Financial Aid Programs

UWGB offers several state and UW System programs that are targeted for minority students. They include the following:

- Lawton Undergraduate Minority Retention Grant
- Pilot Minority Tuition Award
- Minority Teacher Forgivable Loan
- Wisconsin Indian Grant
- Advanced Opportunity Grant (for minority graduate students)

In addition, programs such as the Talent Incentive Program prioritize minority status as part of the eligibility criteria.

It is not necessary to submit a separate application for the minority programs; the FAFSA will provide all of the required information. Contact an adviser in the Financial Aid Office for specific program information.

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 for 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 four courses or 13 credits, whichever is greater.

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 120 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. Credits are held in escrow for the student who has earned UWGB credits before high school graduation.

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 purposes, 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 those 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
German 102	C	4	08
English 093	P	3	00
(student support services)			
Total		11	30

(An A is equal to 4 grade points, a B is equal to 3, and so forth. Three credits earning an A grade equals 12 points.)

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 — an advisory 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 2.0 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 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 entry on P-NC grading that appears later in this section.

Since grading standards differ from institution to institution, grades received from other institutions are not used in computing grade point averages.

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.

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.)

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.
DR (Dropped course)	No effect
W (Withdrew)	No effect

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 successfully 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 successfully 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

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 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 the 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.

Appeals

Academic probation is an advisory 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 assistant to the vice chancellor. The vice chancellor's designee 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 unforeseeable 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?

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 well in advance of the beginning of registration for the desired term of admission.

Grades

Grades will be mailed at the end of each term to 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.

Grades and Grade Appeal

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.

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 disciplinary chairs. 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 instructor files an incomplete removal form, stating both the conditions for removal and the deadline, before an incomplete grade is accepted for recording. 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

Students who expect to graduate in December must have all incompletes removed within 15 working days following the end of the fall semester. Students who expect to graduate in May must have all incompletes removed within 15 working days following the end of the spring semester. All grades on the record become permanent as of that date with no possibility for removal or change.

Removal of Incompletes

The course instructor sets a specific deadline for removal of an incomplete and informs the student and the Office of the Registrar. If no earlier deadline is specified, an incomplete (I) must be removed no later than the last day of classes for the next semester.

The incomplete removal form is filed with two tentative grades. One indicates the quality of work to date; the second is to be assigned if no more work is completed.

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.

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 complete.

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 be dropped from the course without prior notice.

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 cannot 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.

Auditions

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 reduced-fee auditors 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 standing may register for any number of credits up to a maximum of 18 credits per semester after the first day of classes. No students, except graduating seniors, may enroll for more than 16 credits. Graduating seniors may enroll for up to 18 credits as of one week before classes. 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.

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

Once enrolled, 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.

The phases of the course drop policy are:

Through the third day of the second week of a 15-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 records with the symbol W (withdrew) or DR (dropped)

Seventh through 15th weeks —

- no official drops allowed; WF grade or F appears on transcript

See the *Timetable* for terms or classes of a shorter duration than 15 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.

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 file an official withdrawal with the Office of the Registrar. 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 or the fourth week of a six-week summer session. 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, athletic eligibility, 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 eighth day of classes 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.

A written appeal with appropriate documentation should be submitted. If a student has any other reason for requesting a late drop or withdrawal, he/she should

complete a written appeal stating the circumstances. In both cases the written appeal should be directed to the Vice Chancellor, SS 1000, Window #7.

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 or the first week of a six-week summer session. The P-NC request form must be filed at the time of registration.

Some courses may not be selected on a pass-no credit basis if they are taken to fulfill certain requirements. These include:



- general education courses, including Senior Seminars
- major courses (300-400 level), except student teaching
- courses used to fulfill English Composition and Writing Emphasis (WE) requirements
- minor courses, except student teaching
- 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. Non-degree credit courses (such as Student Support Services courses) and student teaching are offered exclusively on a P-NC basis.

For pass-no credit, grades of A, AB, B, BC, or C, are designated "pass." Grades of D, F or WF are designated as NC or "no credit." An NC does not affect grade point average, nor does it add to earned credits.

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.

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 an 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 this 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 projects and senior honors 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.

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 required for the major, as indicated on the Student-degree Tracking Audit Report (STAR);
- have a minimum 3.75 GPA for all upper-level courses required for the major, as indicated on the Student-degree Tracking Audit Report (STAR);
- complete a senior distinction project in the major.

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 3.79;
- 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; or
- a minimum of 105 regularly graded (not P-NC or audit) credits taken in-residence at UW-Green Bay/UW-Centers with an associate degree earned at UW-Centers and a minimum 3.50 earned grade point average at each institution. Honors will be based on the UW-Green Bay grade point average.

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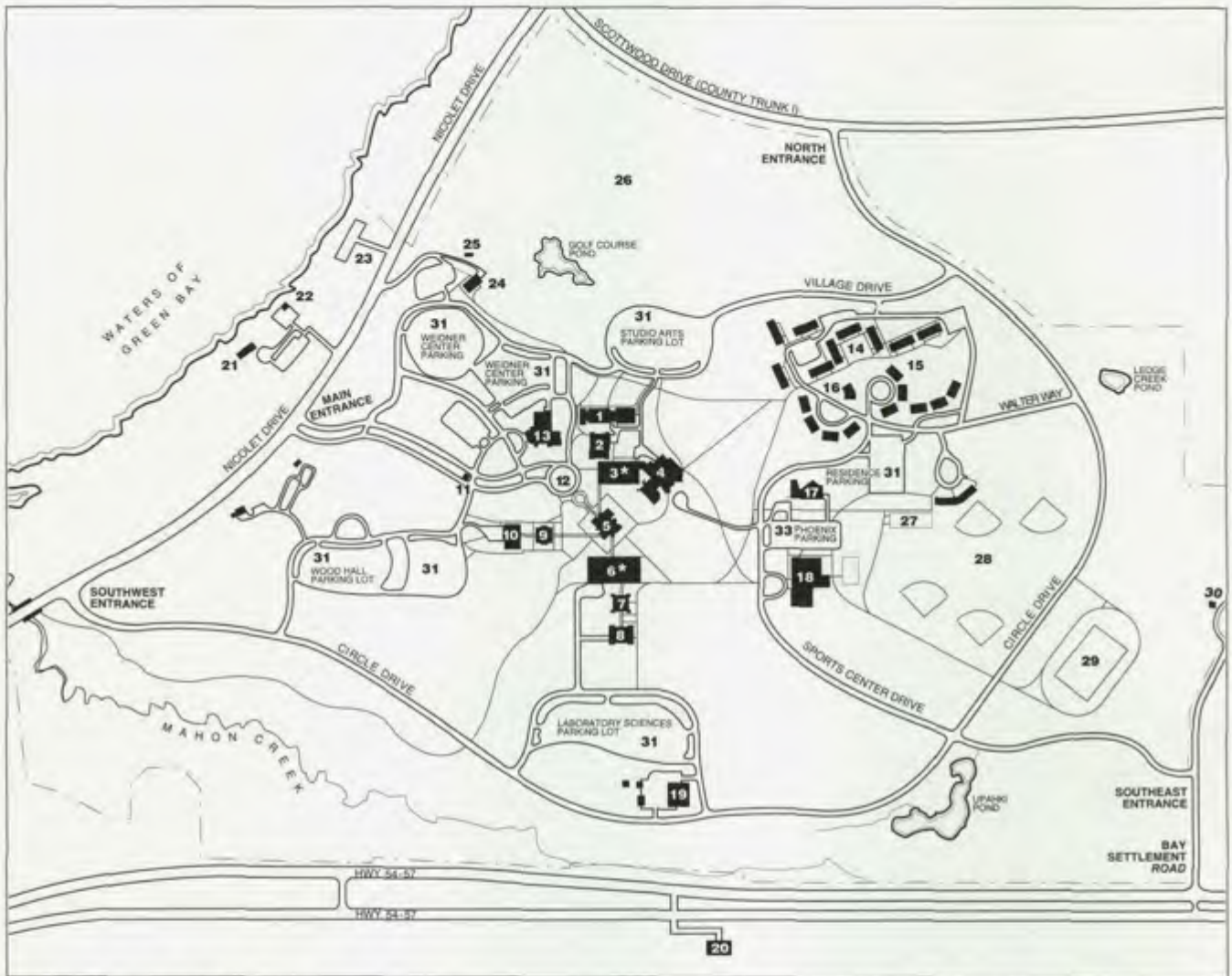
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CAMPUS MAP



UWGB CAMPUS MAP KEY

- | | |
|--|--------------------------------|
| 1. Studio Arts | 17. Ecumenical Center |
| 2. Theatre Hall | 18. Phoenix Sports Center |
| 3. Student Services | 19. Physical Plant/Stores |
| 4. University Union | 20. Heating/Cooling Plant |
| 5. David A. Cofrin Library | 21. Bayshore Center |
| 6. Instructional Services | 22. Dock Facility |
| 7. Environmental Services | 23. Communiiversity Park |
| 8. Laboratory Sciences | 24. Shorewood Center |
| 9. John M. Rose Hall | 25. Equipment Service Building |
| 10. L. G. Wood Hall | 26. Golf Course |
| 11. Parking Office/Campus Directions | 27. Tennis Courts |
| 12. Circle Entrance/Information | 28. Playing Fields |
| 13. Weidner Center for the Performing Arts | 29. Soccer Field |
| 14. Student Apartments | 30. Observation Tower |
| 15. Student Residence Halls | 31. Parking |
| 16. Community Center | |

CAMPUS PARKING

Parking permits are necessary in all campus parking lots. One-day visitor parking permits are issued at the Parking Office, a drive-up facility located on UWGB's Main Entrance Drive. Open weekdays in spring and fall from 7:30 a.m. until 7 p.m. (summer from 7:30 a.m. to 4 p.m.), the booth is a convenient place to get campus maps and information.

CAMPUS INFORMATION

The Information Center is located in the lower level of the Library, just inside the Circle Entrance. The general number for the Information Center and the campus is (414) 465-2000.

ACADEMIC CALENDAR

The University operates on a traditional semester calendar with a four-week spring intersession followed by a six-week summer session. During summer, a few courses may deviate from the six-week schedule.

Fall Semester	1996-97	1997-98	1998-99
Classes begin	Sept. 3	Sept. 2	Sept. 2
Thanksgiving recess begins	Nov. 28	Nov. 27	Nov. 26
Classes resume	Dec. 2	Dec. 1	Nov. 30
Classes end	Dec. 13	Dec. 12	Dec. 16
Study and advising days	none	none	none
Examinations begin	Dec. 16	Dec. 15	Dec. 17
Commencement (Saturday)	Dec. 21	Dec. 20	Dec. 19
Examinations end	Dec. 20	Dec. 19	Dec. 23
Spring Semester			
Classes begin	Jan. 21	Jan. 20	Jan. 19
Spring recess	March 15-23	March 14-22	March 13-21
Classes resume	March 24	March 23	March 22
Classes end	May 12	May 11	May 10
Study and advising days	May 13-14	May 12-13	May 11-12
Examinations begin	May 15	May 14	May 13
Examinations end	May 21	May 20	May 19
Commencement (Saturday)	May 24	May 23	May 22
Intersession			
Classes begin	May 27	May 26	May 24
Memorial Day recess	May 24-26	May 23-25	May 29-31
Last day of classes	June 20	June 19	June 18
Summer Session			
First day of classes	June 23	June 22	June 21
Last day of classes	Aug. 1	July 31	July 30

In conformance with applicable federal and state regulations, the University of Wisconsin-Green Bay is committed to nondiscrimination, equal opportunity, and affirmative action in its educational programs and employment policies. Inquiries concerning this policy may be directed to the Affirmative Action Office, Cofrin Library 830, University of Wisconsin-Green Bay, WI 54311-7001 (414-465-2228).

UW-Green Bay implements Chapter UWS 22, Wisconsin Administrative Code, which assures students' right to meet academic requirements while also accommodating their own sincerely held religious beliefs. Questions about policies should be directed to Dean of Students, University Union 313, University of Wisconsin-Green Bay, 2420 Nicolet Drive, Green Bay, WI 54311-7001 (414-465-2152).

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UW-GREEN BAY GUIDING PRINCIPLES

University of Wisconsin-Green Bay Guiding Principles

In all its endeavors, the University of Wisconsin-Green Bay is committed to the generation and transmission of knowledge, and in that context:

Provides an experience that challenges students to

- think critically and solve problems
- develop communication and quantitative skills
- prepare themselves as engaged and contributing citizens
- practice learning as a lifelong activity



Establishes and maintains programs and services that

- integrate both interdisciplinary and disciplinary perspectives
- strive for excellence
- selectively seek national prominence
- are flexible and responsive
- facilitate campus and community partnerships
- serve the educational, cultural, and research needs of the region and the larger society

Supports a community devoted to

- inquiry, creativity, and scholarship
- excellence
- innovation
- involvement, collegiality, cooperation, and caring
- diversity of thought and experience
- learning throughout life

Maintains its financial health by

- developing private and public support
- managing its resources effectively