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University of Wisconsin-Green Bay Undergraduate Catalog

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# About the University of Wisconsin-Green Bay

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## The Academic Program

Students who successfully graduate from the University of Wisconsin-Green Bay are well prepared for careers or for further study. UW-Green Bay's academic plan offers a combination of knowledge and skills sought by today's employers and graduate and professional schools.

Students may build their academic programs around strong preparation in a traditional discipline and in professional studies. UW-Green Bay students gain added value because they study in other disciplines, too. This enables students to apply a broad range of resources to their own fields and to work with persons from other fields—necessities in today's careers. Students may choose to major in such interdisciplinary studies. Students who select a traditional disciplinary major strengthen it with an interdisciplinary minor.

Another proven advantage to UWGB graduates is the emphasis on practical application of knowledge. By applying knowledge to real experience, students learn to define problems, evaluate them, and find solutions. Students gain such experience in many ways. Class projects, independent studies, working with faculty on research and special projects, internships, and honors projects all can count as practical experience when entering careers.

UWGB students may gain many of these practical, course-related experiences in the community. Taking advantage of off-campus resources gives students important experience in the way the world works.

Students with individual goals can use the university's flexibility to develop their own emphases. All students must meet basic requirements, but a student may draw together courses from many academic units to build a coherent emphasis. Many graduates have used this option to prepare for careers and special interests.

Students at UWGB learn from faculty members who have as their mission teaching excellence. Alumni surveyed reported high satisfaction with faculty expertise and student-faculty relationships.

The aim of the university's academic plan is high. It strives to prepare students to evaluate and to respond to the complex issues they will meet throughout life. Again, the graduate survey shows that alumni feel well prepared for their chosen occupations and for further education. The goal is one the university constantly strives to meet by evaluating itself and the future its graduates face.

## History

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

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

The university offers the Associate of Arts degree, the Bachelor of Science or Bachelor of Arts degree, and the Master of Science in selected areas.

The campus is one of 13 degree-granting institutions in the University of Wisconsin System.

## Accreditation

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

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

## Faculty

Faculty members at UWGB, primarily engaged in teaching, are also recognized for their scholarship and commitment to community concerns. Many are involved in research and consulting work which often provides practical experience opportunities for students. Of the 161 full-time faculty, more than 93 percent have the highest degree or credential available in their fields.

## Students

The university enrolls about 4,800 undergraduates and 300 graduate students (1987-88). The diverse student body includes students from most of Wisconsin's counties, 14 other states, and 18 other countries. Of the regularly admitted freshmen in 1987-88, 50 percent ranked in the upper one-fourth of their high school graduating class.

## The Campus

The campus is a 10-minute drive from the city center of Green Bay, Wisconsin. The 700-acre site is on gently rolling terrain sloping from a geological formation known as the Niagara Escarpment to the waters of Green Bay. The Cofrin Memorial Arboretum, around the campus periphery, is a resource for instruction and recreation. It has streams, ponds, wooded areas, prairie habitat, and bay shore environment, all accessible by trails. A nine-hole public golf course on campus is maintained in winter for cross-country skiing. Because major buildings are clustered on the university site, much of the rest of the campus is open for recreational use.

The campus has exceptional facilities for learning. Library and computer facilities are excellent and laboratories and studios are well equipped.

## The Community and Region

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

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

Although many industries are located in Green Bay and the Fox River Valley to the south, most of Northeast Wisconsin is farmland. Green Bay is the gateway to two areas of Wisconsin known for their natural beauty: Door County and the "north woods" country. The Door County peninsula juts into Lake Michigan to create the bay of Green Bay. The landscape is characterized by farms, orchards, small villages

with attractive harbors, and miles of shoreline. A vacation area for decades, Door County is a center of summer cultural activities. Northern Wisconsin is known for lakes and forests and the recreational facilities of the Lake Superior region.

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

# Campus Life

## Athletics, Recreation

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

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

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

## Clubs, Organizations

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

interests. Members of the cheerleading and pom pom squads perform at intercollegiate athletic events. A wide range of other clubs promote awareness of social and political issues, or provide service to the campus and community. Staff members in the Office of Student Life provide leadership and training, help students organize new groups, and refer students to existing organizations.

## Entertainment

The student-run Good Times Programming Board plans a full schedule of popular and international films, coffeehouse entertainment and bands playing contemporary music for listening and dancing. Fall homecoming, spring week, winter ski trips, and spring break journeys to Florida are among other activities organized with the help of the Office of Student Life. The Student Lecture Forum brings well-known personalities to campus.

## Food Service

There are three dining rooms on campus. The Nicolet Room features full breakfast, lunch, and dinner menus including a wide assortment of entrees, salads and desserts. The Garden Cafe offers deli-type cuisine featuring sandwiches, soups, salads, pastries, and desserts. The Rathskeller offers a menu of hot sandwiches, pasta dishes and pizza.

Students may purchase a food plan which can be used at any of the three outlets. Students who live in the residence halls are required to purchase the plan, while apartment dwellers have the choice of purchasing a full or partial plan, or preparing their own meals. Food plan information is available from the Office of Student Life. Snacks, sandwiches and beverages may be purchased from vending machines in four lunchroom locations on campus.

## Housing

UW-Green Bay students have three options in choosing housing: They can live on campus in an apartment or residence hall room in the University Village complex, they can live in an apartment or house off campus, or they can commute from home.

Most of the apartment units in the University Village are designed for four students. The furnished units consist of living room, kitchen, dining area, two bedrooms and bathroom. A few two-person and one-person units are available. Residence hall rooms are designed for two students and each room is furnished with beds, study desks, chairs and bookcases. Each room has its own bathroom.

Social and educational activities for the nearly 1,000 students who live on campus are planned by the Student Housing Council, the University's professional housing staff, and the resident assistant staff.

On-campus housing is assigned on a first-come, first-served basis, with applications for the fall semester accepted after October 1 of the preceding year and applications for the spring semester after November 15 of the preceding year. Students are advised to apply early.

Those who choose to rent houses or apartments off campus can contact the Housing Office or Dean of Students Office for lists of rental properties and persons seeking roommates.

### Media Activities

The *Fourth Estate*, a weekly campus newspaper, keeps students informed of events and issues that affect them. Students are responsible for almost every phase of publication, including writing, editing, photography, artwork, layout, and advertising sales. Staff members can earn academic credit for work on the paper.

Students are the primary voice of WGBW-FM, the University's 3,000-watt radio station. The station's "alternative" programming brings listeners news and features, Wisconsin Public Radio programs, play-by-play coverage of Phoenix men's soccer and women's basketball, and music ranging from jazz to country to new wave to classical. The student staff is supervised by a full-time professional station manager.

Student poems, short stories, essays, photographs, and other examples of visual art may be submitted for publication in the *Sheepshead Review*, a student-edited literary magazine published each year.

### Shopping

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

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

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

### Student Government

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

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

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

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

### Student Union

The Student Union is the center of student activity on campus. The facility, expanded in 1985, houses offices for student government and student organizations, areas for informal study, a theatre, a TV lounge, dining rooms and the Rathskeller grill and game room.

### Transportation

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

### Visual and Performing Arts

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

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

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

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

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

Exhibitions in the University's Lawton Gallery feature work by artists with national and international reputations, as well as the annual faculty and juried student exhibits. Student groups such as the Art Agency promote interest in contemporary visual arts.

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

# Campus Resources

## Academic Resources

### Academic Advising

The Office of Academic Advising offers students the information they need to make informed educational decisions. Advisers are available to help students select majors and minors, choose courses and chart academic plans. They also refer students to faculty advisers in their areas of interest.

### Computer Facilities

The University's Computer Center gives students free access to a mainframe system, Zenith MS-DOS and Apple-compatible microcomputers and a multitude of software options. Terminals are open to all students regardless of major. Many freshmen and sophomores enroll in computer science and statistics courses to prepare for computer use and research in their upper-level courses. Students in all subject areas have access to word-processing software that can be used in completing assignments and papers.

### Library

The library is a valued resource for UW-Green Bay students, faculty and staff and the entire Northeastern Wisconsin community. It houses a quarter-million books and bound periodicals, 400,000 state, federal and international documents, 45,000 maps and 2,500 sound recordings. In addition, the library has 1,400 periodical subscriptions and extensive collections of microforms, films, videotapes, multimedia kits and other materials.

A computerized library catalog helps users find materials for study and research, and an active interlibrary loan department provides access to the resources of other community and college libraries.

Many UW-Green Bay students use the library daily. Study tables, lounges and private and group study rooms are available for student use, as are photocopiers and microcomputers.

### Media Facilities

Students have access to video and audio tapes, slides, film strips and other materials through the Media Services center. Equipment may be checked out or used on the premises.

Individuals preparing slide-tape presentations or other relatively complex media projects can visit the University's Educational Communications office. It provides audio, photographic and graphic design services.

UW-Green Bay students gain practical media experience by working for campus radio station WGBW-FM or the Center for Television Production, an on-campus facility which produces video programs for public television and instructional use.

### Skills Improvement

Students who need to improve their reading, composition, mathematics or study skills find assistance through the Academic Support Program. The program is described in more detail in the academic programs section of this catalog.

## Student Services

### Adult Student Counseling

The Adult Services Office provides assistance and counseling for the growing number of UW-Green Bay students who are beyond the "traditional" college ages of 18 to 24. Staff members will help adult students enroll in the University and become acquainted with its people, programs, and resources. They can also help students construct programs from the night courses offered on campus. Seminars and support groups are sources of useful hints and encouragement for older students.

### Child Care

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

### Counseling

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

Staff members encourage students to work through problems and to develop coping skills that will stay with them throughout their lives. Discussion groups and workshops focus on assertiveness, communication skills, eating disorders, personal growth, stress, and other topics.

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

### Dean of Students

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

### Ecumenical Center

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

### Employment

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

### Handicapped Student Services

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

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

The University's concourse system provides barrier-free access for persons with physical disabilities. 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.

### Health Care

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

### Information

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

### Intercultural Activities

The American Intercultural Center exists to meet the needs of American Indian, Black and Hispanic students at UW-Green Bay, and to promote intercultural awareness on campus and in the community. Art exhibits, lectures, films and social events are sponsored by the center, which serves as the home for three student organizations: the Black Student Union, the American Indian Council and the Hispanic Programs Committee. The center's staff members are involved with recruitment and retention of students as well as programming and counseling.

### International Student Programs

Eighty students from at least 20 foreign countries attend UW-Green Bay to earn degrees and gain firsthand knowledge of the United States. Activities and events at the International Student Center offer American students and those from other countries the chance to share their cultures and ideas. The center's lounge is a meeting place for relaxation, conversation and reading. Information on study-abroad programs is available here.

### Placement, Career Planning

Finding a job after graduation is a systematic process—and it can start as early as a student's first semester on campus with the aid of the Placement and Career Development Office.

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

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

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

### Security

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

### Veterans' Services

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

### Women's Programs

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

# Special Learning Opportunities

## Exchange Programs, Study Tours

### International Exchange

UW-Green Bay students and faculty study far from campus through international exchange programs with Linköping University in Sweden, Aalborg University in Denmark, the University of Kassel in West Germany, the University of Yucatan in Mexico and Beijing Normal University in the People's Republic of China. Green Bay students can study at the Sorbonne, University of Paris, through the Urban Corridor Consortium of the four UW campuses in eastern Wisconsin. Students interested in international exchange should contact the Office of the Vice Chancellor for Academic Affairs.

### National Student Exchange

UW-Green Bay is one of only three UW System schools participating in National Student Exchange, a program which enables students to study for a semester or a year at one of 73 colleges and universities in 36 states. Students from UW-Green Bay have recently been enrolled at institutions including the University of South Carolina, the University of Massachusetts-Boston, the University of Northern Colorado, the University of Hawaii-Manoa and the University of New Mexico.

The program serves students who want to experience college life in another region of the country, or who are motivated by specific needs: the opportunity for an earth science student to spend a semester in a place that is geologically different from Wisconsin, for example, or to study with particular faculty members at another university, or to take advantage of special courses or programs. Participants remain within the framework of the UW-Green Bay academic plan and pay fees and tuition at UW-Green Bay rather than higher, non-resident costs at the host institution. Students should contact the Individualized Learning Programs Office for more information.

### Study Tours

Students at UW-Green Bay can add variety and depth to their education through study tours abroad or to other parts of the United States. University-sponsored trips, usually offered during January interim, enable students to learn and earn credits in locations including England, Germany, Austria, Mexico, and Chicago. Study tours offer a way to apply or investigate in the field what has been learned in the classroom and earn university credit.

## Retroactive Credit

### 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 course with a grade of "C" or better. In mathematics, a student may receive four credits for Mathematics 202 by earning a "C" or better in Mathematics 203.

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

### Credit by Examination

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

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

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

### Credit for Prior Learning

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

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



## Individualized Learning

### Extended Degree Program

The Bachelor of General Studies degree, offered through the Extended Degree program, is tailored for the working adult who is unable to participate in full-time, on-campus study. The degree plan incorporates elements of problem solving, communications, a broad range of disciplines, and lifelong learning. It is primarily accomplished through independent study; limited campus-based activities such as weekend seminars and individual appointments with faculty members are its cornerstones. Credit toward graduation may also be earned on campus, transferred from other accredited institutions, earned through examination, or through approved on-the-job training programs, military training programs, or a prior learning portfolio.

### Independent Study, Student-Initiated Courses

Independent study allows a student to earn credit for exploring a special interest in depth outside of a classroom setting. To arrange for independent study, a student prepares a proposal that includes a statement of objectives and a list of readings, projects or research that will help meet those objectives. The independent study is overseen by a faculty member.

Students can propose course offerings if the topic is not covered in any existing UW-Green Bay course. If the proposal is approved, the course will be offered as an experimental course and reviewed to determine if it should become part of the permanent curriculum. The opportunity also exists for students to develop and lead courses under the sponsorship of an academic unit with the guidance of a faculty adviser.

### Internships

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

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

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

### Noncredit Study

Noncredit courses, workshops, conferences, and seminars, planned by the Office of Outreach and University of Wisconsin-Extension, are scheduled around the year on campus and in several locations in the community. Offerings in a typical semester range from dance and exercise classes to the visual arts, philosophy, computer science, applied music instruction, financial planning, bird watching, and foreign languages. Courses are usually planned for one to six sessions, meeting weekly in daytime or evening hours. Outreach also sponsors an annual series of dinner-lectures highlighting the cuisine and cultures of other lands.

Noncredit programs and enrollment procedures are described in Lifelong Learning catalogs published every fall, spring and summer.

Conferences and workshops organized by the Office of Business Outreach are oriented to the needs of regional business and industry, but are also open to students. Topics of the short courses include management techniques, labor relations, business law, finance, and communications skills.

### 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 existing majors. It is an alternative which may be planned around any theme consistent with the University's commitment to a broadly based liberal arts education with an emphasis on problem solving. The personal major is described in more detail in the academic programs section of this book.

### Research

Many UW-Green Bay students gain valuable laboratory and field experience by working with faculty members who are engaged in research. Recent or ongoing projects have seen students study groundwater quality in Door County, draft plans for a marina in Oconto, help analyze the recycling of papermaking byproducts, study internal business communication and survey regional retail and consumer patterns.

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

### Senior Honors

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

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

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

Graduating with honors is described in more detail in the general academic information section of this catalog.

# Admission

## Admission for Degree-Seeking Students

Study at the university level requires that students be competent in a number of academic skills. Such preparation is best achieved by a rigorous high school program. For UW-Green Bay staff to assess an applicant's preparedness to successfully complete college level work, standards have been established for students seeking admission.

Although the university has strong admission requirements, it is guided by a philosophy of "personalized admission." Consideration is given for experiences since high school, special circumstances, and socio-economic background. For these reasons, students not meeting the standard admission policy are reviewed on an individual basis. The review committee examines each student's record and determines whether or not admission may be granted on a fully matriculated or probationary and conditional basis.

### Enrollment Limitations

Admission requirements described here may be changed if necessary in order to meet UW System-mandated enrollment "caps."

## Requirements for New Freshmen

(Effective February 1, 1989)

To qualify for admission to UWGB, a student should:

- Be a graduate of a recognized high school or its equivalent (as defined by University of Wisconsin Policy);
- Submit official ACT scores;
- Rank in the upper half of the graduating class;
- Present 16 units of college preparatory or academic coursework.

Unit distribution must be:

English	4 units
(3 from composition and literature)	
Social Studies	3 units
Mathematics	2 units
(algebra and above)	
Science	2 units
Academic Electives*	3 units
Other Electives**	2 units
TOTAL	16 units

\*From the areas of English, speech, advanced math, social studies, science and foreign language.

\*\*Additional units in the above areas and/or in the arts, computer science, or other academic areas are required.

International students who cannot provide class rank or ACT scores may be admitted on the basis of high school graduation and academic work that equates to at least a "B" average and demonstrates English proficiency shown by earning a TOEFL score of at least 500.

### Other Ways to Qualify

UW-Green Bay also accepts its obligation to respond to the educational needs of special groups of students. Specific requirements for such groups are used by the admission review committee to determine whether admission may be offered or denied.

Students lacking rank in class or academic unit requirements. The admissions review committee will consider such applicants based on:

- An ACT composite score of 20 or greater; or
- A score above 50th percentile on the School and College Ability Test (SCAT) and the California Achievement Test—Reading, and demonstration of acceptable writing ability; or
- Successful completion of additional coursework at another institution, whether or not for credit, which indicates either that deficiencies have been corrected or that the student has demonstrated ability to succeed in college; or
- Consideration for returning adults, minorities, veterans, or other individuals who, on the basis of testing, experience, or other generally accepted indicators are judged by the admissions review committee to have a reasonable chance of being successful at UW-Green Bay.

**GED applicants.** The admissions review committee will consider students who have completed the tests for the General Education Development (GED) and are two years beyond their high school graduation date based on:

- Review of high school work completed.
- A combined GED score of at least 265 with no individual test below 50th percentile.
- An acceptable admission test score of at least 50th percentile on the School and College Ability Tests (SCAT) and the California Achievement Test—Reading, and demonstration of acceptable writing ability, or
- An ACT composite score of 20 or greater.

Students with individual scores below 50th percentile may be considered if additional coursework has been taken to improve ability in that area. Since a GED test may be taken only once if a passing score is earned, successful additional work may be presented as evidence of ability.

**Educational opportunity program.** This program provides extra academic assistance to a limited number of specially selected handicapped or low-income or first generation college students who have the potential to succeed in college but who lack some of the necessary background knowledge or skills. Assistance is provided through orientation, personal advising, academic skills development courses, and tutoring. The admissions review committee will consider for admission applicants who:

- Meet general high school graduation requirements or their equivalent.
- Take the campus admission tests and score above the 40th percentile on the SCAT and California Reading, and demonstrate basic readiness for college work.
- Meet EOP participation guidelines and be recommended for the program after interviews with EOP staff.

**Green Bay Correctional Institute program.** The admissions review committee will consider for admission applicants who are:

- High school graduates or equivalent.
- Receive satisfactory score on admission tests (scoring above the 40th percentile on the SCAT and California Reading).
- Present recommendation of program coordinator.

Enrollment at UW-Green Bay while at GBCI does not provide for automatic continued enrollment when released. Students must reapply as regular matriculants.

## Admission Status

The admission review committee will determine the appropriate admission status—regular or probationary/conditional—for each applicant.

## Transfer Admission Requirements

Students who have attended college after high school graduation should fulfill the following requirements:

- Transfer and advanced standing students should have a 2.0 grade point average (4.0 scale) on at least 15 credits of transferable coursework. (See definition of transferable coursework in section on information for transfer students.) A maximum of four semester credits in physical education may be used in calculating the grade point average for determining admissibility.
- Students with less than a 2.0 grade point average on transferable coursework may be considered for admission if they would have met UWGB freshman admission requirements, and if they would not have attained a "drop" action had they earned the same academic record at UWGB.

## Application Procedures for Degree-Seeking Students

• Degree-seeking students applying to UWGB should submit the University of Wisconsin undergraduate application. This application is available through counseling offices of Wisconsin high schools, from the Office of Admissions at UWGB, or any of the UW System campuses.

### • Transcripts:

A new freshman must request that a copy of the high school transcript be sent directly to the Office of Admissions at UWGB. Many students are admitted to the university on the basis of grades earned through the junior year in high school, plus a listing of subjects carried in the senior year, and therefore may receive a permit to register before high school graduation. The university must receive a copy of the transcript when such students graduate.

Others may be asked to provide grades through the senior year to assist the admissions review committee in making the best possible evaluation of their potential for achievement.

Students who hold GED diplomas must have an official score report for the GED and a partial transcript from any regular high school attended sent directly to UWGB by the agency or school.

• Transfer students must request that official transcripts be sent directly to UWGB from all schools attended since high school. Transfer students with fewer than 15 transferable credits or less than a 2.0 grade point average must also have a high school transcript sent directly to UWGB.

• All students who have attended nursing, business, and vocational and technical schools must submit those transcripts as well. (Transcripts from training schools attended as part of military service are not required.) Students must submit the records whether or not the work was completed and regardless of their desire to request UWGB credit for the courses. Credits earned in a noncollege parallel program at a vocational-technical college are not transferable to UWGB. Students who took general education and/or liberal arts courses from such institutions are encouraged to seek credit through examination at UWGB.

• Application dates for admission to UWGB are:

### Fall Semester:

October 1 through August 10  
(Earlier deadlines may apply if enrollment limits are reached.)

### January Interim:

October 1 through December 15

### Spring Semester:

October 1 through January 10

### Summer Session:

October 1 through May 30

• A non-refundable \$10 application fee is required of anyone applying for admission as a new freshman or as a transfer student from an institution outside the University of Wisconsin System. Applicants previously enrolled at a University of Wisconsin System school as nondegree-seeking students must also pay the application fee.

## ACT Scores

Students applying for admission must take the American College Test (ACT) and have official score reports sent to UWGB. These scores and other test information are used by advisers to help students with academic and career planning and placement in courses appropriate to their level of preparation. An adequate score on the ACT English test will satisfy the university's writing requirement.

New freshmen must submit ACT scores before they may enroll for classes. Transfer students who have not completed prior college-level courses in mathematics and English composition must also submit scores. Transfer students who have completed such courses, re-entering students who completed UWGB courses in math and English, and special students are exempt from the ACT requirement.

## Information for Transfer Students

**Credit evaluations.** Transfer students will receive an official credit evaluation to determine what courses and credits can be accepted to fulfill UWGB requirements. The accreditation status of the previous institution or institutions attended and the quality of a student's achievement are factors for determining course and credit transferability.

Credit evaluations will be started after all transcripts have arrived at UWGB and the student has been admitted. If a student is enrolled at another college when accepted at UWGB, a tentative evaluation will be completed and sent; the final evaluation will be held until a final transcript showing grades from the last term is received. Then the evaluation will be completed and mailed directly to the student.

A student who has taken independent study courses at other institutions must supply titles and descriptions for these courses when applying to UWGB so that these can be evaluated.

**General-education requirements.** A student who transfers to UWGB must satisfy general education requirements by:

- meeting the breadth requirements of nine credits each in the humanities and fine arts, natural sciences and mathematics, and social sciences. This must include fulfilling at least one six-credit sequence. Courses taken at other colleges that are appropriate to these three domains of knowledge will be identified on both the tentative and final evaluations.
- fulfilling the other-culture requirement by taking one three-credit course from an approved list or through another approved other-culture experience.
- completing one three-credit senior seminar course.

Transfer students will be informed in writing by the Registrar's Office of their exact standing with respect to fulfilling general education requirements as soon as an evaluation of their completed credits is concluded. Transfer students should read the description of these requirements in the section of this catalog on general academic information.

**Transferable coursework.** Students coming to UWGB may transfer up to 72 credits of coursework. In order to be credited as transferable coursework these criteria must be met:

- The course must be compatible with the curriculum offerings at UWGB. For example, courses such as typing and shorthand may be appropriate at a university which prepares teachers for high school business programs, but courses such as this do not fall within the scope of the UWGB curriculum.
- The course must be successfully completed at a regionally accredited college or university.
- Each course must have a "D" grade or better in order to receive degree credit.

## Special Students

(Students Not Seeking Degrees)

Students who want to take selected courses for credit but do not have the immediate intention of earning a degree at UWGB may enroll as special students. A special student is identified as a nonmatriculated student but he or she may earn regular credit which is permanently recorded for possible future use. Special students should be prudent in their 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 aids, for which degree-seeking students may be eligible, are not available to special students. Special students are subject to all normal academic regulations and Regent's policies.

Normally, a student must have graduated from high school at least two years prior to the semester for which he or she is seeking special student admission. Exceptions are described in the categories below.

A student who has been denied degree-seeking status for a given semester at UWGB may not enroll as a special student for that semester. Also, a student not in good standing at another college may be denied special student status at UWGB.

Special student categories include:

**Special (SPL):** Students who have graduated from high school or earned a General Educational Development (GED) diploma at least two years prior to the term they wish to enroll at UWGB.

**Post Baccalaureate (PBS) or Graduate (GSP) Special:** Students who have already earned a baccalaureate degree (or higher) and are enrolled in undergraduate-level (PBS) or graduate-level (GSP) coursework but are not pursuing a degree at UWGB.

**High School (HSO, HSP, HSS) Special:** Superior high school students may enroll for UWGB coursework while attending high school or during the summer.

High school specials must normally be seniors or juniors in high school and must rank in the upper half of their respective classes. Enrollment in UWGB courses requires the approval of the high school. Credits earned by students before graduation from high school will be held in escrow.

**Summer Session Only (SSO):** Students enrolled at another college or university and current year high school graduates who have been admitted to another college or university for the fall session may apply for Summer Session Only admission. Such admission carries no commitment for permission to register for the regular UWGB academic year. Students from other colleges or universities must be eligible to continue work at their respective institutions and are responsible for determining if their institutions will accept credits earned at UWGB.

## Application Procedures for Special Students

• Nondegree-seeking students applying for admission should submit a Special Student Application, available from the Office of Admissions at UWGB. Usually this is the only information required, however some individuals may be asked to submit additional records based upon individual circumstances.

• High School Special students must submit the following materials in addition to the application: A. an official high school transcript, B. the high school special student statement form, and C. the principal/counselor recommendation form. (Forms "B" and "C" are available from the Office of Admissions.)

• Summer Session Only students must submit an official high school transcript if they are current-year high school graduates.

• No application fee is required of special students.

## Other Admission Information

**Adult Students and Veterans**  
UWGB provides many opportunities for adults who have never pursued higher education and for those who interrupted their education to work, raise a family, or fulfill a military obligation. These opportunities can sometimes be provided for adults who do not meet all of the standard admission requirements. Prospective adult students are urged to write or call the UWGB Admissions Office or the Adult Services Office.

### Teaching Certification

Students who expect to be certified to teach should review the section on education programs elsewhere in this catalog. The State of Wisconsin requires that high school transcripts be on file for all students who are certified 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 certification for the first time should apply as a degree-seeking student. Only students who are renewing certification 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.

### Non-Native English Speakers

Applicants whose native language is not English may be required to submit proof of their English language proficiency; this normally consists of a TOEFL (Test of English as a Foreign Language) score. Although the university prefers the student submit the TOEFL score, Michigan Test of English Language proficiency scores will be accepted with prior approval of the international student services coordinator. The Wisconsin Assessment Test (WAT) score can also be submitted. The test is administered by the International Center. Admitted students must also take the university's English-as-a-second-language proficiency test prior to their registration and abide by those placement results. Information about these tests is available from the coordinator of International Student Services.

### International Student Admission

UWGB enrolls students from more than 30 countries and actively seeks the cultural diversification that international students contribute to the campus.

Admission for international students is based upon scholastic achievement, ability to use the English language, and ability to finance an education.

An international student must have a recognized certificate of completion from a good secondary school and proof of being a very good student. Since all UWGB coursework is conducted in English, an applicant from abroad must take the Test of English as a Foreign Language (TOEFL), administered by the Educational Testing Service, Princeton, New Jersey. The test is given several times each year in many major cities of the world. Information about it is usually available at American embassies and consulates, offices of the U.S. Information Service, U.S. educational commissions and foundations abroad, and other locations.

International students must be prepared to finance their educations. Only a limited number of partial tuition remission scholarships exist. In addition, it is difficult to gain permission from the U.S. Immigration and Naturalization Service to work off campus, so international students should not anticipate financing an education by income from employment.

UWGB has an office for international student services which notifies international applicants when they have been accepted and issues the necessary Certificate of Eligibility (U.S. Department of Justice, Immigration and Naturalization Service, Form I-20) to admitted students.

Further information on international student admission is available in the brochure, *Information for International Students*.

## Admissions Appeals

A student who has been denied admission may appeal that decision by appearing in person before the Admission Appeals Committee. This committee meets approximately two weeks before the beginning of each semester. Students may contact the Office of Admissions for exact dates and times.

## Graduate Program Admission

The basic policy of personalized admission applies to the graduate as well as the undergraduate program. The applicant's total experience is always considered. Entry as a provisional student is possible for those not meeting the minimum requirements. Evidence of success as a provisional student will gain admission to degree candidate status. Minimum requirements for entry into the degree program are:

- A baccalaureate degree.
- A 3.0 grade point in the major field of study, measured on a 4.0 scale.

Candidates for entry must submit:

- A completed application form, including a statement of the student's intended area of study and educational objectives.
- A transcript of grades for all previous undergraduate and graduate work.
- Three letters of recommendation.
- An application fee of \$20.
- Non-native English speakers must submit a TOEFL score.
- International applicants must submit proof of financial support.

The graduate program is summarized in the section of this catalog on academic programs. A separate catalog is available describing the program in detail.

# Costs

## Tuition and Fees

The university publishes a fee schedule each semester. It is available from the Office of the Registrar. Fees vary depending upon the student's state residence, undergraduate or graduate classification, and full-time or part-time enrollment. In addition to general tuition and fees, students are assessed special course fees for certain classes, particularly for studio art courses. The Board of Regents reserves the right to change tuition and fees without notice.

When they register, students should obtain an up-to-date fee information schedule which specifies fee payment dates and procedures; costs; and refund and fee assessment dates.

The following fee information applied to spring semester 1988. It can be useful in estimating average costs of attending the university on a semester basis. The new fee schedule printed each semester shows actual costs.

A part-time undergraduate student registering for 11 credits or fewer pays on a per credit basis. Per credit payment applies to a part-time graduate student registering for eight credits or fewer. In 1987-88, Wisconsin undergraduate students paid \$64.40 and graduate students paid \$110.25 per credit. Nonresident undergraduate students paid \$184.40 and graduate students paid \$311.75 per credit for part-time enrollment. Minnesota undergraduate students paid \$67.90 per credit and graduate level students paid \$95.50 per credit.

All fees and tuition are due at the time of registration and for regular semesters must be paid on or before the Friday of the first week of classes. Late payment penalties go into effect after that date. Information about fees, including late payment penalties and the refund schedule for official withdrawal or reduction of credits is contained in the *Timetable*.

## January Interim

Students enrolling for the January interim do not pay additional fees if they are registered full time in the preceding or following semester. If enrolled for less than full time, fees are assessed at the regular per-credit rate.

## Summer Session Fees

Fees for summer session are based on the number of credits elected and are subject to change without notice by the Board of Regents. Summer fee schedules are announced in the *Timetable* or a separate fee information sheet.

Costs Per Semester	Undergraduate Student	Graduate Student
<b>Tuition and Fees</b> Spring Semester, 1988		
Wisconsin Resident	\$ 760.50	\$ 987.00
Non-Resident	\$2,201.00	\$2,802.00
Minnesota Resident	\$ 807.00	\$ 858.00
<b>Books and Supplies</b> (Average)	\$ 190.00	\$ 190.00
<b>On Campus Housing</b> (double occupancy)	\$ 550.00	\$ 550.00
<b>On Campus Food Plan</b>		
Plan A	\$ 450.00	\$ 450.00
Plan B	\$ 625.00	\$ 625.00

**Total undergraduate cost per semester for a Wisconsin resident living on campus: \$1,950 (food plan A)**

Note: Students will need additional funds for transportation, clothing, personal, medical and miscellaneous expenses. Students living at home with parents and students living off campus will have variable costs which are considered in establishing the financial aid budgets used to determine need.

# Financial Aids

## Objectives

The primary objective of the Student Financial Aid Office is to assure that no academically qualified student is denied an education for lack of financial resources. Financial assistance in a variety of forms is available to students who have financial need. By completing the necessary applications, students are automatically considered for scholarships, grants, loans, or work-study for which they may qualify. The Financial Aid Office can provide detailed information about aid programs and scholarships.

## Eligibility

In order to qualify for most aid programs funded by the federal or state government, a student must:

- Be a U.S. citizen or an eligible non-citizen (permanent resident).
- Be accepted for admission and enroll in a program leading to a degree.
- Show financial need as determined by the institution.
- Have registered with Selective Service, if required to do so.
- Not be in default on a previous student loan nor owe a refund on a previous student aid grant.
- Be classified as a resident of Wisconsin to be eligible for the Wisconsin state programs.
- Use funds only for education-related expenses.
- Notify the institution and lenders of any change of address.
- Maintain satisfactory progress toward a degree as defined by the institution.

## Application Procedures

Students should apply for financial aid as early as possible prior to their semester of enrollment. Students applying for financial aid must have been admitted or be enrolled on at least a half-time basis (6 credits undergraduate; 4 credits graduate) before receiving a financial aid award. Following are specific application procedures.

- New freshmen apply for admission to the university and indicate desire to be considered for financial aid.
- Transfer students complete the Admissions and Financial Assistance Application and be admitted to the university.
- All students obtain a needs analysis document—either a Financial Aid Form (FAF) or a Family Financial Statement (FFS)—from the high school counselor or the Financial Aid Office. Complete and submit the form as soon as possible to the appropriate processor as instructed on the form.
- Transfer students have financial aid transcripts sent from all previously attended institutions whether or not they received assistance at that institution.
- All students submit all copies of the Student Aid Report received from the Pell Grant processor to the Financial Aid Office.
- Respond quickly and accurately to all requests for additional information.

Additional forms may be requested of certain students such as re-entry applicants. The necessary forms will be sent.

Students who apply are considered for all types of financial aid for which they are eligible. An application for aid may be filed before the university issues a permit to register, but a student must be admitted before UWGB can make an offer of aid.

**Determination of need.** To help judge student need and award aid fairly, the university asks self-supporting students and parents of dependent students to fill out a confidential statement. This form is analyzed by one of the processing agencies and then reviewed by a counselor in the Financial Aid Office. On the basis of this financial statement, the university can determine the difference between what the parent and student can provide and what the cost of education will be.

As part of the determination of financial need, students are expected to commit a portion of their assets toward their education expenses. In addition, students are expected to contribute through earnings.

**Aid awards.** Rarely can students meet all their expenses through one type of financial aid. Also, few loan or grant programs for undergraduate students can pay the total educational bill. This means that assistance generally must come from a combination of sources. A student may be selected to receive a loan and grant, a scholarship and a loan, a loan and a job, or some other combination. A student need not accept the whole package to receive part of it.

Awards are based on the total cost of supporting a student for an academic year. Assistance given beyond costs for fees and books should go toward meeting board and miscellaneous expenses.

Aid awards are based on the cost of full-time enrollment (12 credits for undergraduates; 9 credits for graduates) unless informed differently by the student.

**Citizenship and residency.** All aid programs require U.S. citizenship or permanent residency with the exception of the International Student Scholarship. To be eligible for Wisconsin grants students must be residents of the State of Wisconsin under Section 36.27 of the Wisconsin Statutes. Students are classified as residents or nonresidents at the time of admission to the university by the Office of the Registrar.

**Standards of academic progress.** The individual student is responsible for being aware of academic standards of progress required in order to continue eligibility for financial aid. Eligibility is based upon the total number of semesters for which the student has been enrolled and on successfully completing a minimum number of credit hours within a given time span. A complete description of the university's policy and tables showing the number of credits required to continue eligibility for aid are located in the appendix to this catalog.

**Refund and repayment.** If enrollment status changes during the refund and repayment period, it is the student's responsibility to repay any funds he or she receives which cannot reasonably be attributed to meeting educational costs at UWGB. The amount of repayment is based upon Federal Department of Education regulations (paragraph 668.21 of the federal financial aid regulations). Complete refund/repayment policy is in the appendix of this catalog.

**Deadlines.** Application priority date for all financial aid is April 15. Students whose aid files are complete by the priority date are generally notified between May 1 and June 15 of their aid award or denial.

The university cannot guarantee grant, loan, or job assistance to those applying after the priority date. Late applications will be accepted and awards will be made as long as funds are available.

Late applicants (those applications not received prior to six weeks before classes begin) should be prepared to pay all of their initial expenses from their own resources. *Late payment assessments will not be waived for late applicants.*

## Types of Financial Aid

### Grants

**Pell Grant.** Federally funded grants to needy students range from \$200 to \$2,300 (determined by a federal schedule). Students who wish to apply for any financial aid are required to apply for the Pell Grant by checking a section of the FAF or FFS or completing the Federal Financial Aid Application.

**Supplemental Educational Opportunity Grants (SEOG).** Federally funded grants to students who have exceptional financial need. SEOG awards may not exceed \$4,000 in one year of undergraduate study. The actual amount a student may receive is determined by need, funding available, and university policy.

**Wisconsin Higher Education Grants.** State-appropriated grants awarded by the Higher Education Aids Board. Awards range from \$250 to \$1,800. Students may receive these funds for a maximum of 10 semesters.

**Wisconsin Indian Student Assistance Grant.** Grants of up to \$1,800 per year awarded to students of at least one-fourth Native American descent who are residents of Wisconsin. Amount of the grant is based upon financial need. Additional funds on a matching basis are available to most Indian students from the U.S. Bureau of Indian Affairs or individual tribes. The grant may be received for up to five years of study.

**Lawton Grants.** Available to sophomore, junior, or senior Black, Hispanic, Southeast Asian, or Native American students, with an annual maximum of \$2,000 and a cumulative maximum of \$8,000. The award is based on need and is intended to help reduce student indebtedness. The minority affairs coordinator assists in identifying eligible students.

**Wisconsin Talent Incentive Grants.** Need-based awards determined by the Wisconsin Educational Opportunity Center which may be used for up to two years by students who are considered non-traditional or disadvantaged. Students must be clients of the Wisconsin Educational Opportunity Center.

**Minnesota-Wisconsin Compact Fee Remission.** Nonresident fee remission for any Minnesota resident attending a Wisconsin public university. Students from Minnesota need pay only a special fee amount. Students must apply directly to the Minnesota Higher Education Coordinating Commission, Suite 901, Capitol Square, 500 Cedar Street, St. Paul, MN 55101.

**Vietnam Era Veterans Grant.** Made available to eligible Wisconsin veterans who served in the armed forces between August 5, 1964, and July 1, 1975. The yearly grant of up to \$200 for single and \$400 for married veterans is determined by a special application form.

**Vocational Rehabilitation Grant.** Aid covering tuition and books provided to students with a disability as determined by the Department of Vocational Rehabilitation. The amount is included with other financial aid. Students with disabilities should contact their regional Department of Vocational Rehabilitation.

### Loans

**Perkins Loan.** Loans may be made up to \$9,000 cumulative maximum as an undergraduate student. Interest is currently five percent and both interest and principle payments are deferred until six months after the student leaves school.

A first-time borrower after July 1, 1987, has a grace period of nine months after graduation, leaving school, or attending less than half time. Current borrowers have a six-month grace period before loan repayment begins.

Cancellation of all or a portion of the principle borrowed is available for teachers of the handicapped and mentally retarded, teachers employed in schools in low-income areas, and preschool teachers in Head Start programs. Deferments of up to three years may be obtained while serving as a Peace Corps/Vista volunteer or on active duty in the Armed Forces of the United States. Perkins Loan program regulations may be changed by Congress.

**Guaranteed Student Loans.** Students may borrow under this program from participating private lending institutions, such as banks, savings and loan associations, and credit unions. The program is administered jointly by the private lending institutions, the student's home state guarantee agency, and the university.

Depending upon the total amount borrowed, the student has up to 10 years to repay the loan at a present eight percent interest rate, after he or she has permanently left school. Undergraduate freshmen and sophomores may borrow up to \$2,625 per fiscal year, juniors and seniors may borrow up to \$4,000 per fiscal year for a total maximum accumulation of \$17,250. Graduate students may borrow up to \$7,500 per fiscal year for a total aggregate amount of \$54,750.

**PLUS/SLS Loans.** PLUS loans are for parent borrowers; SLS's are for students. Both loans provide additional funds for educational expenses. The interest rate can change yearly and it is best to check with your lender. Like a GSL, these loans may be made by a lender such as a bank, credit union, or savings and loan association.

PLUS enables parents to borrow up to \$4,000 per year, to a total of \$20,000, for each child who is enrolled at least half-time and is a dependent student. Under SLS, graduate students and independent undergraduates may borrow up to \$4,000 per year, to a total of \$20,000. This amount is in addition to the GSL limits.

### Loan Counseling

Counseling on the various loan programs is available to students at any time. If a student actually borrows under Perkins or GSL, a minimum of one loan counseling session or interview is required before completing their course of study or at the time of their departure from the university.

Sample schedules for loan repayment are available in the financial aid award booklet and the student loan counseling booklet. Both are available at the Financial Aid Office.

Before a student accepts an offered loan, it should be reviewed. Any or all of the amount offered may be accepted. Students should not accept all of a loan if it is not needed. If a job has been offered, students are urged to accept it. Often a job is the best way to put what otherwise might be "waste time" to good use and debt may be kept to a minimum.



## Student Employment

Enrolled students may use the employment services of the office of Student Financial Aid. Students may apply any time during the year but they cannot be referred to job openings until they have registered for classes. On-campus student employment openings are generally categorized under two programs: college work-study and regular employment. The university also offers assistance in locating part-time employment off campus through the Job Location and Development Program.

**College work-study.** As a part of the financial aid award, work-study is based upon financial need. Wages are paid partly by the employer and partly by the federal government. Total earnings are limited to the amount of financial need. Once the student earns the allowable amount, employment must cease or be switched to regular part-time employment.

**Regular employment.** Students may apply and be employed on campus as jobs are available. However, students whose financial need has been met by aid programs may not earn additional funds on campus without an adjustment to their financial aid award. Off-campus jobs are listed on the bulletin board outside the Financial Aid Office.

**Job Location and Development (JLD).** The JLD program solicits and posts part-time job opportunities for students from off-campus employers. Information about the jobs is obtained in the Student Employment Office.

The rate of pay for student jobs on and off campus generally ranges from \$3.35 to \$10 an hour. The exact rate depends on the complexity of the job. The chart below shows possible expected earnings (before taxes and other deductions) in a school year of about 34 weeks:

Hours worked weekly at \$3.35 per hour:

10 hours	\$1,139
12 hours	\$1,366
15 hours	\$1,708

## Other Programs

**Veterans Educational Assistance.** The primary source of information for programs administered by the Veterans Administration or the Wisconsin Department of Veterans' Affairs is the veterans' service officer of the county from which the veteran departed for service, or where he/she now claims residence. The veteran may also seek assistance from the veterans' officer on campus.

Veterans should submit the certificate of eligibility to the Office of the Registrar for enrollment certification and transmittal to the Veterans Administration regional office. A special section on the final registration form must be completed to be certified for benefits for the ensuing term.

**War Orphans Educational Assistance.** The War Orphans Educational Assistance Act provides educational benefits for children of permanently disabled or deceased veterans. The veteran must have died or become disabled as a result of service in the Armed Forces during the Spanish-American War, World War I, or since September 15, 1950.

**Financial aid for graduate students.** Financial aid in the form of teaching assistantships, which carry a stipend of about \$6,000 and provide eligibility for waiver of out-of-state tuition, are available to graduate students by applying directly to the Office of Graduate Studies. Work-study, regular employment, and student loans are also available to graduate students by means of the regular financial aid application process.

**Advanced Opportunity Grant.** The Advanced Opportunity Grant is available to graduate minority students. The amount of the grant varies and eligibility is determined by a prioritizing scale.

## Scholarships

Scholarships for students who attend UWGB come from many sources and recognize a variety of talents, achievements, interests, and needs. Some scholarships are available to new students, some are available to continuing students, and others may be awarded to students in both categories. Amounts of the scholarship awards vary. Students who want specific information about scholarships should request a copy of the scholarship handbook. Following is a list of UWGB scholarships by name:

Alumni Association Scholarship

Arthur Atkisson Memorial Scholarship

G. Harvey Benham Memorial Scholarship

Frank Byrne Memorial Fund

James E. Casperson Memorial Scholarship

David Christenson Memorial Fund

Victor Crambeau Education Fund

Coryl Crandall Memorial Scholarship

Thomas E. Daniels Memorial Scholarship

Albert Einstein-Mahatma Gandhi Scholarship

Founders Association Adult Student Scholarship

Founders Association Continuing Student Leadership and Academic Excellence Scholarships

Founders Association Leadership and Academic Excellence Scholarships

Friends of the Arts, Inc. Scholarships

German-American Society Scholarship

Bidwell K. Gage Memorial Scholarships

Lucy Pekham Gfroerer Trust

H.F. Hagemester Jr. Memorial Art Scholarship

Hugh C. and Mary Higley Scholarship

Johnson Foundation Research Grants

Herbert Fisk Johnson Awards for Excellence

Lucy Krehma Education Scholarship

Althea Steele Lederer Memorial Scholarships

Sidney and Ruth Morris Scholarship

Music Educators National Conference (MENC) Scholarship

Music Scholarships

William F. Prevetti Scholarship Fund

John M. Rose Scholarships

Rotary Free Enterprise Award

Walter and Gertrude Scherf Scholarships

Science and Mathematics Scholarships

Show/Jazz Choir Scholarships

Ralph R. Stein Memorial Scholarship

Theatre Scholarships

Oliver and Margaret Trampe Scholarships

University League Scholarship

Byron L. Walter Family Scholarship

Wisconsin Public Service Corp. Associated Kellogg Bank Business Scholarships

Wisconsin Rural Rehabilitation Corporation Scholarship

Women in Business Scholarship

# General Academic Information

## Degrees Offered

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

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

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

## Grading System

Grade point averages are determined on a 4.0 basis. Students with a cumulative 2.0 grade point average ("C" average) or better are in good standing if they are fulfilling standards of progress requirements. Those falling below a 2.0 average or failing to meet standards of progress are placed on probation. The "pass" grade of courses taken on a pass-no credit basis does not count in grade point averages, nor do grades from other institutions. The grading system and academic standing are explained in greater detail beginning on page 169.

## Academic Regulations

Academic policies, rules, and regulations, and definitions of academic terms as they are used at UWGB are explained in greater detail in the academic rules and regulations beginning on page 169 of this book. They also are published in the *Timetable*, circulated each semester, January interim, and summer session by the Registrar's Office and in the *Academic Advising Handbook*. The *Timetable* also contains information about registration procedures, graduation requirements, listing of courses offered during that particular session, and other information. Each student receives a copy of the *Timetable* when he or she begins the registration process for a particular time period.

## Honors List

UWGB recognizes high scholastic achievement for full-time undergraduate students each semester by compiling an honors list based on a minimum of 12 credits taken for a regular grade. A minimum of a 3.50 grade point average indicates honors and a minimum of 3.75, high honors. A 4.0 average gains highest honors. These averages are computed every semester. Grades for the January interim period are combined with those of the fall semester.

## Graduating with Honors

The senior honors program identifies students who have achieved a consistently high level of excellence in the course of their academic careers. A student with a cumulative grade point average between 3.5 and 3.749 is graduated cum laude; 3.75 or higher magna cum laude or summa cum laude. All honors requirements are based on a minimum of 60 credits of regular graded work in residence at UWGB.

**Summa Cum Laude.** For the summa distinction, completion of a senior honors project is required. This project can be a thesis, special research, or creative work. It is normally completed in the semester preceding the last semester of the student's career and is related to his or her interdisciplinary major or minor. Eligible students should consult their interdisciplinary program adviser for more information.

**Distinction in the Major.** Some academic units offer students the opportunity to graduate with distinction in their majors. In order to earn distinction, students must design and complete some original project, with the advice and consent of the faculty in that unit. Distinction in the major is an honor separate from all-university honors described above.

Specific requirements for each type of honor are described in the academic rules and regulations.

## Academic Calendar

The university operates on a 4-1-4 semester plan, with the fall semester beginning in early September and ending in mid-December and the spring semester running from early February to the end of May. An interim period is held during January. An eight-week summer session also is offered, along with special summer workshops and other academic programs of varying lengths.

The 4-1-4 plan offers the opportunity to graduate in less than the standard four years, if desired. This can be done by taking full credit loads during each fall and spring semester, plus attending the interim period each January and the eight-week summer session. By attending each semester and January period, a student can easily graduate in three and one-half years. The student who prefers to graduate in four years can take slightly lighter credit loads during the regular semesters.

## January Interim Period

UWGB's 4-1-4 calendar includes January as a month in which students can concentrate on a single course in a traditional topic or take advantage of a course focused on a practical application.

January courses carry from one to four credits. No additional fees for continuing full-time students or for new full-time second semester registrants are charged. Any student registering only for January credit is charged the regular per credit fees. Students are expected to pay their own expenses for off-campus programs. Some financial aids may be available for these programs.

January course offerings include:

- developmental or extra elementary level work—especially in mathematics, English, and foreign languages, and particularly for freshmen and sophomores;
- independent study—individualized instruction, study or research (in courses numbered 298, 498, and 798) under faculty supervision;
- intensive on-campus courses—providing total immersion learning experiences, such as in foreign language speaking skills;
- internships—actual on-the-job experience for credit (in courses numbered 497);
- other-culture experiences—study or research in a community observation situation, or in national and international study tours;
- practica—small group programs (in courses numbered 195, 295, 395 and 495) focused on special problems and the practical application of skill and knowledge;
- special courses—innovative courses (numbered 283X, 483X and 795) designed by faculty and students around a variety of themes from interdisciplinary perspectives.

## Summer Session

UWGB's summer session has its own set of course offerings. In addition to regular academic courses, some programs are designed to meet the educational needs of special groups. These include special courses, workshops, short courses, clinics, conferences, and inservice programs. Both undergraduate and graduate courses are offered during the summer.

Summer programs serve the educational needs of UWGB's own students, undergraduates regularly enrolled at other institutions, selected high school students, post-graduate students, adults, professionals, and others who may not be conventionally thought of as "students." Qualified high school students may enroll in appropriate courses and leave their college credits "in escrow" for later use. Recent high school graduates may enroll as special students and, if their work is of sufficient quality, be considered for regular admission.

Summer session courses are scheduled flexibly to allow students to work full time and earn college credit at the same time. Many are offered in late afternoon and evening hours, and most on a two-days-a-week basis. Most courses run for the full eight-week period, but others last from two to six weeks, depending on the subject, the number of credits and the nature of the course involved. Noncredit programs as well as credit courses are available.

Summer housing is available in either the university housing on campus, or in nearby off-campus locations.

During the summer a number of noncredit camps and workshops are offered for junior high and high school students and include such activities as art, music, dance, basketball, volleyball, soccer, and swimming. Many students commute to these clinics and workshops, but university housing is available to those from greater distances.

Summer session fees and admission procedures are described in another section of this catalog. Since all fees are determined annually, they are subject to change without notice.

Complete information on specific summer programs is available from the Registrar's Office. Publications and announcements about the coming summer's programs are available in advance.

# Planning an Academic Program

## Goals of the Academic Plan

All programs of study at UWGB are treated as liberal arts programs; they are aimed at providing students with a broad and comprehensive education. Two essential elements are:

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

These are the distinctive elements of our academic plan.

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

## Choosing a Major

It is not necessary to choose a major before coming to college; the freshman year is best spent in general education anyway. Students will have to satisfy a requirement in writing and perhaps also in mathematics. They will have to choose three three-credit courses each in the humanities and fine arts, the social sciences, and the natural sciences to satisfy breadth requirements. Students complete the general-education requirement by fulfilling a three-credit other-culture requirement and by taking a three-credit senior seminar. Senior seminar is a small, discussion course where students bring all of their education to bear on a single problem.

At UWGB, students can choose an interdisciplinary major such as business administration, natural and applied science, human development, or humanistic studies. There are 15 such majors, each drawing from many disciplines. Or, students can choose a disciplinary major—English, mathematics, or sociology, for example. There are 21 of these majors. In either case, students will have to take at least 30 credits in their chosen major, of which 24 must be at the upper level. Additionally, students who choose a dis-

ciplinary major must select an interdisciplinary minor of 18 credits, 12 of which must be taken at the upper level. Of course, many majors impose prerequisites beyond these minimum requirements, so students should see an adviser early.

Finally, some students may want to pursue professional preparation. Those who want to be certified in education will take a course of study appropriate to their chosen certification. There also are programs leading to a

bachelor of social work degree, and students who already have an R.N. qualification can pursue a degree completion program in nursing. Students who want to prepare for law or medicine will need to consult advisers in these areas early, to ensure that they choose appropriate undergraduate courses. The same is true for preparation for graduate or professional schools in other fields.

## Components of a Degree

### Component I

33 credits

### General-Education Requirements

27 credits of breadth consisting of:

- 9 credits of humanities and fine arts
- 9 credits of social sciences
- 9 credits of natural sciences and mathematics
- 3 credits of other-culture studies
- 3 credits of senior seminar

### Component II

credits vary with major

### Supporting Courses

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

### Component III

30-48 credits minimum

### Major

The major is flexible; students choose one of these:

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

OR

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

plus

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

### Component IV

credits vary

### Other Options

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

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

### Total

124 credits (minimum requirement)

## Programs of Study

### Disciplinary Majors and Minors

#### Humanities and Fine Arts

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

#### Natural Sciences and Mathematics

Biology  
 Chemistry  
 Earth Science  
 Mathematics  
 Physics

#### Social Sciences

Anthropology (minor only)  
 Economics  
 Geography  
 Political Science  
 Psychology  
 Sociology

#### Professional Studies

Accounting

### Interdisciplinary Majors and Minors

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

#### Humanities and Fine Arts

Communication and the Arts  
 Humanistic Studies

#### Natural Sciences

Human Biology  
 Nutritional Science  
 Science and Environmental Change

#### Social Sciences

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

#### Professional Studies

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

### Interdepartmental Majors and Minors

American Indian Studies (minor only)  
 Environmental Planning  
 Information and Computing Science (major only)  
 International Studies (minor only)  
 Social Gerontology (minor only)  
 Women's Studies (minor only)

### Areas of Emphasis

By choosing areas of emphasis offered through several of the interdisciplinary and disciplinary majors, students can develop significant components of their education in areas such as computer science, social gerontology, science communication, environmental design, energy science and technology, regional planning, and many others. Students can learn about these emphases by reading descriptions in this catalog of the major and minor programs in their interest area and by consulting advisers.

### Personal Major

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

### Teaching Certification

Requirements are fulfilled through the professional education program.

### Military Science

This program provides specific career preparation.

### Preprofessional Programs

Such programs are prepared for through UWGB majors and minors either by completing a four-year degree in preparation for entering a professional school, or by completing two or three years of preparatory work at UWGB and transferring to a professional school. Examples of preprofessional programs include:

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

### Other Options

#### External Degree Programs

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

### Associate of Arts Degree

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

### Graduate Studies

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

### Academic Advice

The best advice is to get advice. Students should see an adviser in the Academic Advising Office early, and as soon as they have chosen a major, they should see the faculty adviser for that major. (Faculty advisers for the academic areas are listed in each fall and spring semester *Timetable*.) New freshmen should be sure to participate in a one-day Student Orientation, Advising, and Registration (SOAR) session before beginning their studies. Students who seek advice will be surprised how quickly all the elements of their degree fall together in a coherent pattern. Advisers also will help in making particular decisions, such as whether or not to pursue a double major, what supporting courses are needed to prepare for a major, and what special opportunities exist to enable students to pursue their own interests.

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

# Academic Requirements

## General-Education Requirements

General-education requirements total 33 credits. Breadth courses account for 27 of these credits. Other culture studies fulfill three credits and the final three credits are earned in a senior seminar. Students also must demonstrate mastery of basic writing skills as part of the general-education requirement.

General-education requirements complement a student's education by:

- introducing them to different ways of arriving at knowledge in the various academic areas;
- examining applications of the knowledge or technique within these areas;
- helping students to see relationships among major areas of knowledge;
- strengthening and supporting more specialized studies through a liberal education;
- helping students to be more reflective and self-critical of the positions they choose to affirm.

### Transfer Students

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

All transfer students must complete a three-credit senior seminar at UWGB. They may satisfy the 27-credit breadth requirement by either transferring or completing nine credits each in the humanities and fine arts, social sciences, and natural sciences. Advance planning and selection of specific applicable courses before transfer is helpful in fulfilling the general-education requirement.

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

### Breadth Courses

The breadth requirement gives students opportunities to learn the distinctive approaches or procedures of each broad area of knowledge—humanities and fine arts, social sciences, and natural sciences—and to become more aware of the values which shape individual and social experience. The 27 credits will most likely be taken in the freshman and sophomore years. The requirement includes nine credits each in the humanities and fine arts, social sciences, and natural sciences.

Students choose the first three-credit course in each area of knowledge from a list of courses which provide both an overview and a foundation for a deeper examination of values and particular fields of study within that area of knowledge. Students then select the second three-credit course from an approved list of courses which focus in greater depth on the problems and value issues raised by the subject matter of the foundation course. The last three-credit course in each area is a distribution course, again from an approved list, which provides the student with another perspective and methodology from a different discipline within that particular area of knowledge. Course sequences approved to fulfill this requirement are listed in the *Academic Advising Handbook*.

There is a time limit policy for fulfilling general education requirements including the 27-credit breadth requirement and the English proficiency requirement. Students must complete these requirements within five years from the date they enroll as matriculated degree candidates. Students who filed their academic plans before June 1, 1988, must complete these requirements by 1993.

### Other Culture Studies

Students will learn about other societies or sub-cultures in such a way that they can come to an understanding of values and ways of life which differ from their own through this three-credit requirement. This requirement can help students overcome stereotyping, racism, and ethnocentrism. It can be fulfilled by taking a three-credit course from a list of courses approved for this purpose, or it can be satisfied by:

- participating in an approved January interim trip, student exchange program, or other approved study abroad experience;
- completing the second year of a foreign language at the college level;
- petitioning for credit for documentable substantial foreign experience gained outside of the student's academic experience.

Students who choose to take the three-credit course from the approved list may not double-count that course for another part of the breadth requirement.

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

The complete list of other courses approved for the culture requirement is printed in the *Academic Advising Handbook*.

**Senior Seminars**

The senior seminars are the culmination of a student's interdisciplinary liberal education. In these seminars, students are encouraged to extend knowledge gained in their disciplinary and interdisciplinary courses to the broad fundamental concepts and issues that make up the basic social and intellectual concerns of our time. The seminars are designed to enlarge perspective, analytical ability, and interest in the enduring problems of self and society as they relate to contemporary environmental, cultural, ethical, scientific, and political concerns.

Senior seminars differ from other courses in that they bring together advanced students from a variety of majors in an atmosphere that encourages them to deepen and broaden the base of knowledge they bring into the course while engaging them personally and intellectually in some of the most important and interesting contemporary issues. The seminars place considerable emphasis on exploring such concepts as freedom, progress, imagination, myth, ecological systems, various educational and intellectual theories, and the like.

Senior seminar course descriptions appear in the course descriptions section of this catalog, in the sequence numbered 867.

**English Proficiency**

Students must demonstrate mastery of basic writing skills by achieving a specified minimum score on the ACT. Performance on this test is used to place students in one of four categories:

- In need of substantial development—Student must complete 553-093, Fundamentals of Writing, which is a noncredit course, and then successfully complete 552-100, College Writing, a credit course.
- In need of further development—Student takes 552-100, College Writing, or 246-100, Writing Skills Laboratory, or other alternative courses which may be developed and designated in subsequent *Timetables*, during one of the first two semesters at UWGB.
- Adequate—Student is not required to take a writing course, but is encouraged to continue to develop writing ability, perhaps by taking 552-105, Expository Writing.
- Quite good—No writing courses required, but such students also are encouraged to continue developing their abilities by taking Expository Writing or one of the more advanced writing courses.

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

**Residence Requirement**

To graduate from UWGB, at least one year of residence work (31 credits) at the junior or senior level is required, including at least half the advanced work in the student's major. Students who choose minors must also complete half of the advanced work in the minor at UWGB. The senior seminar requirement must be completed in residence.

The in-residence requirement does not mean that a student must live in Green Bay or carry a full-time schedule of courses. A student can commute and carry only a part-time load and still meet the residence requirement.

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

A transfer student must complete the 33-credit general-education requirement but the portion of that requirement that must be completed in residence will be modified according to the number of degree credits and types of courses accepted at the time of transfer. In situations where in-residence requirements are reduced, students must have completed appropriate equivalent courses at their previous college or university; transfer students should contact the Academic Advising Office as early as possible for help in planning their programs to assure that they fulfill all UWGB requirements.

# Academic Year Calendar

## Fall Semester

Registration and new student period (or register by mail earlier)

Classes begin

Thanksgiving recess begins

Classes resume

Classes end

Study and advising days (closed period)

Examinations begin (closed period)

Commencement (Sunday)

Examinations end

## 1988-89

Aug. 29-Sept. 2

Sept. 6

Nov. 24

Nov. 28

Dec. 14

Dec. 15

Dec. 16

Dec. 18

Dec. 22

## 1989-90

Aug. 28-Sept. 1

Sept. 5

Nov. 23

Nov. 27

Dec. 13

Dec. 14-15

Dec. 16

Dec. 17

Dec. 22

## 1990-91

Aug. 27-Aug. 31

Sept. 4

Nov. 22

Nov. 26

Dec. 12

Dec. 13-14

Dec. 17

Dec. 23

Dec. 22

## January Interim

Classes begin

Spring registration (or register by mail earlier)

Last day of classes

Winter recess

Martin Luther King holiday

Jan. 3

Jan. 24-26

Jan. 27

Jan. 28-Feb. 5

Jan. 16

Jan. 2

Jan. 23-25

Jan. 26

Jan. 27-Feb. 4

Jan. 15

Jan. 7

Jan. 29-31

Feb. 1

Feb. 2-10

Jan. 21

## Spring Semester

Classes begin

Spring recess

Classes resume

Memorial Day recess

Examinations begin (closed period)

Examinations end

Commencement (Saturday)

Feb. 6

March 25

April 3

(none)

May 22

May 27

May 27

Feb. 5

March 31

April 9

(none)

May 21

May 26

May 26

Feb. 11

March 30

April 8

May 26-27

May 25

June 1

June 1

## Summer Session

(8 Week Session)

Registration

First day of classes

Last day of classes

June 8-9

June 12

Aug. 4

June 7-8

June 11

Aug. 3

June 13-14

June 17

Aug. 9

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



# Accounting, Managerial

Disciplinary Major or Minor

Associate Professor: Karl Zehms (chairperson).

Assistant Professor: Jeffrey Tollers.

Lecturers: Lawrence Franke, Marilyn Sagrillo, Ann Selk.

The accounting program at UWGB provides students with an in-depth study of specific accounting subjects with a strong emphasis on management accounting applications. Course requirements for the major include exposure to the various domains of the liberal arts and to nonaccounting business-related courses such as management, marketing, finance, law and insurance.

Graduates are qualified to pursue careers in public accounting, management accounting, or government accounting positions. Job opportunities have been excellent for recent graduates and a solid demand for accounting graduates is anticipated.

Upon completion of the program, graduates are eligible to take professional accounting examinations, including the C.P.A. (Certified Public Accountant), C.M.A. (Certified Management Accountant), and C.I.A. (Certified Internal Auditing) examinations. A large percentage of graduates of the UWGB program do attempt and pass these examinations.

## Program Entrance Requirements

To be eligible for admission to the accounting major students must have a minimum 2.3 or better grade point average on all college work completed at the time eligibility is reviewed.

Thirty-six earned credits are required as a minimum base for g.p.a. calculation.

Only the most qualified applicants are admitted from the pool of eligible students.

The minor is designed to provide the student a reasonable exposure to the field of accountancy. Students pursuing this minor must complete a major in an interdisciplinary program at UWGB.

## Requirements for the Major

### Supporting Courses

27 credits

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

### Upper-Level Courses

66 credits

#### Business Administration Courses, 31 credits:

216-305	Business Law I, 3 credits
216-306	Business Law II, 4 credits
216-322	Introductory Marketing, 3 credits
216-343	Corporation Finance, 3 credits
216-382	Introductory Management, 3 credits
216-451	Design of Computer-Assisted Systems, 3 credits
One upper-level marketing course, 3 credits	
One upper-level management course, 3 credits	
<b>Two of these:</b>	
216-345	Risk Management, 3 credits
216-415	Income Taxation, 3 credits
216-442	Principles of Investment, 3 credits

#### Accounting Courses, 35 credits:

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

## Requirements for the Minor

### Supporting Courses

12 credits

298-203	Micro Economic Analysis, 3 credits
552-105	Expository Writing, 3 credits
600-155	Computers and Microcomputers, 3 credits
<b>One of these:</b>	
216-305	Business Law I, 3 credits
216-322	Introductory Marketing, 3 credits
216-382	Introductory Management, 3 credits

### Upper-Level Courses

19 credits

107-300	Introductory Accounting, 3 credits
107-301	Intermediate Accounting, 4 credits
107-302	Accounting for Administrators, 3 credits
<b>One of these:</b>	
107-312	Managerial Accounting, 3 credits
107-313	Financial Accounting Theory and Practice I, 3 credits
<b>Two of these:</b>	
107-314	Financial Accounting Theory and Practice II, 3 credits
107-316	Governmental Accounting, 3 credits
107-410	Income Tax Theory and Practice, 3 credits
107-411	Financial Information Systems, 3 credits
107-414	Advanced Managerial Accounting II, 3 credits

# American Indian Studies

Interdepartmental Minor

**Professors:** Jack Frisch; Estella Lauter.

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

The American Indian studies minor is an interdepartmental program that offers students and community members an opportunity to study the history and cultures of North American Indians with an emphasis on the tribes of Wisconsin and the Great Lakes region.

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

The American Indian studies minor is open to all students and can be combined with a number of disciplines and professional studies, including anthropology, history, the arts, humanities, education, and social services.

## Requirements for the Minor

### Lower-Level Courses

6 credits

**Core courses:**

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

### Upper-Level Courses

12 credits

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

Repeatable seminar has variable topics such as:

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

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

- 242-301 Communication and the Arts Projects in the Community: Oneida Language, 3 credits  
493-371 American Indian Art and Artists, 3 credits  
493-372 American Indian Mythology and Literature, 3 credits (course approval pending)  
493-374 Wisconsin Indians: Historical and Cultural Perspectives, 3 credits  
493-474 Native Americans: Emergence of Pan Indian Cultures, 3 credits

# Anthropology

Disciplinary Minor

**Professors:** James Clifton;  
Anthony Galt.

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

Anthropology is for those who are interested in people, and why they behave, think, and believe as they do, in all their biological, cultural, and historical diversity. Anthropology is the comprehensive study of human cultures, societies, and populations. It encompasses both the biology of human populations, past and present, and the study of culture, society, and change.

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

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

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

## Requirements for the Minor

### Supporting Courses

6 credits

- 156-100 Varieties of World Culture, 3 credits  
OR  
156-210 Introduction to Cultural Anthropology, 3 credits  
156-110 Introduction to Physical Anthropology, 3 credits

### Upper-Level Courses

15 credits

- 156-303 Cultural Ecology, 3 credits  
156-304 Family, Kin and Community, 3 credits  
156-342 Human Evolution, 3 credits  
OR  
156-364 Human Variability, 3 credits  
246-321 Sociolinguistics, 3 credits  
AND  
Appropriate three-credit elective chosen with anthropology adviser



**Professor:** Robert Pum

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

**Assistant Professor:** Caroline Beckett.

**Academic Staff:** Christine Davitt; Robert Ratajczak.

## Requirements for the Major vary with the area of emphasis

### Areas of Emphasis

#### *Studio Art* Lower-Level Courses, 30 credits required

##### Art history core, 9 credits:

- 242-102 History of Visual Arts I: Ancient to Medieval, 3 credits
- 242-103 History of Visual Arts II: Renaissance to French Revolution, 3 credits
- 242-202 Concepts and Issues in Modern Art, 3 credits

##### Design core, 9 credits:

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

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

##### Two-Dimensional Studios:

- 168-200 Introduction to Mixed Media on Paper, 3 credits
- 168-210 Introduction to Painting, 3 credits
- 168-243 Introduction to Photography, 3 credits

##### Three-Dimensional Studios:

- 168-220 Introduction to Sculpture, 3 credits
- 168-230 Introduction to Ceramics, 3 credits
- 168-250 Introduction to Experimental 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:

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

##### Painting:

- 168-301 Life Drawing and Anatomy, 3 credits
- 168-311 Intermediate Painting, 3 credits
- 168-343 Photography II, 3 credits
- 168-401 Advanced Life Drawing, 3 credits
- \*168-410 Advanced Painting, 3 credits

##### Drawing:

- 168-301 Life Drawing and Anatomy, 3 credits
- 168-311 Intermediate Painting, 3 credits
- 168-373 Intaglio, 3 credits
- 168-377 Lithography, 3 credits
- \*168-401 Advanced Life Drawing, 3 credits

##### Sculpture:

- 168-301 Life Drawing and Anatomy, 3 credits
- 168-321 Intermediate Sculpture, 3 credits
- 168-332 Intermediate Ceramics: Moldwork, 3 credits
- 168-364 Art Metals: Casting, 3 credits
- \*168-421 Advanced Sculpture, 3 credits

##### Ceramics:

- 168-301 Life Drawing and Anatomy, 3 credits
- 168-321 Intermediate Sculpture, 3 credits
- 168-331 Intermediate Ceramics, 3 credits
- 168-332 Intermediate Ceramics: Moldwork, 3 credits
- 168-343 Photography II, 3 credits
- \*168-431 Advanced Ceramics, 3 credits

**Photography:**

- 168-301 Life Drawing and Anatomy, 3 credits  
 168-311 Intermediate Painting, 3 credits  
 168-343 Photography II, 3 credits  
 168-344 Photography III, 3 credits  
 168-375 Screen Printing, 3 credits  
 \*168-443 Advanced Problems in Photography, 3 credits

**Art Metals:**

- 168-301 Life Drawing and Anatomy, 3 credits  
 168-321 Intermediate Sculpture, 3 credits  
 168-343 Photography II, 3 credits  
 168-364 Art Metals: Casting, 3 credits  
 \*168-463 Advanced Art Metals: Jewelry, 3 credits

**Fibers/Textiles:**

- 168-301 Life Drawing and Anatomy, 3 credits  
 168-311 Intermediate Painting, 3 credits  
 168-321 Intermediate Sculpture, 3 credits  
 168-353 Intermediate Textiles: Fibers, 3 credits  
 168-355 Intermediate Textiles: Papermaking, 3 credits  
 \*168-453 Advanced Textiles, 3 credits

**Printmaking:**

- 168-301 Life Drawing and Anatomy, 3 credits  
 168-311 Intermediate Painting, 3 credits

**Choose one:**

- 168-373 Intaglio, 3 credits  
 168-375 Screen Printing, 3 credits  
 168-377 Lithography, 3 credits

**Choose one:**

- \*168-473 Advanced Intaglio, 3 credits  
 \*168-475 Advanced Screen Printing, 3 credits  
 \*168-477 Advanced Lithography, 3 credits

\*All advanced studios may be taken 3 times for a total of 9 credits.

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

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

**Supporting Courses, 9 credits recommended**

Choose 3 credits from each of the following categories:

**Communication skills:**

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

**Anthropology:**

- 156-210 Introduction to Cultural Anthropology, 3 credits  
 156-330 Aesthetic Anthropology, 3 credits

**Management:**

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

**Upper-Level Courses, 27 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:**

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

**Art management core, 9 credits:**

- 168-395 Exhibition Development and Design, 2 credits  
 168-396 Gallery Practicum, 2 credits (May be repeated up to 6 credits)  
 168-497 Internships in Art Management, 3-9 credits

*continued*

The visual arts are important creative and expressive components of human experience. They provide a means of exploring the processes of making, seeing, feeling, and thinking in terms of visual systems. Through these experiences our common humanity can be communicated in non-verbal language.

Courses in studio art identify and articulate several components of the complex process of art making. Studio courses:

- present art making as a problem-solving process using a creative methodology which combines intuition and imagination with critical analysis;

- provide students with the knowledge necessary for mastery of materials and techniques;

- provide a firm 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

Courses in art history, other cultures, and contemporary art provide the developing student with a rich conceptual and philosophical context. Such courses investigate stylistic characteristics of specific periods as well as the dynamic relationship between art and its society.

The art discipline provides the conceptual and technical foundations for three identified areas of emphasis within the art major: studio art, art management, and art education. Another career direction is open to art majors who select a minor in communication and the arts with an emphasis in graphic communication. All four areas prepare students for viable entrance-level careers upon graduation or for entry into graduate school programs. Students seeking careers in art or graduate study in art are advised to 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, arts awareness, or graphic communication, but may find minors in the fields of human development, business administration and humanistic studies more appropriate to their individual goals.

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

### Art Education

Students majoring in art may complete an emphasis in art education, which leads to teacher certification by the Wisconsin Department of Public Instruction. Only those certification requirements for course work in art studio and art history are listed here. Information regarding requirements and admission into the education program are listed under the description of that program in this catalog. Students planning certification should seek early advising.

#### Lower-Level Courses, 30 credits required

##### Art history core, 6 credits:

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

##### Design core, 9 credits:

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

##### Studio core, 15 credits:

- Two-Dimensional Studios (6 credits):
  - 168-210 Introduction to Painting, 3 credits
  - 168-243 Introduction to Photography, 3 credits
- Three-Dimensional Studios (choose 9 credits):
  - 168-220 Introduction to Sculpture, 3 credits
  - 168-230 Introduction to Ceramics, 3 credits
  - 168-250 Introduction to Experimental 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:

- Two-Dimensional Studios (6 credits):
  - 168-301 Life Drawing and Anatomy, 3 credits
  - 168-Printmaking (375 Screen Printing, 371 Relief Printing, 373 Intaglio, or 377 Lithography), 3 credits
- Three-Dimensional Studios (6 credits):
  - Select two courses from the 300-400 number sequence in the areas of sculpture, ceramics, textiles, or art metals: jewelry.
- Studio Art Electives (6 credits):
  - Select courses from the 300-400 number sequence in drawing, painting, sculpture, ceramics, photography, art metals: jewelry, fibers/textiles, printmaking, etc. Art education students are advised to investigate several studio areas.

## Requirements for the Minor vary with area of emphasis

### Areas of Emphasis

#### *Two-Dimensional Emphasis*

##### Lower-Level Courses, 15 credits:

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

##### Design core, 6 credits:

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

##### Introductory studios, 6 credits chosen from:

- 168-200 Introduction to Mixed Media on Paper, 3 credits
- 168-210 Introduction to Painting, 3 credits
- 168-243 Introduction to Photography, 3 credits

**Upper-Level Courses, 6 credits.** Select 6 credits, for which appropriate prerequisites have been taken, from the following group:

- 168-300 Intermediate Drawing, 3 credits
- 168-301/401 Life Drawing and Anatomy/Advanced Life Drawing, 3 credits each
- 168-311/411 Intermediate Painting/Advanced Painting, 3 credits each
- 168-314/414 Watercolor Painting/Advanced Watercolor Painting, 3 credits each
- 168-343 Photography II, 3 credits
- 168-344 Photography III, 3 credits
- 168-371/471 Relief Printing/Advanced Relief Printing, 3 credits each
- 168-373/473 Intaglio/Advanced Intaglio, 3 credits each
- 168-375/475 Screen Printing/Advanced Screen Printing, 3 credits each
- 168-377/477 Lithography/Advanced Lithography, 3 credits each
- 168-443 Advanced Problems in Photography, 3 credits
- 168-444 Time Duration Visual Media, 3 credits

*Three-Dimensional Emphasis*

**Lower-Level Courses, 15 credits:**

**Background, 3 credits:**

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

**Design core, 6 credits:**

- 168-105 Drawing, 3 credits
- 168-106 Design Methods, 3 credits

**Introductory studios, 6 credits chosen from:**

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

**Upper-Level Courses, 6 credits.** Select 6 credits, for which appropriate prerequisites have been taken from the following group:

- 168-321/421 Intermediate/Advanced Sculpture, 3 credits each
- 168-331/332 Intermediate Ceramics/Ceramic Moldwork, 3 credits each
- 168-353 Intermediate Textiles: Fibers, 3 credits
- 168-355 Intermediate Textiles: Papermaking, 3 credits
- 168-364 Art Metals: Casting, 3 credits
- 168-431 Advanced Ceramics, 3 credits
- 168-453 Advanced Textiles, 3 credits
- 168-463 Advanced Art Metals: Jewelry, 3 credits

*Art History*

**Lower-Level Courses, 15 credits:**

- 168-105 Drawing, 3 credits
- 168-107 Two-Dimensional Design, 3 credits
- 242-102 History of Visual Arts: Ancient to Medieval, 3 credits
- 242-103 History of Visual Arts: Renaissance to French Revolution, 3 credits
- 242-202 Concepts and Issues in Modern Art, 3 credits

**Upper-Level Courses, 6 credits:**

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

The minor in art serves three types of students. First, are those fulfilling personal interest in art without professional aspirations. Second, are those seeking to add the visual skills of a disciplinary minor in art to their career preparations in such interdisciplinary fields as communication and the arts, humanistic studies, urban and public affairs, and environmental planning. Third, are those who intend the minor as a component of their professional studies, most particularly in education, but also in business (advertising and marketing) and nursing.

Students in any field may find the visual skills of the art minor an appropriate supplement to their academic preparation in the context of our visually oriented media-driven culture.

# Biology

Disciplinary Major or Minor

**Professors:** Harry G. Guilford; Hallett J. Harris; Elaine McIntosh; V.M.G. Nair; Paul E. Sager; Leander Schwartz; Keith White (chairperson).

**Associate Professors:** Alice Goldsby; Charles Ihrke; Michael Morgan; Dorothea Sager; Richard Stevens.

**Assistant Professor:** Robert Howe.

The major in biology prepares students for careers in botany, zoology, microbiology, genetics and physiology (organismal biology), or ecology and field biology. Students can select biology courses that will prepare them for entering medical, dental, veterinary or other professional schools, or for graduate study.

The major in biology also establishes a foundation for interdisciplinary careers in aquatic studies, biological resource management, human biology, nutritional sciences, and science communications (technical writing, journalism, and nature interpretation).

Well-equipped teaching laboratories and numerous small laboratories are available for student-faculty research projects. Facilities include: natural areas for teaching and research, Richter Natural History Museum, small animal lab, herbarium, greenhouse, boats and computers.

In addition to formally scheduled biology courses, students have opportunities to work with individual faculty members on an independent study basis. This is an excellent chance to probe more deeply into areas of special interest. There are also opportunities for students to work in intern training programs with private, state, and national agencies, and in industry. Credit for these experiences is available by special arrangement.

A biology major combines disciplinary work with an interdisciplinary minor. Biology students

## Requirements for the Major

### Introductory Courses

8 credits

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

### Supporting Courses

20 credits

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

#### Three additional credits of mathematics from:

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

#### Three credits of writing from:

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

#### Biology majors are strongly advised to also take:

- 225-300 Bio-Organic Chemistry, 3 credits  
225-301 Bio-Organic Chemistry Laboratory, 1 credit

OR

- 225-302 Organic Chemistry I, 3 credits  
225-303 Organic Chemistry II, 3 credits  
225-304 Organic Chemistry Laboratory I, 1 credit  
225-305 Organic Chemistry Laboratory II, 1 credit

AND

- 754-103 Fundamentals of Physics I, 4 credits  
754-104 Fundamentals of Physics II, 4 credits

OR

- 754-201 Principles of Physics I, 5 credits  
754-202 Principles of Physics II, 5 credits

### Upper-Level Courses

13-14 credits

- 204-302 Microbiology, 4 credits  
204-303 Genetics, 3 credits  
678-302 Principles of Ecology, 3 credits  
204-311 Plant Physiology, 4 credits  
OR  
204-346 Comparative Physiology, 3 credits

### Areas of Emphasis

10-11 credits

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

#### Botany

- 204-305 Biological Microtechnique, 3 credits  
204-310 Plant Taxonomy, 3 credits  
204-312 Mycology, 3 credits  
204-317 Structure of Seed Plants, 3 credits  
204-320 Field Botany, 3 credits  
204-407 Molecular Biology, 3 credits  
479-401 Agricultural Genetics, 3 credits  
678-363 Forest and Plant Pathology, 3 credits



<i>Field Biology and Ecology</i>	204-310	Plant Taxonomy, 3 credits
	204-320	Field Botany, 3 credits
	204-342	Ornithology, 3 credits
	204-343	Mammalogy, 3 credits
	204-363	Forest and Plant Pathology, 3 credits
	678-401	Stream Ecology, 3 credits
	678-403	Limnology, 3 credits
<i>Microbiology</i>	204-312	Mycology, 3 credits
	204-402	Advanced Microbiology, 3 credits
	204-405	Microbial Physiology, 3 credits
	204-407	Molecular Biology, 3 credits
	678-363	Forest and Plant Pathology, 3 credits
<i>Organismal Biology</i>	204-304	Genetics Laboratory, 1 credit
	204-317	Structure of Seed Plants, 3 credits
	203-340	Comparative Anatomy of Vertebrates, 4 credits
	204-345	Animal Behavior, 3 credits
	204-347	Developmental Biology, 4 credits
	478-318	Mammalian Reproduction, 3 credits
	478-402	Human Physiology, 3 credits
	478-404	Animal Physiology Laboratory, 2 credits
	478-413	Neurophysiology, 3 credits
<i>Zoology</i>	204-305	Biological Microtechnique, 3 credits
	204-340	Comparative Anatomy of Vertebrates, 4 credits
	204-342	Ornithology, 3 credits
	204-343	Mammalogy, 3 credits
	204-345	Animal Behavior, 3 credits
	204-347	Developmental Biology, 4 credits
	204-407	Molecular Biology, 3 credits
	478-312	Evolutionary Processes, 3 credits
	478-318	Mammalian Reproduction, 3 credits
	478-404	Animal Physiology Laboratory, 2 credits
	478-413	Neurophysiology, 3 credits

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

## Requirements for the Minor

**Introductory Courses**  
8 credits

These are the same as for the major.

**Upper-Level Courses**  
13-14 credits

These are the same as for the major.

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

interested in such areas as aquatic studies, biological resource management, solid waste management, or science communication will normally take an interdisciplinary minor in science and environmental change.

Human biology is usually the interdisciplinary minor selected by biology majors with an interest in human adaptability or nutrition. Biology students with an interest in land use planning may select an interdisciplinary minor in regional analysis. Biology majors preparing for biology-related administrative positions can select an interdisciplinary minor either in business administration or urban and public affairs.

Some students with an interest in biology may choose to develop an interdisciplinary major and gain depth in the discipline through a minor. For example, a student interest in aquatic studies can select a program that includes courses from biology, chemistry, hydrology, and resource management.

Students interested in education can obtain teacher certification in biology or broad field sciences by combining a program in professional education with the appropriate science courses.

UWGB biology graduates are employed in industry (pharmaceuticals, paper making, agriculture), in government agencies (Environmental Protection Agency, Food and Drug Administration, National Park Service, U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. Bureau of Land Management, Wisconsin Department of Natural Resources, and others), by environmental consulting firms, and as teachers. Approximately 40 percent of biology graduates pursue advanced degrees in graduate and professional schools.

# Business Administration

Interdisciplinary Major or Minor

**Professor:** Daniel J. Alesch (chairperson); James Murray.

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

**Assistant Professors:** A. Sam Ghanty; Mary Ann Hazen; James Strock; Jeffrey Tollers.

**Lecturers:** Laury Berk; Lawrence Franke; Neil Hensrud; Brent Hussin; Lawrence Kostroski; Salvatore Notaro; Daniel Spielmann; Marilyn Sagrillo; Ann Selk.

The university's business administration program prepares its graduates for success as individuals, community leaders, and business professionals. The program provides both a broad background and focused skills, knowledge, and understanding essential for meeting diverse challenges and opportunities as a professional.

Today's business professional is an analyst, decision maker, organizer and leader who must work effectively in changing economic, social, and political settings. Each student earning a major or minor in business administration develops essential skills in writing, speaking, quantitative analysis, and computer applications, as well as a solid background in management, marketing, finance, and accounting. He or she will develop important skills in analysis, decision making, and leadership. In addition, each student majoring in business administration selects an area of emphasis, focusing on one particular aspect of business to develop in-depth understanding and skills.

The advancing business professional is an intellectually well-rounded individual; he or she has broad understanding in the humanities, arts, and natural and social sciences, adding to his or her maturity, breadth of perception, judgment, and ability to deal with people. These attributes are fostered and developed

## Requirements for the Major

### Supporting Courses 21 credits

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

### Upper-Level Courses 21 credits

<b>Business core courses, 21 credits:</b>	
107-300	Introductory Accounting, 3 credits
107-302	Accounting for Administrators, 3 credits
216-305	Business Law I, 3 credits
216-322	Introductory Marketing, 3 credits
216-343	Corporation Finance, 3 credits
216-362	Human Resource Management, 3 credits
216-382	Introductory Management, 3 credits

### Areas of Emphasis 15 credits

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

**The three emphases and specializations within them are:**

#### *Finance*

- corporate finance management
- investment management
- financial institution management
- comprehensive finance

#### *Marketing*

- sales and sales management
- advertising and advertising management
- market analysis and research
- nonprofit marketing and marketing management

#### *Management*

- general management
- human resource management
- small business management
- organizational analysis and development

#### **Courses from other emphasis, 6 credits:**

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

#### **Minor requirement:**

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

## Requirements for the Minor

### Supporting Courses

12-13 credits

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

### Upper-Level Courses

18 credits

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

through an interdisciplinary, all-university program of study which provides the UWGB business administration student with an outstanding background.

To ensure that business administration students are well equipped to deal with the challenges they will face as professionals, each student selects a minor from a variety of choices, some of which are intended specifically for them. Among these, for example, is a minor in humanistic studies directed specifically at helping students to prepare for the rapidly growing field of international business.

#### Program Entrance Requirements

More students want to major in business administration than the university is able to accommodate. Therefore, to be admitted to the business administration major, students must meet specific requirements. The requirements for admission the following year are posted each spring in the Fall *Timetable*. As an example of the requirements, in 1987-88, a student wishing to major in business administration must have completed a minimum of 36 credits and have earned a cumulative grade point average of at least 2.3.

Students not seeking admission to the program as majors, but who are completing a minor or requirements for a different major, must meet the same credit and grade point averages as business administration majors in order to enroll in one of the "gateway" courses (216-305, 322, 343, 362, and 382).

There also are registration priorities for business administration courses. Details are available in the *Timetable*, at the Registrar's Office, and from business advisers. Course prerequisites in business administration are strictly enforced.



**Associate Professors:** Dawson C. Deese; Jack C. Norman; Ronald H. Starkey; Thomas E. Van Koevering; James H. Wiersma (chairperson).

**Assistant Professor:** Warren V. Johnson.

## Requirements for the Major

<b>Supporting Courses</b> 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

<b>Lower-Level Courses</b> 10 credits	225-211	Principles of Chemistry I, 5 credits
	225-212	Principles of Chemistry II, 5 credits

<b>Upper-Level Courses</b> 24 credits	<b>Required:</b>	
	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

<b>Electives:</b>	
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
225-410	Inorganic Chemistry, 3 credits
225-413	Instrumental Analysis, 4 credits
225-417	Nuclear Physics and Radiochemistry, 3 credits
225-418	Nuclear Physics and Radiochemistry Laboratory, 1 credit

### American Chemical Society Certified Major

Major requirements as stated above, plus:

225-410	Inorganic Chemistry, 3 credits
225-498	Independent Study, 1-4 credits

An additional 4 credits of upper-level chemistry electives including at least 1 credit of laboratory

600-305	Differential Equations, 3 credits
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A computer language course

## Requirements for the Minor

### Lower-Level Courses

10 credits

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

### Upper-Level Courses

12 credits

**Required:**

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

**Electives also may include:**

479-321 Physiological Chemistry, 3 credits  
678-434 Water Chemistry, 4 credits

The professional efforts of chemists have had a major impact on the recent improvement in our standard of living. Plastics, pharmaceuticals, adhesives, semiconductors, fuels, solvents, and a wide variety of paper products are but a few of the products developed by chemists.

In addition, chemists have made significant contributions to the fields of medicine, genetics, bioengineering, geology, biology, agriculture, wastewater treatment, food chemistry, solid waste disposal, and environmental chemistry.

Studies in chemistry can prepare a student for employment in industry, for graduate work, or for teaching. A major in chemistry supported by studies in biology is often chosen by students planning careers in medicine, dentistry, veterinary science, and pharmacy. Students seeking teacher certification should consult with advisers in chemistry and education early in their programs to make certain they fulfill all requirements.

# Communication and the Arts

Interdisciplinary Major or Minor



**Professors:** Robert Bauer; Trinidad Chavez; Arthur Cohrs; Jack Frisch; Donald Larmouth; Timothy Meyer; Richard Sherrell.

**Associate Professors:** Clifford Abbott; Jerome Abraham; Margaret Charmon; Phillip Clampitt; David Damkoehler; Jerry Dell; Raymond Gabica; Curtis Heuer (chairperson); Lovell Ives; Wayne Jaeckel; Charles Matter; Dean O'Brien; Terence O'Grady; Patricia Ridge; Karon Winzenz.

**Assistant Professors:** Caroline Beckett; Jeffrey Entwistle; Mark Fonder; Fiorella Gonzalez; Helaine Marshall.

**Lecturers:** Cheryl Grosso; Carol Hoehn; Susan Penny.

## Requirements for the Major

### Areas of Emphasis

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

#### *Aesthetic Awareness*

#### **Lower-Level Courses, 12 credits**

**Required:**

242-261 Aesthetic Awareness: Foundations

**The remaining 9 credits to be selected from:**

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

242-103 History of the Visual Arts: Renaissance to Modern, 3 credits

242-121 Masters and Masterpieces of Music, 3 credits

242-141 Introduction to the Performing Arts: Theatre and Music, 3 credits

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

242-210 Film and Society, 3 credits

242-221 Popular Music Since 1955, 3 credits

242-222 The Arts in the U.S., 3 credits

242-272 Women in the Visual or Performing Arts, 3 credits

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

#### **Upper-Level Courses, 24 credits**

**Required:**

242-361 Aesthetic Awareness: Interpretation, 3 credits

242-362 Aesthetic Awareness: Psychology of Aesthetic Perception, 3 credits

242-364 Aesthetic Awareness: Creation, 3 credits

**Select one:**

242-462 Aesthetic Awareness: Research, 3 credits

242-463 Aesthetic Awareness: Evaluation, 3 credits

**Twelve additional credits chosen from:**

242-310 Criticism of the Performing Arts, 3 credits

242-329 Cross-Cultural Communications (American Show Music, Introduction to World Music, Jazz History, Art of India and Japan), 3 credits

242-370 Modern American Culture, 3 credits

242-372 Aesthetic Awareness: Traditional Styles, 3 credits

242-373 Aesthetic Awareness: Avant-Garde Styles, 3 credits

242-380 The Arts: London, 3 credits

242-430 Mass Media and Society, 3 credits

242-477 Women as Creative Agents, 3 credits

242-498 Independent Study, 1-4 credits

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

#### *Broad-Field Communications*

#### **Lower-Level Courses, 12 credits**

**Required:**

242-160 Introduction to Language, 3 credits

**The remaining 9 credits to be selected from:**

242-210 Film and Society, 3 credits

242-221 Popular Music Since 1955, 3 credits

242-231 Introduction to Graphic Communication, 3 credits

246-102 Introduction to Mass Communication, 3 credits

242-243 Native American Cultures: Film and Performance I, 3 credits

242-244 Native American Cultures: Film and Performance II, 3 credits

**Upper-Level Courses, 24 credits**

**Core Courses, select 4 courses from:**

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

**Elective Courses, select 4 courses from:**

- 242-329 Expressive Traditions, Jazz History, 3 credits
- 242-329 Expressive Traditions: American Show Music, 3 credits
- 242-331 Graphic Communication Studio I, 3 credits
- 242-332 Graphic Communication Studio II, 3 credits
- 242-363 Aesthetic Awareness: Psychology, 3 credits
- 242-480 Communications: London, 3 credits

*Environmental Design*

**Lower-Level Courses, 12 credits**

**Required:**

- 168-106 Design Methods, 3 credits

**The remaining 9 credits to be selected from:**

- 168-105 Drawing, 3 credits
- 242-231 Introduction to Graphic Communication, 3 credits
- 678-105 Elements of Descriptive Geometry, 3 credits
- 950-210 Drawing Systems for the Designer, 3 credits

**Upper-Level Courses, 30 credits**

**Twenty-one credits chosen from:**

- 242-331 Graphic Communication Studio I, 3 credits
- 242-332 Graphic Communication Studio II, 3 credits
- 242-405 Urban Technological Design, 3 credits
- 246-335 Organizational Communication, 3 credits
- 834-325 Behavior in Designed Environments I, 3 credits
- 834-326 Behavior in Designed Environments II, 3 credits
- 950-421 Urban Planning I, 3 credits
- 950-430 Urban Aesthetics, 3 credits

**Nine credits chosen from:**

- 950-401 Environmental Design Workshop I, 3 credits (individual scale)
- 242-471 Environmental Design Workshop II, 3 credits (small-group scale)
- 950-402 Environmental Design Workshop III, 3 credits (community scale)
- 242-472 Environmental Design Workshop IV, 3 credits (senior project)

*Science Communication*

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

**Lower-Level Courses, 37-39 credits**

**Fifteen credits in communications chosen from:**

- 242-231 Introduction to Graphic Communication, 3 credits
- 246-100 Writing Skills Laboratory, 4 credits
- 246-102 Introduction to Mass Communication, 3 credits
- 246-133 Fundamentals of Public Address, 3 credits
- 246-200 Communications Processes: An Introduction, 3 credits
- 246-243 Introduction to Photography, 3 credits
- 552-105 Expository Writing, 3 credits

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

- |              |           |               |             |
|--------------|-----------|---------------|-------------|
| chosen from: | Biology   | Physics       | Mathematics |
|              | Chemistry | Earth science |             |

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 is organized into several areas of emphasis which can be pursued as interdisciplinary majors or minors, often in combination with disciplinary programs such as art, music, theatre, and communication processes, among others.

Areas of emphasis for majors include:

**Aesthetic Awareness**—for artists, actors, writers, musicians, and others concerned with the arts who seek to cultivate general aesthetic sensibilities;

**Broad-field Communications**—for students preparing for careers in mass media, graphics, public relations, communications management, or teaching English-communication arts or English as a Second Language. Students with an emphasis in linguistics should plan on graduate study;

**Environmental Design**—an interdepartmental program preparing students for careers in such fields as architecture, interior design, urban design, industrial design, and urban planning;

**Science Communication**—an interdepartmental program for students interested in environmental journalism, scientific and technical communication, and environmental interpretation.

*continued*

## Communication and the Arts

Areas of emphasis for minors include:

**Graphic Communication**—for students wishing careers in graphic design, technology, television graphics, and management, editorial, and publications work;

**Arts Awareness**—for students wishing broad exposure to the arts either to provide a comparative, historical, and critical study of all the arts for arts majors or to provide breadth of appreciation for nonarts majors;

**Broad-field Communications**—described above;

**Aesthetic Awareness**—described above.

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

### Upper-Level Courses, 30 credits

Eighteen credits chosen from:

- 216-425 Promotional Strategy, 3 credits
- 242-331 Graphic Communication Studio I, 3 credits
- 242-332 Graphic Communication Studio II, 3 credits
- 242-430 Mass Media and Society, 3 credits
- 246-303 Feature Writing, 3 credits
- 246-305 Elements of Electronic Media, 3 credits
- 246-306 Radio Broadcast Practicum, 3 credits
- 246-333 Argumentation and Persuasion, 3 credits
- 246-335 Organizational Communication, 3 credits
- 246-343 Photography II, 3 credits
- 246-345 Designing Multi-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 sciences as follows:

Ecology, 3 credits:

- 678-302 Principles of Ecology, 3 credits

Resource Management, 3 credits, chosen from:

- 678-303 Conservation of Natural Resources, 3 credits
- 678-334 Solid Waste Management, 3 credits
- 678-335 Water and Waste Water Treatment, 3 credits
- 678-460 Resource Management Strategy, 3 credits
- 678-466 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

Each area of emphasis has unique requirements. After fulfilling required lower-level courses in a particular emphasis, remaining lower-level courses for each emphasis may be chosen from the following list, with adviser's approval.

### Lower-Level Courses

- 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 Performing Arts: Theatre and Music, 3 credits
- 242-142 Performing Arts Perspectives: Experience and Evaluation, 3 credits
- 242-202 Concepts and Issues of Modern Art, 3 credits
- 242-210 Film and Society, 3 credits
- 242-221 Popular Music Since 1955, 3 credits
- 242-222 The Arts in the United States, 3 credits



## Areas of Emphasis

### *Aesthetic Awareness*

#### **Lower-Level Courses, 9 credits**

**Required:**

242-261 Aesthetic Awareness: Foundations, 3 credits

#### **Upper-Level Courses, 12 credits**

**Choose a minimum of 6 credits from:**

- 242-361 Aesthetic Awareness: Interpretation, 3 credits
- 242-362 Aesthetic Awareness: Psychology of Aesthetic Perception, 3 credits
- 242-364 Aesthetic Awareness: Creation, 3 credits
- 242-462 Aesthetic Awareness: Research, 3 credits
- 242-463 Aesthetic Awareness: Evaluation, 3 credits

Choose remaining credits with faculty advice.

### *Graphic Communication*

#### **Lower-Level Courses, 9 credits**

**Required:**

242-231 Introduction to Graphic Communication, 3 credits

#### **Upper-Level Courses, 12 credits**

**Choose a minimum of 6 credits from:**

- 242-331 Graphic Communication Studio I, 3 credits
- 242-332 Graphic Communication Studio II, 3 credits
- 242-432 Graphic Communication Workshop, 3 credits
- 242-441 Internship in Graphic Communication, 3 credits

Choose remaining credits with faculty advice.

### *Broad-Field Communications*

#### **Lower-Level Courses, 9 credits**

**Required:**

242-160 Introduction to Language, 3 credits

#### **Upper-Level Courses, 12 credits**

**Choose a minimum of 6 credits from:**

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

Choose remaining credits with faculty advice.

### *Arts Awareness*

#### **Lower-Level Courses, 9 credits**

**Required:**

242-261 Aesthetic Awareness: Foundations, 3 credits

#### **Upper-Level Courses, 12 credits**

**Choose a minimum of 6 credits from:**

- 242-310 Criticism of the Performing Arts, 3 credits
- 242-329 Cross-Cultural Communications, 3 credits
- 242-372 Aesthetic Awareness: Traditional Styles, 3 credits
- 242-373 Aesthetic Awareness: Avant-Garde Styles, 3 credits

Choose remaining courses with faculty advice.



# Communication Processes

Disciplinary Major or Minor



**Professors:** Jack Frisch; Donald Larmouth (chairperson); Timothy Meyer.

**Associate Professors:** Clifford Abbott; Phillip Clampitt; Jerry Dell; Charles Matter; Dean O'Brien.

**Assistant Professor:** Helaine Marshall.

**Lecturer:** Susan Penny.

## Requirements for the Major

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

### Lower-Level Courses

15 credits

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

#### Required:

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

#### Choose remaining 9 credits from courses below:

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

### Upper-Level Courses

Upper-level courses vary with each area of emphasis.

### Areas of Emphasis

Students should plan their programs with faculty advice.

#### *Print Journalism*

24 credits

#### Required:

- 246-353 Practicum in Print Journalism II, 1-3 credits
- 246-380 Communication Law, 3 credits

#### Choose remaining 18 credits from:

- 246-303 Feature Writing, 3 credits
- 246-305 Elements of Electronic Media, 3 credits
- 246-336 Theories of the Interview, 3 credits
- 246-343 Photography II, 3 credits
- 246-344 Photography III, 3 credits
- 246-390 Scientific and Technical Communication, 3 credits
- 246-403 Advanced Reporting, 3 credits
- 246-445 Human Communication Theory, 3 credits
- 246-460 Publications Management, 3 credits
- 246-497 Internship in Communication Processes, 3 credits

#### *Electronic Media*

24 credits

#### Required:

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

#### Choose remaining 3 credits from:

- 246-343 Photography II, 3 credits
- 246-403 Advanced Reporting, 3 credits
- 246-444 Time Duration Visual Media, 3 credits
- 246-497 Internship in Communication Processes, 3 credits

#### *Photography*

24 credits

#### Required:

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

#### Choose remaining 12 credits from:

- 246-305 Elements of Electronic Media, 3 credits

- 246-307 Television Production Techniques, 3 credits
- 246-308 Cable and Satellite Telecommunications, 3 credits
- 246-345 Designing Multi-Media Applications of Photography, 3 credits
- 246-346 Photographic Design for Print Media, 3 credits
- 246-444 Time Duration Visual Media, 3 credits
- 246-497 Internship in Communication Processes, 3 credits

**Organizational  
Communication**  
24 credits

**Required:**

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

**Choose remaining 6 credits from:**

- 246-308 Cable and Satellite Telecommunications, 3 credits
- 246-460 Publications Management, 3 credits
- 246-487 Communication Audits, 3 credits
- 246-497 Internship in Communication Processes, 3 credits

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

**Required:**

- 246-445 Human Communication Theory, 3 credits

16 credits in a foreign language  
(equivalent to two years' college-level study)

**Required for teacher certification in English as a second language:**

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

**Choose remaining 9 credits from courses below:**

- 246-320 History of the English language, 3 credits
- 246-324 Psycholinguistics, 3 credits
- 246-326 Modern Semantics, 3 credits
- 246-337 Small Group Communication, 3 credits
- 246-497 Internship in Communication Processes, 3 credits
- 481-495 Language Acquisition in Children, 3 credits
- \*302-315 Principles and Methods of Teaching English as a Second Language, 3 credits

**Public Relations**  
30 credits

**Choose 21 credits from:**

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

**Electives, choose 9 credits from:**

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

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

The demands of contemporary scholarship as well as professional careers make it important for students to integrate three areas of preparation: a broad, comprehensive examination of the nature of communication that includes knowledge of cognitive science, information theory, linguistics, and psychology; study in depth of a particular form of communication, such as journalism, electronic media, photography, organizational communication, linguistics, and public relations; and significant work in specific areas of communication which are allied with the particular area of emphasis.

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

*continued*

## Communication Processes

The curriculum in communication processes is designed to achieve this kind of broad-field integration through six areas of emphasis:

- In **electronic media**, students need more than just knowledge of production techniques. Professional advancement requires skills in writing, editing, advertising, and sales, market, and audience research as well as knowledge of new media and their impact upon society and culture.

- In **journalism**, students must have writing skill, the ability to dig, a concern for people, a strong sense of autonomy, and an abiding interest in public affairs, including their cultural, social, economic, and political contexts. Good journalists develop these qualities through this program and a thorough liberal arts education.

- Students in **linguistics and English as a second language** integrate a strong background in language structure and variation with substantial preparation in foreign language, cross-cultural studies, and education, both to succeed in the ESL classroom and to prepare for advanced studies at the graduate level.

- Students in **organizational communication** develop basic communication skills needed in organizations, such as speaking, interviewing, and discussion skills. They also learn about sources of communication problems in organizations, apply strategies for discovering and solving these problems, and build an understanding of current theories of organizational communication.

- Students in **photography** come to understand photography as a problem-solving process which combines imagination, intuition, critical analysis, and mastery of tools and materials. The instructional program emphasizes theoretical concepts and practical experience to prepare students for diverse applications of photography.

## Requirements for the Minor Courses marked (\*) cannot be double-counted with another academic major or minor.

### Lower-Level Courses

12 credits minimum

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

#### Required:

246-200 Communication Processes: An Introduction, 3 credits

#### Choose remaining 9 credits from the courses below:

246-102 Introduction to Mass Communication, 3 credits

246-133 Fundamentals of Public Address, 3 credits

246-166 Fundamentals of Interpersonal Communication, 3 credits

246-201 Human Information Processing, 3 credits

246-203 Newswriting Laboratory, 3 credits

246-205 Intercultural Communication, 3 credits

246-243 Introduction to Photography, 3 credits

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

\*242-160 Introduction to Language, 3 credits

\*242-231 Introduction to Graphic Communication, 3 credits

### Upper-Level Courses

12 credits minimum

Upper-level courses vary with each area of emphasis.

### Areas of Emphasis

Students should plan their programs with faculty advice.

#### *Print Journalism*

##### Required:

246-303 Feature Writing, 3 credits

246-380 Communication Law, 3 credits

##### Choose remaining 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

#### *Electronic Media*

##### Required:

246-305 Elements of Electronic Media, 3 credits

##### Choose remaining 9 credits from:

246-307 Television Production Techniques, 3 credits

246-308 Cable and Satellite Telecommunications, 3 credits

246-309 Electronic Media Commercial Campaigns, 3 credits

246-380 Communication Law, 3 credits

#### *Organizational Communication*

##### Required:

246-335 Organizational Communication, 3 credits

246-336 Theories of the Interview, 3 credits

##### Choose remaining 6 credits from:

246-333 Persuasion and Argumentation, 3 credits

246-337 Small Group Communication, 3 credits

246-445 Human Communication Theory, 3 credits

246-460 Publications Management, 3 credits

246-487 Communication Audits, 3 credits

*Photography*

**Required:**

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

**Choose remaining 3 credits from:**

- 246-345 Designing Multiple Media Applications in Photography, 3 credits
- 246-346 Photographic Design for Print Media, 3 credits
- 246-444 Time Duration Visual Media, 3 credits
- 246-460 Publications Management, 3 credits

*Public Relations*

**Required:**

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

**Choose remaining 6 credits from courses below:**

- 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
- \*216-325 Public Relations, 3 credits

*Linguistics/  
Teaching English as a  
Second Language*  
18 credits required

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

8 credits in a foreign language, minimum  
(Equal to 1 year of college-level study)

**Culture of a linguistic minority, minimum 3 credits:**

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

**Language structure, minimum 3 credits:**

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

**Language in its social context, minimum 3 credits:**

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

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

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

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

- 302-315 Principles and Methods of Teaching English as a Second Language, 3 credits

**Additional depth in linguistics, minimum 3 credits:**

Course work selected in consultation with faculty adviser

● 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.

● The program in communication processes is also a good choice for students who seek **teacher certification** in English/communication arts, journalism/mass media, speech/organizational communication, and English as a second language.

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

Graduates from the program in communication processes 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.

# Earth Science

Disciplinary Major or Minor

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

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

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

There are many career opportunities for earth scientists. Emerging awareness of the need to use natural resources wisely has increased demand for knowledgeable earth scientists in industry and a variety of government agencies that deal with land use decisions. Petroleum companies and metallic mineral industries continue to hire earth scientists. Similarly, resource conservation agencies need people who can bridge the gap between the scientific aspect of wise land use to increase public awareness and understanding of issues involved. Waste disposal, water quality, and soil erosion are examples of areas to which earth scientists can contribute invaluable assistance.

Earth science students interested in regional planning, resource management or land management typically select interdisciplinary minors in science and environmental change or regional analysis, and to a lesser degree, environmental planning or urban and public affairs. For those interested in business, earth science may be combined with courses in business administration. A career in earth science communications with emphasis on the earth sciences may be pursued through a major linking earth science with communication and the arts.

## Requirements for the Major

### Supporting Courses

34 credits minimum

#### Required core courses, 16 credits:

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

#### Choose one of these:

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

#### Choose one of these:

- 246-133 Fundamentals of Public Address, 3 credits
- 246-390 Scientific and Technical Communications, 3 credits
- 552-105 Expository Writing, 3 credits
- An equivalent communications course with adviser's consent
- One year of a foreign language (8 credits)

### Areas of Emphasis

#### *General Earth Science*

#### Additional Supporting Courses

##### Choose one of these:

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

#### Upper-Level Courses, 24 credits

##### Choose 6 credits from:

- 296-340 Rock and Mineral Resources, 3 credits
- 416-325 Regional Climatology, 3 credits
- 678-320 Soil Environment, 3 credits
- 678-330 Descriptive Hydrology, 3 credits
- 678-342 Environmental Geology, 3 credits

##### Choose one course from:

- 296-350 Geological Field Methods, 4 credits
- 416-351 Elements of Cartography, 3 credits
- 416-451 Computer Cartography, 3 credits
- 678-454 Remote Sensing of the Environment by Satellite, 3 credits

Plus additional earth science courses to total 24 credits

#### *Graduate Study Emphasis*

#### Additional Required Supporting Courses

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

**Upper-Level Courses**

Select one emphasis and take all courses in that emphasis:

**Atmospheric Science**

- 416-325 Regional Climatology, 3 credits
- 678-350 Meteorology, 3 credits

**Geology**

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

**Soil and Land Resources**

- 678-320 Soil Environment, 3 credits
- 678-321 Soil Environment Laboratory, 1 credit
- 678-460 Resource Management Strategy, 3 credits

**Water Resources**

- 678-430 Quantitative Hydrology, 3 credits
- 678-460 Resource Management Strategy, 3 credits

**Requirements for the Minor**

**Supporting Courses**  
12-17 credits

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

**Choose one of these:**

- 225-108 General Chemistry, 5 credits

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

**Choose one of these:**

- 416-250 Displays of Geographic Information, 3 credits
- A course in communications, remote sensing, cartography or mathematics to include statistics and computer science (approved by an earth science adviser).

**Upper-Level Courses**  
12 credits

**Choose one of these:**

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

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

Teacher certification can be achieved with both the earth science major and minor. Students seeking teacher certification should consult with advisers in earth science and education early in their studies to insure that their programs meet all requirements of the Wisconsin Department of Public Instruction.

Students majoring in earth science usually follow one of two paths: 1) those who are preparing for scientific and technical careers requiring advanced work at the graduate level, and 2) those who plan to obtain the major to support another area of study or simply for personal satisfaction.

**Graduate Studies Emphasis**

A thorough understanding of mathematics, physics, and chemistry are essential for students considering graduate study. Calculus, basic inorganic chemistry, and basic physics are as important as courses in geology, meteorology, hydrology, or soil science. Advanced courses in mathematics, computer science, physics, and chemistry are desirable. In some areas of earth science, advanced training in biology is required.

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

# Economics

Disciplinary Major or Minor

**Professors:** James M. Murray;  
Ismail Shariff.

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

**Assistant Professor:** Gerrit Knaap  
(chairperson).

Economics is a social science discipline that focuses on the allocation and distribution of scarce resources. As a social science, economics is fundamentally about people—their needs and wants, their behavior, and the institutions they construct. As the discipline that focuses on scarcity, economics includes the study of organizations and institutions that influence resource allocation. These include businesses, governments, households, product markets, and the markets for land, labor, capital, and innovation, among others. Understanding these organizations provides insights into problems such as inflation, unemployment, government regulation, environmental degradation, poverty, and economic growth.

Students who major or minor in economics receive training in quantitative methods, economic theory, and applied economic analysis. Majors are required to take three lower-level courses in quantitative methods, four courses in economic theory, and six upper-level courses in applied areas. Minors must take one lower-level course in quantitative methods, three courses in economic theory, and three courses in applied areas. Students can tailor their academic plan to fit their particular strengths and interest areas.

The broad training received by economics students in economic decision-making generates for graduates a variety of career opportunities. Many economics majors go on to graduate schools, where they receive advanced training in such diverse fields as business, economics, law, public policy, and urban studies. Others go directly to work for large businesses, government agencies, and nonprofit organizations.

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

## Requirements for the Major

### Supporting Courses

9 credits required

- 600-260 Introductory Statistics, 3 credits (required)  
OR  
225-205 Social Science Statistics, 3 credits  
600-201 Calculus for Management, 3 credits  
(Other equivalent or higher level calculus course will also fulfill this requirement.)  
600-155 Computers and Microcomputers, 3 credits  
OR  
600-256 Introduction to Computer Science, 3 credits

### Core Courses

6 credits

- 298-202 Macroeconomic Analysis, 3 credits  
298-203 Microeconomic Analysis, 3 credits

### Upper-Level Courses

24 credits

- 298-302 Intermediate Macroeconomic Theory, 3 credits  
298-303 Intermediate Microeconomic Theory, 3 credits  
**Electives, 18 credits chosen from:**  
298-301 Economic and Social Security, 3 credits  
298-304 Contemporary Labor Markets, 3 credits  
298-306 Public Finance and Fiscal Policy, 3 credits  
298-307 Sources of Contemporary Economic Concepts, 3 credits  
298-308 Business Cycles, 3 credits  
298-330 Money and Banking, 3 credits  
298-402 Resource Economic Analysis, 3 credits  
298-403 International Trade, 3 credits  
298-404 Economics of Developing Areas, 3 credits  
298-406 Comparative Economic Systems and Institutions, 3 credits  
298-485 Managerial Economics, 3 credits  
834-340 Economics of Land Use, 3 credits  
834-342 Community Economic Development, 3 credits  
834/950-309 Urban and Regional Economic Theory, 3 credits  
834/950-407 Urban and Regional Economic Analysis, 3 credits

## Requirements for the Minor

### Supporting Courses

3 credits required

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

### Core Courses

6 credits

- 298-202 Macroeconomic Analysis, 3 credits  
298-203 Microeconomic Analysis, 3 credits

### Upper-Level Courses

12 credits

- 298-302 Intermediate Macroeconomic Theory, 3 credits  
OR  
298-303 Intermediate Microeconomic Theory, 3 credits

#### Electives:

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



# E

## Education

Professional Teacher Certification

**Professor:** George O'Hearn.

**Associate Professors:** Lyle Bruss (adjunct); Dennis Bryan; James Busch (chairperson); Margaret Laughlin; Richard Presnell; Philip Thompson; Thomas Van Koevering.

**Assistant Professor:** Kathryn Koch; Jeanne Sullivan.

**Lecturer:** Joan Thron.

Education prepares students for the teaching profession and/or for a variety of education-related professional areas. UWGB has certification in these subjects and grade levels:

Early childhood education (nursery and/or kindergarten)  
Elementary education (grades K-6, 1-6 1-8)\*  
Elementary art teacher  
Elementary music teacher  
Secondary education (grades 7-12)\*

\*When this book was printed, the Wisconsin Department of Public Instruction was in the process of changing the range of the elementary and secondary levels of licensure to K-6 or 1-6 for elementary and to 9-12 for secondary. At the same time, a middle school licensure category and standards for grades 5-9 will be established. When this change is made, the UWGB education program will offer programs leading to such licensure. Contact the Education Office or Academic Advising for information.

Academic subject areas listed below are for grades 7-12 unless otherwise indicated:

Anthropology  
Art (elementary, secondary or K-12)  
Athletic coaching  
Biology  
Chemistry  
Computer science  
Conservation/environmental studies  
Drama  
Earth science  
Economics  
English  
English as a second language (elementary, secondary or K-12)  
French (secondary or K-12)  
Geography  
German (secondary or K-12)  
History  
Journalism/Mass Media  
Mathematics  
Music—choral  
Music—instrumental (secondary or K-12)  
Music—general (elementary; secondary or K-12)  
Physical science  
Physics  
Political science  
Psychology  
Science: broad field  
Science: grades 7-9  
Social studies: broad field  
Social studies: grades 7-9  
Sociology  
Spanish (secondary or K-12)  
Speech

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

For students whose career goals are not the traditional roles of classroom teacher in the formal public or private school context, the education program offers opportunities, too. Such students may pursue noncertification programs which are individually planned to relate to their particular educational needs and career goals.

Some examples of such career fields—many of which are recent developments in our society—include: environmental education and nature center programs, labor education programs, educational media, social services agency educational programs, education advocacy, parent education, education for the elderly, youth and adult community programs, leisure education.

Teacher preparation is a cooperative responsibility of the education faculty and various other departments of the University. UWGB students fulfill degree requirements in their chosen major and at the same time, follow a program to meet requirements of the Wisconsin Department of Public Instruction for teacher certification as approved for UWGB.

UWGB graduates with teacher certification have consistently shown an excellent placement record. A follow-up of graduates receiving initial certification in 1985-86 revealed that approximately 75 percent of the respondents were employed in teaching; 14 percent were engaged in other employment; and eight percent were seeking a teaching position. Employment opportunities do vary depending upon the area of certification.

### Program Entrance Requirements

**Preliminary Admission.** When admitted to the University, students may choose any certification programs in which they expect to complete requirements. Students planning to complete a teacher certification program should indicate this on their application for admission to UWGB.

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

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

1. Be a matriculated student and have earned a minimum of 15 credits in residence at UWGB with a grade point average of 2.5 or higher for work completed at UWGB.
2. Have a minimum cumulative grade point average of 2.5 computed on at least 40 credits of college-level course work. This is calculated on all courses attempted at UWGB and at other institutions which might be recognized for transfer of credit to UWGB. Those courses in which UWGB has no comparable curricular area are not considered in these calculations.
3. Have received a passing score as specified by the state superintendent of public instruction on standard examinations in mathematics, reading, and writing. The examinations as well as the times and sites they are given are specified by the state superintendent. The examinations may not be taken more than three times.
4. Have demonstrated proficiency in speaking and listening by completion of 246-133 with a grade of "C" or better, or by completing an equivalent speech course acceptable for transfer to UWGB with a grade of "C" or better.
5. Have a copy of her or his high school transcript on file in the Education Office.
6. Have ACT test scores submitted to the Registrar's Office for entry on the UWGB transcript.

*continued*

7. Be free from physical or mental/psychological impairment which would substantially limit a person from performing the essential functions of a teacher candidate or teacher. Such physical or mental/psychological impairment shall not disqualify a person who with reasonable accommodation can perform the essential functions of a teacher. An examination and recommendation by an appropriate medical and/or other professional specialist will be required if deemed necessary.

Students should apply for admission to the program during the semester in which they expect to complete all requirements for admission. To be included on the roster of persons admitted, students must meet all requirements and submit records to the Education Office by a specific date for each period.

Admission periods are: (1) the first day of classes of the fall semester through the last day before the start of classes for the spring semester; (2) the first day of classes of the spring semester through the last day before the start of the summer session; and (3) the first day of classes of the summer session through the last day before the start of classes of the fall semester.

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

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

## Requirements for Teacher Certification

The requirements described apply to students seeking initial teacher certification who enter UWGB after July 1, 1987, and who complete their certification requirements after August 31, 1990. Students who enrolled before July, 1987, or who will complete requirements before the end of August, 1990, fulfill an earlier set of requirements which are available from the Education Office.

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

### General Education 42 credits

Course work included in the student's major(s), minor(s) or professional education sequence may not be included in the 42 credits of general education course work required for teacher education.

#### The 42 credits must include:

- 9 credits in the humanities and fine arts
- 9 credits in the social sciences
- 9 credits in the natural sciences and mathematics

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

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

### Academic Major or Minor 30-36 credits minimum

Students may select either an interdisciplinary major or a disciplinary major and interdisciplinary minor. Some programs require substantially more credits than the minimum stated here. Some certification programs require specific majors, minors, or academic competencies. Again, the Education Office should be consulted.

### Human Relations

At the time of printing, these requirements were under revision. The Education Office or Academic Advising can supply updated information.

### Conservation/ Environmental Education 5-8 credits

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

## Professional Education

At the time this book was prepared, professional education requirements were being revised to meet new requirements of the Wisconsin Department of Public Instruction. Students should check with the education or Academic Advising Offices for additional or changed requirements from those listed below.

### Early Childhood

- 302-402 Student Teaching, 15 credits  
 302-410 Introduction to the Education of Exceptional Children, 3 credits  
 302-421 Reading Readiness and Language Development, 3 credits  
 302/481-441 History, Philosophy and Current Programs in Early Childhood Education, 3 credits  
 302-442 Curriculum and Program Development in Early Childhood Education, 3 credits  
 302-445 Early Childhood Center Administration and Community Resources, 3 credits\*  
 481-331 Human Development I: Infancy and Early Childhood, 3 credits\*  
 481-333 Observation and Interpretation of Child Behavior, 3 credits\*  
 481-334 Play and Creative Activity in Childhood, 3 credits\*  
 481-335 Introduction to Experience with Young Children, 1 credit\*  
 820-315 Educational Psychology, 3 credits

\*Not required for kindergarten certification.

### Elementary

- 302-203 Introduction to Environmental Education in the Schools, 2 credits  
 302-301 Introduction to Education and Teaching, 3 credits  
 302-302 Principles and Methods of Teaching Social Studies in Elementary Schools, 2 credits  
 302-303 Principles and Methods of Teaching Art in the Elementary Schools, 2 credits  
 302-304 Principles and Methods of Teaching Music for the Elementary Teacher, 2 credits  
 302-305 Principles and Methods of Teaching Math and Science in the Elementary Schools, 4 credits  
 302-306 Principles and Methods of Teaching Health and Physical Education in the Elementary School, 3 credits  
 302-307 Principles and Methods of Teaching Reading in the Elementary School, 3 credits  
 302-309 Principles and Methods of Teaching Language Arts in the Elementary School, 2 credits  
 302-402 Student Teaching in the Elementary School, 15 credits  
 302-410 Introduction to the Education of Exceptional Children, 3 credits  
 820-315 Educational Psychology, 3 credits

### Secondary

- 302-301 Introduction to Education and Teaching, 3 credits  
 302/310-317 Principles and Methods of Teaching (specific subject), 3 credits  
 302-318 Reading and Study Skills in the Secondary School, 2 credits  
 302-403 Student Teaching in the Secondary School, 15 credits  
 302-410 Introduction to the Education of Exceptional Children, 3 credits  
 820-315 Educational Psychology, 3 credits



# Environmental Planning

Interdepartmental Major or Minor

**Professors:** Hallett Harris;  
Robert Wenger.

**Associate Professors:** Daniel Alesch; Ronald Baba (chairperson); Harvey Kaye; William Laatsch; David Littig; William Niedzwiedz.

**Assistant Professor:** Gerrit Knapp.

Environmental planning is a rigorous interdepartmental major for students who desire to develop professional knowledge and skills in planning, design, protection, and management of the natural and built environment. Students who complete the program of study for this major also fulfill the UWGB requirement for an interdisciplinary major.

Many graduates of the program go on to graduate education in planning, architecture, policy studies, environmental protection, or management where they report that their undergraduate education prepared them exceptionally well for such graduate study.

Other graduates of the program have entered employment in public and private organizations directly upon graduation. These students have found that the problem-focused approach of the program has prepared them for dealing with the complex problems which result from the interaction of environmental, social, economic, and political concerns.

## Requirements for the Major

### Supporting Courses

21 credits

- 255-205 Social Science Statistics, 3 credits  
OR  
600-260 Introductory Statistics, 3 credits  
216-102 Introduction to Environmental Science, 3 credits  
255-301 Foundations for Social Research, 3 credits  
600-101 Intermediate Algebra, 3 credits (or equivalent)  
600-155 Computers and Microcomputers, 3 credits  
778-100 Introduction to Political Science, 3 credits  
950-201 Problem Analysis and Decision Making, 3 credits

### Upper-Level Courses

30 credits

- Required:**  
950-452 Planning Theory and Methods, 3 credits
- Choose 9 credits:**  
834-322 Regional Planning, 3 credits  
834-323 Land Use Controls, 3 credits  
834-421 Techniques and Methods of Planning Analysis, 3 credits  
950-408 Public Policy Analysis, 3 credits  
950-412 Urban Planning, 3 credits  
950-451 Decision Theory and Methods, 3 credits
- Choose 6 credits:**  
298-302 Intermediate Macro Economic Theory, 3 credits  
298-303 Intermediate Micro Economic Theory, 3 credits  
298-404 Economics of Developing Areas, 3 credits  
834-340 Economics of Land Use, 3 credits  
950-309 Urban and Regional Economic Theory, 3 credits  
950-409 Public Finance and Fiscal Policy, 3 credits  
950-415 Public and Nonprofit Budgeting, 3 credits  
950-470 Capital Projects Planning and Management, 3 credits
- Choose 6 credits:**  
778-312 Community Politics, 3 credits  
778-351 Comparative Political Systems, 3 credits  
778-353 Politics of Developing Systems, 3 credits  
778-410 Intergovernmental Relations, 3 credits  
778-416 American Legislative Process, 3 credits  
875-333 Social Change in a Selected Area, 3 credits  
875-361 Historical Perspectives on Social Change, 3 credits  
875-365 Development Planning, 3 credits  
950-331 Urban Politics and Policy, 3 credits
- Choose 6 credits:**  
296-420 Soil Classification and Geography, 3 credits  
678-302 Principles of Ecology, 3 credits  
678-303 Conservation of Natural Resources, 3 credits  
678-327 Urban Technological Design, 3 credits  
678-384 The Environment's Response to Human Settlement, 3 credits  
678-460 Resource Management Strategy, 3 credits

**Field Specialization**

18 credits

The field specialization requirement may be met by:

1. successful completion of a set of courses (consisting of 18 credits, with at least 12 credits of upper-level courses) individually tailored to meet the student's interests,
2. fulfilling the requirements for an approved second major,  
OR
3. meeting the requirements for an approved minor.

**Requirements for the Minor****Upper-Level****Courses**

18 credits

Required:

- 678-302 Principles of Ecology, 3 credits  
950-452 Planning Theory and Methods, 3 credits

Choose 9 credits:

- 834-322 Regional Planning, 3 credits  
834-421 Techniques and Methods of Planning Analysis, 3 credits  
950-408 Public Policy Analysis, 3 credits  
950-412 Urban Planning, 3 credits  
950-451 Decision Theory and Methods, 3 credits  
950-470 Capital Projects Planning and Management, 3 credits

Choose 3 credits:

- 298-404 Economics of Developing Areas, 3 credits  
834-323 Land Use Controls, 3 credits  
834-340 Economics of Land Use, 3 credits  
950-309 Urban and Regional Economic Theory, 3 credits  
950-409 Public Finance and Fiscal Policy, 3 credits  
950-415 Public and Nonprofit Budgeting, 3 credits

Students who minor in environmental planning must choose an interdisciplinary major.

One important feature of the major in environmental planning is the field specialization. This requirement allows students to combine their studies of the planning process with a solid foundation in a specific area of application. For example, some students have completed field specializations in urban studies in preparation for careers in urban planning; others with interests in environmental protection have satisfied this requirement with coursework in the environmental sciences; others have combined interests in economics and planning.

Students may choose to meet the field specialization requirement by completing an approved set of courses tailored to their special interests, completing a second major, or meeting the requirements for an approved minor. These options make it possible to prepare for a broad range of opportunities for employment or advanced study. To investigate these opportunities and take full advantage of the flexibility built into this major, students should consult with the program adviser.

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

# Geography

Disciplinary Major or Minor

**Professors:** Donald Gandre;  
William Kuepper.

**Associate Professor:** William  
Laatsch (chairperson).

Geography is the systematic study of the location, variations, and interrelations of natural and cultural features of the earth. Since UWGB has an institution-wide mission to emphasize interdisciplinary, problem-focused education to prepare students to address the problems of the human experience, the study of geography is particularly appropriate. It is one of the disciplines that effectively examine the world and its problems with a view to comprehensive understanding.

Geography provides limited technical training for students who wish to work as professional geographers in government or industry, and preparation for study beyond the bachelor's degree in geography and allied fields.

## Requirements for the Major

### Supporting Courses

9 credits required

- 416-120 Survey of Physical Geography, 3 credits  
416-250 Displays of Geographic Information, 3 credits  
416-102 Introduction to Geography: The Regions of Earth, 3 credits  
OR  
416-202 Introduction to Cultural Geography, 3 credits  
OR  
416-215 Economic Geography, 3 credits

#### Recommended courses:

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

### Upper-Level Courses

24 credits required

#### Physical Geography (one course required):

- 416-320 Landform Geography: Topics and Regions, 3 credits  
416-325 Regional Climatology, 3 credits  
296/416-380 Geomorphic Processes, 3 credits  
296/416-420 Soil Classification and Geography, 3 credits  
416-421 Soils of Wisconsin Field Trip  
296/416-470 The Glacial Environment and Chronology, 3 credits

#### Cultural Geography (one course required):

- 416-341 Urban Geography, 3 credits  
416-342 Settlement Geography, 3 credits  
416-343 Field Experience in Settlement Geography, 3 credits  
416/834-368 The Geopolitics of World Regions, 3 credits

#### Regional Geography (one course required):

- 416-361 Geography of Africa, 3 credits  
416-371 Geography of the United States and Canada, 3 credits  
416-372 Analysis of Great Lakes Regions of North America, 3 credits  
416-377 Analysis of Northern Lands, 3 credits  
416-378 Geography of Conflict Areas, 3 credits  
416-382 Analysis of Northwestern Europe, 3 credits

#### Geographic Techniques (two courses required):

- 416-355 Introduction to Quantitative Methods of Spatial Analysis  
416-351 Elements of Cartography, 3 credits  
416-353 Air Photo Interpretation, 3 credits  
416-451 Computer Cartography, 3 credits  
416-453 Advanced Air Photo Interpretation, 3 credits  
834-454 Remote Sensing of the Environment by Satellite, 3 credits

#### Geography Colloquium (required):

- 416-465 Colloquium for Geography Majors, 3 credits

#### Geography Electives (two courses required):

- Upper-level geography courses in physical, cultural, regional geography and/or geographic techniques and/or:  
416-483X Selected Topics in Geography, 1-4 credits  
416-497 Internship in Geography, 3-12 credits  
416-498 Independent Study, 1-4 credits

## Requirements for the Minor

### Supporting Courses

6 credits required

416-250 Displays of Geographic Information, 3 credits

One of the following:

416-102 Introduction to Geography, 3 credits

416-120 Survey of Physical Geography, 3 credits

416-202 Introduction to Cultural Geography, 3 credits

416-215 Economic 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.

Geography also 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. Students who want certification to teach should seek advice early from advisers in geography and education, to make sure they complete all requirements.

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



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

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

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

History is an essential guide to the present and the future as well as the past. We cannot understand ourselves or our society without an understanding of our past, and its European and non-western roots, and the comparative perspective gained from a knowledge of the history of other areas of the world. History helps us appreciate the commonality and diversity of cultures and leads us to greater awareness of the complexities of our heritage.

## Requirements for the Major

### Lower-Level Courses

12 credits

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

#### Category 1:

- 448-100 History of the Modern World, 3 credits
- 448-205 History of the United States I, 3 credits
- 448-206 History of the United States II, 3 credits
- 493-101 Foundations of Western Culture I, 3 credits
- 493-102 Foundations of Western Culture II, 3 credits
- OR
- 448-203 History of Europe I, 3 credits
- 448-204 History of Europe II, 3 credits

#### Category 2:

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

### Upper-Level Courses

24 credits

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

#### Category 1, American History:

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

#### Category 2, European History:

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



**Category 3, Non-Western History:**

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

**Required:**

- 448-480 Seminar in History, 3 credits

**Other upper-level courses appropriate for the major program:**

- 493-332 Art and Social Thought, 3 credits
- 493-341 Perspectives on Human Values: The Medieval World, 3 credits
- 493-374 Wisconsin's Indians: Historical and Cultural Perspectives, 3 credits
- 778-360 International Politics, 3 credits
- 834-368 Geopolitics of World Regions, 3 credits
- 875-320 American Constitutional Law, 3 credits
- 875-333 Social Change in Selected Areas, 3 credits
- 875-361 Historical Perspectives on Social Change, 3 credits
- 950-345 Women in American Perspective, 3 credits

## Requirements for the Minor

### Lower-Level Courses 6 credits

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

### Upper-Level Courses 12 credits minimum

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

The history program offers a variety of courses in American, European, and Third World history, and thematic courses such as the history of science, which provide the basis for a necessary part of a liberal education. Each area has sufficient courses to allow history majors a selection of areas of emphasis.

A thorough grounding in history is the foundation of a complete education. History's rigorous intellectual discipline, its emphasis on research and writing skills, and its probing of theory and methods of analysis, provide intellectual growth and breadth of understanding. It is ideal preparation for professional careers in many fields, particularly law, business, journalism, teaching, and public relations, and for many graduate programs.

History faculty includes expertise in political, social, economic, diplomatic, cultural and intellectual history and has outstanding records in teaching and scholarly research. Faculty members are trained in the fields of American, European, African, Asian, and Latin American history, as well as the history of science and international relations. The university supports the history program with a fine library and an exceptional collection of original documents in the Area Research Center.

Students seeking teacher certification in history must include course work in ancient, medieval and modern European history (nine credits minimum), non-Western history (six credits minimum), and U.S. history (six credits minimum). The courses selected must be approved by the history adviser as well as by the social studies education adviser.

# Human Biology

Interdisciplinary Majors and Minors in Human Biology and Nutritional Sciences



**Professors:** Harry G. Guilford;  
Elaine N. McIntosh.

**Associate Professors:** Dawson  
C. Deese; Charles A. Ihrke;  
Joseph A. Mannino (chairper-  
son); Dorothea B. Sager; Richard  
J. Stevens.

**Assistant Professor:** Warren V.  
Johnson.

The interdisciplinary program in human biology offers two majors and two minors—in human biology and nutritional science.

Human biology focuses on the study of the biological, physiological, anthropological, and behavioral bases of the human organism's ability to adapt to and survive the environment. The core courses of the program emphasize human structure and function, patterns of growth and development, genetics, nutrition and behavior as it exists today and as it relates to human biological evolution and diversity.

## Requirements for Majors in Human Biology and Nutritional Science

### Supporting Courses

18-21 credits

#### Category I:

204-202 Principles of Biology I, 4 credits

AND

204-203 Principles of Biology II, 4 credits

OR

204-202 Principles of Biology I, 4 credits

AND

478-203/204 Anatomy and Physiology, 6 credits

#### Category II:

600-260 Introductory Statistics, 4 credits

#### Category III: (6-7 credits)

552-105 Expository Writing, 3 credits

#### Choose one course from these subject areas:

Oral Communication (Communication Processes)

Literature

Foreign language

### Upper-Level Courses

9 credits

One course in three of the four subject areas:

#### Genetics:

204-303 Genetics, 3 credits

OR

478-310 Human Genetics, 3 credits

#### Human Physiology and Anatomy:

Many alternatives available, check course offerings.

#### Nutrition:

479-300 Nutritional Significance of Food, 3 credits

OR

479-302 Nutrition and Culture, 3 credits

#### Evolution:

478-342 Human Evolution, 3 credits

OR

204-312 Evolutionary Processes, 3 credits

### Areas of Emphasis Human Biology

21 credits minimum

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

#### *Health Science Emphasis*

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

#### Upper-Level Courses, 32-40 credits

##### Required:

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

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

225-311 Analytical Chemistry, 4 credits

226-103/104 Principles of Physics I, II, 10 credits

(or 226-201/202 Calculus Level)

600-202/203 Calculus, 8 credits

(Optional for admission to some medical schools, but usually, no less than algebra and trigonometry)

**Exercise Physiology and  
Adult Fitness Emphasis****Supporting Course**

**Required:**  
820-300 Experimental Psychology, 4 credits

**Upper-Level Courses, 22 credits**

**Recommended:**  
478-320 Human Growth, Development, and Senescence, 3 credits  
478-333 Introduction to Sports Physiology, 3 credits  
478-342 Human Evolution, 3 credits  
478-350 Introduction to Exercise Physiology, 4 credits  
478-351 Kinesiology, 3 credits  
479-300 Nutritional Significance of Food, 3 credits  
820-311 Psychology of Sports and Exercise, 3 credits

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

**Recommended:**  
204-302 Microbiology, 4 credits  
204-340 Comparative Anatomy, 4 credits  
204-345 Animal Behavior, 3 credits  
204-346 Comparative Physiology, 3 credits  
204-347 Developmental Biology, 4 credits  
204-407 Molecular Biology, 3 credits  
478-318 Mammalian Reproduction, 3 credits

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

**Areas of Emphasis  
in Nutritional  
Science****Community Nutrition/  
Dietetics Emphasis****Supporting Courses**

**Required:**  
225-108 General Chemistry, 5 credits  
OR  
225-211/212 Principles of Chemistry I, II, 10 credits  
298-202 Macroeconomic Analysis, 3 credits  
479-212 Food Preparation, 4 credits  
820-102 Introduction to Psychology, 3 credits  
900-202 Introduction to Sociology, 3 credits

**Upper-Level Courses, 30 credits**

**Required:**  
204-302 Microbiology, 4 credits  
225-300-301 Bioorganic Chemistry with Laboratory, 4 credits  
225-331 Biochemistry Laboratory, 1 credit  
479-312 Quantity Food Production and Service, 4 credits  
479-321 Physiological Chemistry, 3 credits  
479-421/422 Community Nutrition I, II, 6 credits  
479-485 Advanced Human Nutrition, 3 credits  
479-488 Nutrition in Disease, 3 credits  
575-382 Introductory Management, 3 credits  
820-315 Educational Psychology, 3 credits

*continued*

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

Nutritional science students study human nutritional needs, nutrient functions, food quality, food supply, food preservation and food preparation.

Both majors may prepare students for graduate study in the biological sciences.

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

## Human Biology

There are two areas of emphasis in the nutritional sciences major: **community nutrition** (which may include dietetics) which prepares students for employment as nutritionists in hospitals or other health agencies at local, state, federal or international levels; and **food science**, which focuses on the fundamentals of food composition and analysis, food resources, processing, utilization, distribution and food safety. This emphasis prepares students for entry level positions in the food industry or in food research.

Students seeking teaching certification should consult advisers in the education program.

### *Food Sciences Emphasis*

#### **Supporting Courses**

**Required:**

- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 226-103 Fundamentals of Physics I, 4 credits
- 226-104 Fundamentals of Physics II, 4 credits
- 600-104 Elementary Algebra and Trigonometry, 3 credits

#### **Upper-Level Courses, 31 credits**

**Required:**

- 204-302 Principles of Microbiology, 4 credits
- 225-302 Organic Chemistry I, 3 credits
- 225-303 Organic Chemistry II, 3 credits
- 225-304 Organic Chemistry Laboratory I, 1 credit
- 225-305 Organic Chemistry Laboratory II, 1 credit
- 225-311 Analytical Chemistry, 4 credits
- 225-330 Biochemistry, 3 credits
- OR
- 479-321 Physiological Chemistry, 3 credits
- 225-331 Biochemistry Laboratory, 1 credit
- 479-302 Nutrition and Culture, 3 credits
- 479-404 Food Science, 3 credits
- 479-409 Analysis of Food and Food Products, 2 credits
- 479-485 Advanced Human Nutrition, 3 credits

## **Requirements for the Minor in Human Biology**

### **Supporting Courses**

From category I of the major requirements.

8-10 credits

### **Upper-Level Courses**

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

12-14 credits

## **Requirements for the Minor in Nutritional Science**

### **Supporting Courses**

- 204-202 Principles of Biology I, 4 credits
- 225-108 General Chemistry, 5 credits
- OR
- 225-211/212 Principles of Chemistry I, II, 10 credits

9-14 credits

### **Upper-Level Courses**

- Category I:**
- 479-300 Nutritional Significance of Foods, 3 credits
- Category II:**
- 204-302 Microbiology, 4 credits
- Category III:**
- 225-300/301 Bioorganic Chemistry and Laboratory, 4 credits
- OR
- 479-404 Food Science, 3 credits
- Category IV:**
- 479-302 Nutrition and Culture, 3 credits
- 479-485 Advanced Human Nutrition, 3 credits

16-17 credits

# Human Development

Interdisciplinary Major or Minor



**Professor:** Richard D. Logan.

**Associate Professors:** Fergus Hughes; Lloyd Noppe (chairperson).

**Assistant Professors:** Illene Noppe; Dean Rodcheaver.

## Requirements for the Major

### Supporting Courses

9 credits

- 255-205 Social Science Statistics, 3 credits  
 OR  
 600-260 Introductory Statistics, 3 credits  
 478-102 Introduction to Human Biology, 3 credits  
 OR  
 478-110 Introduction to Physical Anthropology, 3 credits  
 481-201 Introduction to Human Development, 3 credits  
 OR  
 820-102 Introduction to Psychology, 3 credits

### Upper-Level Courses

24 credits

#### Required courses for all emphases, 9 credits:

- 481-331 Human Development I: Infancy and Early Childhood, 3 credits  
 481-332 Human Development II: Middle Childhood and Adolescence, 3 credits  
 481-433 Human Development III: Adulthood and Aging, 3 credits

#### Electives, 15 credits:

Electives are chosen according to the student's area of emphasis. Typically, courses are chosen from the following list, but other appropriate courses may be included from other departments, with faculty adviser's approval.

- 481-333 Observation and Interpretation of Child Behavior, 3 credits  
 481-334 Play and Creative Activities in Childhood, 3 credits  
 481-336 Sex Role Development in Contemporary Society, 3 credits  
 481-339 Woman in the Life Cycle, 3 credits  
 481-342 Cross Cultural Human Development, 3 credits  
 481-431 Cognitive Development, 3 credits  
 481-435 Abnormal Behavior, 3 credits  
 (required for most human development majors)  
 481-436 Counseling with Children and Adolescents, 3 credits  
 481-437 Counseling with Adults and the Aged, 3 credits  
 481-441 History, Philosophy and Current Programs in Early Childhood Education, 3 credits  
 481-495 Language Acquisition in Childhood, 3 credits  
 481/820-420 Tests and Measurements, 3 credits  
 481/820-429 Theories of Personality, 3 credits

## Areas of Emphasis

### *Child Development Emphasis*

#### Supporting Courses, 9 credits

These are the same as listed under major requirements.

#### Upper-Level Courses, 24 credits

- 481-331 Human Development I: Infancy and Early Childhood, 3 credits  
 481-332 Human Development II: Middle Childhood and Adolescence, 3 credits  
 481-333 Observation and Interpretation of Child Behavior, 3 credits  
 481-334 Play and Creative Activities in Childhood, 3 credits  
 481-433 Human Development III: Adulthood and Aging, 3 credits  
 481-436 Counseling With Children and Adolescents, 3 credits  
 481-441 History, Philosophy, and Current Programs in Early Childhood Education, 3 credits  
 481-495 Language Acquisition in Childhood, 3 credits

*continued*

## Human Development

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

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

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

### *Preclinical/ Precounseling Emphasis*

#### **Supporting Course**

Recommended in addition to those listed for the major:  
820-205 Psychology of Human Adjustment, 3 credits

#### **Upper-Level Courses, 24 credits**

##### **Required:**

- 481-331 Human Development I: Infancy and Early Childhood, 3 credits
- 481-332 Human Development II: Middle Childhood and Adolescence, 3 credits
- 481-429 Theories of Personality, 3 credits
- 481-433 Human Development III: Adulthood and Aging, 3 credits
- 481-435 Abnormal Behavior, 3 credits
- 481-436 Counseling With Children and Adolescents, 3 credits (required for child counseling)
- OR
- 481-437 Counseling With Adults and the Aged, 3 credits (required for adult counseling)
- 481-333 Observation and Interpretation of Child Behavior, 3 credits (required for child counseling)
- 481-334 Play and Creative Activities in Childhood, 3 credits (required for child counseling)

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

## **Requirements for the Minor**

### **Supporting Courses**

6 credits

##### **Choose from:**

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

### **Upper-Level Courses**

12 credits

##### **Choose 3 credits:**

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

##### **Choose 9 credits:**

- 481-331 Human Development I: Infancy and Early Childhood, 3 credits
- 481-332 Human Development II: Middle Childhood and Adolescence, 3 credits
- 481-342 Cross Cultural Human Development, 3 credits
- 481-433 Human Development III: Adulthood and Aging, 3 credits

## Requirements for the Minor in Gerontology

### Supporting Courses

6 credits

Select two:

- 156-100 Varieties of World Culture, 3 credits
- 478-108 Introduction to Human Biology, 3 credits
- 481-210 Introduction to Human Development, 3 credits
- 820-102 Introduction to Psychology, 3 credits
- 900-202 Introduction to Sociology, 3 credits

### Upper-Level Courses

15 credits

Required:

- 478-320 Human Growth, Development, and Senescence, 3 credits
- 481-433 Human Development III: Adulthood and Aging, 3 credits
- 481-437 Counseling With Adults and the Aged, 3 credits

Choose remaining credits:

- 481-452 Advanced Gerontology
- 481-484 Senior Honors Project, 3 credits
- 481-497 Internship in Human Development, 3-12 credits  
(emphasis in gerontology)
- 481-498 Independent Study, 1-4 credits

Students preparing for graduate study in psychology can take either a human development major with a minor in psychology, or a major in psychology with a minor in human development. Typically, UWGB students who enter Ph.D. programs in psychology have taken experimental psychology and statistics early in their programs; have had research experiences, independent studies, or senior distinction projects; and have taken the Graduate Record Examination during their junior or senior years.

# Humanistic Studies

Interdisciplinary Major or Minor



**Professors:** James Clifton; Elmer Havens; Frederick Kersten; Raquel Kersten; Estella Lauter; Werner Prange; Irwin Sonenfield; Peter Stambler; E. Michael Thron; Louise Witherell.

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

**Assistant Professor:** Virginia Gibbs.

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

## Supporting Courses

18 credits minimum

Choose nine credits each from at least two of the following areas:

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

## Upper-Level Courses

24 credits

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

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

**Seniors must complete the 3-credit capstone seminar:**

- 493-480 Humanities Seminar, 3 credits

## Areas of Emphasis

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

### *Continuity and Change in Values*

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

### *Other Cultural Studies*

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

### *Religious Studies*

- 493-323 The Writings of the Old Testament, 3 credits
- 493-324 The Writings of the New Testament, 3 credits
- 493-325 Judaism, Christianity, and Islam, 3 credits
- 493-326 Non-Western Religions: Hinduism and Buddhism, 3 credits
- 493-364 Women and Religion, 3 credits



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

- Women's Studies* 493-364 Women and Religion, 3 credits

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

### Electives

Students must choose nine elective credits from among the humanistic studies upper-level offerings to total 24 upper-level credits in their major program. In consultation with the concentration adviser, these elective credits may be chosen from upper-level courses in literature and language, history, or philosophy. Humanistic studies is developing a set of courses on great works and beginning in fall 1988, three of these elective credits must be from the Great Works courses. Students are advised to choose courses on works which were created in the ages studied in the Perspectives on Human Values sequence whenever possible.

## Requirements for the Minor

### Supporting Courses

6 credits

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

### Upper-Level Courses

6 credits minimum

Choose two courses from the Perspectives on Human Values sequence.

### Electives

6 credits minimum

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

### Areas of Emphasis

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

#### *History and Foundations of Science*

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

#### Supporting Courses, 12 credits

- 493-101 Foundations of Western Culture I, 3 credits  
493-102 Foundations of Western Culture II, 3 credits  
448-208 The Development of Modern Science in Western Society, 3 credits  
736-208 Science and Human Values, 3 credits

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

#### Upper-Level Courses, 12 credits

- 493-309 History of Modern Science, 3 credits  
736-406 Philosophical Problems in the Sciences, 3 credits

#### Two courses from:

- 493-480 Humanities Seminar: Models of Reality, 3 credits  
493-344 Perspectives on Human Values: The Modern Period, 3 credits  
448-405 History of Technological Change, 3 credits  
736-314 History of Philosophy II, 3 credits

*continued*

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

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

Because of their ability to think, to communicate, and to understand complex relationships, students of the humanities are likely to excel in their careers and assume positions of responsibility. Evidence shows that students trained in the humanities are more successful in business than those trained more narrowly. In addition, the humanities offer an excellent basis for careers in education, the law, human services, religion, government, and a variety of other fields in which the ability to think, understand, and communicate is important. As we move toward a political economy that embraces all the cultures of the world, the kind of education offered in humanistic studies will become even more valuable.

## Humanistic Studies

The core of the humanistic studies major or minor is a series of courses on perspectives on human values in various eras. Students study the ways human values have been expressed and created throughout history. By examining connections among significant works of literature, art, music, philosophy, architecture, and science from the past, students become better able to understand the complexities of their own lives today.

Beyond the core program, students can either continue to focus on the study of values or choose an area of emphasis from a variety of options: other cultures, religion, the foundations of science and technology, women's studies, American Indian studies, international business, and studies designed for business executives. In consultation with a humanistic studies adviser, students may also develop their own areas of emphasis from a rich variety of courses.

### *Business Executive*

This minor is for students majoring in business.

#### **Supporting Courses, 12 credits**

- 493-102 Foundations of Western Culture II, 3 credits
  - 493-201 Introduction to Humanistic Studies I: Art and Music, 3 credits
  - 493-202 Introduction to Humanistic Studies II: Literature, History, and Philosophy, 3 credits
  - 493-251 Business and American Life, 3 credits
- OR
- 493-250 European Economy and Society, 3 credits

#### **Upper-Level Courses, 12 credits**

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

One other course from the Perspectives on Human Values Series I.

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

### *International Business*

This minor is only for students majoring in business.

#### **Supporting Courses, 12-28 credits**

- 493-102 Foundations of Western Culture II, 3 credits
- 493-201 Introduction to Humanistic Studies I: Art and Music, 3 credits
- 493-202 Introduction to Humanistic Studies II: Literature, History, and Philosophy, 3 credits

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

#### **Upper-Level Courses, 12 credits**

A course dealing with other cultures.

A course in the history or literature of another region.

One course from the Perspectives on Human Values series.

One other humanities course chosen in consultation with the adviser.

# Information and Computing Science

Interdepartmental Major

**Professors:** Timothy Meyer (electronic media); Thomas McIntosh (remote sensing); Donald Larmonth (linguistics).

**Associate Professors:** Clifford Abbott (chairperson) (linguistics); Phillip Clampitt (communications); Dennis Girard (mathematics); John Harris (business); Charles Matter (psychology); Bruce Mielke (computer science); Gilbert Null (logic); Charles Rhyner (electronics); William Shay (computer science).

**Assistant Professors:** Forrest Baulieu (computer science); Mary Prisco (mathematics).

The central organizing concept of information and computing science is information—its structure, storage, retrieval, and communication. The curriculum ranges widely across several disciplines, all of which are represented in the core requirements: computing, linguistics, cognitive psychology, communication theory, mathematics, electronic media and telecommunications, organizational communication and management, logic, and language.

Computing is a significant dimension of this major, but students are expected to be thoroughly grounded in human language, cognition, and communication, not merely to avoid narrow technical preparation (and rapid obsolescence), but to make the most creative and useful applications of machine processing and telecommunications.

An area of emphasis is individually negotiated for each student depending on the student's academic and professional interests. This requirement is an opportunity to apply information principles to a problem area or to gain further tools for some career direction.

## Requirements for the Major

### Supporting Courses

11 credits

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

736-111 Elementary Logic, 3 credits

### Core Courses

27 credits

242-160 Introduction to Language, 3 credits

246-200 Communication Processes: An Introduction, 3 credits

246-201 Human Information Processing, 3 credits

246-220 Principles of Bibliographic Organization and Control of Information, 3 credits

416-250 Displays of Geographic Information, 3 credits

600-242 Discrete Mathematics, 4 credits

600-256 Introduction to Computer Science I, 4 credits

600-257 Introduction to Computer Science II, 4 credits

### Upper-Level Courses

36 credits

246-322 Modern Linguistics, 3 credits

246-326 Modern Semantics, 3 credits

246-335 Organizational Communication, 3 credits

OR

575-382 Principles of Management, 3 credits

246-455 Human Communication Theory, 3 credits

600-353 Computer Organization and Programming, 3 credits

OR

600-357 Theory of Programming Languages, 3 credits

600-352 Computer Graphics, 3 credits

600-351 Data Structures, Storage and Retrieval, 3 credits

Choose one:

246-305 Elements of Electronic Media, 3 credits

246-308 Telecommunications Delivery Systems: Cable and Satellite, 3 credits

Take either the above remaining course or one of the following:

600-455 Microprocessors and Microcomputer Systems, 3 credits

862-454 Remote Sensing of the Environment, 3 credits

### Area of Emphasis

9 credits

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

#### *Management of Information Resources*

246-483 Information Search Strategies, 3 credits

600-451 Database Management Systems, 3 credits

600-452 Systems Programming, 3 credits

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

600-451 Database Management Systems, 3 credits

600-454 Artificial Intelligence, 3 credits

600-457 Compiler Theory, 3 credits

#### *Communications Media*

246-308 Telecommunications Delivery Systems: Cable and Satellite, 3 credits

246-390 Scientific and Technical Communication, 3 credits

246-444 Time Duration Visual Media, 3 credits

# International Studies

Interdepartmental Minor

**Professor:** Craig Lockard  
(coordinator)

Americans live in an increasingly interdependent, complex, and changing world in which developments overseas affect us directly or indirectly, while American decisions and activities influence other countries. International trade accounts for an increasing proportion of American and world economic activity. The employment market for students with foreign language competence, cross-cultural sensitivity, and knowledge of the world is growing rapidly.

Students pursuing a variety of fields will find international studies useful. Some of 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.

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

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

## Requirements for the Minor

### Supporting Courses

9 credits

- 156-100 Varieties of World Culture, 3 credits
- 416-102 Geography of World Regions, 3 credits
- 448-100 History of the Modern World, 3 credits

### Competency in foreign language, 16 credits:

Four semesters of study or equivalent.

### Lower and Upper-Level Courses

18 credits

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

#### Required:

- 448-375 Great Decisions, 3 credits

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

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

#### The following courses meet this requirement:

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

#### Area of Emphasis, 9 upper-level credits minimum:

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

# Literature and Language

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

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

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

**Lecturers:** Vivian Foss; Virginia Gibbs.

## English

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

Although some students choose to study English primarily for personal growth and intellectual enrichment, the program is intended to prepare students for graduate work, teaching, and professional training, as well as for a variety of occupations in business, industry, and government. Graduates in English have found satisfying careers in personnel work, public relations, business management, journalism, politics, free-lance writing, publishing, and other fields requiring communication skills combined with a broad humanities background.

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

## Requirements for the Major in English

### Lower-Level Courses

9-12 credits

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

#### Minimum of 9 credits from:

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

### Upper-Level Courses

24 credits

#### Required:

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

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

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

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

552-333 French Literary Themes, 3 credits  
552-333 German Literary Themes, 3 credits  
552-335 French Literary Eras, 3 credits  
552-335 German Literary Eras, 3 credits  
552-350 French Drama, 3 credits  
552-350 German Drama, 3 credits  
552-351 Major French Fiction, 3 credits  
552-351 Major German Fiction, 3 credits  
552-352 Major German Poetry, 3 credits  
552-438 Major Spanish Writer: Don Quixote de la Mancha, 3 credits

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

552-301 Intermediate Creative Writing, 3 credits  
552-302 Fiction Writing Workshop, 3 credits  
552-303 Poetry Writing Workshop, 3 credits  
552-310 Major English Drama, 3 credits  
552-314 Major English Poetry, 3 credits  
552-315 English Novel: 1700-1860, 3 credits  
552-316 English Novel: 1850-Present, 3 credits  
552-331 Major American Prose Fiction, 3 credits  
552-332 Major American Poetry, 3 credits  
552-333 Literary Themes (War, Alienation, Fantasy, Protest, etc.), 3 credits  
552-335 Literary Eras (Medieval, Renaissance, Romantic Victorian, Modern), 3 credits  
552-490 Seminar in Literature, 3 credits

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

*continued*

Students desiring teaching certification in English must combine their programs in English with a professional program in education in addition to their interdisciplinary program. Such students should consult with the literature and language adviser and an adviser in education early in their studies to insure that their programs meet all of the specific requirements for certification of the Wisconsin Department of Public Instruction.

#### Foreign Languages

Proficiency in a foreign language and understanding other cultures are essential for peace and prosperity in a mutually interdependent world. Language and cultural studies create possibilities for communication and understanding and also are of great professional value in numerous fields such as international business, music, art, linguistics, law, history, communications, politics, anthropology, and theology. This combination of personal, social, and professional values makes language study an excellent academic choice.

All language courses stress development of practical communication skills and cultural understanding. Opportunities are available for educational enhancement through travel and study abroad opportunities (see following sections for individual languages).

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

Students who begin their language study at UWGB should enroll in the introductory level, numbered 101. The normal sequence of language courses is:  
101 Introduction to French, German, or Spanish I  
102 Introduction to French, German, or Spanish II  
201 Intermediate French, German, or Spanish I  
202 Intermediate French, German, or Spanish II  
225 French, German, or Spanish Conversation and Composition  
325 Advanced Oral and Written Conversation and Composition in French, German, or Spanish

## Requirements for the Minor in English

### Lower-Level Courses

9-12 credits

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

#### Minimum of 9 credits from:

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

### Upper-Level Courses

12 credits

552-431 Shakespeare, 3 credits

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

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

### Area of Emphasis

#### *Creative Writing*

#### Supporting Courses, 9-12 credits

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

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

#### Upper-Level Courses, 24 credits

##### Required:

552-431 Shakespeare, 3 credits

##### Up to 12 credits in creative writing courses such as:

552-302 Fiction Writing Workshop, 3 credits  
(may be repeated once)  
552-303 Poetry Writing Workshop, 3 credits  
(may be repeated once)  
552-431 Shakespeare, 3 credits  
552-498 Independent Study, 1-4 credits

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

## Requirements for the Major in French

**Lower-Level Courses**  
7 credits

554-202 Intermediate French II, 4 credits  
554-225 French Conversation and Composition, 3 credits  
(These credits can be earned through retroactive credit.)

**Upper-Level Courses**  
24 credits

**Required:**  
493-376 Cultural Conflict in French Canada, 3 credits  
554-325 Advanced Oral and Written Expression in French, 3 credits  
554-354 France Today, 3 credits

**Minimum of 6 credits from:**  
554-329 Representative French Authors, 3 credits  
554-333 French Literary Themes, 3 credits  
554-335 French Literary Eras, 3 credits  
554-350 Major French Drama, 3 credits  
554-351 Major French Fiction, 3 credits

**Minimum of 9 credits from:**  
552-323 Approaches to Literature, 3 credits  
554-329 Representative French Authors, 3 credits  
554-333 French Literary Themes, 3 credits  
554-335 French Literary Eras, 3 credits  
554-350 Major French Drama, 3 credits  
554-351 Major French Fiction, 3 credits  
554-498 Readings in French Literature, 3 credits  
554-498 French Phonetics (required for teacher certification), 3 credits  
554-498 Advanced French Grammar, 3 credits  
554-498 Business French, 3 credits  
554-498 Conversational French, 1-4 credits  
554-498 Topics in French Literature, 1-4 credits

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

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

### Retroactive Credit

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

For example, students who have taken four years of French in high school who complete 556-225 French Conversation and Composition with a grade of "B" will receive 16 retroactive credits for French 101, 102, 201, and 202 in addition to the three credits for French 225; students who complete the course with a "C" will receive eight retroactive credits in addition to the three credits for the course.

### French

The program in French provides students with the opportunity to develop practical communication skills in French along with an understanding of and appreciation for the literature, culture and people of France and the rest of the French-speaking world.

In addition to regularly scheduled courses in French language, literature, and culture, the French program provides opportunities for students to study with their professors individually or in small groups, and to participate in a semester in France.

## Requirements for the Minor in French

**Lower-Level Courses**  
7 credits

554-202 Intermediate French II, 4 credits  
554-225 French Conversation and Composition, 3 credits  
(These credits can be earned through retroactive credit.)

**Upper-Level Courses**  
12 credits

**Required:**  
554-325 Advanced Oral and Written Expression in French, 3 credits  
554-329 Representative French Authors, 3 credits

**Minimum of 6 credits from the following courses:**  
493-376 Cultural Conflict in French Canada, 3 credits  
(required for certification)  
554-333 French Literary Themes, 3 credits  
554-335 French Literary Eras, 3 credits  
554-350 French Drama, 3 credits  
554-351 Major French Fiction, 3 credits  
554-355 France Today, 3 credits (required for teacher certification)  
554-498 French Phonetics, 3 credits (required for teacher certification)

## Literature and Language, German

### German

The German literature and language program provides students with communication skills in both written and spoken German and with an understanding of and appreciation for German literature and culture. Graduates in German have found satisfying careers in international business, translating and interpreting, teaching, government service, and other fields in which a knowledge of German is useful or essential. German may also be used as a preprofessional major, providing students with a sound liberal arts background for further study in graduate school or for professional training.

In addition to regularly scheduled courses in German language and literature, the German program offers students the opportunity to study with their professors individually or in small groups. Students are also encouraged to enroll in the January or June Abroad program, which provides four weeks of travel and instruction in Germany, and to spend a semester or a year in Germany as exchange students at the University of Kassel.

Students beginning the study of German may enroll in the intensive German program. The aim of this workshop is to develop German communication competency in one semester; completing the program is equivalent to completing 16 credits in introductory and intermediate German language courses. The workshop meets six hours a day, four days a week for 15 weeks. Students who complete the program in the fall are encouraged to take the January trip to Germany and to spend the spring semester as exchange students at the University of Kassel to refine their language skills.

## Requirements for the Major in German

### Lower-Level Courses

7 credits

- 556-202 Intermediate German II, 4 credits (Can be earned as part of 556-289, Intensive German Workshop, 16 credits; equivalent to 556-101, 102, 201, 202.) (Can also be taken by retroactive credit.)  
556-225 German Conversation and Composition, 3 credits

### Upper-Level Courses

24 credits

- Required:**  
556-325 Advanced Written and Oral Expression in German, 3 credits

#### Minimum of 6 credits from:

- 448-325 History of Modern Germany, 3 credits  
493-361 January/June Abroad: German Culture, 3 credits  
556-356 Contemporary German Culture, 3 credits

#### Minimum of 6 credits from:

- 556-329 Representative German Authors, 3 credits  
556-333 German Literary Themes, 3 credits  
556-335 German Literary Eras, 3 credits  
556-350 Major German Drama, 3 credits  
556-351 Major German Fiction, 3 credits  
556-352 Major German Poetry, 3 credits

#### Minimum of 9 credits from:

- 493-343 Perspectives of Human Values: Romanticism to Naturalism, 3 credits (adviser approval required)  
552-323 Approaches to Literature, 3 credits  
556-329 Representative German Authors, 3 credits  
556-333 German Literary Themes, 3 credits  
556-335 German Literary Eras, 3 credits  
556-350 Major German Drama, 3 credits  
556-351 Major German Fiction, 3 credits  
556-352 Major German Poetry, 3 credits  
556-498 German Phonetics, 3 credits (required for teacher certification)  
556-498 Business German, 3 credits  
556-498 Scientific German, 3 credits  
556-498 Two Hundred Years of German Culture, 3 credits

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

## Requirements for the Minor in German

### Lower-Level Courses

7 credits

- 556-202 Intermediate German II, 4 credits (Can be taken as part of 556-289, Intensive German Workshop, 16 credits; equivalent to 556-101, 102, 201, 202.) (Can be earned by retroactive credit.)  
556-225 German Conversation and Composition, 3 credits

### Upper-Level Courses

12 credits

- Required:**  
556-325 Advanced Written and Oral Expression in German, 3 credits  
556-329 Representative German Authors, 3 credits

#### Minimum of 6 credits from:

- 494-361 January/June Abroad: German Culture, 3 credits  
556-333 German Literary Themes, 3 credits  
556-335 German Literary Eras, 3 credits  
556-350 Major German Drama, 3 credits  
556-351 Major German Fiction, 3 credits  
556-352 Major German Poetry, 3 credits  
556-356 Contemporary German Culture, 3 credits



## Requirements for the Major in Spanish

<b>Lower-Level Courses</b> 7 credits	558-202	Intermediate Spanish II, 4 credits (can be earned through retroactive credit)
	558-225	Spanish Conversation and Composition, 3 credits
<b>Upper-Level Courses</b> 24 credits	<b>Required courses, 15 credits:</b>	
	558-325	Advanced Written and Oral Expression in Spanish, 3 credits
	558-351	Major Spanish Fiction: The Narrative Art in Latin America, 3 credits
	558-358	Latin America Today, 3 credits
	558-359	The Americas Look at Each Other, 3 credits
	558-438	Major Spanish Writer: Cervantes' Don Quixote, 3 credits
	<b>Minimum of 9 credits from:</b>	
	448-358	Aspects of Latin American History*, 3 credits
	558-363	January Abroad: Yucatan, 3 credits
	558-498	Applied Linguistics in Spanish, 3 credits (required for teacher certification)
	558-498	Advanced Spanish Grammar, 3 credits
	558-498	Business Spanish, 3 credits
	558-498	Scientific Spanish, 3 credits
	558-498	The Novel in the Hispanic World, 3 credits
	558-498	The Adolescent in Hispanic Literature, 3 credits
	558-498	Drama of the Hispanic World, 3 credits
	558-498	Poetry of the Hispanic World, 3 credits
	558-498	Social Change in a Selected Area*, 3 credits

\*Course content is variable. Approval of adviser is required.

## Requirements for the Minor in Spanish

<b>Lower-Level Courses</b> 7 credits	558-202	Intermediate Spanish II, 4 credits (can be earned through retroactive credit)
	558-225	Spanish Conversation and Composition, 3 credits
<b>Upper-Level Courses</b> 12 credits	<b>Required:</b>	
	558-325	Advanced Written and Oral Expression in Spanish, 3 credits
	558-358	Latin America Today, 3 credits
	<b>Minimum of 6 credits from:</b>	
	558-351	Major Spanish Fiction: The Narrative Art in Latin America, 3 credits
	558-359	The Americas Look at Each Other, 3 credits
	558-363	January Abroad: Yucatan, 3 credits
	558-438	Major Spanish Writer: Cervantes' Don Quixote, 3 credits

### Spanish

The Spanish literature and language program provides students with communication skills in both written and spoken Spanish and with an understanding of and appreciation for Spanish literature and culture. The growing number of Spanish-speaking people in the U.S. has significantly increased the need for teachers and speakers of Spanish.

Graduates in Spanish have found satisfying careers in teaching international business, translating and interpreting, personnel work, public relations, business management, social work, government service, and other fields in which a knowledge of Spanish is useful or essential. The Spanish major is also excellent preparation for graduate study.

In addition to regularly scheduled courses in Spanish language and literature, the Spanish program offers students the opportunity to study with their professors individually or in small groups. Students are also encouraged to enroll in the January Abroad: Mexico course, which provides four weeks of travel and instruction in Yucatan during the interim period, and to take advantage of specially arranged plans which allow students to spend a semester or year at a university in Spain or Mexico as exchange students.

# Mathematics

Disciplinary Major or Minor

**Professors:** David Jowett; David Outcalt; Robert B. Wenger.

**Associate Professors:** William C. Conley; Dennis M. Girard; Bruce W. Mielke; Nikitas L. Petrakopoulos; William A. Shay (chairperson).

**Assistant Professors:** Forrest B. Baulieu; Gregory Davis; Mary K. Prisco.

**Lecturers:** Linda Curl; Gary G. Wardall.

The mathematics discipline has undergraduate programs of study in three areas: mathematics, computer science, and statistics. A student who elects a disciplinary major in mathematics must choose an area of emphasis from one of these three programs of study.

Students choosing an area of emphasis in **mathematics** can focus their studies in a discipline which has been an important part of our intellectual heritage for centuries. Mathematics as a discipline plays an important role at UWGB, both as a major and by providing service or tool courses to students in other academic fields.

Students fulfilling an area of emphasis in mathematics may use their skills in many career fields. In the past, careers for such students existed mostly in fields requiring physics or in engineering. Today, mathematical techniques are employed in the social, industrial, and management realms.

## Requirements for the Major

### Supporting Courses

11 credits

All students majoring in mathematics, regardless of chosen area of emphasis must take:

- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-203 Calculus and Analytic Geometry II, 4 credits
- 600-320 Linear Algebra I, 3 credits

### Areas of Emphasis

Each area of emphasis has its own set of requirements.

#### *Mathematics Emphasis*

25-27 credits

##### Required:

- 600-209 Multivariate Calculus, 4 credits
- 600-305 Ordinary Differential Equations, 3 credits
- 600-328 Introduction to Algebraic Structures, 3 credits
- 600-385 Foundations of Geometry, 3 credits

**Those wishing teacher certification in mathematics must add to lower-level requirements:**

- 600-256 Introduction to Computer Science I, 4 credits
- 600-260 Introductory Statistics, 4 credits

##### Two courses from:

- 600-311 Advanced Calculus, 3 credits
- 600-312 Real Analysis, 3 credits
- 600-321 Linear Algebra II, 3 credits
- 600-410 Complex Analysis, 3 credits

**Two more courses to be chosen from remaining courses above or from the following list:**

- 600-309 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
- 600-364 Biometrics, 4 credits
- 600-416 Orthogonal Functions and Partial Differential Equations, 3 credits
- 600-465 Business and Industrial Statistics, 4 credits

#### *Statistics Emphasis*

25 credits minimum

##### Required:

- 600-209 Multivariate Calculus, 4 credits
- 600-321 Linear Algebra II, 3 credits
- 600-360 Theory of Probability, 3 credits
- 600-361 Mathematical Statistics, 3 credits

##### One course from:

- 600-364 Biometrics, 4 credits
- 600-465 Business and Industrial Statistics, 4 credits

##### One course from:

- 008-704 Discrete Multivariate Statistical Analysis, 2 credits
- 008-767 Statistical Design and Analysis of Experiments, 4 credits
- 008-768 Multivariate Statistical Analysis, 4 credits

(Registration in any of the 3 courses above requires a GPA of 3.00 or higher.)

**Additional courses to reach a total of 24 credits at the 300-level or above must be chosen from remaining courses in the two lists above or from:**

- 600-311 Advanced Calculus, 3 credits
- 600-312 Real Analysis, 3 credits
- 600-350 Numerical Analysis, 3 credits
- 600-351 Data Structures, 3 credits
- 600-353 Computer Organization, 3 credits
- 600-355 Applied Mathematical Optimization, 3 credits
- 600-410 Complex Analysis, 3 credits

*Computer Science  
Emphasis*  
36 credits

**Required:**

- 600-242 Discrete Mathematics, 4 credits
- 600-256 Introduction to Computer Science I, 4 credits
- 600-257 Introduction to Computer Science II, 4 credits
- 600-351 Data Structures, Storage and Retrieval, 3 credits
- 600-353 Computer Organization, 3 credits
- 600-357 Theory of Programming Languages, 3 credits

Those wishing teacher certification in computer science must add this requirement:

- 600-155 Computers and Microcomputers, 3 credits

**Three courses from:**

- 600-352 Computer Graphics, 3 credits
- 600-451 Database Management Systems, 3 credits
- 600-452 Operating Systems, 3 credits
- 600-454 Artificial Intelligence, 3 credits
- 600-455 Microprocessors and Microcomputer Systems, 3 credits
- 600-457 Compiler Theory, 3 credits

**Two more courses chosen from the above list or from:**

- 600-350 Numerical Analysis, 3 credits
- 600-355 Applied Mathematical Optimization, 3 credits
- 600-450 Theory of Algorithms, 3 credits
- 600-456 Advanced Topics in Microcomputing, 3 credits

The student who chooses **computer science** as a area of emphasis chooses a field which is undergoing great changes as technology advances. The goal of the computer science emphasis is to provide students with a basic knowledge upon which they can continue to grow in the profession. Students receive instruction in areas such as software and language design, operating systems, database management, computer graphics, and artificial intelligence. They also develop program solving skills which may be applied to many professions.

The program in **statistics** provides applied courses in experimental design, multivariate statistical analysis, biometrics and, business and industrial statistical methods. In addition, students can obtain 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 certification to teach at the elementary or high school level should consult with advisers in mathematics and education early in their college years to make sure they meet all certification requirements.

## Requirements for the Minor

### Areas of Emphasis

*Mathematics Emphasis*  
20 credits

**Required:**

- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-203 Calculus and Analytic Geometry II, 4 credits
- 600-320 Linear Algebra I, 3 credits

Students wishing teacher certification must add these lower-level requirements:

- 600-256 Introduction to Computer Science I, 4 credits
- 600-260 Introductory Statistics, 4 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 (required for teacher certification)
- 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

*continued*

## Mathematics

### Program Entrance Requirements

ACT placement examinations are used to advise entering freshmen about the level at which they should enter university courses. There are four levels:

**Level 1.** An ACT score below 14 indicates a deficiency in first year high school algebra; such students enter the noncredit 601-094.

**Level 2.** An ACT score of 14 or higher but below 24 indicates a mastery of first year high school algebra. Students enter 600-101.

**Level 3.** An ACT score of 24 or 25 assumes mastery of the first two years of high school algebra; students may enter 600-104, 151, 155, 201, 256, 260, 281; performance below this level results in recommendation to enter 600-101.

**Level 4.** An ACT score of 26 or higher assumes mastery of last two years of high school algebra, and grade 12 course on functions, or mathematical analysis, including trigonometry; student may enter 600-202 or any course cited under level 3 except 600-104; performance below this level results in recommendation to enter 600-104.

In rare cases, a student who has been accelerated and has mastery of high school calculus may, with advice of faculty, enter 600-203. Upon earning a "C" or better in 600-203, an additional four credits for 600-202 are granted.

### Computer Science

#### Emphasis

24 credits

#### Required:

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

**Students wishing certification to teach computer science must add this lower-level requirement:**

- 600-155 Computers and Microcomputers, 3 credits

#### Two of the following:

- 600-351 Data Structures, Storage and Retrieval, 3 credits
- 600-353 Computer Organization, 3 credits  
(required for teacher certification)
- 600-357 Theory of Programming Languages, 3 credits

#### Two more courses from:

- 600-350 Numerical Analysis, 3 credits
- 600-352 Computer Graphics, 3 credits
- 600-355 Applied Mathematical Optimization, 3 credits
- 600-450 Theory of Algorithms, 3 credits
- 600-451 Data Base Management Systems, 3 credits
- 600-452 Operating Systems, 3 credits
- 600-454 Artificial Intelligence, 3 credits
- 600-455 Microprocessors and Microcomputer Systems, 3 credits
- 600-456 Advanced Topics in Microcomputing, 3 credits
- 600-457 Compiler Theory, 3 credits

Or remaining course from previous list.

### Statistics Emphasis

24 credits

#### Required:

- 600-202 Calculus and Analytic Geometry I, 4 credits
- 600-203 Calculus and Analytic Geometry II, 4 credits
- 600-260 Introductory Statistics, 4 credits

#### Twelve additional credits from:

- 600-360 Theory of Probability, 3 credits
- 600-361 Mathematical Statistics, 3 credits
- 600-364 Biometrics, 4 credits
- 600-465 Business and Industrial Statistics, 4 credits
- 008-704 Discrete Multivariate Statistical Analysis, 2 credits
- 008-767 Statistical Design and Analysis of Experiments, 4 credits
- 008-768 Multivariate Statistical Analysis, 4 credits  
(Registration in any of 008-704, 767, or 768 requires a GPA of 3.00 or higher.)

# Military Science

Professional Program

**Associate Professor:** Tom Hartford, LTC, U.S. Army

**Assistant Professors:** Jose R. Rivera, Captain, U.S. Army; Robert H. Ronge, Captain, U.S. Army.

Military science is concerned primarily with developing leadership competence for success in civilian and military occupations. Students who want to develop such skills will choose studies in military science in addition to their major and minor programs.

The military science program of instruction has a core curriculum consisting of military skills and professional knowledge subjects integrated in both the basic and advanced courses. While the ultimate purpose of the program is to provide college-trained officers for the U.S. Army, Army Reserve and Army National Guard, it supports University goals by emphasizing personal depth and developing qualities necessary for leadership in civilian occupations.

The course of study is conducted by the Reserve Officers Training Corp (ROTC) and is a four-year program consisting of a basic course and an advanced course. Completing the course will provide opportunities for full- or part-time careers as an officer in the U.S. Army, Army National Guard, or Army Reserve.

## **Basic Course (Preprofessional)**

The basic course is normally taken in the freshman and sophomore years. However, any student may register for any lower-level military science course. No military commitment is incurred and students may withdraw at any time before the end of the second year. The courses introduce students to select military skills and professional subjects. Students attend class two hours every week, two leadership laboratories each semester, and may participate in a wide variety of extracurricular activities ranging from social events to rigorous, confidence-building physical activities.

## **Advanced Course (Professional)**

Satisfactory performance in the basic course, demonstrated leadership potential, and recommendations from program instructors make a student eligible to enter the professional program. Instruction includes introduction of military skills that must be developed before attending an Officer Basic Course (OBC). Such skills are fundamental to the military profession and serve as the basis for all future branch-directed specialty training. Professional subjects also are provided. They describe in basic terms what it is that the United States Army does and how it goes about doing it.

A six-week advanced camp is held during the summer between the junior and senior years. This camp permits students to put into practice principles and theories they have acquired in the classroom and exposes them to more military skills. Successful completion of the advanced camp is required prior to receiving a commission.

## **Two-Year Program**

The military science program also offers a course of study designed specifically for students who are unable to take ROTC during their first two years of college. Such applicants must successfully complete a six-week basic camp prior to or after their junior year of college. This summer training takes the place of the basic courses of the four-year program and qualifies students to enter the professional courses. Qualified veterans with prior military service and members of the Army Reserve or Army National Guard who have completed their formal training are eligible to enroll in the advanced course without participating in the basic courses.

## **Simultaneous Membership Program**

Under this program, a person may enlist in the Army National Guard or Army Reserve, attend basic training, and be qualified to enroll in the advanced course in the sophomore year in college. Upon successful completion of the advanced course, the cadet could receive an early commission and serve as a second lieutenant with the Army National Guard or Reserve while completing a college degree.

## **ROTC Scholarship Program**

Army ROTC offers many opportunities for two- and three-year scholarships awarded competitively to students who are already enrolled in college. While there are definite academic standards, the emphasis is on the student's total abilities and leadership potential.

Students who attend the basic camp under the two-year program may also compete for two-year scholarships while at camp. These scholarships pay for tuition, textbooks, lab fees, and other educational expenses, plus providing a living allowance of up to \$1,000 each year the scholarship is in effect.



**Professors:** Robert J. Bauer; Trinidad J. Chavez; Arthur L. Cohrs; Irwin C. Sonenfield.

**Associate Professors:** Jerome B. Abraham (chairperson); Michael J. Arendt; Margaret E. Charnon; Lovell G. Ives; Wayne L. Jaeckel; Terence J. O'Grady.

**Assistant Professors:** Mark Fonder; Fiorella E. Gonzalez.

**Lecturers:** Cheryl A. Grosso.

The music discipline offers a program leading to a Bachelor of Arts or a Bachelor of Science degree with music as a major or minor. The program is accredited by the National Association of Schools of Music (NASM).

## Requirements for the Major

### Lower-Level Courses 32-37 credits

#### Category 1, 27 credits:

- 242-121 Masters and Masterpieces of Music, 3 credits
- 705-115/116 Ear Training and Sight Singing I, II, 2 credits
- 705-151/152 Materials and Values of Music I, II, 6 credits
- 705-251/252 Literature and Styles in Music I, II, 8 credits
- 707-100/200 Applied Lessons, 2 credits each, 8 credits (4 semesters)

#### Category 2, 1-4 credits:

- 707-Keyboards Musicianship I-IV, 1-4 credits  
(1-4 semesters at 1 credit each, depending upon placement).  
Students placed in 011 also take 021, 031, and 041. Students placed in 012 also take 022, 032, 042. Students placed in 013 take only that course.

#### Category 3, 4-6 credits:

- 707-Major Performing Ensembles  
Concurrent enrollment is required when studying at the 100/200 levels of applied lessons. The major ensemble chosen must be related to the area of applied lessons when possible.

#### Major Ensembles, 4-6 credits (4 semesters required)

- 707-241 Concert Band, 1 credit
- 707-242 Marching Band, 2 credits
- 707-251 Orchestra (strings only), 1 credit
- 707-261 Concert Choir, 1 credit
- 707-262 University Chorus, 1 credit

A large variety of minor ensembles are offered each semester in voice, string, woodwinds, brass, percussion, jazz, ancient and new music which, although not required, are recommended.

### Upper-Level Courses 13-14 credits

#### Required for all emphases:

- 705-331 or 332 Choral or Instrumental Conducting, 3 credits
- 705-351/352 Literature and Styles in Music III, IV, 8 credits
- 707-Major Performing Ensembles

Concurrent enrollment in a major ensemble is required when studying at the 300-level of applied lessons. The ensemble chosen must be directly related to the area of applied lessons when possible.

#### Major Ensembles, 2-3 credits (2 semesters required)

- 707-441 Concert Band, 1 credit
- 707-441 Marching Band, 2 credits
- 707-451 Orchestra (strings only), 1 credit
- 707-461 Concert Choir, 1 credit
- 707-462 University Chorus, 1 credit

### Areas of Emphasis

Each area of emphasis has different upper-level course requirements. Students seeking the music major must complete requirements in one of the following areas of emphasis.

#### *Applied Music*

#### Upper-Level Courses, 20-23 credits

- 705-316 Instrumental Arranging, 3 credits  
(required for keyboard, wind, string, and percussion majors only)
- 707-300 Applied Lessons, including a half recital, 6 credits  
(2 semesters at 3 credits each)
- 707-400 Applied Lessons, including a full recital, 6 credits  
(2 semesters at 3 credits each)
- 707-Major or Minor Performing Ensembles  
Concurrent enrollment in either a major or minor ensemble is required when studying at the 400-level of applied lessons. The

ensemble chosen must be directly related to the area of applied lessons when possible.

**A minimum of 6 credits from:**

- 705-325 Diction for the Voice I: German, 1 credit
- 705-326 Diction for the Voice II: French, 1 credit
- 705-327 Diction for the Voice III: Italian, 1 credit
- 705-411 Composition I, 3 credits
- 705-412 Composition II, 3 credits
- 705-423 Seminar in Music Literature, 3 credits
- 705/707-498 Independent Study, 1-4 credits

*Music Education:  
Choral Certification*

**Upper-Level Courses, 11 credits**

- 705-318 Choral Literature, 2 credits
- 705-344 Choral Techniques, 2 credits
- 705-346/347 Keyboard Accompanying I, II, 2 credits
- 707-Applied Lessons, including a half recital, 4 credits  
(2 semesters at 2 credits each)
- 705/707 Electives, 1 credits

*Music Education:  
Instrumental Certification*

**Upper-Level Courses, 15 credits**

- 705-316 Instrumental Arranging, 3 credits
- 705-341 Woodwind Techniques, 2 credits
- 705-342 Brass Techniques, 2 credits
- 705-343 String Techniques, 2 credits
- 705-345 Percussion Techniques, 2 credits
- 707-Applied Lessons, including a half recital, 4 credits  
(2 semesters at 2 credits each)

*Music Education:  
General Music  
Certification*

**Upper-Level Courses, 11 credits**

- 705-316 Instrumental Arranging, 3 credits  
(required for keyboard, wind, string, and percussion majors only)
- 705-346/347 Keyboard Arranging I, II, 2 credits
- 707-Applied Lessons, including a half recital, 4 credits  
(2 semesters at 2 credits each)
- 705/707 Electives, 2-5 credits

## Requirements for the Minor

**Lower-Level Courses**  
18-22 credits

These are the same as for the major, excluding:  
707-251/252 Literature and Styles in Music I, II, 8 credits  
707-200 Applied Lessons, 4 credits  
(2 semesters at 2 credits each)

**Upper-Level Courses**  
6 credits

705-331 or 332 Choral or Instrumental Conducting, 3 credits  
**One of the following:**  
242-329 Cross-Cultural Communication II: Introduction to World Music, 3 credits  
242-329 Cross-Cultural Communication II: Jazz History or American Show Music, 3 credits

There are several ways in which to pursue music studies at UWGB. Each requires an area of emphasis or particular focus within the program. These emphasis areas are in applied performance, instrumental education, choral education, and general music education. The major in music can be combined with various selected minors, such as business administration, to develop specialized career preparation. A student may also choose a minor in music and couple it with other types of majors, for example, business administration, communication and the arts, human development, a personal major, or other possibilities.

The music program emphasizes quality in vocal and instrumental music along with broadly based, general education courses and the opportunity for students to structure programs to meet their own needs through various combinations of UWGB programs of study.

Music students have many opportunities for solo and group performances, both on campus and in the larger community.

Applied instruction is available in four-year sequences in piano, organ, guitar, voice, flute, oboe, clarinet, saxophone, bassoon, French horn, trumpet, trombone, euphonium, tuba, percussion, violin, viola, cello, and string bass. Group ensembles provide performance opportunities in Concert Band, Wind Ensemble, Marching Band, Orchestra, Concert Choir, University Chorus, Jazz Ensemble, Show/Jazz Choir, as well as ensembles in woodwind, brass, percussion, string, vocal, ancient and modern music, plus musical theatre.

# Natural and Applied Science

Interdisciplinary Major or Minor in Science and Environmental Change



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

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

**Assistant Professors:** Forrest B. Baulieu; Gregory Davis; Robert W. Howe; Mary K. Prisco.

**Lecturers:** Linda A. Curl; Lee C. Hansen; Bruce E. O'Neill; Gary G. Wardall.

## Requirements for the Major in Science and Environmental Change

### Supporting Courses 39-43 credits

204-202/203 Principles of Biology I, II, 8 credits  
225-211/212 Principles of Chemistry I, II, 10 credits  
296-202 Physical Geology, 4 credits

754-103/104 Fundamentals of Physics I, II, 8 credits  
OR

754-201/202 Principles of Physics I, II, 10 credits  
(calculus based)

Mathematics, 9-11 credits at the sophomore level or above  
(Students should consult with an adviser to determine specific mathematics requirements for their area of emphasis.)

### Areas of Emphasis

Each area of emphasis has a list of required and elective courses. Students should consult with an adviser to select those courses that best serve their needs.

#### *Aquatic Studies Emphasis*

##### Required:

678-302 Principles of Ecology, 3 credits  
678-330 Descriptive Hydrology, 3 credits  
678-401 Stream Ecology, 3 credits  
678-403 Limnology, 3 credits  
678-434 Water Chemistry, 4 credits

##### Electives (choose 14 credits):

204-302 Principles of Microbiology, 4 credits  
204-311 Plant Physiology, 4 credits  
204-340 Comparative Anatomy of Vertebrates, 4 credits  
204-346 Comparative Physiology, 3 credits  
204-347 Developmental Biology, 4 credits  
204-405 Microbial Physiology, 3 credits  
225-300 Bio-Organic Chemistry, 4 credits  
OR  
225-302/303/304/305 Organic Chemistry I, II with labs, 8 credits  
225-311 Analytical Chemistry, 4 credits  
225-413 Instrumental Chemistry, 4 credits  
416-353 Air Photo Interpretation, 3 credits  
600-355 Applied Mathematical Optimization, 3 credits  
678-303 Conservation of Natural Resources, 3 credits  
678-309 Ecology and Management of Endangered Species, 2 credits  
678-318 Industrial Pollution Control Technology, 3 credits  
678-320 Soil Environment, 3 credits  
678-331 Oceanography, 3 credits  
678-335 Water and Waste Water Treatment, 3 credits  
678-342 Environmental Geology, 3 credits  
678-454 Remote Sensing of the Environment by Satellite, 3 credits  
678-460 Resource Management Strategy, 3 credits  
678-475 Ecological Dynamics, 4 credits

#### *Biological Resources Management Emphasis*

##### Required:

678-302 Principles of Ecology, 3 credits  
678-475 Ecological Dynamics, 4 credits  
204-320 Field Botany, 3 credits  
AND  
204-342 Ornithology, 3 credits  
OR  
204-343 Mammalogy, 3 credits

##### Electives (choose 18 credits):

Any three of the following resource management courses:  
678-307 Ecology and Management of Fire, 2 credits



- 678-309 Ecology and Management of Endangered Species, 2 credits
- 678-363 Plants and Forest Pathology, 3 credits
- 678-366 Integrated Pest Management, 3 credits
- 678-466 Vegetation Management, 3 credits
- 008-749 Wetlands Ecology and Management, 3 credits

Any one of the following analytical skills courses:

- 416-351 Elements of Cartography, 3 credits
- 416-353 Air Photo Interpretation, 3 credits
- 416-451 Computer Cartography, 3 credits
- 678-454 Remote Sensing of the Environment by Satellite, 3 credits

Any two of the following political science, regional planning and urban and public affairs courses:

- 778-312 Community Politics, 3 credits
- 778-410 Intergovernmental Relations, 3 credits
- 834-322 Regional Planning, 3 credits
- 834-323 Land Use Controls, 3 credits
- 834-340 Economics of Land Use, 3 credits
- 834-356 Environmental Impact Analysis, 3 credits
- 950-306 Regulatory Policy and Administration, 3 credits
- 950-330 Environmental Politics and Policy, 3 credits
- 950-378 Environmental Law, 3 credits

*Science Communication  
Emphasis*

Students in the science communication emphasis must take an additional 12 credits from a selected list of freshman-sophomore courses offered through the interdisciplinary program in communication and the arts. Students should plan their programs with a faculty adviser.

**Required:**

- 678-302 Principles of Ecology, 3 credits

**Electives (choose 27 credits):**

Any one of the following resource management courses:

- 678-303 Conservation of Natural Resources, 3 credits
- 678-334 Solid Waste Management, 3 credits
- 678-335 Water and Waste Water Treatment, 3 credits
- 678-460 Resource Management Strategy, 3 credits
- 678-466 Vegetation Management, 3 credits

Select four courses from one of the other areas of emphasis—Aquatic Studies, Biological Resources Management and Waste Manage Resource Recovery.

Any four of the following communications courses:

- 216-425 Promotional Strategy, 3 credits
- 242-331 Graphic Communication Studio I, 3 credits
- 242-332 Graphic Communication Studio II, 3 credits
- 242-430 Mass Media and Society, 3 credits
- 246-303 Feature Writing, 3 credits
- 246-305 Elements of Electronic Media, 3 credits
- 246-306 Radio Broadcast Practicum, 3 credits
- 246-335 Organizational Communication, 3 credits
- 246-343 Photography II, 3 credits
- 246-344 Photography III, 3 credits
- 246-345 Designing Multiple Media Applications of Photography, 3 credits
- 246-380 Communication Law, 3 credits
- 246-390 Scientific and Technical Communication, 3 credits
- 246-497 Internship in Communications, 3 credits

*Waste Management/  
Resource Recovery  
Emphasis*

**Required:**

- 678-302 Principles of Ecology, 3 credits
- 678-318 Industrial Pollution Control Techniques, 2 credits
- 678-319 Industrial Pollution Control Field Trips, 1 credit
- 678-334 Solid Waste Management, 3 credits
- 678-335 Water and Wastewater Treatment, 3 credits
- 678-460 Resource Management Strategy, 3 credits

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

As part of their upper-level requirements, majors choose an area of emphasis in a particular problem area. Requirements for each emphasis are described. Students may also structure their own emphases with the help of advisers.

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

*continued*

## Natural and Applied Science

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

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

*The 678 course prefix number for natural and applied science may change. Plans for a new number sequence were underway when this book was published. See an adviser.*

### Electives (choose 15 credits):

- 204-302 Principles of Microbiology, 4 credits
- 204-402 Advanced Microbiology, 3 credits
- 204-404 Microbial Physiology, 3 credits
- 226-311 Analytical Chemistry, 4 credits
- 226-413 Instrumental Analysis, 3 credits
- 296-420 Soil Classification and Geography, 3 credits
- 600-355 Applied Mathematical Optimization, 3 credits
- 678-320 The Soil Environment, 3 credits
- 678-321 The Soil Environment Laboratory, 1 credit
- 678-330 Hydrology, 3 credits
- 678-342 Environmental Geology, 3 credits
- 678-422 Environmental Biogeochemistry, 3 credits
- 678-434 Water Chemistry, 4 credits

Especially suitable for students seeking employment in business or industry. A minor in business administration may be appropriate.

- 107-204 Introductory Accounting, 3 credits
- 216-305 Business Law, 3 credits
- 216-343 Corporation Finance, 3 credits
- 216-382 Principles of Management, 3 credits

Especially suitable for employment in the public sector.

- 950-330 Environmental Politics and Policy, 3 credits
- 950-378 Environmental Law, 3 credits
- 950-415 Public and Nonprofit Budgeting, 3 credits

Available to advanced students with consent of instructor.

- 008-524 Hazardous and Toxic Materials, 3 credits
- 008-566 Waste Management/Resource Recovery Seminar, 3 credits

## Requirements for the Minor in Science and Environmental Change

### Supporting Courses

21 credits minimum

- 204-202 Principles of Biology I, 4 credits
- 204-203 Principles of Biology II, 4 credits
- 296-202 Physical Geology, 4 credits
- 600-104 Elementary Functions: Algebra and Trigonometry, 3 credits

And a minimum of 6 credits from two of these three areas:

- Chemistry
- Physics
- Mathematics at 200 level or higher

### Upper-Level Courses

12 credits minimum

#### Required:

- 678-302 Principles of Ecology, 3 credits

#### Electives:

##### Biological Resources:

- 678-303 Conservation of Natural Resources, 3 credits
- 678-307 Ecology and Management of Fire, 2 credits
- 678-309 Ecology and Management of Endangered Species, 2 credits
- 678-363 Plants and Forest Pathology, 3 credits
- 678-366 Integrated Pest Management, 3 credits
- 678-384 Environment's Response to Human Settlements, 3 credits
- 678-466 Vegetation Management, 3 credits

##### Physical Resources:

- 600-355 Applied Mathematical Optimization, 3 credits
- 678-318 Industrial Pollution Control Techniques, 2 credits
- 678-319 Industrial Pollution Control Field Trips, 1 credit
- 678-334 Solid Waste Management, 3 credits
- 678-342 Environmental Geology, 3 credits
- 678-383 River Basins in Other Regions, 3 credits
- 678-415 Solar and Alternative Energy Systems, 3 credits
- 678-460 Resource Management Strategy, 3 credits

# Nursing, Bachelor of Science for Registered Nurses

Professional Nursing Degree Program

**Chairperson:** Associate Professor Juanita Theile, R.N., M.S.N., medical-surgical nursing, Ed.D.

**Faculty:** Lorraine Noll, R.N., C., M.S.N., community health nursing; Harriet Wichowski, R.N., M.S., psychiatric and mental health nursing; Jerri Hoehn, R.N., M.S.N., parent-child nursing.

The baccalaureate nursing program (BSN), fully accredited by the State of Wisconsin Board of Nursing and the National League for Nursing, provides an opportunity for registered nurses holding a diploma or associate degree in nursing to further their nursing education and earn a bachelor of science degree in nursing.

Nursing program objectives and educational methods are designed to meet the needs of adult learners and practicing registered nurses. Each course meets for one class session per week.

The course of study emanates from general education and is problem focused, inter-disciplinary in nature, value oriented, and based on professional program goals.

Students are assisted to identify and achieve their career goals. Five nursing roles—provider of care, teacher, manager, investigator, and member of the profession—are integrated throughout the nursing curriculum.

The nursing curriculum builds on previous nursing education.

## Entry Requirements

- Graduate of NLN-accredited associate degree or diploma nursing program

- Currently registered as a nurse in Wisconsin

- Successful completion of written NLN Profile II and simulated Clinical Performance tests (30 credits)

- Completion of lower-level coursework:  
Natural science (9 credits)  
Social science (9 credits)  
(including human growth and development through the life span)

- Cumulative GPA of 2.25 on lower-level coursework

## Requirements for the Major

### Supporting Courses 6 credits

246-133 Fundamentals of Public Address, 3 credits  
600-260 Introductory Statistics, 3 credits  
OR  
255-205 Social Science Statistics, 3 credits

### Upper-Level Courses 36 credits

689-315 Health Assessment, 3 credits  
689-329 Computer Applications in Nursing, 3 credits  
689-411 Theoretical Foundations, 2 credits  
689-415 Adaptation in Health and Illness, 4 credits  
689-419 Adaptive Parent-Child Health, 4 credits  
689-425 Adaptation to Acute/Chronic Health, 4 credits  
689-431 Nursing Management, 3 credits  
689-435 Nursing Research, 3 credits  
689-441 Community Health Nursing, 6 credits  
689-451 Advanced Nursing Concepts, 4 credits

### Areas of Emphasis 9 credits

Early in their program of study, students must select one of the five roles of the professional nurse as their area of emphasis. Prior to taking 689-451 Advanced Nursing Concepts, students must have completed 6 of the 9 required upper-level credits to support their emphasis.

Suggested courses are listed here for each emphasis. Other upper-level courses may be selected with the help of an adviser, or students may choose to complete a minor in another discipline related to the emphasis. Students choosing the minor option should plan their programs with the selected discipline chairperson as well as the nursing adviser.

#### Provider Role

##### Suggested courses:

156-304 Family, Kin and Community, 3 credits  
302-410 Introduction to the Education of Exceptional Children, 3 credits  
481-437 Counseling with Adults and Aged, 3 credits

#### Teacher Role

##### Suggested courses:

302-301 Introduction to Education and Teaching, 3 credits  
302-406 Evaluation and Testing in Education, 3 credits  
820-315 Educational Psychology, 3 credits

#### Manager Role

##### Suggested courses:

216-305 Business Law I, 3 credits  
216-322 Basic Marketing, 3 credits  
216-362 Human Resource Management, 3 credits

#### Investigator Role

##### Suggested courses:

255-301 Foundations of Social Research, 3 credits  
255-302 Methods of Participant Observation and Interviewing, 3 credits  
950-408 Public Policy Analysis, 3 credits

#### Professional Role (Advocate)

##### Suggested courses:

216-377 Ethics and Social Issues in Business, 3 credits  
875-371 Motivation and Social Change, 3 credits  
950-408 Public Policy Analysis, 3 credits

#### Option

A minor in another discipline to support the selected role.

# Philosophy

Disciplinary Major or Minor



Professor: Fredrick Kersten.

Associate Professors: Orville Clark (chairperson); Gary Greif; Gilbert Null.

The study of philosophy acquaints students with the major philosophical ideas in the history of Western thought and provides them with the conceptual means for critical reflection on the values and beliefs of their own culture. Philosophy also provides students with a forum for the exchange of ideas and with alternative methods of research and problem-solving techniques.

Courses of study in philosophy include logic, ethics, metaphysics, aesthetics, social and political philosophy, and history of philosophy. Course work in philosophy addresses the basic concerns of humankind with the natural and social worlds, as well as those of the humanities, fine arts, and sciences.

The undergraduate program in philosophy is excellent preparation for many other disciplines and professional programs, including teaching, law, fine arts, natural and social sciences, psychology, and business.

## Requirements for the Major

### Lower-Level Courses

6 credits

Choose 3 credits from each category:

#### Category 1:

- 736-101 Introduction to Philosophy, 3 credits
- 736-102 Problems in Ethics, 3 credits
- 736-111 Elementary Logic, 3 credits

#### Category 2:

- 736-201 Logic, Language and Intelligence, 3 credits
- 736-208 Science and Human Values, 3 credits
- 736-210 Civilization and Culture, 3 credits
- 736-211 The Arts and Human Existence, 3 credits
- 736-213 History of Philosophy I, 3 credits

### Upper-Level Courses

24 credits

Choose 6 credits from category 1; 12 credits from category 2; and 6 credits from category 3:

#### Category 1:

- 736-314 History of Philosophy II, 3 credits
- 736-404 Major Philosophical Figures, 3 credits

#### Category 2:

- 736-301 Criticism of Values, 3 credits
- 736-304 American Philosophy, 3 credits
- 736-322 Aesthetics, 3 credits
- 736-324 Contemporary Philosophical Movements, 3 credits
- 736-325 Marxist Humanism, 3 credits
- 736-326 Philosophy, Politics and Law, 3 credits
- 736-327 Ethics and the Medical Profession, 3 credits

#### Category 3:

- 736-405 Major Philosophical Issues, 3 credits
- 736-406 Philosophical Problems in the Sciences, 3 credits

## Requirements for the Minor

### Lower-Level Courses

6 credits

Choose from:

- 736-101 Introduction to Philosophy, 3 credits
- 736-102 Problems in Ethics, 3 credits
- 736-104 Freedom and Individuality, 3 credits
- 736-105 Introduction to Social and Political Philosophy, 3 credits
- 736-106 Pacifism and Violence, 3 credits
- 736-111 Elementary Logic, 3 credits
- 736-201 Logic, Language, and Intelligence, 3 credits
- 736-207 Philosophy and Literature, 3 credits
- 736-208 Science and Human Values, 3 credits
- 736-209 Reason and Passion: Philosophical Issues in Film, 3 credits
- 736-210 Civilization and Culture, 3 credits
- 736-211 The Arts and Human Existence, 3 credits
- 736-213 History of Philosophy I, 3 credits

### Upper-Level Courses

12 credits

Choose from:

- 736-304 American Philosophy, 3 credits
- 736-322 Aesthetics, 3 credits
- 736-324 Contemporary Philosophical Movements, 3 credits
- 736-325 Marxist Humanism, 3 credits
- 736-326 Philosophy, Politics, and Law, 3 credits
- 736-327 Ethics and the Medical Profession, 3 credits
- 736-404 Major Philosophical Figures, 3 credits
- 736-405 Major Philosophical Issues, 3 credits
- 736-406 Philosophical Problems in the Sciences, 3 credits

# Physical Education

Including Coaching Certification

Chairperson: Bernard Starks

**Lecturers, basic instruction program:** Otis Chambers, Ada Gee, Carol Hammerle, Roger Harriman, Mike Heideman, Mike Pantalone, Janis Purn, Aldo Santaga, Bernard Starks.

**Lecturers, certification program:** Otis Chambers, Carol Hammerle, Mike Heideman, Mike Pantalone, Bernard Starks.

The physical education program complements students' understanding of their intellectual and social selves with an understanding of their physical selves, contributing to their development as whole persons. The program stresses refining and developing motor skills and the associated physiological and kinesiological principles related to preparation for, participation in, and recovery from vigorous physical activity.

#### Credit for Basic Instruction Courses

While the physical education unit does not offer a major or minor, a student may take up to four credits of physical education courses numbered from 100 to 499 for elective credit toward a B.A. or B.S. degree. In addition, any number of approved physical education courses and credits may be counted as degree credits if those courses are listed on a student's academic plan as a requirement for: a) an interdisciplinary major; b) a disciplinary major; c) a professional program; or, d) a part of the supporting subject or background requirements—but only if the related program is completed before graduation.

Credits in physical education courses taken in addition to the above do not count toward graduation. Consult the *Timetable* for further regulations and procedures about physical education credits.

Enrollment in physical education activity presumes the 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.

## Requirements for Coaching Certification

### Required Courses

16 credits

- 478-102 Introduction to Human Biology, 3 credits
- 742-401 Theory and Philosophy of Coaching, 2 credits  
OR
- 742-402 Psychology and Sociology of Sport, 2 credits
- 742-403 Organization and Administration of Interscholastic Athletics, 2 credits
- 742-405 Scientific Conditioning of the Athlete, 2 credits  
(prerequisite 478-102 or equivalent)
- 742-406 Prevention and Treatment of Athletic Injuries, 2 credits  
(prerequisite 478-102 or equivalent)

#### Select 2 credits from:

- 742-410 Principles of Coaching Basketball/Softball
- 742-411 Principles of Coaching Basketball
- 742-412 Principles of Coaching Bowling
- 742-413 Principles of Coaching Crew
- 742-414 Principles of Coaching Curling
- 742-415 Principles of Coaching Fencing
- 742-416 Principles of Coaching Field Hockey
- 742-417 Principles of Coaching Football
- 742-418 Principles of Coaching Golf
- 742-419 Principles of Coaching Gymnastics
- 742-420 Principles of Coaching Handball Team
- 742-421 Principles of Coaching Ice Hockey
- 742-422 Principles of Coaching Lacrosse
- 742-424 Principles of Coaching Skiing
- 742-425 Principles of Coaching Soccer
- 742-426 Principles of Coaching Swimming and Diving
- 742-427 Principles of Coaching Tennis
- 742-428 Principles of Coaching Track and Field
- 742-429 Principles of Coaching Volleyball
- 742-430 Principles of Coaching Wrestling
- 742-431 Principles of Coaching Cheerleading
- 742-433 Principles of Coaching Pom-Pon Team
- 742-434 Principles of Coaching Drill Team

#### Select 2 credits from:

- 742-435 Field Experience in Coaching Baseball/Softball
- 742-436 Field Experience in Coaching Basketball
- 742-437 Field Experience in Coaching Bowling
- 742-438 Field Experience in Coaching Crew
- 742-439 Field Experience in Coaching Curling
- 742-440 Field Experience in Coaching Fencing
- 742-441 Field Experience in Coaching Field Hockey
- 742-442 Field Experience in Coaching Football
- 742-443 Field Experience in Coaching Golf
- 742-444 Field Experience in Coaching Gymnastics
- 742-445 Field Experience in Coaching Handball, Team
- 742-446 Field Experience in Coaching Ice Hockey
- 742-447 Field Experience in Coaching Lacrosse
- 742-449 Field Experience in Coaching Skiing
- 742-450 Field Experience in Coaching Soccer
- 742-451 Field Experience in Coaching Swimming and Diving
- 742-452 Field Experience in Coaching Tennis
- 742-453 Field Experience in Coaching Track and Field
- 742-454 Field Experience in Coaching Volleyball
- 742-455 Field Experience in Coaching Wrestling
- 742-456 Field Experience in Coaching Cheerleading
- 742-458 Field Experience in Coaching Pom-Pon Team
- 742-459 Field Experience in Coaching Drill Team

*continued*

## Physical Education

### Coaching Certification

The coaching certification program consists of a minimum of 16 credits designed to prepare students for coaching responsibilities. The program is approved by the Wisconsin Department of Public Instruction for certification as an athletic coach in the public schools of Wisconsin. Youth-sport coaches are also encouraged to acquire similar training.

Students are encouraged to initiate coaching course work early in their academic preparation to assure normal matriculation. However, students desiring certification may normally complete requirements within two academic years.

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 select 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, as well as the Wisconsin Department of Public Instruction.

### Electives

1 credit minimum

#### Coaching Electives (1 credit minimum)

- 742-401 Philosophy of Athletics and Coaching, 2 credits
- 742-116 First Aid and Emergency Care, 2 credits
- 742-117 Cardiopulmonary Resuscitation, 1 credits

#### Select 1 credit from:

- 742-179 Athletic Officiating in Baseball/Softball
- 742-171 Athletic Officiating in Basketball
- 742-172 Athletic Officiating in Field Hockey
- 742-173 Athletic Officiating in Football
- 742-174 Athletic Officiating in Gymnastics
- 742-175 Athletic Officiating in Ice Hockey
- 742-176 Athletic Officiating in Lacrosse
- 742-178 Athletic Officiating in Soccer
- 742-181 Athletic Officiating in Swimming and Diving
- 742-182 Athletic Officiating in Track and Field
- 742-183 Athletic Officiating in Volleyball
- 742-184 Athletic Officiating in Cheerleading

# Physics

Disciplinary Major or Minor

**Professors:** Fritz A. Fischbach; Anjani K. Mehra; George T. O'Hearn; Charles R. Rhyner (chairperson); Nancy J. Sell.

**Associate Professors:** James W. Busch; Robert W. Lanz.

Physics provides students with concepts and models relevant to describing, understanding and predicting many phenomena of the natural environment. In addition, physics is central to the development of new technologies, through basic and applied research.

Physics is, however, more than a collection of general principles expressed in broad mathematical models. The study of physics implies two skills areas. One, scientific reasoning, deals with solving problems in situations that can be described by physical models. The other, using the scientific method to develop and test physical models, uses skills of observation, hypothesis development, data analysis, equipment operation, and others.

Physics provides a scientific base for many possible careers in science and technology. With a bachelor's degree, graduates are equipped for technical work in industrial or government laboratories, or teaching in a secondary school. A degree in physics also provides preparation for graduate study in physics and other fields such as meteorology, mathematics, computer science, and most fields in engineering. Students seeking secondary teaching certification should seek advice from advisers in physics and education early in their college years to make sure they fulfill all requirements.

## Requirements for the Major

### Supporting Courses

28 credits

- 225-211 Principles of Chemistry I, 5 credits
- 225-212 Principles of Chemistry II, 5 credits
- 600-202 Calculus and Analytical Geometry I, 4 credits
- 600-203 Calculus and Analytical Geometry II, 4 credits
- 600-209 Multivariate Calculus, 4 credits
- 754-201 Principles of Physics I, 5 credits
- 754-202 Principles of Physics II, 5 credits

### Upper-Level Courses

24 credits

- At least 3 upper-level laboratory credits are required.
- 754-315 Classical Mechanics, 3 credits
  - 754-317 Electromagnetic Radiation, 3 credits
  - 754-321 Structure of Matter, 3 credits
  - 754-323 Structure of Matter Laboratory, 1 credit
  - 754-404 Electricity and Magnetism, 3 credits
  - 754-417 Nuclear Physics and Radiochemistry, 3 credits

#### A minimum of 8 credits from:

- 754-318 Optics Laboratory, 1 credit
- 754-320 Thermodynamics and Kinetics, 3 credits
- 754-322 Thermodynamics and Kinetics Laboratory, 1 credit
- 754-405 Electronics for Scientists, 3 credits
- 754-415 Solar and Alternative Energy Systems, 3 credits
- 754-418 Nuclear Physics and Radiochemistry Laboratory, 1 credit
- 754-455 Microprocessors and Microcomputer Systems, 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 Electromagnetic Radiation, 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 Microcomputer Systems, 3 credits

# Political Science

Disciplinary Major or Minor

**Professors:** Martin H. Greenburg; Michael E. Kraft; Edward W. Weidner.

**Associate Professors:** David M. Littig; (chairperson); E. Nelson Swinerton.

**Instructor:** Kimberly Bernaski.

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.

Major goals of the program are to acquaint students with the structure and operation of political systems; the cultural, social, economic and ideological context of these systems; the major philosophical questions and perspectives on politics and government through history and their relevance to understanding modern political phenomena; and the major methods of inquiry and analysis used in the contemporary study of politics, government and public policy.

Political science is a major often chosen by students intending careers in law. The field of study is also useful for students planning careers in journalism, planning, education, business, foreign service, politics, and public service positions with private and public agencies at the local, state, regional, and federal levels.

Political science majors have entered graduate study in political science, public administration, education, and related fields. Students seeking teacher certification should consult early with advisers in political science and education to make sure they fulfill all requirements.

## Requirements for the Major

### Supporting Courses

6 credits

#### Choose from:

- 778-100 Introduction to Political Science, 3 credits
- 778-101 American Government and Politics, 3 credits
- 778-215 Understanding Presidential Elections, 3 credits
- 778-218 Political Behavior, 3 credits

Students intending to pursue graduate study are encouraged to take:

- 255-205 Social Science Statistics, 3 credits
- 255-301 Foundations of Social Research, 3 credits

### Upper-Level Courses

24 credits

#### Minimum of 3 credits from:

- 778-305 Urban Politics and Policy, 3 credits
- 778-310 The American Presidency, 3 credits
- 778-312 Community Politics, 3 credits
- 778-320 Constitutional Law, 3 credits
- 778-330 Law and the Judicial Process, 3 credits
- 778-410 Intergovernmental Relations, 3 credits
- 778-412 Political Parties and Interest Groups, 3 credits
- 778-416 American Legislative Process, 3 credits
- 950-306 Regulatory Policy and Administration, 3 credits
- 950-330 Environmental Politics and Administration, 3 credits
- 950-351 Transportation and the City, 3 credits
- 950-370 Environmental Law, 3 credits
- 950-376 Administrative Law, 3 credits
- 950-406 Administration of Local Government, 3 credits
- 950-408 Public Policy Analysis, 3 credits

#### Minimum of 3 credits from:

- 448-352 History of Modern China, 3 credits
- 448-354 History of Modern Southeast Asia, 3 credits
- 778-351 Comparative Political Systems, 3 credits
- 778-353 Politics of Developing Areas, 3 credits
- 778-378 Geography of Conflict Areas, 3 credits  
(This course can only count in one group)

#### Minimum of 3 credits from:

- 736-326 Philosophy, Politics and Law, 3 credits
- 736-404 Major Philosophical Figures, 3 credits
- 736-405 Major Philosophical Issues, 3 credits
- 778-340 Political Theory, 3 credits

#### Minimum of 3 credits from:

- 778-360 International Politics, 3 credits
- 778-368 Geopolitics of World Regions, 3 credits
- 778-378 Geography of Conflict Areas, 3 credits  
(This course can only count in one group)
- 778-460 American Foreign and Defense Policies, 3 credits

## Requirements for the Minor

### Supporting Courses

6 credits

#### Choose from:

- 778-100 Introduction to Political Science, 3 credits
- 778-101 American Government and Politics, 3 credits
- 778-215 Understanding Presidential Elections, 3 credits
- 778-218 Political Behavior, 3 credits

### Upper-Level Courses

12 credits

Choose courses from the lists shown under major requirements.



# Psychology

Disciplinary Major or Minor

**Professors:** Nicholas Pollis;  
William Smith.

**Associate Professors:** Bela Baker; Fergus Hughes; Per Johnsen; Charles Matter (chairperson); Robert Mendelsohn; Lloyd Noppe.

**Assistant Professors:** Ilene Noppe; Dean Rodeheaver.

Psychology is the systematic and scientific study of behavior and experience. It seeks to explain how physiological, personal, social, and environmental conditions influence thought and action. Research with humans and animals aims at understanding, predicting, and influencing behavior.

In the past 100 years, psychology has moved from being a branch of philosophy to being both an experimental science and an active helping profession.

Psychology helps to deepen understanding of individual and social behavior and provides a strong general background for many careers. Psychology graduates are employed in a variety of positions with social and community service agencies, businesses, research institutes, and governmental agencies. Preparation for specialized professional work—such as testing, counseling, university teaching, and many research activities—usually requires a postgraduate degree (master's or doctorate).

Preparation for postgraduate education 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.

## Requirements for the Major

### Supporting Courses

9 credits

- 255-205 Social Science Statistics, 3 credits
- OR
- 600-260 Introductory Statistics, 3 credits
- 478-102 Introduction to Human Biology, 3 credits
- OR
- 478-313 Brain Functions, 3 credits
- 820-102 Introduction to Psychology, 3 credits

### Upper-Level Courses

28 credits of which 25 must be at the upper level

- 820-300 Experimental Psychology, 4 credits
- A minimum of 3 credits from:**
- 820-306 Psychology of Perception, 3 credits
- 820-309 Psychology of Motivation, 3 credits
- 820-417 Psychology of Cognitive Processes, 3 credits
- A minimum of 3 credits from:**
- 820-202 Introduction to Social Psychology, 3 credits
- 820-335 Psychology of Attitudes and Public Opinion, 3 credits
- 820-337 Social Behavior Dynamics, 3 credits
- 820-416 Psychology of Intergroup Relations, 3 credits
- A minimum of 3 credits from:**
- 481-210 Introduction to Human Development, 3 credits
- 481-331 Human Development I: Infancy and Early Childhood, 3 credits
- 481-332 Human Development II: Middle Childhood and Adolescence, 3 credits
- 481-433 Human Development III: Adulthood and Later Maturity, 3 credits
- A minimum of 3 credits from:**
- 820-429 Theories of Personality, 3 credits
- 820-435 Abnormal Behavior, 3 credits
- A minimum of 12 credits from:**
- 481-431 Cognitive Development, 3 credits
- 481-436 Counseling with Children and Adolescents, 3 credits
- 481-437 Counseling with Adults and the Aged, 3 credits
- 600-364 Biometrics, 3 credits
- 736-406 Philosophical Problems in the Sciences: Psychology, 3 credits
- 820-290 Environmental Psychology, 3 credits
- 820-306 Psychology of Perception, 3 credits
- 820-309 Psychology of Motivation, 3 credits
- 820-315 Educational Psychology, 3 credits
- 820-335 Psychology of Attitudes and Public Opinion, 3 credits
- 820-337 Social Behavior Dynamics, 3 credits
- 820-415 Organizational Psychology, 3 credits
- 820-417 Psychology of Cognitive Processes, 3 credits
- 820-420 Tests and Measurements, 3 credits
- 820-429 Theories of Personality, 3 credits
- 820-435 Abnormal Behavior, 3 credits
- 820-438 Group Dynamics, 3 credits
- 820-450 Psychological Stress and Adaptation, 3 credits
- 820-466 Clinical and Community Psychology, 3 credits
- 820-483X Selected Topics, 1-4 credits
- 820-490 Problems in Environmental Psychology, 3 credits
- 820-497 Internship in Psychology, 3-12 credits
- 820-498 Independent Study, 1-4 credits
- 834-325 Behavior in the Designed Environment I, 3 credits
- 834-326 Behavior in the Designed Environment II, 3 credits
- 875-371 Motivation and Social Change, 3 credits

*continued*

## Psychology

Many graduates continue their professional training in such fields as social work, education, medicine, and business as well as psychology. Students considering postgraduate education should meet with the chairperson or a member of the faculty early in their undergraduate career so that an appropriate course of study and experiences can be planned. Students seeking teacher certification should consult with the psychology adviser and an adviser in the education professional program early in their studies to insure that their programs meet all of the specific requirements for certification of the Wisconsin Department of Public Instruction.

## Requirements for the Minor

### Supporting Courses

6 credits

255-205 Social Science Statistics, 3 credits

OR

600-260 Introductory Statistics, 3 credits

820-102 Introduction to Psychology, 3 credits

### Upper-Level Courses

15 credits

3 credits in each of the five groups of courses listed under the upper-level requirements for the major.

# Regional Analysis

Interdisciplinary Major or Minor



**Professors:** Donald Gandre (chairperson); Martin Greenberg; William Kuepper; Ismail Shariff; William Smith.

**Associate Professors:** Kumar Kangayappan; William Laatsch; William Niedzwiedz.

## Requirements for the Major

### Supporting Courses 9 credits

**Required:**

834-220 Introduction to Regional Analysis, 3 credits

**Two of the following:**

255-205 Social Science Statistics, 3 credits

OR

600-260 Introductory Statistics, 4 credits

416-250 Displays of Geographic Information, 3 credits

600-155 Computers and Microcomputers, 3 credits

600-201 Calculus for Management and Social Sciences, 3 credits

### Areas of Emphasis 27 credits

#### *General Program*

#### **Upper-Level Courses:**

834-309 Urban and Regional Economic Theory, 3 credits

834-322 Regional Planning, 3 credits

834-323 Land Use Controls, 3 credits

834-325 Behavior in Designed Environments I, 3 credits

834-326 Behavior in Designed Environments II, 3 credits

834-335 Transportation Systems in the United States, 3 credits

834-340 Economics of Land Use, 3 credits

834-342 Community Economic Development, 3 credits

834-356 Environmental Impact Analysis, 3 credits

834-365 Impressions of South Africa, 3 credits

834-368 The Geopolitics of World Regions, 3 credits

834-372 Analysis of the Great Lakes Region of North America, 3 credits

834-377 Analysis of Northern Lands, 3 credits

834-392 Analysis of South Asia, 3 credits

834-395 Seminar: Transportation Systems in Wisconsin, 3 credits

834-401 Urban and Regional Economic Analysis, 3 credits

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

834-454 Remote Sensing of the Environment by Satellite, 3 credits

834-472 Senior Seminar in Regional Analysis (required), 3 credits

Some courses from other disciplines can be used for the requirements in some of the areas of emphasis in the regional analysis major.

#### *Land Use and Regional Planning*

#### **Upper-Level Courses:**

**In consultation with an adviser, select courses from:**

416-342 Settlement Geography, 3 credits

416-351 Elements of Cartography, 3 credits

416-353 Air Photo Interpretation, 3 credits

416-451 Computer Cartography, 3 credits

834-309 Urban and Regional Economic Theory, 3 credits

834-322 Regional Planning, 3 credits

834-323 Land Use Controls, 3 credits

834-340 Economics of Land Use, 3 credits

834-342 Community Economic Development, 3 credits

834-356 Environmental Impact Analysis, 3 credits

834-372 Analysis of the Great Lakes Region of North America, 3 credits

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

834-454 Remote Sensing of the Environment, 3 credits

834-472 Senior Seminar in Regional Analysis (required), 3 credits

*continued*

## Regional Analysis

Regional analysis prepares students to understand the character and utilization of human and natural resources in the context of defined areas of the world. These areas are known as regions and can be defined by terms such as: the Fox River Valley, the Midwest, a county, a state, or country.

At other universities the faculty, students and programs in regional analysis would typically be found in departments of economics, geography, political science, psychology, and regional planning. Students wanting to major in these programs can do so within regional analysis at the University of Wisconsin-Green Bay.

The program prepares students for positions in business, government, universities, community organizations, and industry as researchers and policy analysts. More than half of regional analysis graduates have been hired by business firms. Another sizable portion are administrators or other professionals in planning agencies at all levels of government.

Examples of positions held by graduates include university extension assignments, neighborhood associations, community development corporations, marketing groups, planning agencies, and research organizations. The major also serves as suitable preparation for graduate work in economics, geography, regional science, environmental studies, and planning. Ten to 20 percent of graduates continue their studies.

### *Regional Economic Development*

#### **Upper-Level Courses:**

To be selected from:

- 298-404 Economics of Developing Areas, 3 credits
- 298-406 Comparative Economic Systems and Institutions, 3 credits
- 834/950-309 Urban and Regional Economic Theory, 3 credits
- 834-322 Introduction to Regional Planning, 3 credits
- 834-335 Transportation Systems in the United States, 3 credits
- 834-340 Economics of Land Use, 3 credits
- 834-342 Community Economic Development, 3 credits
- 834-368 Geopolitics of World Regions, 3 credits
- 834-372 Analysis of the Great Lakes Region of North America, 3 credits
- 834-377 Analysis of Northern Lands, 3 credits
- 834-392 Analysis of South Asia, 3 credits
- 834/950-401 Urban and Regional Analysis, 3 credits
- 834-421 Techniques and Methods of Planning Analysis, 3 credits
- 834-472 Senior Seminar in Regional Analysis (required), 3 credits

### *Transportation Planning and Management*

#### **Upper-Level Courses:**

In consultation with an adviser, select from:

- 298-403 International Trade, 3 credits
- 416-371 Geography of the United States and Canada, 3 credits
- 834-309 Urban and Regional Economic Theory, 3 credits
- 834-322 Introduction to Regional Planning, 3 credits
- 834-335 Transportation Systems in the United States, 3 credits
- 834-372 Analysis of the Great Lakes Region of North America, 3 credits
- 834-395 Seminar: Transportation Systems in Wisconsin, 3 credits
- 834-421 Techniques and Methods of Planning Analysis, 3 credits
- 834-472 Senior Seminar in Regional Analysis-Transportation Emphasis (required), 3 credits
- 834-498 Independent Study: Transportation, 3 credits
- 950-351 Transportation and the City, 3 credits
- 950-421 Urban Planning I, 3 credits

### *Real Estate Development and Appraisal*

#### **Upper-Level Courses:**

In consultation with an adviser, select courses from:

- 216-343 Corporation Finance, 3 credits
- 216-344 Real Estate Principles and Practices, 3 credits
- 298-308 Business Cycles, 3 credits
- 416-342 Settlement Geography, 3 credits
- 416-353 Air Photo Interpretation, 3 credits
- 834-309 Urban and Regional Economic Theory, 3 credits
- 834-322 Regional Planning, 3 credits
- 834-323 Land Use Controls, 3 credits
- 834-325 Behavior in Designed Environments, 3 credits
- 834-340 Economics of Land Use, 3 credits
- 834-342 Community Economic Development, 3 credits
- 834-356 Environmental Impact Analysis, 3 credits
- 834-421 Techniques and Methods of Planning Analysis, 3 credits
- 834-472 Senior Seminar in Regional Analysis (required), 3 credits
- 950-313 Cities Past, Present and Future, 3 credits

Students entering this program are encouraged to consider a minor in business administration.

*Economics of Waste and Resource Management*

**Upper-Level Courses:**

In consultation with an adviser, select courses from:

- 298-303 Intermediate Micro-Economic Analysis, 3 credits
- 298-402 Resource Economic Analysis, 3 credits
- 416-320 Landform Geography, 3 credits
- 416-353 Air Photo Interpretation, 3 credits
- 778-312 Community Politics, 3 credits
- 834-309 Urban and Regional Economic Theory, 3 credits
- 834-322 Regional Planning, 3 credits
- 834-323 Land Use Controls, 3 credits
- 834-340 Economics of Land Use, 3 credits
- 834-356 Environmental Impact Analysis, 3 credits
- 834-372 Analysis of the Great Lakes of North America, 3 credits
- 834-472 Senior Seminar in Regional Analysis (required), 3 credits
- 862-334 Solid Waste Management, 3 credits
- 862-335 Water and Waste Water Treatment, 3 credits
- 862-460 Resource Management Strategies, 3 credits

Students entering this program are encouraged to take additional courses in science and engineering, if possible.

Areas of emphasis available within the regional analysis major include:

- Land use and regional planning
- Regional economic development
- Transportation (planning and management)
- Real estate (development and appraisal)
- Economics of waste and resource management
- Other areas of emphasis are possible in consultation with an adviser.

Each student majoring in regional analysis works out a specific program with a faculty adviser from the unit. The courses for the major are selected from two areas: lower-level supporting courses and upper-level courses.

**Requirements for the Minor**

**Supporting Course** 834-220 Introduction to Regional Analysis, 3 credits  
3 credits

**Upper-Level Courses** 15 credits  
A minor program can include any one of the areas of emphasis listed for the major in regional analysis. Students will select the 15 credits in consultation with an adviser in the unit.

# Social Change and Development

Interdisciplinary Major or Minor



**Professors:** Anthony Galt; Harvey J. Kaye (chairperson); Craig A. Lockard.

**Associate Professors:** Bela Baker; Julie R. Brickley; Walter Groves; Carol A. Pollis; Larry Smith; Lynn W. Walter.

Social change and development provides students with the basic tools needed to understand large scale processes of social change and the impacts these changes have on people. Emphasis is placed on helping students develop a global perspective—one which views societies as interdependent parts of a world system.

Social change and development is appropriate for individuals interested in graduate work in the social sciences or history; law school; and a variety of human services careers related to women's issues, community development, social activism, criminal justice or development programs, and international relations or development issues.

## Requirements for the Major

### Supporting Courses

12 credits required

Choose 6 credits from category 1 and 6 credits from either 2, 3 or 4:

#### Category 1:

- 156-100 Varieties of World Culture, 3 credits
- OR
- 900-202 Introduction to Sociology, 3 credits
- AND
- 448-100 History of the Modern World, 3 credits

#### Category 2:

- 255-205 Social Science Statistics, 3 credits
- OR
- 600-260 Introductory Statistics, 4 credits
- AND
- 255-301 Foundations of Social Research, 3 credits
- OR
- 255-302 Interviewing and Participant Observation, 3 credits

#### Category 3:

Foreign Language: Two years of a foreign language up through the 202 level. Students with some language skills may receive retroactive credits.

#### Category 4:

(for teacher certification)

- 302-301 Introduction to Education, 3 credits
- 302-302 Principles and Methods of Teaching Social Studies in Elementary Schools, 2 credits

### Upper-Level Courses

12 credits

- 875-333 Social Change in a Selected Area, 3 credits (specific region changes with each offering)
- 875-360 Models and Social Change, 3 credits
- 875-361 Historical Perspectives on Social Change, 3 credits
- 875-470 Seminar in Social Change and Development, 3 credits (topics vary with each offering)

### Areas of Emphasis

Students must complete requirements in one of the following area of emphasis. Additional supporting courses are required in some areas of emphasis. A minimum of 6 credits must be chosen from 875 upper-level courses.

#### *Contemporary Social Issues Emphasis*

12 credits

#### Recommended Supporting Courses, 6 credits

- 875-275 Vietnam War, 3 credits
- 900-203 Minority Groups, 3 credits

#### Upper-Level Courses, 12 credits

- 242-370 Modern American Culture, 3 credits
- 875-340 Women, Work and Family, 3 credits
- 875-350 Contemporary America, 3 credits
- 900-208 Marriage and Family in American Society, 3 credits
- 900-302 Social Stratification, 3 credits
- 950-303 Urban Sociology, 3 credits

#### *Criminal Justice Emphasis*

12 credits

#### Recommended Supporting Courses

- 875-204 Freedom and Social Control, 3 credits
- 875-235 Sex and Society, 3 credits

**Upper-Level Courses, 12 credits**

- 875-303 Criminal Justice Process, 3 credits
- 875-315 Law in Society, 3 credits
- 875-330 Law and the Judicial Process, 3 credits
- 900-304 Deviant Behavior, 3 credits
- 900-404 Criminology, 3 credits

*Development Studies  
Emphasis*  
15 credits

**Recommended Supporting Courses**

- Foreign language (2 years)

**Required Supporting Course, 3 credits**

- 875-270 Third World: Development or Despair, 3 credits

**Upper-Level Courses, 12 credits**

- 156-303 Cultural Ecology, 3 credits
- 298-404 Economics of Developing Areas, 3 credits
- 448-354 History of Modern Southeast Asia, 3 credits
- 448-356 History of Africa, 3 credits
- 448-358 Aspects of Latin American History, 3 credits
- 875-345 Women in Cross-Cultural Perspective, 3 credits
- 875-365 Human Resources and Economic Growth, 3 credits
- 875-371 Motivation and Social Change, 3 credits

*International Studies/  
World Affairs Emphasis*  
12 credits

**Recommended Supporting Courses, 6-22 credits**

- Foreign language (2 years)
- 448-251 Modern Asian Civilization, 3 credits
- 875-270 Third World: Development or Despair, 3 credits

**Upper-Level Courses, 12 credits**

- 448-352 Modern China, 3 credits
- 448-354 History of Modern Southeast Asia, 3 credits
- 448-356 History of Africa, 3 credits
- 448-358 Aspects of Latin American History, 3 credits
- 448-375 Great Decisions, 3 credits
- 778-368 Geopolitics of World Regions, 3 credits

*Law and Social  
Change Emphasis*  
12 credits

**Recommended Supporting Courses**

- 736-100 Ethics, 3 credits
- 736-111 Elementary Logic, 3 credits
- 875-206 Law and the Individual, 3 credits

**Upper-Level Courses, 12 credits**

- 448-403 Political and Social History of Modern America, 3 credits
- 778-312 Community Politics, 3 credits
- 778-410 Intergovernmental Relations, 3 credits
- 875-320 Constitutional Law, 3 credits
- 875-325 Law in Society, 3 credits
- 875-400 Environmental Law, 3 credits
- 900-404 Criminology, 3 credits
- 950-314 Administrative Law, 3 credits

Social change and development majors complete an area of emphasis within the program. Emphases available include:

**Contemporary social issues**, studies socioeconomic change in modern America as background for careers in law, politics, teaching or social activism; **criminal justice**, provides preparation for careers in law enforcement and corrections as well as preparation for law school or graduate studies in related fields; **development studies**, supplies a background for students interested in employment with Third World and international development agencies; **international studies/world affairs**, offers a broad background for understanding relationships between nations and preparation for careers in foreign service, international business or other international organizations, and for graduate study in a variety of fields; **law and social change**, is appropriate for students seeking admittance to law school and those interested in law-related careers in fields requiring an understanding of law as a social institution and the use of law as a tool for bringing about change; **social studies education**, leads to certification to teach social studies through grade nine; **women's studies**, is a useful emphasis 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 a personalized emphasis in fields like broad field social studies (high school teaching), elementary education, family studies, and historical studies.

*continued*

## Social Change and Development

Students seeking the interdisciplinary major or minor in social change and development complete general education requirements and may also choose to combine their program with an appropriate disciplinary or with another interdisciplinary field of study in order to gain more depth or breadth. Among fields most relevant to a social change and development major or minor are: anthropology, business, education, ethnic studies, history, human development, international studies, political science, psychology, social work, sociology, urban studies, and women's studies.

### *Social Studies Education Emphasis* 12 credits

### *Women's Studies Emphasis* 12 credits

### *Individualized Emphasis* 24 credits

#### **Recommended Supporting Courses, 6 credits**

- 298-202 Macroeconomics, 3 credits
- 416-102 Introduction to Geography, 3 credits
- 778-101 American Government, 3 credits

#### **Upper-Level Courses, 12 credits**

- 298-207 History of Economic Thought, 3 credits
- 416-378 Geography of Conflict Areas, 3 credits
- 448-311 History of Wisconsin, 3 credits
- 778-360 International Politics, 3 credits
- 875-342 Women, Myth and Identity, 3 credits
- 875-350 Contemporary America, 3 credits
- 875-371 Motivation and Social Change, 3 credits

#### **Required Supporting Course**

- 875-241 Women and Changing Values, 3 credits

#### **Upper-Level Courses, 12 credits**

- 875-340 Woman as Worker, 3 credits
- 875-343 Women, Myth and Identity, 3 credits
- 875-345 Women in Cross-Cultural Perspective, 3 credits
- 875-440 Women and Religion, 3 credits
- 875-497 Internship, 3-12 credits
- 875-498 Independent Study, 1-4 credits

Designed for students with very specific interests or desire for more general liberal arts education. Requires 24 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 Courses** 12 credits required

These are the same as for the major.



# Social Gerontology

Interdepartmental Minor

Assistant Professor: Dean Rodeheaver.

Social gerontology provides students with a concentrated study of individual development in later adulthood. It focuses predominantly on the socio-psychological development of the individual 65 years of age and older, but physical and biological development is also studied.

The minor is primarily designed for students who are interested in an in-depth examination of the functioning of the older adults in our society and who may want to pursue careers in some areas of gerontology. Such careers may be found in a federal, state or local aging agency or long-term care institution. Students with minors in social gerontology also may pursue research or graduate study in the field.

## Requirements for the Minor

**Supporting Course** 481-210 Introduction to Human Development, 3 credits  
3 credits

**Upper-Level Courses** 478-320 Human Growth, Development, and Senescence, 3 credits  
481-433 Adulthood and the Aging, 3 credits  
481-437 Counseling with Adults and the Aged, 3 credits  
481-452 Advanced Gerontology, 3 credits  
21 credits

And three other courses chosen with an adviser.

(Students majoring in human development may not count 481-437 or 452 as part of their major degree requirements.)

**Associate Professors:** Betty Baer (chairperson); Robert Mendelsohn; Rolfe White.

The major in social work, leading to the Bachelor of Social Work degree, offers a significant opportunity for students who seek a career in the human services. The program prepares students for beginning level professional practice in social work and provides educational preparation applicable to a wide range of positions in the human services. Graduates of the UWGB social work program secure positions in programs serving the aging, children and their families, the developmentally and emotionally impaired, the economically dependent, sufferers of alcoholism and drug abuse, and others.

The UWGB social work program was admitted to candidacy status in spring 1987 toward full accreditation by the Council on Social Work Education, the profession's accrediting body. The program anticipates final review and positive action during the 1987-1988 academic year.

Students who wish to major in social work must make formal application for admission to the program. Admission into the major is based upon completion of at least 30 credits, a satisfactory grade point average, and demonstrated interest in working with people.

Prospective social work majors should seek advising from social work faculty.

## Requirements for the Major

### Supporting Courses

36 credits

255-205	Social Science Statistics, 3 credits
255-301	Foundations of Social Research, 3 credits
298-301	Economics and Social Security, 3 credits
478-102	Introduction to Human Biology, 3 credits
481-331	Infancy and Early Childhood, 3 credits
481-332	Middle Childhood and Adolescence, 3 credits
481-433	Adulthood and Aging, 3 credits
552-105	Expository Writing, 3 credits
875-203	Prejudice and the Human Condition, 3 credits
875-241	Women and Changing Values, 3 credits
875-360	Models and Social Change, 3 credits
900-308	Sociology of the Family, 3 credits

### Upper-Level Courses

36 credits

892-275	American Social Welfare, 3 credits
892-300	Introduction to Field Experience, 2 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, 3 credits
892-420	Social Work Methods III, 3 credits
892-430	Social Policy Analysis, 3 credits
892-460	Evaluation of Practice, 3 credits

#### Elective:

892-202	Introduction to Social Work, 3 credits
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# Sociology

Disciplinary Major or Minor

**Professor:** Harvey J. Kaye.

**Associate Professors:** Walter B. Groves; Carol A. Pollis (chairperson).

**Assistant Professor:** Ray Hutchison.

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. Specific subject areas in the discipline range from the family, intimate relations, minority groups, deviant behavior, and crime, to gender, ethnicity, social class, collective behavior, and power.

The program in sociology provides education on a variety of research methods and social theories used in studying both large-scale and small-scale patterns of social relationships and processes by which these patterns change.

Sociology offers excellent preparation for students going on to graduate work in a number of professional programs. The minor in sociology is an appropriate choice of program for students majoring in business, communications, human development, social change and development, and urban and public affairs.

Students with sociology majors choose many kinds of careers, including those of teacher or professor (with appropriate work in education or graduate work); staff member of local, state, or federal government agencies; or researcher in an organization. They also work in a variety of positions in social and community development programs, in health agencies, correctional institutions, and in other profit and nonprofit organizations which hire individuals with a liberal arts degree background.

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

## Requirements for the Major

### Supporting Courses

6 credits

- 255-205 Social Science Statistics, 3 credits  
OR  
600-260 Introductory Statistics, 3 credits  
900-202 Introduction to Sociology, 3 credits

### Upper-Level Courses

24 credits

- 900/255-301 Foundations of Social Research, 3 credits  
900-307 Social Theory, 3 credits

**A minimum of 12 credits from the following sociology courses:**

- 900-302 Class, Status and Power, 3 credits  
900-303 Race and Ethnic Relations, 3 credits  
900-304 Deviant Behavior, 3 credits  
900-308 Sociology of the Family, 3 credits  
900-311 Collective Behavior and Social Movements, 3 credits  
900-375 Sociology of Sexual and Intimate Relations, 3 credits  
900-404 Criminology, 3 credits  
900-483 Selected Topics, 3 credits  
900-498 Independent Study, 1-4 credits

**A maximum of 6 credits from the following courses or others approved by the chairperson or adviser:**

- 156-304 Family, Kin and Community, 3 credits  
481-336 Sex Role Development in Contemporary Society, 3 credits  
820-337 Social Behavior Dynamics, 3 credits  
875-303 Criminal Justice Process, 3 credits  
875-360 Models and Social Change, 3 credits  
950-303 Urban Sociology, 3 credits

Students interested in teacher certification in broad field social studies and/or sociology should contact an adviser in the education office for requirements in addition to those listed here.

## Requirements for the Minor

### Supporting Courses

6 credits

- 255-205 Social Science Statistics, 3 credits  
OR  
600-260 Introductory Statistics, 3 credits  
900-202 Introduction to Sociology, 3 credits

### Upper-Level Courses

12 credits

- 900/255-301 Foundations of Social Research, 3 credits  
900-307 Social Theory, 3 credits

AND

An additional 6 credits of upper-level sociology courses

# Theatre

Disciplinary Major or Minor



**Professors:** Jack Frisch; Richard Sherrell.

**Associate Professors:** Patricia Lin Ridge (chairperson); Raymond Gabica.

**Assistant Professor:** Jeffrey Entwistle.

**Lecturers:** Carol Hoehn; Betty Luk; Michael Mills.

## Requirements for the Major

### Supporting Courses 6 credits

Required, 6 credits:

- 242-141 Introduction to Performing Arts, 3 credits
- 242-142 Performing Arts Perspective, 3 credits

### Lower-Level Courses 19 credits

Acting Core Courses, 6 credits

- 709-131 Beginning Acting I, 3 credits
- 709-132 Beginning Acting II, 3 credits

Dance Core Courses, 4 credits chosen from:

- 709-128 Beginning Jazz, 2 credits
- 709-137 Beginning Ballet, 2 credits
- 709-141 Movement for Theatre, 2 credits
- 709-145 Beginning Modern Dance, 2 credits

Technical Theatre Core Courses, 9 credits:

- 709-221 Technical Practices I: Stagecraft, 3 credits
- 709-222 Technical Practices II: Costume/Makeup, 3 credits
- 709-224 Scenography: Introduction to Theatre Design, 3 credits

### Upper-Level Courses 9 credits

Required, 3 credits:

- 709-351 Directing I, 3 credits

History/Criticism, 6 credits:

- 709-309 Theatre History I, 3 credits

Choose one:

- 709-310 Theatre History II, 3 credits
- 709-409 Theatre Criticism, 3 credits

### Areas of Emphasis

#### *Performance* 30 credits

#### Lower-Level Courses

Acting Courses, 9 credits:

- 709-231 Intermediate Acting I, 3 credits
- 709-232 Intermediate Acting II, 3 credits
- 709-235 Theatre Practicum in Acting, 3 credits

Elective Courses, 6 credits: (not required)

- 709-233 Voice for Actor I, 3 credits
- 709-234 Voice for Actor II, 3 credits

#### Upper-Level Courses

Acting/Directing, 12 credits:

- 709-331 Advanced Acting I, 3 credits
- 709-332 Advanced Acting II, 3 credits
- 709-335 Theatre Practicum: Acting or Directing, 3 credits
- 709-352 Directing II, 3 credits

Design, 6 credits chosen from:

- 709-321 Scene Design, 3 credits
- 709-322 Costume Design, 3 credits
- 709-323 Lighting Design, 3 credits
- 709-325 Three-Dimensional Stage Make-up, 3 credits

Electives, 3 credits required:

- 709-403 Theatre Seminar I, 3 credits
- 709-404 Theatre Seminar II, 3 credits
- 709-498 Independent Study, 1-4 credits

#### *Design/Technical Theatre* 30 credits

#### Lower-Level Courses

Design/Technical Theatre Courses, 9 credits:

- 709-220 Stage Management, 3 credits
- 709-235 Theatre Practicum: Technical Theatre, 1-3 credits

Choose one:

- 168-105 Drawing, 3 credits
- 168-106 Design Methods, 3 credits

**Upper-Level Courses**

**Design/Technical Theatre Courses, 12 credits:**

- 709-321 Scene Design, 3 credits
- 709-322 Costume Design, 3 credits
- 709-323 Lighting Design, 3 credits
- 709-325 Three-Dimensional Stage Make-up, 3 credits

**Electives, 9 credits required:**

- 168-301 Life Drawing and Anatomy, 3 credits
- 709-335 Theatre Practicum: Design/Technical, 1-3 credits
- 709-403 Theatre Seminar I, 3 credits
- 709-404 Theatre Seminar II, 3 credits
- 709-405 Theatre Management, 3 credits
- 709-423 Advanced Stage Lighting, 3 credits
- 709-424 Advanced Technical Practices, 3 credits
- 709-498 Independent Study, 1-4 credits

**Requirements for the Minor** Choose either Alternative A or Alternative B

**Alternative A Lower-Level Courses, 15 credits**

21 credits

- 709-131 Beginning Acting I, 3 credits
- 709-132 Beginning Acting II, 3 credits
- 709-221 Technical Practices: Stagecraft, 3 credits
- 709-222 Technical Practices: Costume/Makeup, 3 credits
- 709-224 Scenography: Introduction to Theatre Design, 3 credits
- 709-235 Theatre Practicum, 1-3 credits

**Upper-Level Courses, 6 credits**

**Six credits chosen from:**

- 709-309 Theatre History I, 3 credits
- 709-310 Theatre History II, 3 credits
- 709-321 Scene Design, 3 credits
- 709-351 Directing I, 3 credits
- 709-409 Theatre Criticism, 3 credits

**May choose one of these electives:**

- 709-322 Costume Design, 3 credits
- 709-323 Lighting Design, 3 credits

**Alternative B Lower-Level Courses, 15 credits**

21 credits

- 709-131 Beginning Acting, 3 credits
- 709-137 Beginning Ballet (2 semesters), 4 credits
- 709-141 Movement for Theatre, 2 credits
- 709-237 Intermediate Ballet, 2 credits

**Choose one:**

- 709-128 Beginning Jazz Dance, 2 credits
- 709-145 Beginning Modern Dance, 2 credits

**Choose one:**

- 709-228 Intermediate Jazz Dance, 2 credits
- 709-245 Intermediate Modern Dance, 2 credits

**Upper-Level Courses, 6 credits**

- 709-335 Theatre Practicum (Dance), 1-3 credits
- 709-340 Dance History, 2 credits
- 709-440 Choreography, 2 credits

This program provides a rigorous artistic and academic environment for the study and production of past and present forms of theatre. By including plays and styles of past theatrical achievements, students keep in touch with the accumulated culture of the past and learn from this experience. The program also offers an environment that encourages experimentation with new theatre forms. This balance is aimed at providing for theatre a living future as well as to celebrate some of the greatness of the past.

The faculty views its approach to theatre as an academic program within the context of a liberal arts institution. It takes as its responsibility the preparation of students for graduate and professional schools, community theatre, summer stock experience, television, film acting, and stage direction.

In addition to requirements listed here, all theatre students must pass the comprehensive play reading examination in the spring semester of their senior year.

# Urban and Public Affairs

Interdisciplinary Majors or Minors in Public and Environmental Administration and Urban Studies



**Professors:** Michael E. Kraft;  
Nicholas Pollis.

**Associate Professors:** Ronald  
Baba; Sidney Bremer; Per K.  
Johnsen; David M. Littig; E.  
Nelson Swinerton (chairperson).

**Assistant Professors:** Ray Hutch-  
inson; Gerrit Knaap.

**Instructor:** Kimberly Bernaski.

Urban and public affairs offers  
majors and minors in two areas  
—public and environmental ad-  
ministration and urban studies.  
Each program is described  
separately.

## Requirements for the Major in Public and Environmental Administration

### Supporting Courses

21 credits minimum

#### Required:

- 255-205 Social Science Statistics, 3 credits
- 255-301 Foundations of Social Research, 3 credits
- 778-101 American Government and Politics, 3 credits
- 950-102 Introduction to Public Policy, 3 credits
- 950-200 Introduction to Urban Studies, 3 credits
- 950-201 Problem Analysis and Decision Making, 3 credits
- 950-215 Introduction to Public Administration, 3 credits

Students must demonstrate competencies at the level of the courses below or take those courses:

- 246-133 Fundamentals of Public Address, 3 credits
- 552-105 Expository Writing, 3 credits
- 600-155 Computing and Microcomputers, 3 credits

#### Recommended:

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

### Upper-Level Courses

9 credits minimum

#### Required Core Courses, 6 credits:

- 950-313 Cities, Past, Present, and Future, 3 credits
- 950-408 Public Policy Analysis, 3 credits

#### Three credits chosen from:

- 950-361 Field Studies in Urban and Public Affairs, 3 credits
- 950-461 Urban and Public Affairs Laboratory, 3 credits
- 950-497 Urban and Public Affairs Internship, 3-12 credits
- 950-498 Independent Study, 1-4 credits

### Areas of Emphasis

15 credits

#### Students choose one of these emphases:

- Public Management
- Environmental Policy and Administration
- Public Policy
- Urban Management

The remaining 15 credits are chosen with faculty advice, from the list below. Courses selected depend on the student's area of emphasis.

- 216-362 Human Resource Management, 3 credits
- 246-335 Organizational Communication, 3 credits
- 778-312 Community Politics, 3 credits
- 778-320 Constitutional Law, 3 credits
- 778-410 Intergovernmental Relations, 3 credits
- 778-416 American Legislative Process, 3 credits
- 778-460 American Foreign and Defense Policy, 3 credits
- 820-415 Organizational Psychology, 3 credits
- 950-306 Regulatory Policy and Administration, 3 credits
- 950-309 Urban and Regional Economic Theory, 3 credits
- 950-330 Environmental Politics and Policy, 3 credits
- 950-331 Urban Politics and Policy, 3 credits
- 950-344 Leadership in Organizations, 3 credits
- 950-351 Transportation and the City, 3 credits
- 950-376 Administrative Law, 3 credits
- 950-378 Environmental Law, 3 credits
- 950-402 Resource Economic Analysis, 3 credits
- 950-406 Administration of Local Government, 3 credits
- 950-409 Public Finance and Fiscal Policy, 3 credits
- 950-412 Urban Planning I, 3 credits
- 950-415 Public and Nonprofit Budgeting, 3 credits
- 950-451 Decision Theory and Methods, 3 credits
- 950-452 Planning Theory and Methods, 3 credits

## Requirements for the Minor in Public and Environmental Administration

### Supporting Courses

12 credits

#### Required:

- 298-202 Macro Economic Analysis, 3 credits  
OR  
298-203 Micro Economic Analysis, 3 credits  
778-101 American Government and Politics, 3 credits

#### Select two:

- 950-102 Introduction to Public Policy, 3 credits  
950-201 Problem Analysis and Decision Making, 3 credits  
950-215 Introduction to Public Administration, 3 credits

### Upper-Level Courses

12 credits minimum

#### Choose from:

- 778-410 Intergovernmental Relations, 3 credits  
778-416 American Legislative Process, 3 credits  
778-460 American Foreign and Defense Policies, 3 credits  
950-306 Regulatory Policy and Administration, 3 credits  
950-330 Environmental Politics and Policy, 3 credits  
950-331 Urban Politics and Policy, 3 credits  
950-344 Leadership in Organizations, 3 credits  
950-351 Transportation and the City, 3 credits  
950-376 Administrative Law, 3 credits  
950-378 Environmental Law, 3 credits  
950-402 Resource Economic Analysis, 3 credits  
950-406 Administration of Local Government, 3 credits  
950-408 Public Policy Analysis, 3 credits  
950-409 Public Finance and Fiscal Policy, 3 credits  
950-415 Public and Nonprofit Budgeting, 3 credits  
950-451 Decision Theory and Methods, 3 credits  
950-452 Planning Theory and Methods, 3 credits

*continued*

### Public and Environmental Administration

Studies in public and environmental administration prepare students for a variety of challenging careers in public and non-profit organizations and for further study in a wide range of graduate programs. The program is designed to meet the need for public policy analysts and public administration professionals who can effectively identify and analyze problems; develop and evaluate policies; and manage and lead organizations. But it also serves as a broad-based social sciences major, with a strong interdisciplinary orientation.

All public and environmental administration majors engage in both theoretical and applied studies. Independent studies, internships, and/or applied research projects are part of every student's program. Each student takes a core of courses in the interdisciplinary concentration—urban and public affairs—and is encouraged to take courses in urban studies, the other major within the concentration. Students also choose an area of emphasis to meet their particular needs. Choices include public management, public policy, environmental policy and administration, and urban management.

Graduates in public and environmental administration hold positions such as administrative analysts, budget officers, data processors, personnel counselors, and others in local, state, and federal government and in non-profit organizations. They have also pursued graduate studies in fields such as law, political science, social services, and public policy.

**Urban Studies**

The program in urban studies focuses on the problems, possibilities, and promise of life in urban areas. Its interdisciplinary program offers a valuable focus for understanding contemporary culture and the small, medium, and large cities in which most students will live their lives. As a liberal arts program, it offers the interdisciplinary background increasingly sought by employers for a variety of urban-based careers. Examples include architecture, planning, policy analysis, social services, education, journalism, marketing, real estate, politics, and community organizations. UWGB graduates in urban studies are pursuing careers in those fields and others. More than 20 percent of graduates with this major have gone on to graduate schools in fields such as architecture, planning, administration, law, business, and education.

**Requirements for the Major in Urban Studies**

**Supporting Courses**

18 credits minimum

**Required:**

- 255-205 Social Science Statistics, 3 credits
- 255-301 Foundations for Social Research, 3 credits
- 778-101 American Government and Politics, 3 credits
- 950-102 Introduction to Public Policy, 3 credits
- 950-200 Introduction to Urban Studies, 3 credits
- 950-201 Problem Analysis and Decision Making, 3 credits

It is recommended that students demonstrate competencies at the level of the courses below or take those courses:

- 246-133 Fundamentals of Public Address, 3 credits
- 552-105 Expository Writing, 3 credits
- 600-155 Computing and Microcomputers, 3 credits

**Upper-Level Courses**

9 credits minimum

**Required core courses, 6 credits:**

- 950-313 Cities, Past, Present and Future, 3 credits
- 950-408 Public Policy Analysis, 3 credits

**Three credits, chosen from:**

- 950-361 Field Studies in Urban and Public Affairs, 3 credits
- 950-461 Urban and Public Affairs Laboratory, 3 credits
- 950-497 Urban and Public Affairs Internship, 3-12 credits
- 950-498 Independent Study, 1-4 credits

**Areas of Emphasis**

15 credits

**Students choose one of these emphases:**

- Public Policy
- Urban Management
- Urban Affairs
- Urban Design and Aesthetics
- Women's Studies

Students choose appropriate courses for their area of emphasis from the list below, with the aid of faculty advice.

- 255-301 Foundations for Social Research, 3 credits
- 950-302 Urban Behavior, 3 credits
- 950-303 Urban Sociology, 3 credits
- 950-306 Regulatory Policy and Administration, 3 credits
- 950-309 Urban and Regional Economic Theory, 3 credits
- 950-325 Behavior in Designed Environments I, 3 credits
- 950-326 Behavior in Designed Environments II, 3 credits
- 950-330 Environmental Politics and Policy, 3 credits
- 950-331 Urban Politics and Policy, 3 credits
- 950-341 Cities in Literature and Art, 3 credits
- 950-344 Leadership in Organizations, 3 credits
- 950-345 Women in American Perspective, 3 credits
- 950-351 Transportation and the City, 3 credits
- 950-363 Urban Aesthetics, 3 credits
- 950-375 Women's Strategies for Change, 3 credits
- 950-376 Administrative Law, 3 credits
- 950-378 Environmental Law, 3 credits
- 950-379 Law in Society, 3 credits
- 950-402 Resource Economic Analysis, 3 credits
- 950-406 Administration of Local Government, 3 credits
- 950-408 Public Policy Analysis, 3 credits
- 950-409 Public Finance and Fiscal Policy, 3 credits
- 950-412 Urban Planning I, 3 credits
- 950-415 Public and Nonprofit Budgeting, 3 credits
- 950-436 Environmental Design Studio I, 3 credits
- 950-438 Environmental Design Studio II, 3 credits
- 950-451 Decision Theory and Methods, 3 credits
- 950-452 Planning Theory and Methods, 3 credits
- 950-461 Urban and Public Affairs Laboratory, 3 credits



## Requirements for the Minor in Urban Studies

**Supporting Course** 950-200 Introduction to Urban Studies, 3 credits  
3 credits

**Upper-Level Courses** 15 credits

**Core courses, 9 credits, chosen from:**

950-302 Urban Behavior, 3 credits  
950-303 Urban Sociology, 3 credits  
950-309 Urban and Regional Economic Theory, 3 credits  
950-313 Cities, Past, Present and Future, 3 credits  
950-331 Urban Politics and Policy, 3 credits  
950-363 Urban Aesthetics, 3 credits  
950-421 Urban Planning I, 3 credits

**Choose remaining courses from:**

242-477 Women as Creative Agents, 3 credits  
875-340 Women, Work and Family, 3 credits  
875-345 Women in Cross-Cultural Perspective, 3 credits  
950-306 Regulatory Policy and Administration, 3 credits  
950-325 Behavior in Designed Environments I, 3 credits  
950-326 Behavior in Designed Environments II, 3 credits  
950-330 Environmental Politics and Policy, 3 credits  
950-341 Cities in Literature and Art, 3 credits  
950-345 Women in American Perspective, 3 credits  
950-351 Transportation and the City, 3 credits  
950-375 Women's Strategies for Change, 3 credits  
950-376 Administrative Law, 3 credits  
950-378 Environmental Law, 3 credits  
950-379 Law in Society, 3 credits  
950-402 Resource Economics Analysis, 3 credits  
950-406 Administration of Local Government, 3 credits  
950-409 Public Finance and Fiscal Policy, 3 credits  
950-415 Public and Nonprofit Budgeting, 3 credits  
950-436 Environmental Design Studio I, 3 credits  
950-438 Environmental Design Studio II, 3 credits  
950-451 Decision Theory and Methods, 3 credits  
950-452 Planning Theory and Methods, 3 credits  
950-461 Urban and Public Affairs Laboratory, 3 credits  
950-468 Public Policy Analysis, 3 credits

Urban studies students combine descriptive and theoretical courses with practical experience in the community through independent studies, internships, and applied research projects. Each student takes a core of courses in the interdisciplinary concentration—urban and public affairs—and is encouraged to take courses from public and environmental administration, the other major within the concentration. Students also select an area of emphasis to complement their particular program. Choices include public policy, urban management, urban affairs, urban design and aesthetics, and women's studies.

# Women's Studies

Interdepartmental Minor

**Professors:** Estella Lauter (co-chairperson), humanistic studies; Louise Witherell, humanistic studies.

**Associate Professors:** Sidney Bremer (co-chairperson), urban and public affairs; Julie Brickley, social change and development; Carol Pollis, social change and development; Lynn Walter, social change and development.

**Assistant Professor:** Illene Noppe, human development.

Women's studies is an essential component of a liberal arts education. Women's studies are studies about women—for women and men. It examines the common denominators affecting women's lives, and at the same time focuses on the cultural, racial, and economic diversity of their experiences. It explores their past and present contributions to societies as persons, creators, and thinkers. The program has been a formal component of UWGB's interdisciplinary problem-focused academic plan since 1977.

The program draws upon methods and content from a wide range of disciplines, including anthropology, literature and the arts, biology, economics, history, political science, psychology, religion and sociology. It seeks to improve the quality of human life by expanding women's and men's appreciation of women's accomplishments and capabilities, and by enabling students to widen their sphere of development beyond the limits of traditional gender-differentiated roles.

Any student may take women's studies as an interdepartmental minor in addition to the required interdisciplinary major or minor, or it may be pursued as an area of emphasis in any one of the five cooperating interdisciplinary majors. Cooperating interdisciplinary programs are communication and the arts, human development, humanistic studies, social change and development, and urban and public affairs.

## Requirements for the Minor

### Lower-Level Course 3 credits

Required introductory course:

875-241 Women and Changing Values, 3 credits

### Upper-Level Courses 18 credits

Core courses (9 credits):

242-477 Women as Creative Agents, 3 credits

875-345 Women in Cross-Cultural Perspective, 3 credits

950-345 Women in American Perspective, 3 credits

Other upper-level courses (choose 9 credits):

242-395 Images of Woman in Contemporary Arts, 3 credits

481-339 Woman in the Life Cycle, 3 credits

554-333 Women in 19th and 20th Century French Literature, 3 credits

875-340 Woman, Work and Family, 3 credits

875-342 Women, Myth and Identity, 3 credits

875-440 Women and Religion, 3 credits

950-375 Women: Strategies for Change, 3 credits

Other experimental courses may be substituted for one of the above at the discretion of the women's studies advisers.

# Academic Support Program

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**Staff:** Michael W. Murphy, director; Michael Marinetti, special services project supervisor and tutoring lab supervisor; Jo Chern, writing; Ann Deprey, reading and writing; Marjorie Herrscher, EOP adviser, writing and study skills; Mary Prindiville, writing; Michael Stearney, mathematics and science study skills; Joan Thron, writing.

The academic support program helps students to develop the skills they need to succeed in college, particularly the skills of critical thinking, effective writing, efficient reading, basic mathematics. Help in study skills such as time management, note-taking, reviewing, and test-taking is also available.

## Skills Courses and Workshops

The academic support program offers nondegree credit courses in reading, writing, mathematics, and applied study skills. The following courses are usually offered both in the fall and spring semesters: College Reading Skills, Efficient Reading, Fundamentals of Writing, Elementary College Algebra, and Applied Study Skills Labs connected to introductory courses in environmental science, human biology, human development, and sociology. During the January interim one-credit courses are offered on the research paper, efficient reading, and arithmetic review.

## Resource Materials

The academic support program provides a variety of resource materials to assist students in improving their reading, writing, mathematics, and study skills. Among the most popular resources are handout sheets on topics such as "How to Write a Research Paper," "How to Document Resources," and "How to Prepare for Exams." Some computer-assisted instruction materials also are available, including programs for improving writing skills.

## Tutoring

Individual tutoring is provided free to students who need short-term assistance with a course, paper, or project. Appointments may be scheduled at the tutoring lab. Small-group tutoring sessions for certain large-enrollment courses are offered on a regular basis throughout the year.

# Professional and Preprofessional Programs

## Requirements

Requirements for professional programs and schools change often as the professions strive to offer up-to-date preparation for their practitioners. Some professional programs require prior completion of a prescribed set of courses and an acceptable grade point average; others require that

students already possess a four-year bachelor's degree. Some professional programs, law, for example, have other criteria, such as demonstrated ability in certain skills.

The point is that requirements change and each professional program is unique. Students planning to enter a professional program or school should seek academic advice as soon as they enroll. That way, they can plan their academic programs to meet all requirements for their chosen professional field.

## Advantages

Completing preprofessional studies at UW-Green Bay offers several advantages:

### Liberal Arts

Students' first two years at any institution of higher learning and for all preprofessional programs are devoted to fulfilling general education/liberal arts requirements. These requirements include credits in the humanities (such as philosophy, literature, languages), social sciences (psychology, sociology, economics), and natural sciences (earth science, biology, mathematics). UWGB is known for its strong liberal arts programs, so it is a good place to complete those requirements.

### Competency Requirements

Competency requirements help students to develop professional-level skills in writing, speech, mathematics and other areas. UWGB's strong undergraduate program, academic rigor, quality faculty, and small class size allowing individual attention, offer a supportive environment in which to gain those skills.

### Reputation and Ease of Transfer

The university's reputation for quality is well documented. Professional schools, through their experience with UWGB students, have developed respect for its academic preparation. Professional programs and UWGB staff together have developed advising materials outlining requirements for each program. Transferability of credits from UWGB to the professional school is guaranteed for students who fulfill the requirements satisfactorily.

## Two-Year Programs

Students may complete two-year preprofessional programs in these fields at UWGB:

Agriculture  
Architecture  
Chiropractics  
Engineering  
Medical technology  
Mortuary science  
Nursing  
Occupational therapy  
Pharmacy  
Physical therapy  
Physician assistant  
Veterinary medicine

## Three-Year Program

Students may complete three years of a preprofessional program in:

Optometry

## Professional Schools

Students may complete bachelor's degrees preparing them for professional schools in:

Dentistry  
Counseling (preparation for guidance and counseling)  
Law  
Medicine  
Theology

## Professional Preparation

Here are some of the professions for which students can prepare:

**Agriculture.** University of Wisconsin campuses at Madison, Platteville, and River Falls offer a variety of opportunities in agriculture. The two-year preparatory program at UWGB emphasizes the biological and physical sciences.

**Architecture.** Architecture programs have become increasingly flexible and students may enter the field by completing a master's degree after earning a bachelor's degree in one of several majors. Several bachelor's degrees available at UWGB provide strong preparation for architecture. Opportunities in art, environmental design, and psychology will be especially helpful.

**Chiropractics.** Most schools of chiropractic medicine entail four years of training after the student completes a two-year preparatory program. The two years of preparation at UWGB are very similar to other two-year preprofessional health science programs.

**Dentistry.** Preparation for dental school requires early planning. All dental colleges specify completion of specific courses before entrance and most specify at least 90 credits of college work and good scores on the Dental Admissions Test. UWGB's major in human biology along with traditional majors in biology, chemistry, or physics seem most appropriate. UWGB is highly successful in having its students accepted into dental schools.

**Engineering.** UW-Green Bay has a strong two-year preprofessional program to prepare students for various engineering programs at the Universities of Wisconsin-Madison, Milwaukee, and Platteville, and at Marquette University and Milwaukee School of Engineering. UWGB preparatory courses are approved by the engineering departments for each specialty at each of those institutions.

**Law.** Law schools do not require a specific undergraduate major. They seek evidence of a good liberal education, an understanding of social, political, and economic institutions, and good communications skills. They also require good scores on the Law School Admissions Test. UWGB's interdisciplinary majors in social change and development, urban and public affairs, business administration, and humanistic studies are excellent in providing a "head start" toward law school.

**Medical technology.** The degree in medical technology is available at LaCrosse and Madison. The first two years of study may be completed at UWGB emphasizing the sciences and communications, and completing liberal arts requirements.

**Medicine.** The success of UWGB's pre-medical program is well documented. Almost all medical schools require a bachelor's degree for entrance and specify certain subjects that a candidate must have completed. UW-Green Bay's strong programs in the sciences and good grounding in the liberal arts provide an excellent background. Its graduates have a high rate of success in admission to medical college.

**Mortuary science.** The state of Wisconsin requires two years of academic college training as a prerequisite to mortuary college. UWGB can provide the basic requirements of those two years that will allow students to enter the school of their choice.

**Nursing.** While UWGB offers a specialized program that allows nurses with the R.N. to complete a bachelor's degree, and cooperates with the Bellin College of Nursing to offer the required introductory science and liberal arts courses, it also offers a year and a half of introductory work that qualifies students to enter the four-year nursing degree programs at UW campuses at Eau Claire, Madison, Milwaukee, and Oshkosh.

**Occupational therapy.** After completing a year and a half of required work at UWGB, students will be prepared for the programs at Madison or Milwaukee. Another way to enter the field is to complete a bachelor's degree in a related field at UWGB and earn the master's degree in occupational therapy in the professional program.

**Optometry.** Typical preparation for a school of optometry requires a minimum of 90 credits of designated undergraduate work. This preprofessional study can be completed at UWGB.

**Pharmacy.** UWGB students enrolled in this two-year preparatory program follow a course approved by UW-Madison's School of Pharmacy. An adviser from the Madison program meets with UWGB students to insure they are meeting requirements for the professional program.

**Physical therapy.** The two-year preprofessional program at UWGB is approved by the professional programs in physical therapy at UW-LaCrosse and UW-Madison. Successful completion of the foundation in chemistry, physics, biology, and psychology at UW-Green Bay insures acceptance into those programs.

**Physician assistant.** Students can complete the first year of preprofessional work for this highly competitive professional field at UWGB. Academic performance, health care experience, and letters of recommendation are very important in getting accepted to the professional program.

**Theology.** Theological schools traditionally recommend a broad undergraduate program in the liberal arts. Students usually earn a bachelor's degree and include study in English, history, social science, music, philosophy, and foreign language. The UWGB major in humanistic studies offers specific courses in writings of the old and new testaments and studies of other religions.

**Veterinary medicine.** This two-year preprofessional program emphasizes biology and chemistry, but students also will gain skills in communications, complete requirements in general education, and gain background in physics. Pre-veterinary students from UWGB will generally enter schools of veterinary medicine at UW-Madison or the University of Minnesota.

# Individualized Learning

## Personal Major

Adviser: Katharine Olski.

A *personal major* is a self-designed program for students who find that their educational objectives and interests do not fit into any existing major at UW-Green Bay. Following the University's interdisciplinary approach, a personal major draws resources from several academic areas.

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

Students completing personal majors must meet University requirements for residency and English proficiency as well as general education requirements.

The personal major requires a minimum of 30 credits at the junior-senior level.

Information about the personal major is available from the Individualized Learning Programs office. An adviser in the office is available to help students organize details of their proposals and can suggest faculty advisers in their interest areas.

## Extended Degree

Director: Katharine Olski.

The **Bachelor of Arts: General Studies** (extended degree) is a fully accredited degree program to accommodate the needs of adult students whose circumstances prevent attendance at traditional on-campus courses. Extended degree students fulfill all academic requirements and meet the standards of educational quality characteristic of the University of Wisconsin, but work at their own pace, usually completing a course in three to six months.

Most requirements are completed off campus. Students have a minimum of two on-campus meetings with faculty per course, generally in weekend seminars. These may also be arranged as individual appointments. Extended degree students may attend a week-long seminar on campus. Because students are geographically dispersed, interaction among students is usually limited to seminars. Some students have established support groups in their areas.

Extended degree students must demonstrate competency in five subject areas—business and economics, communications, humanities and fine arts, natural science, and social science—in order to graduate. They also complete a unit on problem solving and fulfill a 15-credit area of emphasis unique to them.

A study of extended degree programs conducted by the U.S. Department of Health, Education, and Welfare in the late 1970s showed that graduates experienced tangible benefits in the world of work which they attributed to obtaining the degree. Nearly all graduates who sought graduate school entrance were accepted and 99 percent reported they felt as well or better prepared than traditional college graduates.

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

## University Without Walls

Adviser: Katharine Olski.

**University Without Walls (UWW)** is a selective program for Wisconsin residents who want to design their own major and their own courses. UWW students complete most of their study through individualized learning contracts. A learning contract is designed by the student in collaboration with a UWGB professor who has expertise in the area of interest. The contract outlines what will be learned, the method of study, the resources, the number of credits to be awarded, and means of evaluating the work. This process requires dedication because students take considerable responsibility for developing and initiating their own contracts.

Graduation requirements are the same as those for any campus student including residency, English proficiency, general education requirements, and a major.

Due to the individualized nature of University Without Walls, the admission process is selective. Over the years of the program's existence, it has been found that successful students possess high levels of independent learning skills. Therefore, rigorous application procedures have been developed to ascertain beforehand an applicant's ability to attain a degree in this manner.

Eligibility for acceptance is based on:

- inability to attend on-campus courses or strong preference for an alternative learning process;
- approximately two years of college credits which include general education requirements, English proficiency, and core courses

for the junior-senior level work to be done by learning contract;

- excellent writing skills (assessed during the application process);
- evidence of ability to set objectives and follow through to completion demonstrated by previous experience;
- evidence of self-direction and motivation shown in the design of an initial learning contract.

# Other Degrees

Associate of Arts and Master of Science

## Associate of Arts Degree

The associate of arts degree at the University of Wisconsin-Green Bay offers a flexible program with areas of emphasis in a broad range of subjects and represents a degree earned through a fully accredited university-level educational program.

The A.A. degree certifies completion of a focused, structured program of study. This accomplishment represents essentially half of a bachelor's degree and a minimum of 62 degree credits.

There are several reasons why a person might find an A.A. degree beneficial:

- to add breadth and depth to the vocational training he or she has or plans to receive;
- to strengthen opportunities for advancement by gaining additional education and certification;
- to serve as a stepping stone toward a bachelor's degree;
- to provide an opportunity to pursue a special academic interest in a focused, systematic way;
- for personal enrichment and pleasure.

The university began granting the A.A. degree with the December 1977 graduation. Students and former students who may already have fulfilled A.A. degree requirements may file an academic plan and a request to graduate with the A.A. degree even though they are not enrolled for the semester in which they would graduate.

**Requirements for the Degree**  
Requirements for the associate of arts degree at UWGB include:

- a total of 62 degree credits;
- a minimum of 15 credits of UWGB course work (meaning that only 47 transfer credits from another accredited college or university can be counted toward the A.A. degree);
- a grade point average of 2.0 or better;
- a completion of general-education requirements except for the senior seminar requirement described elsewhere in this book;

- a minimum of 12 additional credits in one area of emphasis developed by the student and a faculty adviser;

- acceptable score on an English proficiency test or 3 credit hours of college level writing;

- supporting subjects as may be required by the individual area of emphasis;

- additional elective credits to total 62 or more earned degree credits.

A summary shows these requirements:  
30 credits of general education  
12 credits emphasis  
3 credits writing (if required)  
20-23 credits electives and/or supporting subjects  
65-68 total

Associate of arts degree students must fulfill the same admission requirements as students in the bachelor's degree program. All of the services available to regular degree students apply to A.A. candidates and they can participate as fully in the life of the campus as they wish.

Tuition and fee charges for A.A. degree students are the same as for bachelor's degree students.

Persons interested in the associate of arts degree program should read especially the sections in this catalog on admissions and costs, general-education requirements, and descriptions of the academic programs which they may wish to emphasize. More information is available from the Office of Admissions and Orientation.

Associate of Arts degree requirements described here fulfill lower-level general-education requirements only at UWGB.

## Master's Degrees

The University of Wisconsin-Green Bay offers two types of programs leading to master's degrees.

The first type consists of degrees awarded by UW-Green Bay in three distinct areas of study. They are:

- Master of Science in Administrative Science

- Master of Science in Community Human Services

- Master of Science in Environmental Science and Policy

The second group comprises cooperative programs with the Universities of Wisconsin at Oshkosh and Milwaukee. Course work in these cooperative programs is normally completed on the UW-Green Bay campus, but the degree is awarded by the sponsoring institution.

### Administrative Science

Administrative science is concerned with the effective management of formal organizations. A principle objective of administrative science is to prepare skilled and imaginative individuals for middle-management and policy-making positions in government, nonprofit organizations and the private sector. The program offers areas of emphasis in:

Public and private management. For students who wish to pursue primarily management careers in public, private and nonprofit organizations.

Policy analysis and planning. For students who want to focus their graduate studies on policy issues associated with contemporary public problem-solving activities, on characteristics of the public policy system, and on methods of policy analysis and planning.

Decision science and systems analysis. For quantitatively oriented students who wish to engage in sophisticated systems planning and analysis.

### Community Human Services

Community human services focuses on the dynamics, structure, management and improvement of such organizations as:

- mental health clinics,
- social and welfare agencies,
- community organizations,
- rehabilitation agencies,
- hospitals,
- and certain aspects of police departments, schools, and industrial organizations. The program seeks to provide sufficient knowledge to permit graduates to understand, modify, create and use these organizations to assist others.

### Environmental Science and Policy

Environmental science and policy is appropriate for students with interests in the scientific and/or public policy and administration aspects of environmental problems such as waste management, resource management, ecosystems studies, and technology development and assessment. Two areas of emphasis are available:

Environmental science. For students interested in positions dealing with a variety of environmental problems in industry, consulting, laboratory/engineering firms and/or government agencies.

Environmental policy and administration. For students interested in policy analysis, planning and administration, leading to positions in government agencies, legislative bodies, environmental organizations or industry.

### Cooperative Programs

UWGB, in cooperation with the Universities of Wisconsin at Milwaukee (UWM) and Oshkosh (UWO), offers four master's degrees in the field of education and one in business administration (MBA). The course work for these programs is normally completed on the UW-Green Bay campus. The cooperative programs are:

Master of Science in Administrative Leadership—Educational Administration and Supervision (UWM)

Master of Business Administration (UWO)

Master of Science in Curriculum and Instruction (UWM)

Master of Science in Educational Psychology—Counseling (UWM)

Master of Science in Education—Reading (UWO)

### For More Information

Detailed information on graduate programs at UW-Green Bay is available from the Office of Graduate Studies.

# Course Descriptions

This section of the catalog contains course descriptions listed in alphabetical-numerical order. Students should not conclude that courses listed under one academic program may be taken for credit only in that academic unit. Many academic units accept for major and/or minor credit courses listed under another academic area. This is one of the many reasons students should seek advising in designing their programs of study.

Every course described in this catalog is not offered every semester, though nearly all of them are offered on a regular basis, such as every spring, or every fall, or in odd-numbered or even-numbered years. Some courses may be offered only during the January interims. Courses offered at regular intervals are indicated with codes following the course description in this listing. Up-to-date information on course periodicity is published in each *Timetable*.

That is why students should consult the *Timetable* for each session when planning their programs. *Timetables* also publish new courses and special offerings, such as experimental courses or seminars, which do not appear in this catalog.

## Prerequisites

Two types of previous course experience may be indicated in the *Timetable*—prerequisites (required) and recommended prior courses.

Prerequisites indicate the minimum level of proficiency or background knowledge needed for successful achievement of the course objectives. Students who have not fulfilled required prerequisites will not be allowed to enroll in a course. Exceptions to prerequisites may be made by the course instructor or the instructional unit chairperson, but the student is responsible for seeking approval of exceptions before enrolling in the course.

Recommended prior courses are basically advisory. Students who have not completed recommended prior courses—usually lower-level courses—may enroll in a course if they choose, but they do so at their own risk. Instructors will not hold back the progress of a course for those students who have not taken recommended prior courses. Students who misjudge their ability to complete a course without recommended prior courses may get a lower grade than they desire. They also run the risk of finding it necessary to drop the course, which also means loss of tuition and costs of books and course materials.

## Abbreviations and Symbols

Abbreviations commonly used in course descriptions are:

cr	credits
P	prerequisite(s)
Rec	recommended prior course
fr	freshman
soph	sophomore
jr	junior
sr	senior
cons inst	consent of instructor

Codes for course periodicity are:

F	Every fall semester
FE	Alternate fall semesters, even-numbered academic years (example: 1986-87, 1988-89)
FO	Alternate fall semesters, odd-numbered academic years (example: 1987-88, 1989-90)
S	Every spring semester
SE	Alternate spring semesters, even-numbered academic years (example: 1986-87, 1988-89)
SO	Alternate spring semesters, odd-numbered academic years (example: 1987-88, 1989-90)
J	Every January interim
JE	Alternate January interims, even-numbered academic years (example: 1986-87, 1988-89)
JO	Alternate January interims, odd-numbered academic years (1987-88, 1989-90)



## Instructional Unit Numbers

The instructional unit number listed with each group of course descriptions is used for identification and record keeping. Students will need to combine the instructional unit number with the course number to complete registration forms. For example, for record keeping, Biology 303, Genetics, would be listed 204-303. The first three digits refer to the instructional unit; the last three to the course number. The six-digit number also is used to refer to course prerequisites.

Courses are listed numerically by instructional units in the *Timetables*, which list what courses are being offered each semester, January, and summer session. The *Timetable* also tells when the course is scheduled and, in most cases, who will be teaching it.

Instructional unit numbers are:

107	Accounting
156	Anthropology
165	Art
204	Biology
216	Business Administration
225	Chemistry
242	Communication and the Arts
246	Communication Processes
255	Community Sciences
296	Earth Science
298	Economics
302	Education
416	Geography
448	History
478	Human Biology
479	Nutritional Sciences
481	Human Development
493	Humanistic Studies
552	Literature and Language: English-American
553	Academic Support Program-English
554	Literature and Language: French
556	Literature and Language: German
558	Literature and Language: Spanish
600	Mathematics
601	Academic Support Program-Mathematics
644	Military Science
678	Natural and Applied Science
689	Nursing
705	Music

707	Music-Applied
709	Theater
736	Philosophy
742	Physical Education
754	Physics
778	Political Science
820	Psychology
834	Regional Analysis
867	Senior Seminars
875	Social Change and Development
892	Social Services
900	Sociology
930	University Without Walls
950	Urban and Public Affairs

## Courses With Variable Content

Many academic programs of the university offer courses with variable content to provide students with opportunities for individual work and exploration of unusual, specialized, or topical subjects not ordinarily included in the curriculum. They fall into five categories: selected topics, student-led courses, independent study, internships, distinction in the major, and senior honors projects. General descriptions of the nature and philosophy of courses in each category are provided below. They are cited only briefly by number and title in the course lists of units offering them. Information on how to develop or take such courses can be found in the *Timetable* or the Academic Advising Office.

### 281, 481 Student-Led Courses 1-4 credits

Well prepared, highly motivated students are offered the chance to develop and lead courses on their own. Topics derive directly from student interest and initiative and are chosen from 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 feel competent to design and lead. Proposals are routed through an appropriate interdisciplinary concentration or professional program for approval based both on merit and potential demand.

Upon approval, courses are listed in the *Timetable* with the instructional unit student-led course number. The listed title will ap-

pear 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 for consultation in concentration and professional program offices.

### 283X, 483X Selected Topics 1-4 credits

Courses and seminars presented on an experimental basis or in response to special demand. Topics may be chosen to represent current issues of general concern, special interests of student groups or faculty members, special resources or visiting faculty, or other areas of interest not represented in existing programs. 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.

When offered, the title and number of credits is announced in the *Timetable* under the heading of the sponsoring unit. Further information can be obtained from the unit or the instructor. Introductory 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 title of the course as announced in the *Timetable* appears on the transcripts of students who enroll.

### 298, 498 Independent Study 1-4 credits

Offered on an individual basis at the student's request and consisting of a program of selected reading and research planned in consultation with a faculty member in the subject matter area of the student's choice. A student wishing to study or conduct research in an area not represented in available scheduled courses should develop a preliminary proposal and seek the sponsorship of a faculty member. The student's adviser can direct him or her to instructors with appropriate interests. A written report or equivalent is required for evaluation,

and a short title describing the program must be sent early in the semester to the registrar for entry on the student's transcript. *Timetables* can provide up-to-date information on independent study.

### 478 Senior Distinction in the Major 3 credits

Some academic units offer an opportunity to students graduating with a major to earn distinction by designing, completing, and defending original work undertaken with the consent and supervision of the faculty. Projects vary, according to each student's area of emphasis, but may take the form of written research projects, creative portfolios, video/audio/or slide-tape presentations, computerized materials, publishable series of articles, or other results, as appropriate. Prerequisites are 3.5 overall grade point; 3.75 gpa in upper-level major courses; senior standing; consent of instructor.

### 484 Senior Honors Project 3 credits

Each interdisciplinary or professional program offers qualified students the opportunity to undertake a project to qualify for graduation with summa cum laude honors. Such a project—normally a thesis, research, or other creative activity—is carried out in the latter part of the junior year or in the senior year with the consent of an 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. Includes supervised reading and periodic meetings with faculty sponsor. Prerequisites are junior standing and consent of department chair.

## Accounting, Managerial

### 107 Accounting, Managerial

**107-283X Selected Topics in Accounting 1-4 cr.** See page 113.

**107-298 Independent Study 1-4 cr.** See page 113.

**107-300 Introductory Accounting 3 cr.**

Basic concepts and terminology of financial accounting; the underlying principles of accounting as well as the processes by which accounting data are recorded, summarized, and reported; accounting problems concerned with sole proprietorships, partnerships, and corporations; principles underlying the accounting for current and fixed assets, current and long-term liabilities, and the owner's equity accounts. P: soph st. (F,S)

**107-301 Intermediate Accounting 4 cr.**

Theories underlying financial accounting practice; special problems associated with preparation of the income statement and balance sheet; accounting principles underlying the valuation of cash, receivables, inventories, long-term investments, fixed assets, liabilities, and owners' equity accounts; relevant APB opinions and FASB statements. P: 107-300. (F,S)

**107-302 Accounting for Administrators 3 cr.**

Accounting concepts and methods; interpretation and use of accounting reports and analyses for the managerial purposes of planning, coordination, and control; cost-profit-volume relations budgeting, effects of taxation and price level changes on decision-making. P: 107-300. (F,S)

**107-305, 306 Business Law I, II 3, 4 cr.**

Laws affecting business, conducted on the case method with emphasis on the Uniform Commercial Code. Introduction to law and the legal process, contracts, agency, property including environmental problems, landlord-tenant and real estate laws. Sales, including consumer protection laws, secured transactions, negotiable instruments, corporation and partnership law, estate and bankruptcy law are introduced in the second half of the course. P for 305: must have BUA or MGA classification or minimum of 36 credits and 2.3 grade point average. (F,S) P for 306: 107-305. (F,S)

**107-312 Managerial Accounting 3 cr.**

Principles and procedures utilized in the accumulation of cost data in an organization; the role of cost accounting in management and how cost data are recorded in the accounts; job order and process cost systems; the use of flexible budgeting and standard cost accounting in the overall context of budgetary control. P: 107-302; Rec: 216-217, 600-260. (F,S)

**107-313 Financial Accounting: Theory and Practice I 3 cr.**

Specialized financial accounting topics, pronouncements of the AICPA and FASB, price level accounting, accounting changes, statements of changes in financial position, tax allocation, accounting for leases and pensions, special sales arrangements, and partnerships. P: 107-301. (F)

**107-314 Financial Accounting: Theory and Practice II 3 cr.**

Business combinations; principles and techniques involved in the preparation of consolidated financial statements; special problems in consolidations pertaining to intercompany inventory profit, preference interests and liquidating dividends, "earnings per share" calculations, accounting for branch operations, and accounting for foreign operations. P: 107-301; Rec: 107-313. (S)

**107-316 Governmental and Institutional Accounting 3 cr.**

Accounting theory and practice unique to governmental and institutional jurisdictions; control of revenues and expenditures through budgets and allotments; comparison with commercial accounting, including nature and purpose of separate funds. P: 107-300. (F,S)

**107-348 Practicum: Computer-Assisted Financial Analysis 3 cr.**

Emphasizes integration and practical application of finance, accounting, taxation, and marketing concepts and theory through use of popular micro-computer spreadsheets. Provides instruction in the use of spreadsheets. Emphasizes development of cash flow, feasibility, breakeven, and related

models, and the use of the computer for evaluating alternative strategies, sensitivity analysis, and report generation. P: 216-343; Rec: 600-155. (J)

**107-395 Practicum in Financial Statement Analysis 3 cr.**

Examines the theory and practice of the analysis of published financial statements. The course will include a review of the balance sheet and income statement as well as an in-depth analysis of such topics as short- and long-term liquidity, funds flow analysis, ROI analysis, the analysis of operations and the problems related to the project of earnings. (Counts for upper-level finance credits.) P: 107-300, 216-343. (J)

**107-410 Introduction to Income Tax Theory and Practice 3 cr.**

Federal and state income tax as applied to individuals, partnerships, and corporations: tax and raw source materials, written problems; tax planning and tax determination. P: 107-300; Rec: 107-305. (F)

**107-411 Financial Information Systems 3 cr.**

Principles of systems design with an emphasis on organizational structure; internal control; flow charts and the impact of people on systems studies; systems requirements regarding the procedural areas of accounting systems such as cash purchasing, inventory management, sales, billing. P: 107-302; Rec: 107-451. (F)

**107-412 Auditing Standards and Procedures 4 cr.**

Audit standards, professional ethics, legal liability of auditors. Audit procedures as they relate to assets, liabilities, equity as well as revenue and expense accounts. Includes an examination of effect of the computer on auditing, statistical sampling, and internal auditing. P: 107-313; Rec: 107-411. (S)

**107-414 Advanced Managerial Accounting 3 cr.**

Cost concepts for decision making which include cost-profit analysis, break-even analysis, differential and comparative cost, capital budgeting and control, profit performance measurements and linear programming for decision making. Use of responsibility accounting concepts and implication of transfer pricing for performance evaluation. Use of selected quantitative techniques in the cost accounting function. P: 107-312; Rec: 600-260. (S)

**107-415 Advanced Income Tax Theory and Practice 3 cr.**

A study of advanced topics in income tax on both the state and federal levels. Primary emphasis is on federal tax as it relates to corporations, estates, trusts and partnerships, including both tax planning and determination. P: 107-410. (S)

**107-451 Design of Computer-Assisted Systems 3 cr.**

Approaches to and methods of designing computer-assisted processes in organizations, with emphasis on feasibility analysis, design, implementation, and evaluation. Special attention given to management information and decision support systems. Includes fundamentals of sociotechnical systems design. P: 600-155 or 600-256; Rec: 216-382 or 820-415. (S)

**107-478 Senior Distinction in Accounting 3 cr.** See page 113.

**107-483X Selected Topics in Accounting 1-4 cr.** See page 113.

**107-497 Internship in Accounting 3-12 cr.** See page 113.

**107-498 Independent Study 1-4 cr.** See page 113.

### 156 Anthropology

**156-100 Varieties of World Culture 3 cr.**

A survey of the variety of ways of life that exist in the world. Stress is given to the concepts of culture, cultural relativity, and ethnocentrism. Representative case studies of tribal and peasant societies are considered. (F,S)

**156-110 Introduction to Physical Anthropology 3 cr.**

A study of populations from a biological evolutionary perspective. The evolutionary history, diversity, and adaptation of human beings is explored. Also included is discussion of the mutual interaction and influence

of human culture and biology within an evolutionary framework. See 478-110. Credit is not granted for both 156-110 and 478-102. (F)

**156-220 Myth, Ritual and Religion 3 cr.**

Critical survey and analysis of mythologies, rituals, and religion and magic among divergent cultures of the world. Emphasis is placed on how religious and magical systems interrelate with family, political and economic institutions. P: soph st. (F)

**156-283X Selected Topics 1-4 cr.** See page 113.

**156-298 Independent Study 1-4 cr.** See page 113.

**156-303 Cultural Ecology 3 cr.**

How people, nature, and culture interrelate. The approaches hunting, agricultural, and industrial societies use in adapting to the physical environment are studied. P: jr st. (SE)

**156-304 Family, Kin, and Community 3 cr.**

A cross-cultural comparison of the form and function of such social institutions as marriage and the family; age, sex and kin groups; task groups; caste and class. P: jr st. (F)

**342 Human Evolution 3 cr.**

See 478-342

**364 Human Variability 3 cr.**

See 478-364

**156-370 Internship in Museum Anthropology 1-4 cr.**

Cooperative venture with the Neville Public Museum. Students will negotiate a specific anthropologically related task to be carried out at the museum under museum staff supervision and seek approval of a UWGB anthropology faculty sponsor. Tasks might include research on, or cataloging of artifacts and/or their display or presentation in special programs. An opportunity to experience behind-the-scenes aspects of professional museum work. Not a general museum course. P: 156-100, 110, 210 or 215 and soph st. (F,S)

**156-483X Selected Topics 1-4 cr.** See page 113.

**156-497 Internship in Anthropology 3-12 cr.** See page 113.

**156-498 Independent Study 1-4 cr.** See page 113.

## 168 Art

**168-099 Power Tool Workshop for Artists: the Anxiety of Power Tools 2 cr.**

Acquaints students with a wide range of materials and safe working practices and methods, including, but not limited to, power and hand tools, joining, glues, plastics, wood, metal, fiberglass, brazing, riveting, forging, and vacuumforming. The course primarily supports the creative work of students in art and theatre, to develop an understanding of necessary materials and skills and alleviate anxiety about working with tools. Prior experience of working with tools is not assumed or required. (F,S)

**168-105 Drawing 3 cr.**

Introduction to studio art work and to fundamental concepts of drawing structure and design. Emphasis upon two-dimensional art work employing various drawing techniques in black and white media. (F,J,S)

**168-106 Design Methods 3 cr.**

This studio seminar serves as an introduction to design methods. Its focus is investigating spatial design as a decision-making and problem-solving process bounded by criteria which include human sensory systems, ergonomics, proxemics, basic structural systems, and materials. These investigations are combined with experiences and creativity systems, graphic and workshop tools and techniques. (F,S)

**168-107 Two-Dimensional Design 3 cr.**

Introduction to design studio art work and to fundamental concepts of art structure and composition. Emphasis upon two-dimensional art work in color and design utilizing the elements and principles of design. (F,S)

**168-200 Introduction to Mixed Media on Paper 3 cr.**

Designed to prepare students who may specialize in drawing, painting, or printmaking. Encourages exploration of the interrelationships of water-based mediums (watercolor, acrylics, dyes) to drawing tools, photographs, images, collage and the incorporation of found objects. Use of a wide variety of paper surfaces will be emphasized. Rec: 168-105, 106, 107. (F)

**168-210 Introduction to Painting 3 cr.**

Investigation of painting media; oil, watercolor, and acrylics and their inherent expressive qualities and characteristics. P: 168-106. (F,S)

**168-220 Introduction to Sculpture 3 cr.**

Introduction to various sculpture media and their inherent expressive qualities. Construction of basic forms using clay, plaster, cement, and other media. P: 168-106. (F,S)

**168-230 Introduction to Ceramics 3 cr.**

Introduction to the forming of clay by pitch, slab, and coil methods and throwing on the wheel. Pottery decoration and glaze application. Rec: 168-105, 106, 107. (F,S)

**168-243 Introduction to Photography 3 cr.**

The creative process in photography is studied to develop visual perception through active participation in discussions and photographic exercises. See 246-243. Rec: 168-105, 106, 107. (F,S)

**168-250 Introduction to Experimental Textiles 3 cr.**

Students explore ways in which prewoven fabrics can be altered through surface embellishment (batik, painting, color application, photocopy transfer) and through assembling and reconstructing (stitching, quilting, soft sculpture). Emphasis is on integration of textile processes and concepts with those normally associated with painting, drawing, and sculpture. Rec: 168-105, 106, 107. (F)

**168-260 Art Metals: Jewelry Fabrication 3 cr.**

Studio work in creating and designing jewelry projects using varied metal techniques, processes and metal media. Forming, shaping, and designing of jewelry as quality handcrafted art forms for personal adornment and expression. Rec: 168-105, 106, 107. (F,S)

**168-283X Selected Topics 1-4 cr.** See page 113.

**168-298 Independent Study 1-4 cr.** See page 113.

**168-301 Life Drawing and Anatomy 3 cr.**

The skeletal structure and muscular articulation of human and animal forms as a basis for artistic interpretation. P: 168-105, 106, 107. (F,S)

**168-311 Intermediate Painting 3 cr.**

Cultivation of techniques for personal expression; composition and development of imaginative concepts in oil paint and allied media. P: 168-105, 106, 107, 210. (F,S)

**168-314 Watercolor Painting 3 cr.**

Creative approach to watercolor techniques; cultivation of personal expression and development of imaginative concepts. P: 168-105, 106, 107, 210. (F)

**168-321 Intermediate Sculpture 3 cr.**

Intermediate work in sculpture. Students use various media to develop personal forms of expression. May include metal fabrication, casting of metals, carving, lamination of plastics, and innovative methods of working with different materials. P: 168-105, 106, 107. (F,S)

**168-331 Intermediate Ceramics 3 cr.**

Intermediate work in ceramic media with emphasis on the potter's wheel and the aesthetics of the vessel, surface decoration form and utility. P: 168-105, 106, 107, 230. (F,S)

**168-343 Photography II 3 cr.**

Emphasis upon black and white photography and darkroom printing techniques. P: 168-105, 106, 107, 243. (F,S)

*continued*

## Art

*continued*

### **168-344 Photography III 3 cr.**

A continuation of 168/246-343; investigation of black and white photography, allied media, and applications of photography. See 246-344. P: 168/246-343. (F)

### **168-345 Designing Multiple Media Applications of Photography 3 cr.**

Emphasizes programmed multi-image designs bringing together photography, graphics, and sound. P: 246/168-243 and 168-105, 106, 107. (J)

### **168-353 Intermediate Textiles: Fiber 3 cr.**

Investigation of the varied techniques of creating both two- and three-dimensional forms with fibers and pliable linear materials. Focuses on weaving (both on- and off-loom) with crochet, knotting and other fiber construction techniques introduced as supplements. Emphasis is upon the use of fibers as a vehicle for artistic expression. P: 168-105, 106, 107; Rec: 168-250. (F)

### **168-355 Intermediate Textiles: Papermaking 3 cr.**

Students explore the potential of handmade paper as a primary artistic material. Basic processes include pulp processing, sheet forming, poured pulp, color applications, and three-dimensional techniques in casting, molding and assemblage. P: 168-105, 106, 107; Rec: 168-250. (S)

### **168-364 Art Metals: Casting 3 cr.**

Study and investigation of casting techniques in jewelry and art metals media. Emphasis on designing wax models; varied casting processes (i.e., "lost-wax," centrifuge, steam casting, vacuum casting, gravity casting), and the aesthetic development of 3-D art metals/jewelry pieces as reflection of individual creative expression. P: 168-105, 106, 107, 260. (S)

### **168-373 Intaglio 3 cr.**

Studio work in intaglio techniques including dry point, engraving and various etching procedures. P: 168-105, 106, 107. (S)

### **168-375 Screen Printing 3 cr.**

An introduction to studio work in screen printing, including basic materials and equipment, blockout stencil making, paper stencil, pochoir, water soluble film, and photo-emulsion technique. P: 168-105, 106, 107. (S)

### **168-377 Lithography 3 cr.**

An introduction to the art of lithography employing fundamental techniques of planographic printing. Explored and developed as a medium of expression in which students communicate personal statements reflecting the human condition of the environment. P: 168-105, 106, 107. (F)

### **168-390 19th and 20th Century Art 3 cr.**

Analyzes the evolution of art styles from neo-classicism to surrealism (1789-1945) and relates these movements to their historic and cultural origins. Topics include the struggle of the individual against the state and the academy, the influences of scientific and psychoanalytic discoveries on the arts, and the resulting changes in our perception of reality. P: 242-103. (F)

### **168-395 Exhibition Development and Design 2 cr.**

Introduction to the standards, practices and methods of the museum and art gallery profession. Includes most phases of successful exhibition development including planning, promotion and publicity, development of educational materials and programs, exhibition design and installation, and training in the proper handling and treatment of works of art. Two field trips required. P: jr st. (F)

### **168-396 Gallery Practicum 2 cr.**

An extension of the Exhibition Development and Design course in which students focus upon practices and methods of the museum and art gallery profession. Includes preplanning, exhibition design, installation, and evaluation, as well as proper handling and treatment of art work. Required field trips broaden perspective. P: 168-395. (S)

### **168-401 Advanced Life Drawing 3 cr.**

Emphasis on the interpretation and expressionistic use of the human figure. Logical distortion and exaggeration to heighten the visual expression. May be repeated to a maximum of 9 credits. P: 168-301. (F,S)

### **168-410 Advanced Painting 3 cr.**

Maturing painting students explore specific problems relevant to their individual artistic development. A major goal is a consistent body of work, both conceptually and formally. The course also deals with portfolio preparation. May be repeated for a maximum of 9 credits. P: 168-311. (F,S)

### **168-414 Advanced Problems in Watercolor 3 cr.**

The developing watercolorist selects and concentrates on those aspects which seem relevant to artistic growth. A focus on specific problems, leading to development of a unique and personal style of expression. May be repeated for a maximum of 9 credits. P: 168-314. (F)

### **168-421 Advanced Sculpture 3 cr.**

Techniques and equipment; construction of tools; investigation of materials, traditional and innovative, as related to needs and aesthetic considerations of the sculptor. May be repeated to a maximum of 9 credits. P: 168-321. (F,S)

### **168-431 Advanced Ceramics 3 cr.**

Extension and development of ceramic techniques and aesthetics into a personal expression and portfolio development. May be repeated for a maximum of 9 credits. P: 168-331 or 332. (F,S)

### **168-443 Advanced Problems in Photography 3 cr.**

Each participant identifies an area of interest and an approach to the problems implied and is directed to resources in that problem area. Each student leads a seminar and prepares a paper on a selected photographer. Students also lead seminars on their work in progress and present the finished work to the class in a final portfolio. May be repeated for a maximum of 9 credits. P: 246/168-343, 344. See 246-443. (S)

### **168-444 Time Duration Visual Media 3 cr.**

An investigation of visual media, especially film, video, and programmed multi-image projection, which require the passage of time to be perceived and which enable the producer direct control over the passage of time. The course includes active participation in discussions, exercises, and productions. See 246-444. P: 246/168-243 and 343. (FE)

### **168-453 Advanced Textiles 3 cr.**

In-depth exploration in one area of textiles or papermaking including but not limited to: handmade paper; weaving and related fiber construction techniques; or alteration of prewoven fabrics (surface application, cutting and reconstructing). Student must have had prior experience in area selected for advance study. Emphasis is upon successful interaction of technical mastery and individual style. P: 168-353 or 355. (F,S)

### **168-463 Advanced Art Metals: Jewelry 3 cr.**

Study of advanced techniques in jewelry; creative research and investigation of metals and jewelry media. Emphasis is upon technical competency of art metals media; designing; aesthetic development of a personal style; plus the creation of qualitative and expressive art jewelry pieces. May be repeated for a maximum of 9 credits. P: 168-364. (F,S)

### **168-473 Advanced Intaglio 3 cr.**

Advanced studio work in intaglio printing. Color techniques and development of a personal concept are stressed. May be repeated for a maximum of 9 credits. P: 168-373. (S)

### **168-475 Advanced Screen Printing 3 cr.**

Provides an advanced studio experience building upon the introductory course, 168-375, including printing on vacuum formed plastic, on glass, metal, and fabrics. Can be repeated for a maximum of 9 credits. P: 168-375. (F)

**168-477 Advanced Lithography 3 cr.**

Provides further investigation of specific problems relevant to students' personal artistic development. Emphasis on developing individual competency, both technically and conceptually through assigned projects. May be repeated for a maximum of 9 credits. P: 168-377. (S)

**168-483X Selected Topics 1-4 cr.** See page 113.**168-490 Contemporary Art: Post 1945 3 cr.**

Analyzes the art movements from abstract expressionism to post-modernism. It explores, critically, artists' grappings with such issues as meaning and standards (or the lack thereof) in art today, pluralism, commercialization and popularization of art, morality in art, and the merging of life and art (the Zen viewpoint). P: 242-103. (S)

**168-497 Gallery Management Internship 3-9 cr.**

A one-semester internship with an outside museum or gallery. Activities are determined by the curator of art and a professional in the sponsoring institution. Students are expected to work on a specific project that can be seen from conception to completion and receive ongoing evaluation throughout the internship. P: 168-395, 398, minimum B grade.

**168-497 Internship in Art 3-12 cr.**

See page 113 for general information on art internships.

**168-498 Independent Study 1-4 cr.** See page 113.**204 Biology****204-202 Principles of Biology I 4 cr.**

An introduction to biological principles, structure and function of organisms, with consideration of interactions at cellular level, and examination of the relationships of organisms to the environment. Includes laboratories. (F,S)

**204-203 Principles of Biology II 4 cr.**

An introduction to biological principles; structure and function of organisms and examination of relationships of organisms to the environment. Includes laboratories. P: 204-202. (F,S)

**204-283X Selected Topics 1-4 cr.** See page 113.**204-298 Independent Study 1-4 cr.** See page 113.**204-302 Principles of Microbiology 4 cr.**

A study of microorganisms and their activities. Included is their form, structure, reproductive physiology, metabolism, and identification; their distribution in nature and relationship to each other and to other living things. P: 204-202 and 225-108 or 212. (F,S)

**204-303 Genetics 3 cr.**

Mechanisms of heredity and variation, their cytological basis and their implications in biology. P: 204-202 required. (F)

**204-304 Genetics Laboratory 1 cr.**

Optional laboratory course to accompany 204-303, basic techniques of genetics. Investigation; analysis of animal, plant and human patterns of inheritance. P: 204-303 or 478-310, or concurrent registration. (F)

**204-305 Biological Microtechnique 3 cr.**

Laboratory theory and practice in cytological and histological techniques including preparation of permanent microscope slides of plant and animal tissues with emphasis on fixation, staining, and sectioning of materials. Preparation of semipermanent mounts of cells for the study of cell division, gamete formation and chromosome behavior. P: 204-203 and 225-211 or 108. (J)

**204-310 Plant Taxonomy 3 cr.**

A laboratory, field and discussion course in identification and classification of plants of North America including flora of Wisconsin. Field trip required. P: 204-203. (SE)

**204-311 Plant Physiology 4 cr.**

General physiology of vascular plants within the context of a plant life cycle. Seed dormancy and germination, metabolism, transport systems, mineral nutrition, patterns of plant growth and development, growth regulators, reproduction, and senescence. P: 204-203, 225-212. (SO)

**204-312 Mycology 3 cr.**

Morphology and taxonomy of lower and higher fungi; fungi in medicine and industry; laboratory techniques involved in collection, isolation, culture, and identification; field trips; mycological literature. Field trip required. P: 204-202. (S)

**204-317 Structure of Seed Plants 3 cr.**

The anatomy of seed plants with special emphasis upon tissue differentiation and structure. P: 204-203. (FE)

**204-320 Field Botany 3 cr.**

Identification and natural history of plants indigenous to northeastern Wisconsin. Field trip required. P: 204-203. (F)

**204-340 Comparative Anatomy of Vertebrates 4 cr.**

Lectures compare organ systems of vertebrates and emphasize anatomy leading to human adaptations. Laboratory dissection of shark, mud-puppy, and cat. P: 204-203. (F)

**204-341 Ichthyology 3 cr.**

An examination of the biology of fishes including classification, phylogeny, functional morphology and population characteristics. Aspects of the ecology of fishes will be studied in relation to behavior, distribution, diversity and production in fresh water environments. Field trip required. P: 204-203. (FO)

**204-342 Ornithology 3 cr.**

An overview of avian biology, including systematics, behavior, ecology, anatomy, and adaptations of birds. Laboratory work includes examination of prepared specimens and field study of local avifauna. Field trip required. P: 204-203. (SO)

**204-343 Mammalogy 3 cr.**

A comprehensive study of mammals including systematics, behavior and ecological relationships. Laboratory includes identification and preparation of skin and skulls and field techniques. Field trip required. P: 204-203. (SE)

**204-345 Animal Behavior 3 cr.**

The biology of animal behavior patterns; the behavioral interactions of animals with their environment. P: 204-203. (S)

**204-346 Comparative Physiology 3 cr.**

The ways in which dissimilar organisms perform similar functions. Behavioral, physiological, and biochemical solutions to problems imposed on invertebrate and vertebrate animals by their environment. Lectures and discussions. Offered in alternate years. P: 204-203, 225-212. (SE)

**204-347 Developmental Biology 4 cr.**

Principles of development including gametogenesis, fertilization, gastrulation, organogenesis, and the effects of internal and external environmental factors on development. Laboratory work includes morphogenesis of amphibians, chicks and pigs, and work with living embryos. P: 204-203, 303. (S)

**204-402 Advanced Microbiology 3 cr.**

Detailed study of microorganisms from virus to fungi in their environment. A study of both free-living and pathogenic organisms and their degrading abilities. P: 204-302. (F)

**204-405 Microbial Physiology 3 cr.**

A study of microbial physiological and biochemical adaptations to temperature, oxygen, light, nutrients and other environmental factors. Primary emphasis is on the bacteria. P: 204-302, 225-300 or 303. (SE)

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## Biology

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### 204-407 Molecular Biology 3 cr.

An examination of molecular approaches to biological problems with an emphasis on the study of informational macromolecules. Topics include replication, control, expression, organization, and manipulation of genes; RNA processing; protein processing; transposons; oncogenes; growth factors; and genetic control of development and the immune system. P: 204-303. (S)

204-483X Selected Topics 1-4 cr. See page 113.

204-497 Internship in Biology 3-12 cr. See page 113.

204-498 Independent Study 1-4 cr. See page 113.

Other courses that count toward a major or co-major in biology are:

478-310 Human Genetics 3 cr.

478-312 Evolutionary Processes 3 cr.

478-313 Brain Functions and Human Behavior 3 cr.

478-318 Mammalian Reproduction 3 cr.

478-342 Human Evolution 3 cr.

478-402 Human Physiology 3 cr.

478-404 Animal Physiology Lab 1 cr.

478-413 Neurophysiology 3 cr.

479-401 Agricultural Genetics and World Food Production 3 cr.

678-302 Principles of Ecology 3 cr.

678-307 Ecology of Fire 2 cr.

678-308 Ecology of Invasions 2 cr.

678-322,323 Ecosystems Analysis I, II 4, 4 cr.

678-363 Plants and Forest Pathology 3 cr.

678-403 Limnology 3 cr.

## 216 Business Administration

### General Courses

#### 216-202 Business and Its Environment 3 cr.

The major components of the business enterprise and its environments of resources, competition, and regulation are studied by participation in a simulated world of competitive manufacturers who attempt to accomplish appropriate business goals. Pricing, profit, finance planning, controls, ethics, environmental impact, social responsibility, and other important concepts are included. Emphasis on issues that tend to enlarge the students' awareness of environmental issues that challenge the business leader. (F)

#### 216-203 January Abroad: Mexican Business Explorations 3 cr.

This team-taught course exposes students to economic development issues and business practices in Mexico. During a month-long stay, students examine the cultural, political, social, economic, and historical context in which Mexican businesses operate. Students will have opportunities to visit Mexican businesses and interview Mexican business people. Rec: 298-203. (J)

#### 216-206 Law and the Individual 3 cr.

An introduction to the American legal system, its processes, language, ethics and laws from the viewpoint of the individual. The student is asked to confront and evaluate the principles of our legal system and specific laws which directly relate to the individual—family, personal injury, property, consumer, criminal, privacy, probate and administrative laws. (F,S)

#### 216-217 Quantitative Methods in Administration 3 cr.

Applications of elementary mathematics including probability, statistics, linear programming, game theory, and associated models to practical business decisions; the use of probability tables. Encourages translating of typical business problems to obtain and examine relevant numerical answers. Techniques are tied to practical business problems. P: 600-260; Rec: 600-155. (F,S)

216-281 Student-Led Courses 1-4 cr. See page 113.

#### 216-282 Personal Financial Planning 3 cr.

Explores a variety of consumer problems encountered in a modern, complex economy. The central theme of the problem focus revolves about economic problems such as budgeting, financing and investing. Lateral problem themes explore the philosophies and values of consumers, the psychology of consumer behavior and the legal aspects of consumer rights. (S)

#### 216-283X Selected Topics in Business Administration 1-4 cr.

See page 113.

#### 216-298 Independent Study 1-4 cr. See page 113.

#### 216-300 Introductory Accounting 3 cr.

Basic concepts and terminology of financial accounting; the underlying principles of accounting as well as the processes by which accounting data are recorded, summarized, and reported; accounting problems concerned with sole proprietorships, partnerships, and corporations; principles underlying the accounting for current and fixed assets, current and long-term liabilities, and the owner's equity accounts. P: soph st. (F,S)

#### 216-305, 306 Business Law I, II 3, 4 cr.

Laws affecting business, conducted on the case method with emphasis on the Uniform Commercial Code. Introduction to law and the legal process, contracts, agency, property including environmental problems, landlord-tenant and real estate laws. Sales, including consumer protection laws, secured transactions, negotiable instruments, corporation and partnership law, estate and bankruptcy law are introduced in the second half of the course. P for 305: must have BUA or MGA classification or minimum of 36 credits and 2.3 grade point average. (F,S). P for 306: 216-305. (F,S)

#### 216-372 Introduction to International Business 3 cr.

A study of factors that combine to affect business on an international level, including law, finance, marketing, management, political, and social elements. Students will gain an awareness of the major concepts and principles underlying international business relationships. P: 298-202. (F)

#### 216-395 Practicum in Financial Statement Analysis 3 cr.

Examines the theory and practice of the analysis of published financial statements. The course will include a review of the balance sheet and income statement as well as an in-depth analysis of such topics as short- and long-term liquidity, funds flow analysis, ROI analysis, the analysis of operations and the problems related to the project of earnings. (Counts for upper-level finance credits.) P: 216-300, 343. (J)

#### 216-478 Senior Distinction in Business Administration 3 cr.

See page 113.

#### 216-481 Student-Led Courses 1-4 cr. See page 113.

#### 216-483X Selected Topics in Business Administration 1-4 cr.

See page 113.

#### 216-484 Senior Honors Project 3 cr. See page 113.

#### 216-497 Internship in Business Administration 3-12 cr. See page 113.

#### 216-498 Independent Study 1-4 cr. See page 113.

### Accounting and Quantitative Methods

#### 216-302 Accounting for Administrators 3 cr.

Accounting concepts and methods; interpretation and use of accounting reports and analyses for the managerial purposes of planning, coordination, and control: cost-profit-volume relations budgeting, effects of taxation and price level changes on decision making. P: 216-300. (F,S)

#### 216-317 Computer Techniques for Business Decisions 3 cr.

A complete spectrum of quantitative decision-making problems from the business field are discussed. Solutions are provided for all the case problems in the course, including many classical business optimization problems that were heretofore unsolvable. Fortran IV is taught and used extensively. Lecture and computer lab. P: 216-217 or 600-155 or 600-256. (J)

**216-451 Design of Computer-Assisted Systems 3 cr.**

Approaches to and methods of designing computer-assisted processes in organizations, with emphasis on feasibility analysis, design, implementation, and evaluation. Special attention given to management information and decision support systems. Includes fundamentals of sociotechnical systems design. P: 600-155 or 600-256; Rec: 216-382 or 820-415. (F,S)

**Marketing****216-322 Introductory Marketing 3 cr.**

An overview of the marketing system and the managerial techniques used to market goods, services, and/or organizations. Analyses of the relationships between marketing activities and economic, political, and social institutions; understanding the actions of consumers; and making appropriate product, promotion, price, and distribution decisions. P: BUA or MGA classification or minimum of 36 credits and 2.3 grade point average; Rec: 298-203. (F,J,S)

**216-325 Public Relations 3 cr.**

External relations of the business enterprise or governmental unit; attitudes and actions of the public and how they affect internal relations and conduct of the unit. P: 216-322. (S)

**216-327 Selling and Sales Management 3 cr.**

Covers principles and techniques of successful selling that lead to a mutually profitable relationship between salesperson and customer. Emphasis is also directed toward the nature and scope of sales management, specifically selecting, training and directing sales personnel; the importance of customer satisfaction; the relationship of company philosophy to the sales force, and fundamentals of communication process. P: 216-322. (F)

**216-422 Retailing Management 3 cr.**

Management practices in the operation of retail and wholesale enterprises. Nature of retailing in the U.S.; basic requirements for successful store management; opportunities and careers; store location, building, fixtures, equipment; interior layout; organizational structure; personnel management; merchandise management; sales promotion and customer service; controls; coordination and management. P: 216-322. (S)

**216-424 Marketing Research 3 cr.**

The techniques of obtaining and analyzing information about marketing problems; obtaining data from primary and secondary sources, and interpreting them for marketing decisions. Development of target market determination plans to test the feasibility and relevance of a proposed new small business or the expansion of an existing enterprise. P: 216-322, 600-260. (F)

**216-425 Promotional Strategy 3 cr.**

Analysis of the environment in which persuasive efforts take place. Appropriate concepts from communication theory. The promotional tools which can be used to communicate to various publics about products, services, ideas and institutions are treated from a promotion system perspective. P: 216-322. (F)

**216-426 Marketing Management 3 cr.**

Contemporary environmental issues and managerial problems faced by marketing management. Develops analytical abilities. P: 216-322 and one of these: 325, 327, 422, 424, 425, and sr st. (S)

**216-428 Consumer Behavior 3 cr.**

Includes an in-depth analysis of various theories of buyer behavior including ultimate and industrial consumers. Implications for marketing management are stressed. P: 216-322. (S)

**216-429 Marketing Strategies for Nonbusiness Institutions 3 cr.**

The applicability of marketing concepts, strategies and techniques to the problems faced by nonprofit institutions in their attempts to relate to various societal needs. Relevant current literature is analyzed and field experience is gained in solving institutions' problems. P: 216-322. (J)

**Finance****216-343 Corporation Finance 3 cr.**

Organization for management of finance of business units; management of fixed and working capital; short- and long-range financial planning; money and capital markets; failure; reorganization. P: BUA or MGA classification and 216-300, minimum of 36 credits and 2.3 grade point average; Rec: 216-217. (F,S)

**216-344 Real Estate Principles 3 cr.**

A survey of the subject of real estate. Examines the importance of land, the nature of real estate ownership, contracts, title transfer, and mortgage instruments. Special attention to the theory of real estate valuation, real estate finance, and real estate investment. The impact of taxation, marketing, and insuring and current legislation affecting real estate are examined. A broad survey course, not intended to prepare students for the real estate licensing examination. P: 216-343. (F)

**216-345 Principles of Risk Management 3 cr.**

The theory and principles of risk management; techniques and bases for decision making in management of business and personal risks; an introduction to the insurance function. P: 216-343. (S)

**216-347 Financial Markets and Institutions 3 cr.**

Explores the role that financial institutions play in our economy in forming and managing capital resources. The course examines the processing of financial intermediation and disintermediation. Various types of financial institutions such as commercial banks, credit unions and insurance companies are studied in terms of their financial organization, structure and their investment management objectives and strategies. P: 216-343. (F,S)

**216-348 Practicum: Computer-Assisted Financial Analysis 3 cr.**

Emphasizes integration and practical application of finance, accounting, taxation, and marketing concepts and theory through use of popular micro-computer spreadsheets. Provides instruction in the use of spreadsheets. Emphasizes development of cash flow, feasibility, break-even, and related models, and the use of the computer for evaluating alternative strategies, sensitivity analysis, and report generation. P: 216-343; Rec: 600-155. (J)

**216-442 Principles of Investment 3 cr.**

Principles underlying the construction and management of investment portfolios; meeting investment needs of personal and institutional investors; reducing investment risks inherent in selection; inflation, depression, and money market fluctuations. P: 216-343. (F,S)

**216-443 Financial Planning and Control 3 cr.**

The efficient management of working capital; analysis and projection of financial data for planning, control, and for dealing effectively with the financial dimensions of management decisions P: 216-343; Rec: 216-442. (F)

**216-445 International Financial Management 3 cr.**

Theory and recent experience in currency standards, international banking, foreign exchange fluctuations and controls, international monetary cooperation and special topics. P: 216-343; Rec: 216-442. (S)

**216-446 Advanced Corporation Finance 3 cr.**

Deals with long-term financing decisions in an environment of uncertainty. Specific adaptations of capital budgeting techniques and theoretical considerations for the cost of capital concept. Mergers, acquisition, bankruptcy, and alternative financing methods are discussed within the framework of shareholder wealth maximization. P: 216-343; Rec: 216-442. (F)

**216-447 Investment Analysis and Portfolio Management 3 cr.**

Expanded discussion of fundamental and technical analysis within a framework of efficient markets and uncertainty. Modern portfolio theory and techniques for adjusting portfolio returns for risk are examined in depth. Development of overall investment strategy within the environment facing the investor or portfolio manager. P: 216-442. (S)

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## Business Administration

*continued*

### **216-450 Bank Administration 3 cr.**

Commercial banking theories and practices from a financial management perspective are comprehensively treated with emphasis on operations, administration and asset-liability management (bank services, credit, loan, investment, profitability, cost control, and capital analysis). Examines competitive and regulatory implications during an era of deregulation of the financial industry. P: 216-347; Rec: 216-442. (F)

### **Management**

### **216-362 Human Resource Management 3 cr.**

Introduction to personnel management. Manpower planning, selection, recruitment, training, motivation, fringe benefits, salary and wages, and labor relations. P: BUA or MGA classification or minimum of 36 credits and 2, 3 grade point average. (F,S)

### **216-366 Collective Bargaining 3 cr.**

Cases of techniques and problems in dealings between organized employees and their employers; industry-wide collective bargaining; constraints in the public service; administration of collective bargaining agreements. P: 216-362, 300; Rec: 216-467. (F)

### **216-382 Introductory Management 3 cr.**

Basic ideas and concepts of managing. The realities of management in contemporary situations with emphasis on the behavioral approach, understanding the environment of managing, the knowledge required by managers, functions performed, and adjustment to rapid changes in the future. P: BUA or MGA classification or minimum of 36 credits and 2, 3 grade point average. (F,S)

### **216-384 Industrial Management 3 cr.**

The management of physical and human resources in the production and operation functions for producing goods or providing services in manufacturing and processing enterprises. P: 216-382. (F,S)

### **216-385 Management of the Nonprofit Organization 3 cr.**

The operation and management of organizations that operate within our society for purposes other than generating profit for owners or shareholders. Models such as the hospital and the university focus on the operational principles, optimizing criteria, and management control techniques characteristic of such institutions. In addition to examining the areas of accounting, finance, marketing, organization, and personnel, the nonprofit organization is discussed in terms of its social responsibility and the political and economic conditions in which it operates. Case studies used in a seminar format. P: 216-382. (S)

### **216-386 Small Business Management 3 cr.**

Case study analysis of management principles and concepts concerning the development and operation of small businesses. Student evaluation of the application of certain management principles in specific small businesses. Phases of business management at the level of simplification suitable to enterprises of limited size and staff. P: 216-382. (F)

### **216-389 Organizational Behavior 3 cr.**

Designed for the intended career manager who desires to gain a knowledge of the behavioral sciences as related to the business organization. Direct business applications of motivation theory, learning theory, leadership theory, and small group behavior will be explored. P: 216-382. (FE,S)

### **216-462 Seminar in Personnel Management 3 cr.**

Provides a foundation through discussion of personnel problems and experiences which can be translated into developing corporate personnel policies. Case studies related to urban, cultural, and legal realities along with making decisions which affect the administration and development of personnel policies are included. P: 216-362. (S)

### **216-463 Labor Legislation and Administration 3 cr.**

Federal and state statutory and administrative regulation of social legislation and benefit programs; other regulations, including workmen's com-

pensation, unemployment compensation, social security, and labor laws with respect to women and children. P: 216-362. (S)

### **216-467 Compensation and Benefits Planning 3 cr.**

Examines theories of compensation and work motivation, their impact on various reward systems, and the rationale for decisions affecting the selection of benefits. Case studies illustrate the problems in choosing benefits, communications to employee groups, and cost factors in making benefit decisions. P: 216-362. (F)

### **216-482 Management Planning and Control 3 cr.**

Focuses on planning and control processes from a management perspective, with an emphasis on completing the planning cycle through implementation, control, and feedback. Planning is viewed from the perspective of organizational guidance, systems design, motivation, resource allocation, intra-organization communication, control of variance, and systems integration in both project and process settings. P: 216-382. (F,S)

### **216-485 Managerial Economics 3 cr.**

Application of the basic theoretical tools of economic analysis (micro and macro) to the problems of business management, including topics on demand, production, costs, pricing, forecasting, etc. Current economic issues of interest to the manager, such as environmental policies and regulations are discussed. P: 298-202, 203. (S)

### **216-486 Small Business Feasibility Analysis 3 cr.**

Problems in small business development research related to determining the feasibility of proposed businesses regarding the developer's objectives and choosing market targets suitable to the economic, political, physical, ethical, and environmental constraints of the site and the investor. Determination and analysis of student proposed small businesses relative to development costs, operating expenses, financing arrangements, and computerized cash flow projections. P: 216-322, 343. (S)

### **216-487 Ethics and Social Issues in Business 3 cr.**

Through the use of case studies and simulations, the course examines the interplay of ethics in business decision making and explores the appropriate social role of the business firm as it is confronted by a variety of current issues. Students are called upon to evaluate their own ethical position with respect to a broad range of issues and to consider the implications of those positions for the firm and for society. Issues to be discussed include the corporate role in politics and government, the impact of business upon the environment and resource utilization, and business relations with consumers, employees, minority groups, other businesses and investors. P: 216-382. (J)

### **216-488 Rational Decision Making in Administration 3 cr.**

Through close analysis of actual cases in which business decisions are made, rational process techniques are developed for making administrative decisions in business and government. P: 216-382; Rec: 216-389. (F)

### **216-489 Management and Organizational Theory 3 cr.**

Contemporary problems in business and public administration. In addition to cases, class exercises, and readings, the student undertakes a major project paper which relates a contemporary administrative problem to an existing or created business or administrative organization. P: 216-382. (F)

### **Nonprofit Organization Management**

### **216-385 Management of the Nonprofit Organization 3 cr.**

The operation and management of organizations that operate within our society for purposes other than generating profit for owners or shareholders. Models such as the hospital and the university focus on the operational principles, optimizing criteria, and management control techniques characteristic of such institutions. In addition to examining the areas of accounting, finance, marketing, organization, and personnel, the nonprofit organization is discussed in terms of its social responsibility and the political and economic conditions in which it operates. Case studies used in a seminar format. P: 216-382. (S)



**216-429 Marketing Strategies for Nonbusiness Institutions 3 cr.**

The applicability of marketing concepts, strategies and techniques to the problems faced by nonprofit institutions in their attempts to relate to various societal needs. Relevant current literature is analyzed and field experience is gained in solving institutions' problems. P: 216-322. (J)

**225 Chemistry****225-108 General Chemistry 5 cr.**

Designed for students who will take only one semester of general chemistry. A survey course covering basic concepts of matter—its measurement, properties and states; atomic structure and chemical bonding; solutions; acid-base theories. An introduction to organic chemistry and biochemistry is also included. Laboratory work is selected to reinforce lecture topics. Full graduation credit will not be awarded for 225-108 and the courses in the following sequence: 225-211, 212. P: 601-094 or equivalent. (F,S)

**225-211 Principles of Chemistry I 5 cr.**

The first course in the Principles of Chemistry sequence. Atomic structure, chemical bonding, periodic table, thermochemistry, properties of gases, molecular structure and properties, solutions, chemical equations. Three lectures and three hours of laboratory per week. Full graduation credit for both 225-211 and 225-108 will not be awarded. P: 600-101 or equivalent; Rec: 600-104 or equivalent. (F,S)

**225-212 Principles of Chemistry II 5 cr.**

A continuation of the Principles of Chemistry sequence. Thermodynamics, kinetics, chemical equilibrium, solubility, acid-base reactions, oxidation-reduction, nuclear reactions. Three lectures and three hours of laboratory per week. Full graduation credit for both 225-212 and 225-108 will not be awarded. P: 225-211. (F,S)

**225-283X Selected Topics 1-4 cr.** See page 113.**225-298 Independent Study 1-4 cr.** See page 113.**225-300 Bio-Organic Chemistry 3 cr.**

Emphasis on those aspects of the field pertinent to students planning to enter the biologically related disciplines. Includes basic organic chemistry, natural products, and molecules important to biological systems. (Credit will not be given for both 225-300 and 225-302 or 225-303.) P: 225-212 or 108. (F)

**225-301 Bio-Organic Chemistry Laboratory 1 cr.**

Optional laboratory course to accompany 225-300. P: credit or concurrent registration in 225-300. (F)

**225-302 Organic Chemistry I 3 cr.**

A study of the chemistry of carbon compounds. Structure, reactions, synthesis, stereochemistry, reaction mechanisms, spectroscopy, nomenclature and physical properties of both aliphatic and aromatic compounds. All common functional groups and natural products are covered. Credit will not be awarded for 225-302 and 225-300 or 303. P: 225-212. (F)

**225-303 Organic Chemistry II 3 cr.**

A continuation of 225-302. P: 225-302. (S)

**225-304 Organic Chemistry Laboratory I 1 cr.**

One three-hour laboratory per week. Basic techniques and synthesis in organic chemistry. P: credit or concurrent registration in 225-302. (F)

**225-305 Organic Chemistry Laboratory II 1 cr.**

One three-hour laboratory period per week. Intermediate level instrumental techniques and syntheses in organic chemistry. P: credit or concurrent registration in 225-303. (S)

**225-311 Analytical Chemistry 4 cr.**

Introduction to the theory and practice of chemical analysis. Gravimetric analysis techniques, computations, solubility products, and applications. Volumetric analysis techniques, computations, acid-base titration, oxidation-reduction titrations, precipitation titrations, and complexometric titra-

tions. Introduction to instrumental analysis, spectrophotometric and electroanalytical methods. P: 225-212. (S)

**225-320 Thermodynamics and Kinetics 3 cr.**

Temperature, heat and work, thermodynamic properties of gases, solids, and solutions; homogeneous and heterogeneous equilibria; thermodynamics of electrochemical cells; statistical thermodynamics; the calculation of thermodynamic properties of substances; chemical kinetics. P: 225-212, 754-202, 600-203. (F)

**225-321 Structure of Matter 3 cr.**

The concepts of physical chemistry and modern physics are presented in an integrated fashion. Topics covered are: introduction to quantum theory, symmetry, atomic and molecular structure, crystal structure, spectroscopy, X-rays, properties of gases, liquids, and solids. P: 225-212, 754-202, 600-203. (S)

**225-322 Thermodynamics and Kinetics Laboratory 1 cr.**

One three-hour laboratory per week. P: credit or concurrent registration in 225-320. (S)

**225-323 Structure of Matter Laboratory 1 cr.**

One three-hour laboratory per week. P: credit or concurrent registration in 225-321. (S)

**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. P: 225-303, 204-202; Rec: 225-320. (F)

**225-331 Biochemistry Laboratory 1 cr.**

One three-hour laboratory per week. P: credit or concurrent registration in 225-330. (S)

**225-402 Advanced Organic Chemistry 3 cr.**

An extension of Organic Chemistry 303 with a more quantitative physical organic approach. Advanced topics include: 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: 225-303; Rec: 225-321. (SE)

**225-403 Advanced Organic Chemistry Laboratory 1 cr.**

A laboratory to accompany Advanced Organic Chemistry. Topics to be covered include: advanced molecular spectroscopy, organic qualitative analysis, physical organic chemistry experiments. P: credit or concurrent registration in 225-402. (SE)

**225-410 Inorganic Chemistry 3 cr.**

A survey of the elements including coordination and organo-metallic compounds. Modern bonding theories, group theory, and periodic properties are extended and applied to actual chemical systems and reactions. General acid-base theory and non-aqueous solvent systems are discussed. Special topics of current interest are included. P: credit or concurrent registration in 225-321. (SO)

**225-413 Instrumental Analysis 4 cr.**

A survey of the theory and practice of analysis by instrumental methods including those based on absorption and emission of radiation, electroanalytical methods, chromatographic methods, and radiochemical methods. P: 225-311 and credit or concurrent registration in 225-321; Rec: 225-303. (S)

**225-417 Nuclear Physics and Radiochemistry 3 cr.**

Introduction to the properties and reactions of atomic nuclei; the application of the properties of radioactive nuclei to the solution of chemical, physical, biological and environmental problems. P: 225-212, 754-202; Rec: 225-321. (SO)

**225-418 Nuclear Physics and Radiochemistry Laboratory 1 cr.**

One three-hour laboratory per week. P: credit or concurrent registration in 225-417.

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## Chemistry

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### 225-419 Industrial Chemistry 3 cr.

Basic concepts of applied thermodynamics, fluid mechanics, heat transfer, reactor design, and mass transfer are introduced and discussed with an emphasis on their practical application. The various design equations are illustrated with specific examples. Field trips to local industries are required. P: 225-320. (SO)

225-483X Selected Topics 1-4 cr. See page 113.

225-497 Internships in Chemistry 3-12 cr. See page 113.

225-498 Independent Study 1-4 cr. See page 113.

## 242 Communication and the Arts

### 242-102 History of the Visual Arts: Ancient to Medieval 3 cr.

A broad survey of the visual arts in the Western world beginning in prehistoric times and ending in the late Gothic period. (F)

### 242-103 History of the Visual Arts: Renaissance to French Revolution 3 cr.

A broad survey of the visual arts in the Western world beginning in the early Renaissance and ending in the contemporary period. (FO)

### 242-121 Masters and Masterpieces of Music 3 cr.

The musical style of several well-known composers as evident in selected compositions of each. Class lectures are combined with outside listening to give the student a basic repertoire of musical compositions of various forms and styles. (S)

### 242-141 Introduction to the Performing Arts: Theater and Music 3 cr.

Centers on the literature and the artists in theater and music from a historical perspective. Entails research prior to performances, attendance at performances, interviews with artists, and the writing of critiques. (F)

### 242-142 Performing Arts Perspectives: Experience and Evaluation 3 cr.

Presupposes the historical background of 242-141. The emphasis is on understanding the elements of performance from the perspective of the audience and critic. Entails research prior to performances, attendance at performances, interviews with artists, and the writing of critiques. (S)

### 242-160 Introduction to Language 3 cr.

Introductory study of language and linguistics, including basic principles and methods in structural linguistics, social and regional variation in language, historical change, and introductory study of meaning. (S)

### 242-202 Concepts and Issues of Modern Art 3 cr.

Modern art began its break from traditional art (art regarded as a recorder of visual fact) in the late 19th century. A series of radical concepts have emerged, each raising questions about the function of art in modern society, challenging preconceptions and ultimately enlarging our ideas of what art is or can be. This course examines key concepts, the visual art which evolved, and the corresponding issues they raise. It also deals with the wider cultural matrix in which modern artistic ideas germinate. Designed to prepare both the art student and nonart student with an informed attitude and framework with which to approach the variety of visual arts produced today. (F,S)

### 242-210 Film and Society 3 cr.

Deals with film primarily in its social context, i.e., the ways in which film reflects and influences society. Films such as Griffith's *Birth of a Nation*, Lang's *Metropolis*, Eisenstein's *October*, Vertov's *Man With a Camera*, Renoir's *Rules of the Game*, and films chosen from the student film series are examined for their social content, both explicit and implicit, and the social milieu of their creation. Emphasis is also placed on the ways in which different cultures use films and on the cross-cultural influences which occur. See 493-210. (F)

### 242-221 Popular Music Since 1955 3 cr.

Provides an introduction to the essence and evolution of popular music since 1955 and its relationship to society. Emphasis is placed on rock music in the 1960's and early 1970's, the period of greatest stylistic expansion and also the period in which the music was most intimately intertwined with its social milieu. (JE)

### 242-225 American Indian Studies: Arts and Ceremonial Traditions 3 cr.

An introduction to the cultures of North American Indians through a study of their visual arts and crafts, musical forms and ritual ceremony, and traditions. Discussion will be on North American Indian cultures in general with a special emphasis on the arts, music, and ceremonies of woodland Indians of Wisconsin. (S)

### 242-226 American Indian Studies: History and Verbal Traditions 3 cr.

An introduction to the cultures of North American Indians through a study of their history, literature, and languages. Discussion will be on North American Indian cultures in general with a special emphasis on the history, literatures, and languages of woodland Indians of Wisconsin. (F)

### 242-231 Introduction to Graphic Communications 3 cr.

Introductory program for students with vocational objectives or with interests in graphic communication. Provides a basic background required for entry into advanced courses. Emphasis on basic principles and potentials of visual communication, application of design concepts, exploring aspects of printing, preparation of mechanicals, type units of measurement, letterspacing, and type styles as communicative devices. P: prior course in photography or design. (F)

### 242-243 Native American Cultures: Film and Performance I 3 cr.

A study of images of the American "Indian" in selected films and literature. Focus is on the "popular" and stereotypical images of Native People and will be counterpointed with documentaries and writings which attempt to present with more authenticity some of the cultural world views. Some introduction to creative group performance principles of the subsequent course for all-University requirements. (F)

### 242-244 Native American Cultures: Film and Performance II 3 cr.

A continuation of the all-University requirements Communication and the Arts package beginning with 242-243. In this portion, emphasis is on the process of group work toward creating/developing a performance piece from Native American materials. It is primarily an experiential "studio" course based upon materials from the first semester. If and when feasible, the work will be publicly performed. Previous "theater" experience or particular interest in theater is not necessary. P: 242-243. (J)

### 242-261 Aesthetic Awareness: Foundations 3 cr.

Students are encouraged to break out of habitual ways of perceiving and into the subjective world of feeling, from which aesthetic responses come. Starting with analysis of color, line, point, shape, form, texture, space, value and tone, instructors go on to show how these basic elements of the visual arts appear in other arts and other environments. (F,J,S)

### 242-272 Women in the Visual or Performing Arts 3 cr.

Surveys images of women in the visual and performing arts and compares them with information drawn from nonartistic sources in order to clarify the kinds of knowledge we can gain from the study of the arts. Emphasizes works by women in order to re-value their place in our history. Emphasizes different cultures, periods and forms of art depending on the background of the instructor.

242-281 Student-Led Courses 1-4 cr. See page 113.

242-283X Selected Topics in Communication and the Arts 1-4 cr. See page 113.

### 242-295 Sensing and Communication 1 cr.

Practice and philosophical background in a series of exercises and activities

designed to heighten sensory awareness for the teacher/performer, drawing both from ancient exercise techniques of Aen and Hatha Yoga and from modern Sensory Awareness as taught by Charlotte Selver and Charles Brooks. Exercises include practice in breathing, sounding, stance, and movements for students in the performing arts and related areas. P: soph st.

**242-298 Independent Study 1-4 cr.** See page 113.

**242-301 Communication and the Arts Projects in the Community 1-5 cr.**

Projects vary, but emphasize service, creative, developmental, and communications activities in the community. May be repeated for credit. P: cons inst. (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, nonverbal communication, language and world view. Rec: jr st. (F)

**242-329 Cultural Cross-Communication II: Expressive Traditions 3 cr.**

Cultural conflict and influence and enrichment that arise when differing traditions of the arts come into contact. Course topics vary and have included such areas as ethnomusicology, jazz history, American show music, and West African art. Students should consult the *Timesable* for specific listings of topics each semester. Course may be repeated once with a different topic. (F,S)

**242-331 Graphic Communications Studio I 3 cr.**

Introduces students in a studio setting to problem-solving techniques in graphic communication. Students will have an opportunity through a series of projects, including mock interviews with clients and contact with a printer, to expand visual, verbal, technical and management skills, to integrate them by completing projects and to critically evaluate the final product. Evaluation includes methods of investigating the problem, evidence of considering alternate solutions, creative approach to solutions, and the finished product. Some research into traditional and contemporary solutions to similar problems is required. P: 242-231; Rec: 168-105, 106, 107 or 168/246-243. (S)

**242-332 Graphic Communications Studio II 3 cr.**

Continues work begun in 242-331 in problem-solving techniques. Studio projects are used for the same objectives as in 242-331 but there is more emphasis on working in groups and carrying a single project through all phases from the concept to final productions. Students investigate a product and design packaging and promotional campaigns, using management, publications, photography, design, printing, and copywriting skills. Results are critically evaluated at each stage. P: 242-331; Rec: 246-166 or 337. (F)

**242-361 Aesthetic Awareness: Interpretation 3 cr.**

One of a sequence of courses examining the process of aesthetic experience, this course concentrates on the experience of the perceiver rather than that of the creator. It posits that awareness can be increased in several ways: by developing the senses, by altering the habits of the perceiver, by changing the pattern of interaction between the perceiver and the environment, and by changing the condition of the environment. The course seeks to heighten and refine awareness in two ways: through exploration of selected aesthetic objects, and through laboratory experimentation. Each student sets up a contract with the instructor establishing appropriate goals and measurements. P: 242-261. (F)

**242-362 Aesthetic Awareness: Psychology of Aesthetic Perception 3 cr.**

Explores what is known of the psychological and physiological processes that give rise to aesthetic perception and arousal. Special emphasis is given to current work on cognition and perception, and the relationships between these processes and art and other sources of the aesthetic experience. Students are asked to do a paper or a creative project demonstrating their understanding of the central themes of the course. P: 242-261; Rec: 481-210 or 820-102. (F)

**242-364 Aesthetic Awareness: Creation 3 cr.**

The artist's aesthetic experience is explored through readings, discussion, and exercises. Attention is given to how and why the artist works, the artist's relationships to society and audience, and the artist's concerns with creative process and end products. Work culminates in student presentations of creative works in their chosen art forms. P: 242-261. (S)

**242-370 Modern American Culture 3 cr.**

A survey of fad, fashion, and popular art: the media, music, advertising, and entertainment. Although they exist in the shadow of the fine arts and are usually ephemeral, popular art, fad, and fashion express the intimate unguarded concerns of modern America. (F)

**242-372 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. Emphasis placed on comparative study of artists, writers, architects, and thinkers from the Renaissance to the modern periods. (F)

**242-373 Aesthetic Awareness: Avant-garde Art Styles 3 cr.**

Comparative study of common stylistic elements operating in different forms in the work of avant-garde artists, composers, playwrights, and novelists. Emphasis on the nature of innovative consciousness. (S)

**242-375 Communication Skills: Language of Metaphor 3 cr.**

Metaphor is a verbal process of pretending one thing is another. It is a powerful part of how we imagine our worlds and how others try to structure our worlds. The course examines the metaphoric process itself and, through exercises and analyses of examples, seeks to develop skills in creating metaphors and understanding those created by others, especially those that have become an unconscious part of our language and culture. Rec: general education requirements in Humanities and Fine Arts. (S)

**242-380 The Arts: London 3 cr.**

The arts in and about London are always in a lively state of action. This program attempts to taste and analyze as many forms of the arts as time, energy, and funds allow. The group tries to become involved in several performing arts events as well as investigate museum collections, neighborhood art groups, and, if possible, spends time with artists working in various art forms. Students note the ways in which the British solve their needs for the arts in society. Students keep a journal during their London stay recording especially critical responses to events, persons, places, etc. Each student negotiates in advance an individual project to be carried out in some area of the arts as they are experienced in London and Britain. P: cons inst. (J)

**395 The Individual and His Culture: The Filmmaker's View 3 cr.**

See 493-395.

**242-395 The Biological Aspects of Language 3 cr.**

Studies of language as a biological system, including language development in children, the integration of the speech organs and the nervous system, and connections between human speech and animal communication. (J)

**242-430 Mass Media and Society 3 cr.**

Analysis of the media as persuader, informers, entertainers; public opinion, readership, and audience studies; communication theory; legal aspects; critical examination of mass communication in the changing social environment. P: 246-102 or 305. (S)

**242-432 Graphic Communications Workshop 3 cr.**

A problem-solving workshop, applying concepts in graphic design, technology and management. Advanced students work on projects for university or nonprofit groups from concept to finished product, including involvement with design, writing copy, contacting printers, clients, etc. Groups may also become involved in consulting to solve graphics problems for nonprofit groups. Course content emphasizes the roles of graphic

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## Communication and the Arts

*continued*

communication in society at large. Emphasis is on group problem solving within the context of real life situations. P: 242-332; Rec: 246-343 or 460 or 216-322 or 425. (F,S)

### **242-450 The Construction of Public Images 3 cr.**

Develops skill in reading the imagery of mass media and public environments. Case studies probe image problems in news, promotion, entertainment, photography, tourism, sports, landscape, and other realms. The student considers or contrives alternative imagery with higher fidelity to contemporary conditions and with greater humanizing potential. Rec: sr st. (F)

### **242-463 Aesthetic Awareness: Evaluation 3 cr.**

Seeks to clarify the process we use in making aesthetic judgments, to examine the various systems of evaluation that are current, and to prepare each student to take hold of the process of evaluation so that he or she can locate, express, and insist on the validity of his or her aesthetic values. P: 242-361 or 362 or 364

### **242-471 Environmental Design Workshop 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. Past design projects have taken the form of designing and producing a book focusing on environmental design of group spaces including sections on case studies conducted by student design teams. Students can expect some major project of this sort in addition to readings, research, and design analyses. Draws support from 834/944-326, Human Living Space II, and 242-402, Designing the Environment II. Students are strongly advised to enroll in at least one of these parallel offerings. P: 950-436. (S)

### **242-472 Environmental Design Workshop IV 3 cr.**

A culminating experience for students who have participated in the workshop sequence. Each student proposes, designs, and executes a design/research project on an elected topic. Individual projects are acceptable in some instances; projects by design teams are encouraged. This "thesis" project is overseen and evaluated by the teaching staff and a faculty committee representing appropriate areas of study. The project must include at least: 1. A written document covering area of focus, research methods, and conclusions, design methods, and development of design alternatives. 2. Descriptive graphic presentations with emphasis on design alternatives developed. 3. Formal, public jury presentations during the project and at its conclusion. P: 950-437. (S)

### **242-477 Women as Creative Agents 3 cr.**

Seeks to clarify the multiple ways women have exercised their creative capacities and to describe the external and internal factors that support creative work. Examines some of the cultural assumptions about creativity in women by comparing them with the evidence of at least six biographies of women in several fields who have been recognized for their creative achievement. Explores the ways that great women and relatively unknown women artists may serve as role models for others. Rec: 875-241 or 242-364. (S)

### **242-481 Student-Led Courses 1-4 cr.** See page 113.

### **242-483X Selected Topics in Communication and the Arts 1-4 cr.** See page 113.

### **242-484 Senior Honors Project 3 cr.** See page 113.

### **242-497 Internship in Graphic Communications 3-12 cr.**

A field course offering instruction and experience in a professional, graphic communications related environment. The internship for qualified students, when available, may be in any area of the field (management, design work, technical processes) as long as it involves work among professionals. Credit is variable depending on the work involved but no more than three credits may be used to meet requirements for a major. P: 242-432 and prior written cons inst. (F,S)

**242-498 Independent Study 1-4 cr.** See page 113.

## 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 reports. A laboratory program for small-group and individualized instruction complements general class meetings. The course is competency-based, such that students may complete requirements by examination at designated times during the semester, and is designed to meet university requirements for competence in writing. P: English placement test at appropriate level; satisfactory basic writing skills. (F)

### **246-102 Introduction to Mass Communications 3 cr.**

Survey of the interplay between American society and mass media, both print and broadcast, commercial, cultural, and political functions of the media; popular taste; the pseudo-environment of symbols; the concept of a free and responsible press. (F)

### **246-133 Fundamentals of Public Address 3 cr.**

An examination of the principles of oral message preparation and presentation. Students will engage in preparing and presenting actual public communications. (F,J,S)

### **246-161 English as a Second Language: Reading and Lecture Comprehension 3 cr.**

Work toward acquisition of the basic listening and recording skills a student must have in order to be able to follow lectures and focus on the main points in note-taking; learning the fundamentals of preparing and giving an oral presentation regarding a scientific, scholarly, or technical topic; development of technical vocabulary. P: ESL proficiency test. (F,S)

### **246-163 English as a Second Language: Expository Writing I 3 cr.**

Acquisition of basic principles of nonfiction writing in English, including work toward eliminating grammatical problems; a review of the fundamental rules of rhetoric; study of the patterns of organization most frequently used by American technical writers. This course should be helpful to students whose native linguistic background may be other than English and who want to learn how to approach writing a research paper. P: ESL proficiency test. (F,S)

### **246-164 English as a Second Language: Expository Writing II 3 cr.**

Refinement and extension of competence in technical writing with particular emphasis on the psycholinguistic characteristics of technical written expression in American English. This course is intended for the student of a non-English native linguistic background who has already mastered the basic rules of writing nonfiction, but who wants to gain a deeper understanding of the logical and organizational principles followed by American scientists and professionals in written accounts of their work. P: ESL proficiency test or 246-163. (F,S)

### **246-166 Fundamentals of Interpersonal Communications 3 cr.**

Basic principles of personal interaction as a basis of the communication process. Investigation through study, practice, and discussion includes the role of communication in interpersonal relationships, the role of identity and self-concept in communication behavior, and the roles which information reception and evaluation play in determining effectiveness of communication. (F,S)

### **246-200 Communication Processes: An Introduction 3 cr.**

An overview of a variety of communication processes, what they share, how they differ, their uses for communication, for art, and for individual growth and their effect on the social fabric. The course includes practical experience with these processes as well as a theoretical framework for continuing study. P: one course in communications suggested. Rec: one previous communications course. (F)

**246-201 Human Information Processing 3 cr.**

An introduction to the study of human cognition from the information processing perspective. Examines the processes of sensation, perception, memory, thinking, language, and problem solving with special attention to the role of these processes in communications (i.e., graphics, journalism, linguistics, photography, etc.). P: one previous communications course; Rec: 246-200 or 820-102. (S)

**246-203 Newswriting Laboratory 3 cr.**

Assignments in gathering and writing news; copy editing; emphasis on developing an objective, clear, accurate, and forceful style. P: completion of UWGB writing requirement; Rec: 552-105. (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. Thus, the course should be of special interest to international students during their first year in America and to American students who would like to be exposed to other cultures and perspectives. The course is designed to provide an experiential background which will make other courses and activities about international affairs more meaningful. (J)

**246-220 Bibliographic Organization and Control of Information 3 cr.**

An 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 bibliographical networks. Rec: 246-200. (F)

**246-243 Introduction to Photography 3 cr.**

The creative process in photography is studied to develop visual perception through active participation in discussions and photographic exercises. See 168-243. 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 the development of skills in some facet of newspaper operation: reporting, feature writing, or photojournalism. Repeatable. P: completion of UWGB writing requirement and written consent; Rec: 246-203 or 243. (F,S)

**246-283X Selected Topics 1-4 cr.** See page 113.**246-298 Independent Study 1-4 cr.** See page 113.**246-303 Feature Writing 3 cr.**

Writing feature articles for magazines and newspapers. Information gathering, professional standards, and effective style are emphasized. P: 246-203 or 552-105. (S)

**246-305 Elements of Electronic Media 3 cr.**

Exploring the potentials of television and radio; 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 Broadcast Practicum 3 cr.**

An advanced production course emphasizing development of writing, producing, announcing, reporting, and problem-solving skills in the broadcast environment of radio station WGBW-FM. Students work on their knowledge of broadcast skills, responsibilities, and systems in a classroom/workshop context, while at the same time gaining experience in similar areas at WGBW-FM. 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 examination and 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 Telecommunications Delivery Systems: Cable and Satellites 3 cr.**

Focusing on cable and satellite telecommunication systems, this course provides an overview of historical development, economics, and current operations of telecommunications technology and investigates its impact on society. Topics include programming and telecommunications systems, interactive computer uses, changing media formats and delivery systems, and applications of telecommunications systems in the communications environment of the future. P: 246-305. (S)

**246-309 Electronic Media Commercial Campaigns 3 cr.**

An intensive examination of TV/media commercials as a unique form of communication. Through the use of student projects, individual and team, the demands and rigors of the creative process are revealed. Legal and ethical considerations are also presented and discussed. P: 246-305. (S)

**246-320 History of the English Language 3 cr.**

The origins, development, and cultural background of the English language (dialects, grammar, pronunciation, spelling, vocabulary, and usage), including contemporary American English. Rec: 242-160. (FO)

**246-321 Sociolinguistics 3 cr.**

Communications in social groups and application of linguistic principles to specific cultural problems, including the study of social and regional dialects, stylistic variations, bilingualism, linguistic interference, paralinguistic behavior, and language acquisition. Rec: 242-160. (FE)

**246-322 Modern Linguistics 3 cr.**

Structure and system in language, with attention to modern English and including principles of structural linguistics (phonology, morphology, and syntax), tagmemic grammar, and generative-transformational grammar. Rec: 242-160. (F)

**246-324 Psycholinguistics 3 cr.**

A brief survey of language structures and an intensive examination of the psychological processes by which we produce and perceive those structures. Additional topics include: comparisons with animal communication and other communication methods; acquisition of language; origin of language; memory. Rec: 242-160. (SE)

**246-325 Applied Linguistics 3 cr.**

Application of linguistic principles to specific problem areas, including language acquisition, the teaching of reading, the teaching of English as a second language, the teaching of composition (especially remedial composition), and institutional communications; special emphasis upon problems faced by secondary school teachers. Rec: 242-160. (S)

**246-326 Modern Semantics 3 cr.**

A study of meaning in language. The course covers topics in 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. Rec: 242-160. (SO)

**246-327 Error Analysis and Treatment in Second Language Learning 3 cr.**

A practical introduction to the analysis of errors produced by second language learners, their implications for understanding the process of inferring the rules of a second language, and the strategies for responding to them. A useful course to anyone interested in teaching foreign languages or English as a second language. P: 242-160. (SE)

**246-333 Persuasion and Argumentation 3 cr.**

Designed to foster an awareness, appreciation and understanding of contemporary forms and methods of oral persuasion. The student will be exposed to theory and practice in an attempt to produce both better practitioners and more cautious consumers of persuasion. P: 246-133; Rec: 246-200. (SO)

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## Communication Processes

continued

### 246-335 Organizational Communication 3 cr.

A study of 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. Examination of common organizational communication evaluation tools and training interventions. P: 246-133 or 200 or 201; Rec: 246-166. (F)

### 246-336 Theories of the Interview 3 cr.

Examines the basic theory behind conducting effective interviews. Specific types of interviews are discussed, including selection, counseling, exit, discipline, appraisal, mass media, and research interviews. Both the interviewee's and the interviewer's perspectives are examined. P: 246-133 or 200 or 201; Rec: 246-166. (F)

### 246-337 Small Group Communication 3 cr.

Focuses on the role communication plays in small group processes. Special attention is given to developing the special communication skills needed in the small group setting. For instance, students are taught how to use specified questioning strategies to deal with an argumentative group member. Additionally, the course involves conducting analysis of actual group communication processes. P: 246-133 or 200 or 201; Rec: 246-166. (SE)

### 246-343 Photography II 3 cr.

Emphasis upon black and white photography and darkroom printing techniques. See 168-343. P: 246-243. (FE,S)

### 246-344 Photography III 3 cr.

A continuation of 168/246-343; investigation of black and white photography, allied media, and applications of photography. See 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. P: 246/168-243 and 168-105, 106, 107. (J)

### 246-346 Photographic Design for Print Media 3 cr.

An investigation of photographic design and craft for print media ranging from the commercial printing press to non-silver exhibition prints. Projects will emphasize photographic illustration from concept through assignment, editing, scaling and placement of images in a print design. P: 246-343. (JO)

### 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. May be repeated for credit. P: 246-203 or 303 or 253 or 353; Rec: successful prior experience on *Fourth Estate*. (F,S)

### 246-380 Communication Law 3 cr.

Freedom of the press and broadcast media, with a focus on the problems of gag orders, contempt, privacy, censorship, libel, and slander. An overview of copyright law, the Federal Communications Act, and other laws affecting communication. P: jr st; Rec: 9 credits in communication courses. (SO)

### 246-390 Scientific and Technical Communication 3 cr.

Scientific and technical writing for professional and lay audiences, including news articles and features, laboratory reports, procedure manuals, grant and contract proposals, and technical reports. Emphasis on skills for professional work in science communication, but open to science students and media students. P: completion of UWGB writing requirement and Natural Sciences general-education requirement; Rec: 246-203 or 552-105. (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 either newspaper publication or radio broadcast. P: 246-203; Rec: 246-306 or 353. (J)

### 246-443 Advanced Problems in Photography 3 cr.

Each participant identifies an area of interest and an approach to the problems implied and is directed to resources in that problem area. Each student leads a seminar and prepares a paper on a selected photographer. Students also lead seminars on their work and present the finished work to the class in a final portfolio. P: 246/168-344. May be repeated to a maximum of nine credits. See 168-443. (S)

### 246-444 Time Duration Visual Media 3 cr.

An investigation of visual media, especially film, video, and programmed multi-image projection, which require the passage of time to be perceived and which enable the producer direct control over the passage of time. The course includes active participation in discussions, exercises, and productions. P: 246/168-343 (FO)

### 246-445 Human Communication Theory 3 cr.

Human communication theory evolves from a number of academic disciplines. This course integrates a variety of theories to promote a sensitivity to and an understanding of the complexity of human communication. It examines the construction of various communication theories, various communication contexts, and specific processes in communication, and leads to the development of communication theories by class members. P: nine credits 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 publications professionals encounter. The course includes strategies for organizing a publications effort and planning and producing publications, and suggests ways that professionals evaluate their products. It discusses impacts of technology on publications and implications for changes in the publications field. P: jr st and prior course work in communications; Rec: 246-203 or 243 or 242-231. (SE)

### 246-483X Selected Topics 1-4 cr. See page 113.

### 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. They conduct interviews with personnel, administer questionnaires, analyze the data, and make recommendations for improving communication with the client organization. P: 246-335 or 336; Rec: one course in statistics. (S)

### 246-497 Internship in Communication Processes 3-12 cr.

A field course offering instruction and experience in a professional environment. The subject area may be any communication process as long as it involves work among professionals. Typical internships are in reporting, television or radio, public information, photography, and similar contexts. The course is repeatable if a different internship is involved, but no more than three credits may be used to fulfill requirements for a co-major (disciplinary program) in Communication Processes. P: jr st. (F,J,S)

### 246-498 Independent Study 1-4 cr. See page 113.

## 255 Community Sciences

### 255-205 Social Science Statistics 3 cr.

Application of statistics to problems of the social sciences, particularly those problems pertaining to Regional Analysis, Urban Studies, Human Development, and Social Change and Development. Application of statistical techniques in problem definition; hypothesis construction; and data collection, processing, and evaluation. P: successful completion of one year high school algebra or 601-094. (F,S)

### 255-301 Foundations for Social Research 3 cr.

An integrated introductory examination of the nature of science, theory, and statistics. The emphasis is on identifying and interpreting relationships

between social phenomena. This is assured by applying the conceptual tools provided in the course to specific problems. Same as 900-301. P: 255-205. (F,S)

**255-302 Methods of Participant Observation and Interviewing 3 cr.**  
Course provides instruction and experience in extended interviewing and participant observation which are principal data gathering methods in sociology, anthropology, and psychology as well as practical methods in applied fields such as social services, community development, public health, and development studies. Course also considers theoretical and ethical issues relating to these methods of research. P: one lower level course in psychology, sociology or anthropology. (J)

## 296 Earth Science

### 296-102 Introduction to Earth Science 3 cr.

Study of the properties of the earth's physical environment and the variety of processes operating within it. Surveys the basics of physical and historical geology, soil science, oceanography, meteorology, and astronomy. Designed for nonscience majors. Students will not receive credit for both 296-102 and 296-202. Field trip required. (F,J)

### 296-110 Dinosaurs: Rise to Ruin 1 cr.

Over 200 million years ago dinosaurs and other reptiles became the dominant animals on earth. For nearly 150 million years these animals ruled the land, sea, and air. This course explores dinosaurs, their ancestors, rise to preeminence, reasons for success, and possible reasons for their extinction. (J)

### 296-202 Physical Geology 4 cr.

Description and analysis of the geological processes that have shaped and continue to shape the earth's major internal and external features. Examination of the origins, properties, and uses of the earth's rock and mineral resources. Principles and methods of scientific investigation are emphasized. Students will not receive credit for both 296-102 and 296-202. Laboratories included. Field trips required. (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. 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. P: credit or concurrent registration in 296-302. (S)

### 296-222 The Ocean of Air: An Introduction to 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 environment and on humans. Same as 834-222. (F,S)

### 296-230 Geology of Wisconsin 3 cr.

The Wisconsin story is one of high mountains now worn away, volcanoes no longer active, and seas long since departed. At different times tropical storm waves battered shore cliffs near Baraboo, coral reefs dotted warm shallow seas, and glaciers buried the state with ice. At other times rich mineral deposits, such as those recently discovered near Crandon, were formed. The geological processes shaping these events constitute the content of this course. An all-day field trip is required. (FE)

296-283X Selected Topics 1-4 cr. See page 113.

296-298 Independent Study 1-4 cr. See page 113.

### 296-306 Drifting Continents 3 cr.

The theory of continental drift has revolutionized many aspects of the earth sciences, and the evolution of this theory provides an opportunity to explain

many geologic phenomena, such as earthquakes and volcanoes, as well as to examine a recent example of a scientific revolution. Considers relationship of continental drift and mineral resources, evolution, and mountain building. P: 296-202, 302. (SE)

### 296-310 Paleobiology 4 cr.

Considers the preservation, morphology, evolution, interrelationships and paleoecological significance of fossil plants and animals. Includes field and laboratory study of fossil assemblages and their environments. P: 296-302, 303 or 204-203. (FE)

### 296-340 Rock and Mineral Resources 3 cr.

Macroscopic identification of common rocks and minerals, formation and uses of rock and mineral resources, and the environmental impact of resource exploration and extraction. Field trips. P: 296-202. (FO)

### 296-350 Geologic Field Methods 4 cr.

Description and application of standard field techniques employed in assembling geologic data. Includes mapping, measuring sections, collecting rock and fossil specimens, and preparing and presenting a report on a geologic problem. P: 296-202, 302. (FE)

### 296-366 Structural Geology 3 cr.

Structures produced by deformation of the earth's crust: faults, folds, foliations. Methods of field study and laboratory analysis. Tectonic significance of structures within the earth's crust. Stress and strain analysis and its application to rock deformation. P: 296-202, 302. (FE)

### 296-380 Geomorphic Processes 3 cr.

Landforms influence many activities including transportation, settlement, and agriculture in addition to constituting a fundamental aspect of scenery. Landforms are in constant flux as dynamic processes on and within the earth shape and reshape materials of the crust. This course describes and evaluates the operations and interrelationships of agents involved in creating and modifying the physical features of the earth's surface. See 416-380. P: 296-202; Rec: 296-302. (FO)

### 296-402 Stratigraphy and Sedimentation 3 cr.

Principles of physical- and bio-stratigraphy, and sedimentation. Discusses concepts of sedimentary processes, sedimentary environments, and stratigraphic relationships of time and physical characteristics. Includes a brief historical development of principles, the methods and techniques used to study sediments and sedimentary rocks, and the application of principles and methods to interpretation of local geology. Field trip. P: 296-202, 302. (SE)

### 296-420 Soil Classification and Geography 3 cr.

Morphological properties of soils, major kinds of soil horizons; principles of soil classification, taxonomic systems; soil-landscape relationships; genesis and global distribution of major kinds of soils; soil surveys and their interpretations for agriculture, engineering, and urban planning. Field trips. See 416-420. P: 296-320 or 202. (F)

### 296-441 Mineralogy 4 cr.

A survey of important concepts in mineralogy. Crystallography, symmetry, and molecular structure of minerals. Optical properties of minerals and identification of minerals in thin section. Description and recognition of minerals and ores in hand specimen. P: 225-212. (FO)

### 296-442 Petrology 4 cr.

Classification, genesis, and occurrence of sedimentary, igneous, and metamorphic rocks; introduction to optical methods of identification; identification of rocks in hand specimen. P: 296-441. (SO)

### 296-470 The Glacial Environment and Chronology 3 cr.

An interdisciplinary approach to an understanding of the extremes in environmental behavior which characterized Pleistocene time. Surveys the principles of glaciology and describes the impact of glaciation on the landscape. Field trip. See 416-470. P: 296-202; Rec: 296-302. (SO)

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## Earth Science

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296-483X Selected Topics 1-4 cr. See page 113.

296-497 Internship in Earth Science 3-12 cr. See page 113.

296-498 Independent Study 1-4 cr. See page 113.

Other courses for upper division earth science credit include:

### Land and Soil Resources

416-351 Elements of Cartography

416-353 Air Photo Interpretation

416-451 Computer Cartography

416-453 Advanced Air Photo Interpretation

834-356 Environmental Impact Analysis

678-303 Conservation of Natural Resources

678-320 Soil Environment

678-321 Soil Environment Laboratory

678-342 Environmental Geology

678-345 Geology of Energy Resources

678-421 Soils of Wisconsin Field Trip

678-454 Remote Sensing by Satellite

678-460 Resource Management Strategy

678-462 Land Use Tour of Wisconsin

008-761 Global Environmental Monitoring

009-741 Land Use, Institutions and Policy

### Water Resources

678-300 Descriptive Hydrology

678-331 Oceanography

678-335 Water and Waste Water Treatment

678-382 River Basins in Transition

678-403 Limnology

678-430 Quantitative Hydrology

678-434 Water Chemistry

008-759 Coastal Zone Management

### Meteorology-Climatology

416-325 Regional Climatology

678-350 Meteorology

678-351 Synoptic Meteorology Laboratory

678-450 Air Pollution Chemistry and Meteorology

008-776 Bioclimatology

### Geology

678-342 Environmental Geology

678-345 Geology of Energy Resources

## 298 Economics

### 298-202 Macro Economic Analysis 3 cr.

An introduction to the behavior of our economy in the aggregate, basically focusing upon the process by which the economy achieves a certain level of output and employment. (F,S)

### 298-203 Micro Economic Analysis 3 cr.

An introduction to the decision-making process 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. Includes a discussion of the institutional framework within which these decisions are made; for example, proprietorships, partnerships, corporations and cooperatives. P: 298-202. (F,S)

298-283X Selected Topics 1-4 cr. See page 113.

298-298 Independent Study 1-4 cr. See page 113.

### 298-301 Economic and Social Security 3 cr.

A description and critical analysis of 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. Includes an analysis

of social security programs, workers' compensation, the negative income tax and other income redistribution programs. P: jr st. (F)

### 298-302 Intermediate Macro Economic Theory 3 cr.

Study of the principles and theories of national income determination; 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.

Development of the tools used in the consumer's and producer's behavior. Major emphasis on the application of economic theories to problems dealing with the production, exchange, and distribution of output. P: 298-203. (S)

### 298-304 Contemporary Labor Markets 3 cr.

An explanation of the determination of wages and employment at the level of the firm, the industry, and for the total economy. P: 298-202 and 203. (FO)

### 298-306 Public Finance and Fiscal Policy 3 cr.

Effects of government spending and taxation on resource allocation, incomes, prices, and employment. Includes a consideration of the uses and effects of fiscal policy. (See 950-409.) P: 298-202, 203. (S)

### 298-307 Sources of Contemporary Economics Concepts 3 cr.

The development of contemporary economic thought, drawing upon contributions from the mercantilist period to the present, emphasizing contributions of major schools of thought. P: jr st. (FO)

### 298-308 Business Cycles 3 cr.

Description and recent history of business cycles; leading explanations of levels of employment, output, and prices; savings and investments, forecasting, governmental policy. P: 298-202, 203. (F,S)

### 298-330 Money and Banking 3 cr.

An analysis of money as an economic institution and of the organizational structure of the commercial and central banking system in the U.S.; study of the monetary theory and policy in the national and international setting. P: 298-202. (F,S)

### 298-402 Resource Economics Analysis 3 cr.

Application of tools and concepts in current economic decision making with special emphasis upon common property resources management (i.e., water and air). Same as 950-402. P: jr st and 298-203. (SE)

### 298-403 International Trade 3 cr.

Theory and concepts in development of international trade and finance; contemporary conditions and problems in international economic relations. P: jr st and 298-202, 203. (S)

### 298-404 Economics of Developing Areas 3 cr.

Social and economic factors underlying economic development; leading issues in growth and theory; comparative rates of progress in different countries. P: jr st and 298-202. (F)

### 298-406 Comparative Economic Systems and Institutions 3 cr.

Analysis of contemporary functioning of different economic systems and institutions. Employs case studies to contrast market directed economies and centrally planned economies. P: jr st. (SE)

### 298-420 Workshop in Economic Education 2-3 cr.

Provides information on selected current economic topics and concepts. The workshop enables educators to examine new print and nonprint instructional materials and curriculum guides and develop learning activities appropriate to their instructional responsibilities. Different topics selected each year for focus will be identified by subtitle. (SO)

298-483X Selected Topics 1-4 cr. See page 113.

### 298-485 Managerial Economics 3 cr.

An application of the basic theoretical tools of economic analysis (micro



and macro) to the problems of business management, including topics on demand, production, costs, pricing, forecasting, etc. Discussion of current issues of interest to the firm, such as the economic impact of environmental policies and regulations. P: 298-202, 203.

298-497 Internship in Economics 3-12 cr. See page 113.

298-498 Independent Study 1-4 cr. See page 113.

## 302 Education

### 302-202 Changes in American Education 3 cr.

Explores education as a life-long learning process within cultural contexts, not limited to formal schooling. Includes how medias and environments educate. All decisions within social institutions about goals, methods, financing, time structuring, etc., are value issues to be confronted within a given society. Cross-cultural comparisons foster a clear perspective of American education. (F)

### 302-203 Introduction to Environmental Education in the Schools 2 cr.

Environmental education; philosophies, curricular materials, and related instructional strategies. Direct involvement in local schools at the grade level and in subject matter appropriate to student's area of anticipated certification. P: concurrent enrollment or completion of 678-102 or 302 or equivalent course. (F,S)

### 302-204 Values in Conflict: The School Experience of Minority Students 3 cr.

Differing explanations about why minority background children often do poorly in school, and what is being done to improve the situation. Historical and current values and life experiences of several major U.S. minorities (Native Americans, Blacks, and Chicanos) are explored and contrasted with dominant middle-class white values. Conflicts are examined. Ethnocentrism and social class bias as reflected in teacher expectations and instructional materials. Students examine assumptions and attitudes about minorities to reduce ethnocentrism and interact in an authentic and genuine manner with people from diverse backgrounds. (F,S)

### 302-205 Basic Operations of Audio Visual Equipment 1 cr.

Step-by-step independent instruction on operation of projecting, recording, and duplicating equipment and on basic preparation of instructional materials. (S)

### 302-206 Cultural Images in Books and Related Materials for Children and Adolescents 3 cr.

The student becomes aware of the varied images of ethnic and racial groups, and sex roles as developed in tradebooks, textbooks, and other instructional materials for children and adolescents and learns how to effectively use books and other instructional materials to detect negative images and build positive images. (J)

302-281 Student-Led Courses 1-4 cr. See page 113.

302-283X Selected Topics in Education 1-4 cr. See page 113.

302-298 Independent Study 1-4 cr. See page 113.

### 302-301 Introduction to Education and Teaching 3 cr.

This course is required for teacher certification and should be taken before all other required teaching methods classes. The technical skills of teaching, the application of learning theory, instructional planning, micro teaching, and evaluating teaching effectiveness are studied. Also, students spend 2-1/2 hours a week in a school to observe and participate in various aspects of the instructional program. P: admission to teacher education; Rec: one morning per week open for required field assignment. (F,J,S)

### 302-302 Principles and Methods of Teaching Social Studies in Elementary Schools 2 cr.

Designed to acquaint students with concepts, processes, learning skills, teaching methods, and resource materials related to the social sciences. Attention is given to questioning, classroom environment, content and

topic selection, scope and sequence, and forces influencing the social studies curriculum. Peer teaching opportunities are included. P: admission to teacher education and concurrent enrollment or completion of 302-301 or written consent of chair; Rec: one morning per week open for required field assignment. (F,S)

### 302-303 Principles and Methods of Teaching Art in the Elementary Schools 2 cr.

The purpose is to prepare the student to teach art to children by providing theoretical and practical experiences in art and education. Topics include the philosophy and psychology of art education, characteristics and stages of creative development in children and children's art, principles and procedures for selecting and motivating elementary experiences, developing specific lesson plans and units in elementary art and the organization of a developmental curriculum for art in the elementary school. P: admission to teacher education and concurrent enrollment or completion of 302-301 or written consent of chair; Rec: one morning per week open for required field assignment. (F,S)

### 302-304 Principles and Methods of Teaching Music for the Elementary Teacher 2 cr.

Deals with the identification of children's musical needs and methods and materials to assist classroom teachers in meeting these needs. Practical experience with basic elements of music are included to develop the classroom teacher's competency and self-confidence. Required for general elementary certification. P: admission to teacher education and concurrent enrollment or completion of 302-301 or written consent of chair; Rec: one morning per week open for required field assignment. (F,J)

### 302-305 Principles and Methods of Teaching Math and Science in the Elementary School 4 cr.

Acquaints students with foundation principles, methods and materials related to teaching mathematics and science in the elementary school. This class focuses on measurement in the metric system, the development of mathematical concepts and skills, error patterns and remediation, problem solving in mathematics, development of understanding processes and concepts of science, special concerns related to science activities and concerns related to sex and race bias in elementary school mathematics and science. P: admission to teacher education and concurrent enrollment or completion of 302-301 or written consent of chair; Rec: 600-281 and one morning per week open for required field assignment. (F,S)

### 302-306 Principles and Methods of Teaching Health and Physical Education in the Elementary School 3 cr.

Acquaints the prospective elementary school classroom teacher with those special knowledges and awarenesses which are deemed necessary for the planning and conduct of health and physical education instruction. P: admission to teacher education and concurrent enrollment or completion of 302-301 or written consent of chair; Rec: one morning per week open for required field assignment. (F,S)

### 302-307 Principles and Methods of Teaching Reading in the Elementary School 3 cr.

Acquaint students with teaching methods in developmental reading. Major areas addressed include nature of the reading process, reading readiness, vocabulary, comprehension, and study-skills development. Diagnosis and instructional techniques for meeting the needs of diverse learners are discussed. P: admission to teacher education and concurrent enrollment or completion of 302-301 or written consent of chair; Rec: one morning per week open for required field assignment. (F,S)

### 302-308 Children's Literature: Contemporary Practices in the Elementary School 3 cr.

Examines practices which produce an effective children's literature program. Analyzing of children's books; developing of instruction units and independent programs to foster positive attitudes toward reading; using books for personal development; using books for developing attitudes

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## Education

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about social issues such as ecological concerns and social and minority group relations; and criteria of evaluating content, methods, and effect on students. P: jr st. (F)

### **302-309 Principles and Methods of Teaching Language Arts in the Elementary School 2 cr.**

Contemporary practices for the elementary and middle school classroom are approached through both theory and experiences. Students are expected to develop a language arts model, a rationale, the basic processes and skills, as well as assessment procedures for use in the classroom. An emphasis on small group activities, continuing participation and student initiative will be stressed. P: admission to teacher education and concurrent enrollment or completion of 302-301 or written consent of chair; Rec: one morning per week open for required field assignment. (F,S)

### **302-310 Principles and Methods of Teaching Communication Arts Courses in Secondary Schools 3 cr.**

Contemporary practices for teaching communication arts are approached through both theory and experiences. Students develop a communication arts model, a rationale, basic processes and skills as well as assessment procedures for use in the classroom. Emphasis on small group activities, continuing participation and student initiative is stressed. P: 302-301 and admission to teacher education or written consent of chair; Rec: appropriate coursework in communication arts. (F)

### **302-311 Principles and Methods of Teaching Foreign Languages: Secondary and FLES 3 cr.**

Principles and methods of teaching foreign languages to students of all ages; texts and other materials are evaluated; planning for one semester's teaching is simulated. Required for certification to teach foreign languages. P: 302-301 and admission to teacher education or written consent of chair; Rec: appropriate coursework in foreign language. (FO)

### **302-312 Principles and Methods of Teaching Social Studies in Secondary Schools 3 cr.**

Acquaints students with concepts, processes, learning skills, teaching methods, and resource materials related to the social sciences. Attention is given to questioning, classroom environment, content and topic selection, scope and sequence, and forces influencing the social studies curriculum. Peer teaching opportunities are included. Required for certification to teach social studies in the secondary school. P: 302-301 and admission to teacher education or written consent of chair; Rec: appropriate coursework in social studies. (F,S)

### **302-313 Principles and Methods of Teaching Mathematics in Secondary Schools 3 cr.**

Acquaint students with principles, methods and materials related to teaching mathematics and computer science in the secondary school. Attention is given to development of mathematical concepts and skills, selection and use of materials, motivation, lesson and unit planning and evaluation. Required for certification to teach mathematics and computer science in the secondary schools. P: 302-301 and admission to teacher education or written consent of chair; Rec: appropriate coursework in math. (F)

### **302-314 Principles and Methods of Teaching Science in Secondary Schools 3 cr.**

An examination of the nature of high school science curricula, recent innovations in science teaching, evaluation, and classroom teaching techniques. Required for certification to teach science in the secondary schools. P: 302-301 and admission to teacher education or written consent of chair; Rec: appropriate coursework in science. (F)

### **302-315 Principles and Methods of Teaching English as a Second Language 3 cr.**

Introduces the basic methods of teaching ESL and the underlying theories from linguistics, psychology, education, and sociolinguistics. Designed to give students opportunity to develop lessons for the ESL class using various methods, discuss and critique these methods, and consider their use in

future situations. Required for certification to teach English as a Second Language. P: 302-301 and admission to teacher education or written consent of chair; Rec: one course to develop understanding of structure of language, e.g., 242-160. (FO)

### **302-316 Principles and Methods of Teaching Secondary School Art 3 cr.**

Includes principles of art teaching methodology, procedures and strategies; classroom motivation techniques; preparation of art lessons; lesson plans; evaluation and grading techniques of art learning experiences; creativity and visual awareness-perceptual techniques, curriculum development in art, and other related material concerning the role of the art teacher in the secondary school. Required for certification to teach art in the secondary school. P: 302-301 and admission to teacher education or written consent of chair; Rec: appropriate coursework in art. (SO)

### **302-317 Principles and Methods of Teaching Instrumental or Choral Music 3 cr.**

Philosophical and curricular issues involving secondary school music. Materials and methodologies pertinent to a secondary school music curriculum are studied. Special emphasis is placed on developing rehearsal objectives for a performance oriented music curriculum. Required for certification to teach instrumental or choral music. P: 302-301 and admission to teacher education or written consent of chair; Rec: appropriate coursework in music. (F)

### **302-318 Reading and Study Skills in the Secondary School 2 cr.**

Developmental reading, comprehension and retention, vocabulary development, motivation, rate, and flexibility. Consideration of diverse reading abilities and interests and development of appropriate study and learning techniques for reading in content areas. P: admission to teacher education and concurrent enrollment or completion of 302-301 or written consent of chair; Rec: one morning per week open for required field assignment. (F)

### **302-319 Adolescent Literature in Secondary School Reading 3 cr.**

Examines practices in high schools, junior high schools, and middle schools which produce effective adolescent literature programs. Includes analysis of literature for the adolescent, current practices in literacy curriculum, personal development and literature for the adolescent, literature and social issues, and criteria for evaluating adolescent literature and literature programs. P: jr st. (SE)

### **302-334 Principles and Methods of Teaching General Music in the Elementary School 3 cr.**

Focuses on exploring philosophical and theoretical foundations of music education. Curriculum development is approached by identifying children's musical needs in contemporary society. Traditional and contemporary methods and materials are reviewed and evaluated in relation to the development of feasible music curriculum framework. Required for certification in general music grades K-8. P: admission to teacher education and concurrent enrollment or completion of 302-301 or written consent of chair; Rec: one morning per week open for required field assignment. For music majors only. (FE)

### **302-335 Principles and Methods of Teaching General Music in the Secondary School 2 cr.**

Develops understanding of the musical needs of the adolescent, insight into secondary general music with respect to contemporary education and the economy, and materials appropriate for the entire range of educational needs (e.g., gifted, multicultural, handicapped, average). Major focus is on teaching music literacy with emphasis on functional music reading, a perspective of music throughout history, and a working knowledge of materials currently marketed by the music industry. P: admission to teacher education and concurrent enrollment or completion of 302-301 or written consent of chair; Rec: one morning per week open for required field assignment. For music majors only. (SO)

**302-402 Student Teaching in the Elementary School 2-12 cr.**

Supervised student teaching or internships in the elementary school. Required for a teacher's license. Offered on a pass-no credit basis only. P: assignment for student teaching approved by director of student teaching. (F,J,S)

**302-403 Student Teaching in the Secondary School 2-12 cr.**

Supervised student teaching or internships in the secondary school. Required for a teacher's license. Offered on a pass-no credit basis only. P: assignment for student teaching approved by director of student teaching. (F,J,S)

**302-406 Evaluation and Testing in Education 2-3 cr.**

Techniques for constructing tests and measurement systems, statistical procedures applied to classroom data, monitoring and assessing individual and group learning situations, using and interpreting data from standardized tests. Students may participate in a task force student-initiated project for the third credit. P: jr st.

**302-410 Introduction to the Education of Exceptional Children 3 cr.**

A survey of the kinds of exceptionalities found in the school population, the needs of such children, and some methods for meeting them. Information enables the teacher or parent to recognize and understand exceptional children and unique subtleties that deserve specific attention. P: admission to teacher education and concurrent enrollment or completion of 302-301 or written consent of chair; Rec: one morning per week open for required field assignment. (F,S)

**302-415 Counseling Role of the Classroom Teacher 2 cr.**

Provides teachers and future teachers with the knowledge of specific counseling and guidance skills necessary to enhance their counseling effectiveness. The course will focus on becoming more aware of these skills and how one best implements them in the classroom. P: teaching experience or admittance to teacher education program.

**302-420 Workshop in Economics Education 2-3 cr.**

Provides information on selected current economic topics and concepts. The workshop enables educators to examine new print and nonprint instructional materials and curriculum guides and develop learning activities appropriate to their instructional responsibilities. Different topics selected each year for focus will be identified by subtitle. (SO)

**302-421 Reading Readiness and Language Development 3 cr.**

Focuses on the acquisition of reading skills and development of language in preschool through primary grades. The instructional and diagnostic strategies appropriate to these grade levels will be discussed. Selected reading and language development programs will be examined. Topics to be addressed include listening and reading comprehension, vocabulary development, word identification strategies, and approaches to beginning reading. P: 302-301 or 481-331. (S)

**302-422 Reading in the Content Areas 3 cr.**

Practical guidelines for classroom teachers who are teaching in various subject areas—English, social studies, mathematics, science, etc. Suggestions for teaching reading and study skills related to content and approaches to dealing with technical and specialized vocabulary, developing study guides, and effectively dealing with reading problems in the content areas are the focus of this course. P: 302-307 or 318 or cons inst.

**302-441 History, Philosophy, and Current Programs in Early Childhood Education 3 cr.**

See 481-441.

**302-442 Curriculum and Program Development in Early Childhood Education 3 cr.**

A developmental approach to curriculum and program including the study of effective interweaving of various disciplines in a program for young children. Program priorities and planning are considered within 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.**

A survey course in children's center management dealing with governmental licensing and controlling agencies, various aspects of program organization and administration (e.g., funding, staffing, accounting), and utilizing family and community resources. Includes a study of early childhood programs in the community. P: jr st. (F)

**302-451 Field Experience in Environmental Education 1-12 cr.**

Prestructured or individualized study in environmental education at environmental centers, e.g., Trees for Tomorrow, MacKenzie Environmental Center, etc. Credit determined based on length of assignment and nature of activities. P: advance arrangement for field experience approved by chair. (F,J,S)

**302-462 The Adult Learner 3 cr.**

Helps the student, 1) acquire knowledge of various physiological, psychological, and sociological factors relevant to adult development throughout the life span and of their implications for learning; 2) develop an understanding of the key elements involved in the teaching-learning process; 3) develop an understanding of some of the important research in adult learning; and 4) develop a personalized learning theory. P: jr st or relevant professional experience. (S)

**302-481 Student-Led Courses 1-4 cr.** See page 113.**302-483X Selected Topics in Education 1-4 cr.** See page 113.**302-498 Independent Study 1-4 cr.** See page 113.

Courses in other areas for which education credit may be received include:

481-210 Introduction to Human Development 3 cr.

481-331 Human Development I: Infancy and Early Childhood 3 cr.

481-332 Human Development II: Middle Childhood and Adolescence 3 cr.

820-338 Psychology of Learning 3 cr.

**416 Geography****416-102 An Introduction to Geography: The Regions of Earth 3 cr.**

Contemporary geography, its viewpoints and methodology. Geographic reality of the present-day world is analyzed in the form of case studies in which both the regional approach and systematic analysis are used. (F)

**416-120 Survey of Physical Geography 3 cr.**

Characteristics and world distribution of physical factors which in combination form the natural environment: elements of weather and climate, climatic types, earth materials, landforms, vegetation and earth resources. Attention is paid to the role of humans in the modification of these physical elements and their changing distribution. Two hours of lab a week. Required field trips. (SO)

**416-202 Introduction to Cultural Geography 3 cr.**

The impact of culture through time in creating the earth's contrasting landscapes. Emphasis on case studies which often focus on North America. Field trips required. (S)

**416-250 Displays of Geographic Information 3 cr.**

The appreciation, use, and evaluation of maps and air photos as informational sources. (F,S)

**416-283X Selected Topics 1-4 cr.** See page 113.**416-298 Independent Study 1-4 cr.** See page 113.**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: soph st; Rec: 296-202 or 416-120 (SO)

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## Geography

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### 416-325 Regional Climatology 3 cr.

The elements, controls, and classification of climates; the distribution of climatic types over the earth; world patterns. P: soph st; Rec: 296-202, 416-120, 834-222. (SO)

### 416-341 Urban Geography 3 cr.

The city is viewed in two perspectives: as an entity among other cities and the surrounding region, and as a complex of subsystems, commercial, residential and manufacturing, functioning in space. Field trips required. P: soph st. (FO)

### 416-342 Settlement Geography 3 cr.

Examination of the evolution of major human settlement forms with an emphasis on geographical patterns in the United States. Topics include relationships between house form and culture, the arrangement of habitations on the landscape, and the historical geography of urban settlements. Field trips required. P: soph st. (FE)

### 416-351 Elements of Cartography 3 cr.

Principles of basic cartography including problem identification and clarification, data collection and analysis compilation, generalization and symbolization. Emphasis on presentation of data on medium and large scale maps. Field trips required. P: soph st. (S)

### 416-353 Air Photo Interpretation 3 cr.

Techniques for the interpretation of the uses humans make of the earth. Vertical, oblique, and infrared aerial photography are used in analyzing human use of the earth and its resources. P: soph st. (F)

### 416-361 Geography of Africa 3 cr.

The broad physical and human patterns of Africa; historical aspects of geography including the imposition of colonial organization on resource use and on indigenous cultures. P: soph st. (S)

### 416-368 The Geopolitics of World Regions 3 cr.

An examination of the impact of geographic factors on political behavior and relationships. Topics include concepts such as political space, political territoriality, the organization of space, and the nature of boundaries. The course also considers movement and migration as a political and social process and examines the impact of regional relationships on global social, economic, and political structures. See 778-368 and 834-368. P: jr st; Rec: 778-100. (F)

### 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. The various regions of the two countries are compared and contrasted. P: soph st. (F)

### 416-372 Analysis of the Great Lakes Region of North America 3 cr.

A systematic analysis of the areas surrounding the Great Lakes of the United States and Canada; internal and external relationships; economic activities; regional change and problems. P: soph st. See 834-372. (S)

### 416-377 Analysis of Northern Lands 3 cr.

A topical and regional analysis of the subarctic and arctic areas of North America and Eurasia; regional emphasis on Alaska, northern Canada, and Scandinavia. P: soph st. See 834-377. (F)

### 416-378 Geography of Conflict Areas 3 cr.

The economic and political geography of areas actually or potentially dangerous to the peace of the world are investigated to analyze underlying causes of existing tensions. See 778-378. P: 416-102. (S)

### 416-380 Geomorphic Processes 3 cr.

See 296-380.

### 382 Regional Analysis of Northwestern Europe 3 cr.

See 834-382.

### 416-420 Soil Classification and Geography 3 cr.

See 296-420.

### 416-421 Soils and Geology of Wisconsin Field Trip 2 cr.

An intensive three-day field study tour of the properties, origins, and uses of major soils and landscapes of Wisconsin. This tour is offered in cooperation with UW-Madison departments of Soil Science and Geography. Pre-tour lectures at UWGB on Tuesday and Wednesday following Labor Day; depart for Madison Thursday evening. Tour leaves from Madison at 5:30 a.m. Friday with overnight stops at River Falls and Wausau and returns Sunday night to Madison. Two post-tour discussion periods at UWGB during September. Trip log and a paper on a topic related to soils and landscapes required before end of semester. Cost of tour bus, guide book, meals and lodging (3 nights) borne by student. Approximate cost in 1981 was \$100. Deposit required. Enrollment is limited. See T.H. McIntosh for tour registration form. P: 296-202 or 420 or cons inst. (F)

### 416-451 Computer Cartography 3 cr.

An introduction to the use of the computer in assisting cartographic production, its advantages, disadvantages and limitations; the employment of current cartographic display software systems, and the application of computer-assisted mapping to geographic problems. P: 416-250 and 351. (S)

### 416-453 Advanced Air Photo Interpretation 3 cr.

Remote sensing is presented as a source of information, with particular emphasis on the extraction of land-use, landform, wetland, and vegetative information. Aerial photographs are used as a primary information format. Geometry of aerial photographs, photo-interpretative techniques, radial-line triangulation, photogrammetric mapping, and automated classification as applied to information extraction, serve as major components of the course. P: jr st and 416-353. (S)

### 416-465 Colloquium for Geography Majors 3 cr.

Orientation to geography as a scholarly discipline; its development, objectives, essential concepts, methods of investigation, institution, opportunities, problems and trends. Field trips required. P: sr st. (SE)

### 416-470 The Glacial Environment and Chronology 3 cr.

See 296-470.

### 416-478 Senior Distinction in Geography 3 cr. See page 113.

### 416-483X Selected Topics 1-4 cr. See page 113.

### 416-497 Internship in Geography 3-12 cr. See page 113.

### 416-498 Independent Study 1-4 cr. See page 113.

## 448 History

### 448-100 History of the Modern World 3 cr.

An introduction to the history of the world during the past five centuries, and particularly since 1900. Considerable attention is accorded to the period since 1945. The global nature of modern historical change is emphasized, with special stress on the interaction of Europe and North America with the societies of Asia, Africa, and Latin America. Major topics include the rise and impact of capitalism, Western expansion and imperialism, the African slave trade, the creation of new societies in North and South America, the evolution of colonial empires, the impact of colonialism on Asia and Africa, the rise and impact of socialism, the industrial and scientific revolutions, the development of the modern world system, nationalism and revolution in the Third World, the role of the United States in the postwar world, the evolution of the communist societies, contemporary Western Third World relationships, and the state of the world system today. (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. Attention is given to the art, institutions, ideas and values as well as the political, social and economic development of early Mesopotamia, Egypt, Palestine, Greece, and Rome. (FE)

**448-202 The Middle Ages 3 cr.**

Examines Western civilization from the late Roman Empire to the Renaissance and Reformation. Emphasis on the Christian Church; feudalism; the emergence of national states and institutions; urban civilization; agriculture, trade, and technology; and cultural achievements. (SE)

**448-203 History of Europe from 1300 to 1815 3 cr.**

Origins and development of Western civilization from the Renaissance and Reformation to the Napoleonic era. Emergence of the nation-state; absolutism and parliamentary government; development of urban centers, the middle class, commerce, capitalism, and early industry; dynamics of Western expansion and its collision with non-European cultures; the scientific revolution; the Enlightenment; the French Revolution; beginnings of the industrial revolution in England; appearance of the secular and rational human.

**448-204 History of Europe from 1815 to the Present 3 cr.**

Emergence of modern Europe. Revolutions against the old regimes; industrialization, urbanization, and the origins of modern classes and institutions; the ideologies of conservatism, liberalism, socialism, communism, and fascism; the impact of science on society; imperialist expansion; the making of new nations in Europe and the Third World; advent of mass society; world wars and totalitarian politics; reconstruction of Europe; Europe today. (SO)

**448-205 History of the United States from 1600 to 1865 3 cr.**

The institutional basis of American government and the impact of changing ideas, social structure, and expectations on American culture. Attention to political, economic, and legal development, factional and sectional disputes; and the fundamentals and important founders of American liberalism and conservatism. (F)

**448-206 History of the United States from 1865 to the Present 3 cr.**

Major factors for change, their effects on American values, and the principal examples of intellectual and institutional accommodation. Attention to domestic and international effects of technology, economic development, and economic and ethnic-based social and political movements. (S)

**448-207 Roots of Black America 3 cr.**

A survey of black people's experience in America beginning with African culture and following the development of Afro-American culture and institutions. The course includes political and institutional history and seeks to understand the evolution of a culture and a people. (F,S)

**448-208 The Development of Modern Science in Western Society 3 cr.**

The interrelationships between modern science and Western society and the ways in which each has helped shape and form the other. Emphasis on the blossoming of modern science in the 17th century, the influence of the sciences and technology in recent times, and the development of some of the major theoretical structures in science. (FO)

**448-250 Traditional Asian Civilization 3 cr.**

An introduction to the history and civilization of traditional Asian societies, including China, Japan, India, and the various peoples of Southeast Asia. Primary attention is focused on the evolution and structure of civilization before the increasing Western impact in the 19th century; China and Japan receive the major emphasis. Among topics considered are cultural life, art, music, literature, sociopolitical traditions, economic structure, and the various religious and philosophical systems such as Buddhism, Hinduism, Islam, Confucianism, and Taoism. (F)

**448-251 Modern Asian Civilization 3 cr.**

An introduction to the history and civilization of East, Southeast, and South Asia since the end of the 18th century, with particular attention to the period since 1900; China and Japan receive the most attention. Major emphasis is on social, political, economic, and cultural change under the impact of the West. Topics include the breakdown of traditional Chinese civilization, Japanese modernization, Western imperialistic pressures on China, European colonization of South and Southeast Asia, the evolution of anti-

Western nationalism and revolutionary movements, the building of modern Japanese technocratic society, the rise and development of Chinese communism, the Korean and Vietnam wars, and the societies of Southern Asia since independence.

**448-275 The Vietnam War in Historical Perspective 3 cr.**

An introduction to the conflicts and upheavals in Indochina from World War II to the present with particular attention to the Vietnam War. The role of the United States in Indochina, the effect of that activity on both the United States and Indochina, and the Indochinese context of revolution and change will be emphasized. Rec: soph st. (J)

**448-283X Selected Topics 1-4 cr.** See page 113.**448-298 Independent Study 1-4 cr.** See page 113.**448-302, 303 History of American Thought and Culture 3, 3 cr.**

Development of patterns of American thought and culture within the context of the major Western intellectual traditions; emphasis on changing American conceptions of nature, humanity, society, progress, and art and how in the works of key American thinkers and in the formation of characteristic American cultural agencies such conceptions were given coherency and social force. Can be taken out of sequence. P: jr st. (F,302) (S,303)

**448-306, 307 History of European Thought and Culture from the Renaissance to the Present 3, 3 cr.**

Development, transmission, and impact of European philosophy, religion, science, literature, art, and social thought; significant thinkers and cultural institutions; major currents and trends. 306: Renaissance, Reformation, Scientific Revolution, Age of Reason, 307: romanticism, liberalism, nationalism, positivism, irrationalism, socialism, fascism, existentialism. Can be taken out of sequence. P: jr st. (FE,306) (FO,307)

**448-309 History of Science in Modern Times 3 cr.**

Development of science since the 16th century as part of its cultural matrices; discussion of important scientific concepts of the last four centuries. (SE)

**448-310 American Colonial History 3 cr.**

A course dealing with, perhaps, the best researched and most understood period of American history which can provide an excellent understanding of the foundations of American institutions and attitudes against which subsequent continuity and change may be measured. It offers perspectives on a number of problems, particularly in the area of politics, economics, and social movements, providing meaningful insights into the perennial reconciliation between ideals and necessity. Also makes available an understanding of evolution of values during the transition period between the pre-industrial and industrial society in America. P: jr st and 448-205 and 206. (FE)

**448-311 History of Wisconsin 3 cr.**

A survey of Wisconsin from European exploration to the present. The development of Wisconsin as part of the international Great Lakes region and as part of the United States. The political, economic and cultural history of the region, territory and state, as exemplification of regional and national history and as the development of a distinctive political community within the American system. P: jr st and 448-205 or 206. (S)

**448-314 History of the Russian Empire 3 cr.**

Survey and analysis of social, intellectual, political, and economic developments and crises from the Crimean War to the Bolshevik Revolution. P: jr st. (FE)

**448-315 The Soviet Union from 1917 to the Present 3 cr.**

Survey of the origins and evolution of the main ideological, political, economic, social, diplomatic, and cultural developments of Russia since the Bolshevik Revolution. P: jr st. (SE)

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## History

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### **448-320 U.S. Military History 3 cr.**

Reviews important developments in American military strategy and its relationship to national policy. The views of relevant theorists are considered as well as the utility of these views in actual strategic situations. The course ends with a consideration of current military thinking and the balance of forces. Rec: 3 credits in history. (F)

### **448-322 Economic and Business History of the United States from 1876 to the Present 3 cr.**

The development of a corporate economy and the rise of government intervention; industrial, financial, agricultural, and labor reorganization; wage and price policies and their relationship to these general themes; special attention to modernization and urbanization and the developing relationship between the domestic and the world economy. P: jr st. (SE)

### **448-324 History of American Foreign Relations, 1865 to the Present 3 cr.**

Factors contributing to American foreign policy including changing views of the world, the balance of power, idealism, and self-interest. An effort is made to evaluate foreign policy decisions and to describe the relationship between foreign policy concerns and domestic politics. P: jr st. (SO)

### **448-325 History of Modern Germany 3 cr.**

Survey of the 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: jr st.

### **448-343 America's Urban Past 3 cr.**

Investigation of the American urban experience; the economic, political, social, and ideological forces that have shaped urban development; the city as a transforming force in American culture and as product of that culture. P: jr st.

### **448-345 Women in American Perspective 3 cr.**

Provides a historical survey of the changing situations and various contributions of women in American society. The course covers the colonial, frontier, Jeffersonian, urban-industrial, and modern periods; and it includes an in-depth study of the turn-of-the-century women's movement. It also uses social analyses and individual life histories to explore the impact of sex-role problems on contemporary women from different socio-economic, ethnic, and personal backgrounds. P: 875-241. (F)

### **448-350 Social History of Europe 3 cr.**

Development of social thought, institutions, organizations, and policies from early to modern Europe. Special attention is paid to the impact of economic change on society, the formation of classes, the consequences of the industrialization of Europe and contemporary social issues, crisis, and conflicts. P: jr st.

### **448-352 History of Modern China 3 cr.**

Analysis of selected themes in Chinese history since 1800. Topics that might be discussed include the impact of the West, reform programs in late imperial China, Chinese nationalism, republican China, the rise of Chinese communism, Maoist thought, and the development of Chinese communist society. P: jr st. (SO)

### **448-354 History of Modern Southeast Asia 3 cr.**

An introduction to modern Southeast Asian history, with particular attention to the period since 1800. Countries discussed include Vietnam, Indonesia, Thailand, Malaysia, Singapore, Cambodia, Laos, and the Philippines. Emphasis is placed on the remaking of Southeast Asia under the stimulus of the West and the Southeast Asian response. Among the major themes are state and nation building, colonialism, economic and social change, nationalism, the impact of communism, U.S. policies in Southeast Asia and the Vietnam War. P: jr st. (SE)

### **448-356 History of Africa 3 cr.**

The social, political, economic, and cultural development of Sub-Saharan

African societies from prehistoric times to the present, with emphasis on the period since 1800. Among main topics are traditional modes of thought and culture; the spread of Islam, the development of kingdoms and "stateless" societies, the slave trade, the African diaspora in the Americas, European colonialism and its heritage, changing musical traditions, the emergence of modern African nation-states, postcolonial politics and evolution of white domination in Southern Africa, and the contemporary African struggle against underdevelopment and neocolonialism. P: jr st. (FE)

### **448-358 Aspects of Latin American History 3 cr.**

Historians of Latin America have noted several themes which seem to characterize the development of countries of that region. This course examines some of those themes, such as conquest, colonization and neocolonialism and class and ethnic conflict between landlord and peasant and capitalist and worker to seek understanding of external and internal forces which have contributed to the making of modern Latin America. P: jr st.

### **448-367 World Wars I and II: Age of Global and Total Conflict 3 cr.**

Examination of the causes, development, and results of the world wars; survey of the major military operations on land, sea, and in the air, as well as their strategic, political, economic, and social implications; analysis of the war aims of the belligerents; and assessment of the impact of the wars on specific societies and on the development of the modern world. Many documentary films are used. P: jr st.

### **448-375 Great Decisions: Issues and Options in International Affairs 3 cr.**

Examination and discussion of major regional and global issues, problems and conflicts, their impacts on the United States and other countries, and analysis of policies and policy alternatives; evaluation of international affairs on the shaping of U.S. foreign and domestic policy. Case studies change every year. Public lecture presentations are an integral part of the course and may be taken for continuing education credit, or may be audited by anyone through the office of Outreach. P: upper-level coursework in history, political science, international economy, international relations, foreign policy. (S)

### **448-403 Political and Social History of Modern America 3 cr.**

Political and social change in 20th century America; the evolution of governmental roles in social change; the development of American culture; and the emergence of the United States as an industrial and political power. P: jr st and one 300-level history course. (SE)

### **448-404 Political and Social History of Modern Europe 3 cr.**

Political and social change in 20th century Europe; origins and impact of World War I: emergence of communism and fascism; the road to World War II; postwar renaissance of the European community. P: jr st.

### **448-405 History of Technological Change 3 cr.**

The impact of major inventions on the patterns of life in modern society; ecological problems resulting from technological changes. P: jr st.

### **448-478 Senior Distinction in History 3 cr.** See page 113.

### **448-480 Seminar in History 3 cr.**

Focuses on theoretical and practical topics and problems such as research techniques, source materials, comparative studies, analysis and interpretation, and the writing of historical inquiries. Required of all history students, the seminar is valuable to graduate students and seniors majoring in other academic fields. Required of all history majors. Rec: sr st. (S)

### **448-483X Selected Topics 1-4 cr.** See page 113.

### **448-497 Internship in History 3-12 cr.** See page 113.

### **448-498 Independent Study 1-4 cr.** See page 113.

See also relevant courses in other areas which may be taken for history credit, including:

156-301 Peoples and Cultures in a Selected Region 3 cr.

- 242-200 History of the Visual Arts: Ancient to Medieval 3 cr.  
 242-201 History of the Visual Arts: Renaissance to the Present 3 cr.  
 242-340 Greek and Roman Art 3 cr.  
 242-342 Italian Renaissance 3 cr.  
 493-101, 102 Foundations of Western Culture 3, 3 cr.  
 493-250 European Economy and Society 3 cr.  
 493-251 Business and American Life 3 cr.  
 493-274 Red Man in White America 3 cr.  
 493-320 Man, Machines, and the Environment 3 cr.  
 493-332 Art and Social Thought 3 cr.  
 493-374 Wisconsin Indians: Historical and Cultural Perspectives 3 cr.  
 493-390 Violence, War, Revolution and Society 3 cr.  
 493-474 The Native Americans: Emergence of Pan Indian Cultures 3 cr.  
 875-333 Social Change in a Selected Area 3 cr.  
 875-361 Historical Perspectives on Social Change 3 cr.  
 875-385 Dynamics of Revolutionary Change 3 cr.  
 950-313 Cities Past, Present, and Future 3 cr.  
 950-345 Women in American Perspective 3 cr.

## 478 Human Biology

### 478-102 Introduction to Human Biology 3 cr.

Introduction to the 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, and human adaptability. Credit not granted for both 478-102 and 110. (F,S)

### 478-110 Introduction to Physical Anthropology 3 cr.

An introduction to understanding human populations from a biological, evolutionary perspective. The evolutionary history, diversity, and adaptation of human beings is explored. Also included is discussion of the mutual interaction and influence of human culture and biology within an evolutionary framework. See 156-110. Credit not granted for both 478-110 and 102. (F)

### 478-203 Anatomy and Physiology I 2 cr.

The structure and function of the human body, its organs and organ systems, general anatomy and the skeleto-muscular system. Primarily for nursing and nutrition students. P: 204-202. (J)

### 478-204 Anatomy and Physiology II 4 cr.

The structure and function of the human body, its organs and organ systems; emphasis on systems other than skeleto-muscular systems: respiratory, nervous, endocrine, urinary, circulatory, digestive, reproductive systems. Primarily for nursing and nutrition students. P: 478-203. (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 or 478-110. (F,J,S)

### 478-206 Fertility, Reproduction and Family Planning 3 cr.

Deals with the many factors that influence reproduction and fertility, i.e., physiological, psychological, social, cultural, and ethical; the methods available for limiting or increasing reproduction; and the nature of family planning programs. P: 478-102 or 110 or 204-202. (F,S)

### 478-215 Here's to Your Health 3 cr.

Students will learn to assume moral, ethical, and personal responsibility in self health enhancement. The course is structured to provide theoretical information about health and wellness with experimental exercises to heighten awareness of one's own values, attitudes, and abilities toward the goal of developing the potential for enhancing one's own health. (F)

### 478-217 Man, Nature and Disease 3 cr.

An overview of the impact of diseases in humans. Emphasis is on the major diseases, their causes, the effect on the individual, the historical significance, and the methods of control. Diseases such as plague, VD, leprosy,

cholera, river blindness, hookworm, lice, cardiovascular disease, and cancer are discussed. P: 478-102 or 110. (F)

### 478-281 Student-Led Courses 1-4 cr. See page 113.

### 478-283X Selected Topics in Human Adaptability 1-4 cr. See page 113.

### 478-298 Independent Study 1-4 cr. See page 113.

### 478-310 Human Genetics 3 cr.

Principles of human and 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 or 110. (S)

### 478-312 Evolutionary Processes 3 cr.

The cytological, morphological, behavioral, and geographic factors involved in the origin of species and higher taxa. P: 204-203 or 478-110. (F)

### 478-313 Brain Functions in Human Behavior 3 cr.

Considers the role of the nervous system as the basis of human behavioral adaptation. Specific topics include: evolution of nervous systems and behavior; human nervous system functional anatomy; neural bases for drives, emotions, range and fear, hand-eye coordination, conditioning and learning; development of the human nervous system and behavior. P: 478-102 or 110 or 204-202. (FE,J,S)

### 478-318 Mammalian Reproduction 3 cr.

Basic reproductive processes, with emphasis on the factors, both hormonal and environmental, that affect reproductive functions in mammals; how these processes can be modified to control reproduction. P: 204-203. (F)

### 478-320 Biology of Human Development and Senescence 3 cr.

The physical and functional events of the stages in the life sequence of the human being. Changes in musculo-skeletal, cardiopulmonary, central nervous, and endocrine systems and how they may relate to sociopsychological concerns. Offered in alternate years. P: 478-102 or 204-203 or 478-204. (F)

### 478-333 Introduction to Sports Physiology 3 cr.

How the human body meets and resists or adjusts to the stresses of the environments of sport, adventure and exploration. Lecture and laboratory demonstrations. P: 478-102 or 204-203. (S)

### 478-342 Human Evolution 3 cr.

Phylogenetic history and affinities of homo sapiens and the evidence on which they are based. Potential effects of technology on future human evolution. See 156-342. P: 478-102 or 110 or 204-203. (S)

### 478-350 Introduction to Exercise Physiology 4 cr.

The study of acute and chronic effects of exercise on major organ systems. Emphasis is on the significance of these effects as they relate to developing and maintaining physical fitness. P: 478-204 or 204-203. (F)

### 478-351 Kinesiology 3 cr.

Basic anatomical and mechanical principles as they relate to human movement. P: 478-333 or 350. (S)

### 478-364 Human Variability 3 cr.

The study of living human populations with an emphasis on the variability found from one to another in terms of biological and cultural factors. Stress is placed on biological differences found between subspecific populations, or races, from around the world, such as blood group, skeletal, and other adaptive systems. In addition, populations living in stress environments such as high altitude, arctic, and deserts are examined. P: 478-110 or 102 or 204-203. (F,S)

### 478-402 Human Physiology 3 cr.

The functions of the major organs and organ systems of humans other than the central nervous system and the special senses. P: 204-203 and 225-212. (F)

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## Human Biology

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### **478-404 Animal Physiology Laboratory 2 cr.**

Students perform laboratory research in the study of major animal organ systems and are exposed to techniques of physiological investigation. Topics include consideration of experimental error; cardiovascular/respiratory, enzyme, endocrine, nervous, muscular, renal, and osmoregulatory systems; and whole-body, electrophysiological, surgical, biochemical, histological, and behavioral techniques. P: 478-402, or 204-346, or 478-413, or 318 or concurrent registration. (SO)

### **478-412 Principles of Parasitology 3 cr.**

Interactions of human populations with parasitic worms, protozoans, and arthropods. Laboratory includes identification and life cycles of parasites. P: 204-203. (FE)

### **478-413 Neurophysiology 3 cr.**

The nervous system and its functions in perception, interpretation, and the production of physiological and behavioral response: fundamental concepts, neuronal function, sensory systems, and processing mechanisms. Emphasis on limitations imposed by various environments. P: 204-203 and 225-212. (S)

**478-481 Student-Led Courses 1-4 cr.** See page 113.

**478-483X Selected Topics in Human Adaptability 1-4 cr.** See page 113.

**478-484 Senior Honors Project 3 cr.** See page 113.

**478-497 Internship in Human Biology 3-12 cr.** See page 113.

**478-498 Independent Study 1-4 cr.** See page 113.

## **479 Nutritional Sciences**

### **479-142 You and Your Food 3 cr.**

Consumer-related coverage of the nutritional requirements of sedentary populations. Purposes, production, processing, packaging, advertising, and distribution of food; changes in foods from farm to market to table in order to meet specific biological needs; deterioration and preservation of foods; uses and abuses of additives; food safety and consumer protection. P: 478-102 or 110 or 204-202. (F,S)

### **479-212 Food Preparation 4 cr.**

Principles of food selection and preparation with emphasis on methods which maximize the retention of nutritional value. (F)

### **479-250 World Food and Population Issues 3 cr.**

An overview of world hunger and population growth as interrelated problems. Describes the dimensions of the world food situation and its ramifications; what constitutes hunger, its scope, complex causes and effects. Examines general strategies and obstacles to the solution of the world food and population problems from the standpoints of conflicting cultural values, differences in educational and socioeconomic levels, technology and total resources. P: 478-102, 110 or 204-202. (F)

**479-281 Student-Led Courses 1-4 cr.** See page 113.

**479-283X Selected Topics in Nutritional Sciences 1-4 cr.** See page 113.

**479-298 Independent Study 1-4 cr.** See page 113.

### **479-300 Nutritional Significance of Food 3 cr.**

Fundamentals of human nutrition, including functions and requirements of essential nutrients; means of obtaining an adequate diet. Specific attention is given to the needs of infancy, adolescence, adulthood, pregnancy and lactation, and aging. P: 225-108 and 204-202. (F)

### **479-301 Crop Science 3 cr.**

Principles of plant science involved in the growth, management, and production of field crops. Biological factors, environment, soil, climatic and technological foundations of agronomy and crop distribution. P: 204-203. (SO)

### **479-302 Nutrition and Culture 3 cr.**

Effects of environment and culture on food habits in historical perspective. Role of food in health and disease as related to humans and the biosphere. P: 204-202 or 478-102. (S)

### **479-312 Quantity Food Production and Service 4 cr.**

Principles of quantity food preparation and service. Laboratory affords experience in quantity preparation, service, and costing of food. Field trips. P: 479-212. (SE)

### **479-321 Physiological Chemistry 3 cr.**

Principles of physiological chemistry as related to metabolism in living organisms. Credit will not be given for both 225-330 and 479-321. P: 225-301. (S)

### **479-404 Food Science 3 cr.**

Standards of food quality, food preferences, food assay, food deterioration, adulteration; methods of preservation and distribution. Laboratory includes quantitative analysis of and instrumental procedures for various food components; arranged student visits and/or interaction with specific area food laboratories. P: 225-303 or 330. (S)

### **479-409 Analysis of Food and Food Products 2 cr.**

Laboratory and lecture course studying principles, methods, and techniques necessary for analytical chemical analyses of food and food products. Analyses and instrumental methods are related to the standards and regulations for food processing. P: 225-301 or 304 or 311. (S)

### **479-421 Community Nutrition 1 3 cr.**

Nutritional problems of the individual within the context of the larger community—the world, the nation, the region, and the state. Studies methods of assessing nutritional status, agencies, and programs which focus on alleviating malnutrition. Addresses the role of nutrition education. P: 479-302. (F)

**479-481 Student-Led Courses 1-4 cr.** See page 113.

**479-483X Selected Topics in Nutritional Sciences 1-4 cr.** See page 113.

**479-484 Senior Honors Project 3 cr.** See page 113.

### **479-485 Advanced Human Nutrition 3 cr.**

Physiological and biochemical principles of nutrition; fundamental concepts of human nutrition and nutritional diseases. P: credit or concurrent enrollment in 225-330 or 479-300 and 321. (FE)

### **479-488 Nutrition in Disease 3 cr.**

Therapeutic applications of nutrition in treatment of human diseases. Emphasis upon familiarization with the medical terminology, etiology, biochemical and clinical manifestations of disease conditions. Students determine changes in nutrient intake, food and eating patterns necessary for treating disease conditions and construct suitable meal plans. P: 479-485 and 225-331 or concurrent registration. (SO)

**479-497 Internship in Nutritional Science 3-12 cr.** See page 113.

**479-498 Independent Study 1-4 cr.** See page 113.

## **481 Human Development**

### **481-210 Introduction to Human Development 3 cr.**

An interdisciplinary approach to the study of human development from conception through death. This survey covers topics such as physical development, social and emotional development, personality development, the development of language, intellectual development and creativity, and the process of human learning. Students considering majoring in Human Development should take this course. (F,J,S)

### **481-215 Issues in Human Development 3 cr.**

Examines 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 develop-



ment are examined as values systems shaping the process of understanding people, particularly those influencing the process of deciding what is "good" for people and what people "need." Not intended for Human Development majors. P: 481-210.

**481-281 Student Led Courses 1-4 cr.** See page 113.

**481-283X Selected Topics in Human Development 1-4 cr.** See page 113.

**481-298 Independent Study 1-4 cr.** See page 113.

**481-331 Human Development I: Infancy and Early Childhood 3 cr.** Current theories, methods of study, and pertinent research provide the framework for studying human development from conception through the preschool years. Interrelationships between the biological, sociocultural, and psychological aspects of development are emphasized. Required core course. Rec: 481-210 or equivalent. (F,S)

**481-332 Human Development II: Middle Childhood and Adolescence 3 cr.**

Individual development from the beginning of the elementary school years through adolescence in the context of the sociocultural, economic, and physical growth factors influencing the developmental processes that characterize the "typical" older child and adolescent at each level of development. Interpretation of behavior from the perspectives of such theorists as Erikson, Freud, and Piaget is stressed. Required core course. P: 481-210 or equivalent; Rec: 481-331 or equivalent. (F,S)

**481-333 Observation and Interpretation of Child Behavior 3 cr.**

The behavior and development of young children is studied in depth through direct observation of children in selected situations and through comparison of the observations with theories and established data regarding child development. P: 481-331 or equivalent. (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 are examined. Audio-visual materials provide opportunities for observation. P: 481-331 or equivalent. (F)

**481-335 Introduction to Experience with Young Children\*\* 1 cr.**

Supervised work with young children in a group situation. Recommended only for those students earning certification in early childhood education. Pass/no credit only. P: 481-331 or equivalent or written cons inst. (F,S)

\*\*Meets a requirement for certification in early childhood education in Wisconsin.

**481-336 Sex Role Development in Contemporary Society 3 cr.**

Developmental analysis of the biological, personality, social and cultural factors contributing to sex role identity and behavior in contemporary society. P: 481-210 or equivalent. (F,S)

**481-339 Woman in the Life Cycle 3 cr.**

Introduces the student to the significance of sex and gender as variables in the study of human development and in the interpretation of such studies. Readings include original research in cultural anthropology, the psychology of women, literary criticism, and literature. Rec: 481-210 or equivalent and jr st. (S)

**481-342 Cross Cultural Human Development 3 cr.**

Covers cultural differences in perception, cognition, language and thought, child development, child rearing, and personality. Examines relationships between various aspects of culture (value, economy, ecology, political system) and psychological functioning within both non-Western cultures and American ethnic subcultures. P: 481-210 or equivalent; Rec: social science course. (F,S)

**481-380 Families and Sexuality: Politics and Public Policy Issues 3 cr.**

Examines political process and public policy issues related to families and sexuality in American society. The course develops theoretical models for understanding such issues; provides a historical overview on specific policy

developments since the 1960s; and analyzes a number of current policy issues in depth (e.g., child abuse and other forms of domestic violence, teenage childbearing/childrearing, AIDS, abortion, child care, homelessness, and social implications of reproductive technologies). P: 481-210, 875-235, or 900-308 and one additional course in social science. (S)

**481-420 Tests and Measurements 3 cr.**

Methods and 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. See 820-420. P: a course in statistics or human development or psychology and jr st. (S)

**481-429 Theories of Personality 3 cr.**

Major ideas and systematic statements about the organization, function, change, and development of human personality. Readings acquaint the student with a variety of personality theorists such as Freud, Adler, Jung, Sullivan, Erikson, Dollard and Miller, Skinner, and selected existentialists. P: upper-level human development or psychology course; Rec: jr st. (F,S)

**481-431 Cognitive Development 3 cr.**

The development of cognitive functioning from infancy to adulthood. The stimulus-response, cognitive, and psychoanalytic approaches to intellectual development are analyzed. Current issues and research are critically examined. P: 481-331, 332 or equivalent; Rec: jr st. (F)

**481-433 Human Development III: Adulthood and Aging 3 cr.**

An interdisciplinary approach to theory and empirical research concerning developmental processes across the adult life span. The course deals with psychological, cultural and biological factors which influence development in young adulthood, middle adulthood, and old age. Required core course. P: 481-210 or equivalent; Rec: 481-332 or equivalent. (F,S)

**481-435 Abnormal Behavior 3 cr.**

Deviations from normal intellectual, physical, emotional, and social development (e.g., retardation, psychopathology, emotional problems) throughout the life cycle are covered. Includes study of accelerated development, delayed development, and disturbances in development. Biological and environmental origins of deviations are examined. P: upper-level human development or psychology course. (F,S)

**481-436 Counseling with Children and Adolescents 3 cr.**

Introduction to theories and principles of counseling as applied to children and adolescents. Surveys different theoretical approaches and techniques for helping children and adolescents cope with the developmental deviations introduced in 481-435. P: upper-level human development or psychology course; Rec: 481-331, 332, 435, or equivalent and jr st. (F,S)

**481-437 Counseling with Adults and the Aged 3 cr.**

Introduction to 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 the life cycle introduced in 481-435. Rec: 481-433, 435 or equivalent and jr st. (F,S)

**481-441 History, Philosophy, and Current Programs in Early Childhood Education\*\* 3 cr.**

Historical and philosophical bases of early childhood education, with emphasis upon current approaches and programs; guided observations of young children. (Also listed as 302-441.) P: 481-333, 334, 431 or 820-315. (F)

**481-452 Advanced Gerontology 3 cr.**

Examines in depth the process of aging, including an emphasis on the fields of social gerontology—aging in the social context—and geropsychology—the psychological processes of aging. The relationships among the physiological, emotional, cognitive, personality, and social changes in

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## Human Development

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later life and health care and social policies in the aging society are discussed. P: 481-433 or equivalent. (SE)

**481-478 Senior Distinction in Human Development 3 cr.** See page 113.

**481-481 Student Led Courses 1-4 cr.** See page 113.

**481-483X Selected Topics in Human Development 1-4 cr.** See page 113.

**481-484 Senior Honors Project 3 cr.** See page 113.

**481-495 Language Acquisition in Childhood 3 cr.**

An interdisciplinary approach to language acquisition 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. Includes student observations and interpretations of child speech behavior. P: 481-331 or equivalent; Rec: linguistics course. (JO)

**481-497 Internship in Human Development 3-12 cr.** See page 113.

**481-498 Independent Study 1-4 cr.** See page 113.

## 493 Humanistic Studies

**493-101, 102 Foundations of Western Culture I, II 3, 3 cr.**

Western civilization and cultures are approached from broadly historical perspectives, considering not only major events, developments, and personalities, but the ideas, concepts, and values that mold each age and constitute our traditions and sources. The first semester covers the period from ancient civilizations to the Renaissance. The second semester is from the Renaissance to the modern world. This is a basic course for students in the humanities and serves as an important background course for all other students as well. 101 (F); 102 (S)

**493-106 Great Books 3 cr.**

An introductory study of notable literary and nonliterary texts, to be considered with a historical perspective. (F, J, S)

**493-201 Introduction to Humanities I: Music and Art in Western Civilization 3 cr.**

Explores the ways in which fine arts, such as visual arts, music, and film, express ideas and values. Several cultural eras in western civilization are considered, relating historical developments and social factors to aesthetic creativity. This is a basic subject for majors or co-majors in Humanistic Studies. It is also an excellent general introduction to humanistic ideas, methods, and values, for all students. (F)

**493-202 Introduction to Humanities II: Literature, Philosophy and History in Western Civilization 3 cr.**

Studies some of the elementary forms (epic and lyric poetry, drama, historical narrative, philosophical dialogue, novel) and ideas (appearance and reality, destiny, fate, free will, tragedy and comedy, truth, and the good) and methods (criticism, description, textual analysis) which have been predominant at various times in Western thought. Course content may change from time to time. This is a basic subject for majors or co-majors in Humanistic Studies. It is also an excellent general introduction to humanistic ideas, methods, and values, appropriate for all students. (S)

**493-204 Humanistic Values Through Literature 3 cr.**

Through discussion of essays, stories, poems, plays, and novels, this course examines particular value issues from a humanistic perspective. Among topics which might be studied are "the search for a meaningful life," "human worth," or "conflicts between the individual and society." Readings on the specified topic include both Western and non-Western viewpoints, and range from modern authors like Camus, Hesse, and Vonnegut, to Shakespeare, Sophocles, and Plato. (F, S)

**493-205 Personal Values and Social Reform 3 cr.**

Any attempt to reform society involves, at least implicitly, major questions

concerning the value of such an attempt. This course examines some of these value questions, such as: Are attempts at social reform generally beneficial or harmful to individuals in the society being reformed? How does one determine whether a society is good or bad, and thus, whether a society should be reformed? Do programs for reform of society necessarily restrict or obstruct the exercise of individual freedom? Why might someone be interested in reforming society? Such issues will be examined through reading, discussion and lectures. See 892-205. (F)

**493-210 Film and Society 3 cr.**

Deals with film primarily in its social context, i.e., the ways in which film reflects and influences society. Films such as Griffith's *Birth of a Nation*, Lang's *Metropolis*, Eisenstein's *October*, Vertov's *Man with a Camera*, Renoir's *Rules of the Game*, and films chosen from the student film series are examined for their social content, both explicit and implicit, and the social milieu of their creation. Emphasis is placed on the ways in which different cultures use films and on the cross-cultural influences which occur. See 242-210. (F)

**493-225 American Indian Studies: Arts and Ceremonial Traditions 3 cr.**

An introduction to the cultures of North American Indians through a study of their visual arts and crafts, musical forms and ritual ceremony, and traditions. Discussion will be on North American Indian cultures in general with a special emphasis on the arts, music, and ceremonies of woodland Indians of Wisconsin. (S)

**493-226 American Indian Studies: History and Verbal Traditions 3 cr.**

An introduction to the cultures of North American Indians through a study of their history, literature, and languages. Discussion will be on North American Indian cultures in general with a special emphasis on the history, literatures, and languages of woodland Indians of Wisconsin. (F)

**493-250 European Economy and Society 3 cr.**

Introduces major issues, developments, and problems which shaped European societies in the course of the fundamental transformation from rural, agrarian, and largely static societies, to urban, industrial, and rapidly changing ones. Highlighted are the major developments in agriculture, commerce and industry; the impact of science and technology; the evolution of modern labor and management patterns of prices, wages, economic cycles, and consumption; changes in economic principles, practices and institutions; and the corresponding transformation of Europe's social and cultural patterns. (F)

**493-251 Business and American Life 3 cr.**

Describes 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. Representative personalities, firms, and events are studied to achieve the goals of the course, and to permit a comparison of the development of the American economic tradition with the European tradition discussed in 493-250, European Economy and Society. Rec: 493-250. (F, S)

**493-271 American Indian Literature 3 cr.**

A study of the religious, aesthetic, and philosophical attitudes of some representative Indian cultures as these are reflected in literature. Novels, poetry, and some legends and myths are used to explore the values of Indians. The course focuses on the contrasting lifestyles, customs, and beliefs of Indian and American cultures.

**493-274 Red Man in White America 3 cr.**

A multi-disciplinary survey of the changing position of Native Americans in American culture and society. Historical relations of Indians and whites are examined to discover basic processes of socio-cultural change, such as ecological succession, evolution of corporate organizations from tribal beginnings, and growth of Pan-Indian culture patterns. Past and current stereotypes, images, and visions of "the Indian" are examined critically. Attempts are made to answer basic questions such as: What has the Indian

meant to Americans? What does it mean to be Indian? Who and what is an Indian? (F,S)

**493-276 Ireland: Culture and Conflict 3 cr.**

Studies Irish history, literature, and culture with the aim of understanding the values which have shaped the Irish way of life. The major focus is on Ireland from 1850 to the present. Works studied include plays, short stories, novels, autobiographies, histories, music, and films. (F,S)

**493-281 Student-Led Courses 1-4 cr.** See page 113.

**493-283X Selected Topics in Humanistic Studies 1-4 cr.** See page 113.

**493-295 Art and Ideas in Western Culture 3 cr.**

Using the celebrated series of television films entitled *Civilization*, narrated and produced by art historian Kenneth Clark, this course 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. (J)

**493-298 Independent Study 1-4 cr.** See page 113.

**493-302 Human Identity 3 cr.**

The concept of human identity is presented from the vantage point of many disciplines; the contributions of science and art and their mutual interaction are demonstrated. Rec: jr st. (SO)

**493-305 Value Theory and the Humanities 3 cr.**

A systematic and critical survey of ideas and methods of value inquiry with special attention to problems and claims of values of the environment and the humanities. Some of the topics considered are the origins of traditional problems of value, the methods of value inquiry, and the relation of a general theory of value to other disciplines in the humanities and the sciences. Rec: 493-201, 202.

**493-315 Theories of Creativity 3 cr.**

The concept of "creativity" is presented from different social science approaches and viewpoints. Emphasis is on the relationship of creativity to the various psychological theories (personality development, personal growth, statistical, etc.). Attempts are made to demonstrate a training approach to facilitating creativity. P: jr st. (SE)

**493-323 The Writings of the Old Testament 3 cr.**

The Old Testament as literature and as part of the literary heritage of the Western world. This approach excludes, therefore, any sort of ecclesiastical or doctrinal preconceptions of the Old Testament's value as an exclusively religious work, though attention is necessarily paid to religious convictions, ideas, and views which influenced and helped to develop it. The books of the Old Testament are approached with as much objectivity as possible, and they are examined as literature by genre (narrative, poetry, idyll, drama), with techniques of literary analysis applied to them as appropriate relative to theme, character, plot, symbolic order, and structure. Rec: jr st. (FE)

**493-324 The Writings of the New Testament 3 cr.**

A study of the origins of the Christian tradition as reflected in the primary texts of that tradition contained in the New Testament. It examines 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 issues he addressed in the development of early Christianity, and the apocalyptic writings of St. John. Rec: jr st. (SE)

**493-325 Judaism, Christianity, and Islam 3 cr.**

The world's three great monotheistic religions; their origins; the experience, the ideas, and attitudes which they share; the features which make each a distinct and unique expression and system of belief in the God who is One. Rec: jr st. (FO)

**493-326 Non-Western Religions 3 cr.**

A study primarily of the two major religions of the East, Hinduism and Buddhism. It attempts to explore the richness, variety, and flexibility of the

faith and practice of Hinduism, with its belief in a multiplicity of gods and goddesses, and to examine Buddhism from the standpoints of its various sects and schools—Theravadic (Hinayana), Mahayana, Zen, and Tantric. Rec: jr st. (SO)

**493-332 Art and Social Thought 3 cr.**

An examination of the role of art and art criticism in various modern theories of social order and social change. The interrelations of social value and the environment of art and ideology. Art as an agent in social change and art as a measure of social well-being. The course emphasizes the place of art within liberal, socialist, communist, and fascist thought and practice. Art, whether seen as personal expression or as the expression of social process, is considered primarily from the perspectives of social criticism and historical analysis. Rec: 493-201, 202, jr st.

**493-333 Utopia and Antiutopia 3 cr.**

A study of the origins, history, and philosophical and political significance of utopian thought in Western culture. The course covers the development of major utopian ideals from Plato to the present. Rec: jr st. (S)

**493-340 Perspectives on Human Values: The Classical World 3 cr.**

Focuses on the world of classical Greece and Rome as reflected in its literature. The course varies in content from semester to semester and employs these approaches: a) an in-depth study of the Greek world-view in the tragedies of Aeschylus, Sophocles, Euripides, and the comedy of Aristophanes; b) a general study of the Greco-Roman world, including the epics of Homer and Virgil, Greek and Roman tragedy, comedy, and satire. Rec: jr st. (FE)

**493-341 Perspectives on Human Values: The Medieval World 3 cr.**

Focuses on the medieval world as reflected in its literature. Students explore the history, society, culture and values of the middle ages by beginning with the heroic deeds of Beowulf, Roland and the Vikings, continuing to the chivalric romances of King Arthur and Tristan leading finally to the wonderful tales of Chaucer and Boccaccio that mark the end of this period. Rec: jr st. (S)

**493-342 Perspectives on Human Values: Renaissance to Rationalism 3 cr.**

The form of western culture first takes shape in the Italy of the 14th and 15th century Renaissance. The idea of the individual as the measure of value is born in the Renaissance and continues its development throughout the Western world through the 18th century, usually termed the age of Rationalism. This course studies the major thinkers and artists of the era beginning with the Italian and ending with the introduction of Western ideas onto the American continents. Rec: jr st. (FO)

**493-343 Perspectives on Human Values: Romanticism to Naturalism 3 cr.**

Romanticism begins, as a self-conscious notion, in the early 19th century coincidental with the great political, economic and technological changes in Western culture. The course studies the nature of these changes and their effects on romantic artists and thinkers beginning with English romanticism and ending with the social, political and literary movement associated and the term "naturalism" in Europe and America. Rec: jr st. (S)

**493-344 Perspectives on Human Values: The Modern Period 3 cr.**

In the modern world, no single set of values seems to have sufficient authority to command belief and provide assurance. In such a skeptical situation, it is increasingly difficult for people to dwell meaningfully with themselves and the things of their world. This course seeks to provide a critical reflection on some of the most significant ways in which writers and artists have sought to understand the value predicaments and dilemmas of the human condition. Confining itself chiefly to the first 50 years of this century, this course focuses primarily, but not exclusively, on values associated with either tragic or comic perceptions found in works of literature, philosophy, history and the fine arts. Rec: jr st. (F)

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## Humanistic Studies

continued

### 493-354 France Today 3 cr.

Beginning with an examination of French history and traditional customs and values, this course studies as many aspects of contemporary French culture as possible, including rural and urban life, industry and commerce, art and music, etc. Rec: jr st. (F)

### 493-356 Contemporary German Culture 3 cr.

An introduction to the culture of the four German speaking countries (the Federal Republic of Germany, the German Democratic Republic, Austria, and Switzerland) and to German culture in the U.S. Emphasis is on the post-World War II era, with particular focus on West Germany. Rec: jr st. (S)

### 493-358 Latin America Today 3 cr.

Studies specific humanistic aspects of contemporary Latin American culture, including its history, art, literature, music, and value systems. The goal is to come to as complete an understanding as possible of the people of Latin America today. Rec: jr st. (FE)

### 493-359 The Americas Look at Each Other 3 cr.

Through the study of Latin American writers and artists, this course examines the way the Latin American culture perceives our North American culture. The aim is to provide students with a new and increased awareness of their own cultural environment as well as that of Latin America. Rec: jr st. (SE)

### 493-361 January Abroad: German Culture 3 cr.

Travel to one of the German speaking countries. German culture studies through on-site lectures followed by tours of interesting historical and architectural sites, visits to universities and museums, factories and business concerns, and attendance at concerts and operas. Usually based in Berlin and one or two of the large West German cities such as Hamburg and Cologne. Rec: 448-325 or 556-201.

### 493-363 January Experience Abroad: Mexico 3 cr.

An exposure to the accessible portions of 1) a culture of ancient Mexico, 2) the culture of present day Mexican villages, and 3) the culture of contemporary urban Mexicans. The course typically takes place in the states of Yucatan, Quintana Roo, Campeche, and Chiapas, with emphasis upon the cultures of the ancient and contemporary Maya. Stress on cultural relativity and cultural systems. Students examine their own values in the context of the value systems of these other cultures. Work may be completed in either Spanish or English. Rec: minimum of one semester of Spanish or equivalent.

### 364 Women and Religion 3 cr. See 875-440.

### 493-365 January Abroad: England and Its Heritage 3 cr.

Provides a field trip to England for on-site study of English literature, history, and culture. The center of study is the city of London—its museums, galleries, palaces, cathedrals, theaters, and other places of literary and historical interest. The course also includes conducted study tours to other sites which are central to the English heritage, such as Bath, Brighton, Cambridge, Canterbury, Oxford, Stonehenge, and Stratford Upon Avon. Rec: 552-214 and cons inst.

### 493-367 The Structure of Evil and Western Culture 3 cr.

Traditional conceptions of good and evil, enshrined in Western culture as ideals for human experience and behavior, have been fundamentally challenged in this century by authors who argue that these cultural values are negative or evil rather than positive or good. The course examines this claim through reading and discussion of major works in order to gain better understanding of our traditional values. See 875-367. Rec: jr st or cons inst. (SO)

### 493-371 American Indian Art and Artists 3 cr.

A study of the art and painting of selected North American Indian cultures, using comparative analyses of art as expression of differing value systems. The course uses the public television series *American Indian Artists* con-

sisting of six 30 minute videotapes on the arts and crafts of painting, pottery, sculpture, and jewelry making of six contemporary artists. Films, slide presentations, and lectures on the aesthetic ideals and basic symbolism of American Indian art supplement the series. Rec: jr st.

### 493-374 Wisconsin's Indians: Historical and Cultural Perspectives 3 cr.

Indian cultures of Wisconsin in the period 1600-1830. Basic cultural patterns and the social life of such tribes as the Winnebago, Menominee, Sauk, Fox, Kickapoo, Huron, and Potawatomi and their historical transformation. Attention to the impact of the fur trade, missionaries, and Euro-Americans in the area.

### 493-376 Cultural Conflict in French Canada 3 cr.

Cultural nationalism or separatism, grounded in a sense of group identity founded on language, religion, historical traditions, and popular and elite arts and literature, can be the source and dynamic element in political confrontation between different cultural groups. This course analyzes the conflict between the English and the French in Canada, one of many cases of conflicting cultural groups in the world today. Focusing on the cultural dimension of the problem, the course attempts to assess the consequences, both creative and destructive, of the tension and struggle. Rec: jr st. (J or S)

### 493-478 Senior Distinction in Humanistic Studies 3 cr. See page 113.

### 493-480 Humanities Seminar 3 cr.

Advanced study of contemporary problems seen from the perspective of the humanities. Topics vary from term to term. Among principal topics explored are: identity, alienation and cultural conflict; continuity and change in values; language and culture; and the humanities and imagination. Required for Humanistic Studies majors. Rec: intended for Humanistic Studies majors and minors.

### 493-481 Student-Led Courses 1-4 cr. See page 113.

### 493-483X Selected Topics in Humanistic Studies 3 cr. See page 113.

### 493-484 Senior Honors Project 3 cr. See page 113.

### 493-497 Internship in Humanistic Studies 3-12 cr. See page 113.

### 493-498 Independent Study 1-4 cr. See page 113.

## 552, 554, 556, 558 Literature and Language

Please note that each language has a separate curriculum area number. Many courses are offered separately in several languages. The appropriate curriculum area number must be included when completing registration forms. Courses in which the content is at the discretion of the instructor may be repeated for credit if the content is different each time. Students should check the *Timetable* for specific course offerings in foreign literature and language.

### 552 ENGLISH-AMERICAN

### 554 FRENCH

### 556 GERMAN

### 558 SPANISH

### 100 College Writing 3 cr.

An introductory course in college writing, emphasizing writing as a four-step process of prewriting, drafting, revising, and editing. Focuses on sentence structure, paragraph development, principles of organization, and an introduction to research paper techniques, and includes a review of the conventions of punctuation, grammar, spelling, and usage. P: 553-093 or ACT English score of 15 or higher (F,S)

### 101, 102 Introduction to the French, German, Spanish Language, I, II 4, 4 cr.

The first two semesters of language study seek to develop basic ability in understanding, reading, speaking and writing. No prior language study

necessary for 101. One year high school or one semester college language study prerequisite for 102. See section on retroactive credit preceding course descriptions. 101(F); 102(S)

**104 Introduction to Literature 3 cr.**

A study of the distinctive characteristics of poetry, plays, short stories, and the novel, intended to help students understand, appreciate, and enjoy literature. Works studied range from the classic to the contemporary. (F, S)

**105 Expository Writing 3 cr.**

Designed to improve college-level writing skills, this course emphasizes principles of logical reasoning, effective organization and development of ideas using a variety of rhetorical modes, and improvement in research paper techniques. Reading and writing assignments in some sections of the course may be focused on particular topics, such as Issues in the Social Sciences. P: 552-100 or 246-100, or ACT English score of 22 or higher. (F, S)

**107 The Short Story 3 cr.**

An introduction to the short story as a literary form. The stories selected may be arranged according to period theme, nationality, or author.

**201, 202 Intermediate French, German, Spanish Language I, II 4, 4 cr.**

Intermediate study develops more fully the ability to understand, read and speak the language. Courses are in sequence according to level of achievement. One year of high school foreign language equals one semester of university work. See footnote about retroactive credit. 201 Rec: two years high school or one year college study in the language. (F); 202 Rec: three years high school or three semesters college study in language. (S)

**206 Women In Literature 3 cr.**

The course surveys both women as writers and women as characters in literature. It emphasizes the wisdom, experiences, and insights of women writers and women in literature, looks at the works from a variety of critical perspectives, and clarifies the values inherent and/or envisioned in those works. The course is concerned with literature from two or more cultures with emphasis on comparing and contrasting the social and human values reflected in the literature of those cultures. (S)

**207 Philosophy and Literature 3 cr.**

A study of issues shared between philosophy and literature as reflected in literary works. Emphasis is on the nature and meaning of literature for an understanding of the world. (F)

**212 Introduction to Creative Writing: Fiction 3 cr.**

A first course in the writing, appreciation, understanding, and technique of fiction. (F, S)

**213 Introduction to Creative Writing: Poetry 3 cr.**

A first course in the writing, appreciation, understanding, and technique of poetry. (F, S)

**214 Introduction to English Literature I 3 cr.**

An introductory, chronological survey of English literature from Anglo-Saxon times to the end of the 18th century. Among writers studied are Chaucer, Shakespeare, Donne, Milton, Pope, Swift, and others whose works comprise the major literary heritage of all English-speaking people. (F)

**215 Introduction to English Literature II 3 cr.**

An introductory, chronological survey of English literature from the 19th century to the present, including such writers as Wordsworth, Shelley, Keats, Byron, Tennyson, Browning, Dickens, Shaw, Conrad, Joyce, Lawrence, Eliot, and Thomas. (S)

**216 Introduction to American Literature I 3 cr.**

An introductory chronological survey of American literature from Bradford to Melville, including such writers as Mather, Bradstreet, Paine, Irving, Cooper, Poe, Emerson, Hawthorne, Thoreau, and Melville. (F)

**217 Introduction to American Literature II 3 cr.**

An introductory chronological survey of American literature from Whitman to the present, including such writers as Longfellow, Dickinson, Twain, James, Crane, Eliot, Pound, Fitzgerald, Hemingway, Faulkner and Cummings. (S)

**225 French, German, Spanish Conversation and Composition 3 cr.**

Helps develop greater fluency in the language through classroom practice in conversation. Emphasis on developing ease and correctness of oral expression through directed and extemporaneous conversations, dialogues, class presentations and dramatic reading of texts. Also includes practice in expository writing and grammar review. This is an appropriate course for students with four years of high school language study or two years at the university level. See section on retroactive credit. (F)

**283X Selected Topics 1-4 cr.** See page 113.

**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. Emphasis is on communication. Represents the equivalent of both introductory and intermediate courses in the language. As a follow-up, students are encouraged to spend January abroad or a subsequent semester at the University of Kassel. (F)

**298 Independent Study 1-4 cr.** See page 113.

**301 Intermediate Creative Writing 3 cr.**

An intermediate course for writers of poetry, fiction, drama and journalistic features. Begins with a comparison of literary texts with their source materials; then students develop writing projects based on research of historical documents or other source material. Rec: 552-212 or 213 or 246-203, or cons inst.

**302 Fiction Writing Workshop 3 cr.**

An advanced course in the practice of writing fiction. Group criticism of student work. May be repeated once for credit. Rec: 552-212 or cons inst. (F, S)

**304 Advanced Expository Writing 3 cr.**

The study and practice of non-fiction writing of various kinds, including autobiography, argument, the personal essay, and the formal essay. Particular attention is paid to developmental strategies, organization, tone and style. The reading and writing assignments of some sections of this course may be focused on a particular area, such as business, education, or professional studies. Rec: 552-104 or equivalent, or cons inst.

**315 The English Novel: 1700-1860 3 cr.**

A study of the development of the English novel from its beginnings to the mid-Victorian period. Typically, eight novels are discussed, chosen from authors such as Daniel Defoe, Lawrence Sterne, Henry Fielding, Tobias Smolett, Jane Austen, Sir Walter Scott, Charlotte Bronte, Emily Bronte, William Thackeray, Charles Dickens, George Eliot. (F)

**316 The English Novel: 1850 to the Present 3 cr.**

A study of the development of the English novel from the mid-Victorian period to modern times. Typically, eight novels are discussed, chosen from authors such as Charles Dickens, George Eliot, Anthony Trollope, Thomas Hardy, Oscar Wilde, Joseph Conrad, James Joyce, Virginia Woolf, D.H. Lawrence, Elizabeth Bowen, Joyce Cary. (S)

**323 Approaches to Literature 3 cr.**

Studies various ways of analyzing a literary work, including historical, psychological, and formal approaches. Specific poems, plays, and novels are examined using different critical approaches. Required for English/American literature majors. Rec: jr st or cons inst. (F)

**325 Advanced Written and Oral Expression in French, German, Spanish 3 cr.**

Follows 225. Continues development of fluency through intensive practice

*continued*

## Literature and Language

### *continued*

and study of the spoken and written language. Stresses accurate use of grammatical structures. Interpretation of texts is used to develop sensitivity to differences in style, tone and levels of language from colloquial to formal. Helps develop greater confidence and skill. May be taken concurrently with 329. See section on retroactive credit. Rec: 225 or cons inst. (S)

### **331 Major American Prose Fiction 3 cr.**

A study of American prose fiction including examples of novels, short stories and satire. Major prose writers such as Melville, Twain, Fitzgerald, Hemingway, Wright and Bellow are considered. (S)

### **333 Literary Themes 3 cr.**

A single theme (such as fantasy, war, revolution, love, alienation) is explored through the literature of one or many nations. May include novels, short stories, poetry, and plays. Available in American, English, French, German, Spanish, or literature in translation. May be repeated for credit when a different theme is studied.

### **335 Literary Eras 3 cr.**

Studies the works of a number of writers in relation to their time, and includes poetry, prose and drama. Eras offered include the Middle Ages, the Renaissance, the Romantic, the Victorian, the Modern, and the Contemporary, and occasionally others. Available in American, English, French, German, Spanish, or literature in translation. May be repeated for credit when a different era is studied.

### **350 Major Foreign Drama 3 cr.**

A study of French, German, Spanish drama either by period or by theme. Conducted either in the foreign language or in English. Inquire about receiving retroactive credits for prior experience. (FO, SO)

### **351 Major Foreign Prose Fiction 3 cr.**

A study of French, German, Spanish short story and/or novel either by period or by theme. Conducted either in the foreign language or in English. Inquire about receiving retroactive credit for prior experience.

### **352 Major Foreign Poetry 3 cr.**

A study of French, German, Spanish poetry either by period or by theme. Conducted in the foreign language or in English. Inquire about the possibility of receiving retroactive credit for prior experience.

### **354 France Today 3 cr.**

Beginning with an examination of French history and traditional customs and value, this course proceeds to study as many aspects of contemporary French culture as possible, including rural and urban life, industry and commerce, art and music, etc. Rec: 554-202 or equivalent. (F)

### **356 Contemporary German Culture 3 cr.**

An introduction to the culture of the four German speaking countries (the Federal Republic of Germany, the German Democratic Republic, Austria, and Switzerland) and to German culture in the U.S. Emphasis is on the post-World War II era, with particular focus on West Germany. See 493-356. Rec: jr st or cons inst. (S)

### **358 Latin America Today 3 cr.**

Studies specific humanistic aspects of contemporary Latin American culture, including its history, art, literature, music, and value systems. The goal is to come to as complete an understanding as possible of the people of Latin America today. See 493-358. (FE)

### **359 The Americas Look at Each Other 3 cr.**

Through the study of Latin American writers and artists, this course examines the way the Latin American culture perceives our North American culture. The aim is to provide students with a new and increased awareness of their own cultural environment as well as that of Latin America. See 493-358. (SE)

### **431 Shakespeare 3 cr.**

The study of a representative selection of Shakespeare's plays, including comedies, tragedies, and histories. Required for English/American literature majors. (S)

### **434 Major British Writer(s) 3 cr.**

A study of one or more outstanding figures in British literature, such as Chaucer, Milton, Blake, Wordsworth, Conrad, Joyce, or Virginia Woolf. Important themes, techniques, and influences are emphasized.

### **435 Major American Writer(s) 3 cr.**

A study of one or more outstanding figures in American literature, such as Melville, Twain, Dickinson, Whitman, Frost, Hemingway, Fitzgerald, or Faulkner. Important themes, techniques, and influences are emphasized.

**478 Senior Distinction in Literature and Language 3 cr.** See page 113.

**483X Selected Topics 1-4 cr.** See page 113.

### **490 Seminar in Literature 3 cr.**

An intensive study of a major writer, literary movement, literary period, or influence. Extensive research in the chosen topic is required. Rec: jr st. (S)

**497 Internship in Literature and Language 3-12 cr.** See page 113.

**498 Independent Study 1-4 cr.** See page 113.

## 553 Academic Support Program

### **553-080 Applied Study Skills Lab: Introduction to Sociology**

A nondegree credit lab where students learn and practice study skills essential for success in Introduction to Sociology. Students learn and practice good note-taking skills as well as vocabulary development, study reading, and critical reading and film-viewing skills. Students are enabled to connect ideas learned in class to their own experiences. They practice reviewing and test-taking skills. P: concurrent enrollment in 900-202. (F,S)

### **553-082 Applied Study Skills Lab: Introduction to Human Development**

Students assess their current study habits and explore a variety of study skills techniques, practicing these skills in the context of the course, Introduction to Human Development. P: concurrent enrollment in 481-210. (F,S)

### **553-083 Applied Study Skills Lab: Introduction to Human Biology**

Students discover the processes and principles involved in extracting main ideas from textbooks and lectures, in taking effective notes, in preparing for exams, in selective remembering, and in approaching scientific terminology. Students will learn skills enabling them to deal with large quantities of material. P: concurrent enrollment in 478-102. (F,S)

### **553-084 Applied Study Skills Lab: Introduction to Environmental Science**

Students learn and practice a variety of note-taking, reading, study, and test-taking procedures designed to help them identify, interpret, remember, and apply scientific concepts and information. P: concurrent enrollment in 862-102. (F,S)

### **553-092 College Reading Skills 3 nondegree cr.**

Incorporates college level study skills with general reading improvement techniques. Emphasis on vocabulary building, comprehension improvement, reading rate and flexibility. Course format is a combination of class meetings and some individual laboratory work. No prerequisites. P-NC basis. (F,S)

### **553-093 Fundamentals of Writing 3 nondegree cr.**

Helps students master skills necessary for writing clear sentences and paragraphs. Students write often and gain the skills to revise what they have written. P-NC basis. Rec: for English ACT scores of 14 or lower. (F,S)

### **553-097 Efficient Reading 1 nondegree cr.**

Stresses both reading rate and attendant comprehension skills for the average reader. Format is a combination of class meetings and some individualized laboratory work. No prerequisites. P-NC basis. (F,S)

## 600 Mathematics

\*\*A prerequisite implies a satisfactory performance. In most mathematics courses, a grade of "C" is sufficient; in some a grade of "B" is advisable.

### 600-101 Intermediate Algebra 3 cr.

Preparation for 600-104, for students with a high school background of first-year algebra. 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. P: one year of high school algebra and ACT math score of 14 or higher. (F,S)

### 600-104 Elementary Functions: Algebra and Trigonometry 4 cr.

For the student whose mathematical background is inadequate for 600-202. 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. P: 600-101, or two years of high school algebra and ACT math score of 24 or higher. (F,S)

### 600-151 COBOL: A Business Data Processing Language 3 cr.

Introduction to COBOL, the predominant computer language for commercial applications. P: 600-101 or two years high school algebra and ACT math score of 14 or higher. (S)

### 600-155 Computers and Microcomputers 3 cr.

A course for nonmajors designed to develop an understanding of computer concepts, computer systems, use of computer software, and computer programming techniques. Examines the way in which those without extensive training in computer science use computers and microcomputers in the work setting. Students use existing software packages to gather, display, and interpret information. The programming language BASIC is taught. P: 600-101 or two years high school algebra and ACT math score of 14 or higher. (F,J,S)

### 600-201 Calculus for the Management and Social Sciences 3 cr.

The basic concepts and techniques of differential and integral calculus. Applications in the fields of accounting, economics, finance, and management are emphasized. Full credit is not given for both 600-201 and 202. The student who enrolls in 600-202 after receiving credit for 600-201 will receive one credit for 600-202. P: 600-101 or two years high school algebra and ACT math score of 24 or higher. (F,S)

### 600-202 Calculus and Analytic Geometry I 4 cr.

Differential and integral calculus of the elementary functions with associated analytic geometry; applications. P: 600-104 or 4 years high school math, including trigonometry, and ACT math score of 26 or higher. (F,S)

### 600-203 Calculus and Analytic Geometry II 4 cr.

Transcendental functions; techniques of integration; applications; sequences and series. P: 600-202. (F,S)

### 600-204 Calculator Calculus 1 cr.

Provides students with empirical experiences which illustrate the theory of Calculus I. Students are supplied with programmable calculators, trained to write and execute programs, and directed to conduct mathematical experiments. Laboratory sessions cover material from Calculus I, including limits, derivatives, the mean value theorem, graphing, integrals, etc. P: 600-202 or concurrent registration. (J)

### 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)

### 600-242 Discrete Mathematics 4 cr.

A first course on methodology associated with discrete mathematical structures. Fundamentals of enumeration, partitions, algebraic counting techniques, generating functions, recurrence relations, graph theory, and combinatorial designs. Selected special topics. P: 600-104 or four years

high school math, including trigonometry, and ACT math score of 26 or higher. (F,S)

### 600-255 FORTRAN: A Scientific Programming Language 2 cr.

A thorough 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. P: 600-202. (J)

### 600-256 Introduction to Computer Science I 4 cr.

Designed to develop an understanding of basic concepts of computer science. Topics include problem solving, algorithmic processes, characteristics and organization of computers, and programming in a higher level language using techniques of good programming style. Assignments include a number of applications in the physical, social, life, and management sciences. P: 600-101 or two years of high school algebra and ACT math score of 24 or higher. (F,S)

### 600-257 Introduction to Computer Science II 3 cr.

Continues the development of discipline in program design, style and expression, as well as debugging and testing begun in 600-256. Students are introduced to larger programming projects covering such topics as aspects of string processing, recursion, internal search/sort methods, simple data structures, machine organization, and assembly language. Algorithm analysis, documentation, use of subroutines and other techniques used in advanced programming projects are also studied. P: 600-256. (F,S)

### 600-260 Introductory Statistics 4 cr.

Descriptive and inferential statistics; frequency distributions; graphical techniques; measure of central tendency and of dispersion; probability distributions; large and small sample estimation and inference, regression, correlation, analysis of count data, analysis of variance. P: 600-101 or two years of high school algebra and ACT math score of 17 or higher; credit will not be granted for both 600-260 and 255-205. (F,S)

### 600-281 Conceptual Foundations of Elementary Mathematics I 3 cr.

Common threads running through the mathematics content of the elementary school are emphasized in this exploration of the foundations of arithmetic. The processes of abstraction, symbolic representation, notational manipulation and modeling will be explored in all arithmetic contexts. Significant features of the discipline of mathematics will be discussed. May not be taken on a pass/no credit basis. P: 600-101 or two years high school algebra and ACT math score of 24 or higher. (F)

### 600-282 Conceptual Foundations of Elementary Mathematics II 2 cr.

A continuation of Math 281, this course examines non-arithmetic mathematical topics of elementary school, including geometry, probability, statistics, algebra, and programming concepts. May not be taken on a pass/no credit basis. P: 600-101 or two years high school algebra and ACT math score of 24 or higher. (J,S)

### 600-283X Selected Topics 1-4 cr. See page 113.

### 600-298 Independent Study 1-4 cr. See page 113.

### 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: 600-203. (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. (FO)

### 600-311 Advanced Calculus 3 cr.

Jacobians; transformation of coordinates; functional dependence; constrained extreme and Lagrange multipliers; line, surface and volume integrals; scalar and vector fields; gradient, divergence, and curl; divergence

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## Mathematics

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theorem; Stokes' theorem. P: 600-209 and 320. (FO)

### 600-312 Real Analysis 3 cr.

Basic ideas of real analysis; sets and functions; topology of the real numbers; sequences and series of real numbers; limits of functions; the derivative; the Riemann integral; sequences and series of functions. P: 600-209 and 320. (SO)

### 600-320 Linear Algebra I 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. P: 600-202. (F,S)

### 600-321 Linear Algebra II 3 cr.

A continuation of 320. Positive-definite matrices, normal forms, the principal axis theorem, applications. P: 600-203 and 320. (SE)

### 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. Types of problems to be considered are: solutions of equations, factorization of polynomials, solutions of systems of equations, interpolation, curve fitting, differentiation, integration, and solutions of differential equations. In addition to writing computer programs to solve some of these problems, comparisons will be made among various techniques to determine errors involved in approximation schemes, advantages and disadvantages to applying a particular technique to a particular problem, and the unstable nature of some methods. P: 600-203, 600-320 or concurrent registration in 600-320 and FORTRAN ability. (SE)

### 600-351 Data Structures, Storage and Retrieval 3 cr.

An introduction to concepts involved in storage, retrieval, and processing of data for use in computer applications. Included are structures such as arrays, stacks, queues, linked lists, trees, and networks. Particular emphasis is placed on design of efficient algorithms that use these different structures for various processing needs. These include searching, sorting, evaluation of arithmetic expressions, construction of symbol tables, and memory management. P: 600-242 and 257. (F,S)

### 600-352 Computer Graphics 3 cr.

Basic techniques of computer graphics such as point and line plotting, clipping, and windowing are introduced and the use of graphics hardware is discussed. Students use and build graphics packages. P: 600-257. (S)

### 600-353 Computer Organization and Programming 3 cr.

An introduction to binary, octal, and hexadecimal number systems, and data representation. A study of assembly language programming, including actual programming exercises. Included is an overview of computer software and hardware components. Topics considered are assemblers, loaders, compilers, memory, microprogramming, monitoring, gates, adders, circuits, and applications of Boolean algebra to circuit analysis. P: 600-242 and 257. (F,S)

### 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: 600-202 and 320, or concurrent enrollment in 320. (FE)

### 600-357 Theory of Programming Languages 3 cr.

Several commonly used high-level programming languages will be compared and contrasted in this course. The advantages and disadvantages of compiling and interpreting will be discussed. Language design and syntax will be studied. Other topics include data types, variables, constants, binding of a variable, scope of a variable, and procedure data handling. P: 600-242 and 257. (F)

### 600-360 Theory of Probability 3 cr.

Probability as a mathematical system, with applications; basic probability theory; combinatorial analysis; distribution functions and probability laws; mean and variance of a probability law; expectation of a function with respect to a probability law; normal, Poisson, and related probability laws; random variables. P: 600-209. (FE)

### 600-361 Mathematical Statistics 3 cr.

Sample moments and their distributions; tests of hypotheses; point and interval estimation; regression and linear hypotheses; nonparametric methods; sequential methods. P: 600-320 and 360. (SE)

### 600-364 Biometrics 4 cr.

Emphasis on life-science problems. Analysis of variance techniques, linear regression, correlation analysis and nonparametric techniques; introduction to statistical computation. P: 600-260. (SO)

### 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. (FE)

### 600-416 Orthogonal Functions and Partial Differential Equations 3 cr.

Fourier series, Fourier transform; orthogonal functions; Legendre and other polynomial systems; Bessel functions; characteristic functions and values; Green's function; wave equation in one and more dimensions; D'Alembert's solution; separation of variable in various coordinate systems; Dirichlet problem; strings and membranes; heat flow; electricity flow. P: 600-209 and 305. (FE)

### 600-450 Theory of Algorithms 3 cr.

Introduction to design, analysis, and comparison of algorithms along with average and worst-case time complexities. Includes divide and conquer techniques, greedy method, dynamic programming, and graph searching. Applications to profit maximization with constraints (knapsack problem), job sequencing, matrix and bit string multiplications, task assigning, optimal tape storage, graph coloring, processor scheduling, traveling salesman problem, and others. A class of nonpolynomial time complexity problems called NP complete problems is also discussed along with algorithms to approximate solutions to these problems when the search for exact solutions is not feasible. P: 600-203 and 600-351. (FE)

### 600-451 Data Base Management Systems 3 cr.

A project-oriented course. Each student is responsible for designing and creating a real data base using the Data Definition Language contained in the computer's Extended Data Management System. The project is to include a program capable of entering information into the data base and extracting information to be output in report form. The project uses the same Data Definition Language and Data Base Manager calls that administrative programs use in the existing student and library data bases. The data base itself is a network type based on the CODASYL data base model. P: 600-351 and COBOL ability. (F)

### 600-452 Operating Systems 3 cr.

An introduction to operating systems, techniques, and philosophies behind management of computing resources. Topics include memory management (paging, real and virtual storage), processor management (scheduling and multiprocessing), process management (asynchronous processes, concurrent programming, deadlock), auxiliary storage management (scheduling, file structures, recovery, backups), and case studies of some popular current operating systems. P: 600-257; Rec: 600-351. (S)

### 600-454 Artificial Intelligence 3 cr.

A study of 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. A list processing language (LISP) is used. P: 600-351; Rec: 600-357. (FO)

**600-455 Microprocessors and Microcomputer Systems 3 cr.**

An integrated lecture/laboratory approach to digital electronics, micro-computer interfacing, and microcomputer programming. P: course in computer programming; Rec: background or prior course experience in electronics. (F)

**600-456 Advanced Topics in Microcomputing 3 cr.**

A lecture/laboratory course on the 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: 600-455. (JE)

**600-457 Compiler Theory 3 cr.**

A project-oriented course including software concepts, focused primarily on the theory of compilers. Students apply theory in a team project, either writing or substantially modifying a compiler. Includes formal language definition, dictionaries, symbol tables, text scanning, parsing, arithmetic expressions and Polish strings. P: 600-353 and 357. (SO)

**600-465 Business and Industrial Statistics 4 cr.**

Statistical methods commonly applied in business and industry. Topics covered are quality control, control charts and acceptance sampling; multiple regression, time series, smoothing and forecasting; index numbers. P: 600-260. (FO)

**600-478 Senior Distinction in Mathematics 3 cr.** See page 113.

**600-483X Selected Topics 1-4 cr.** See page 113.

**600-492 Special Topics in Mathematics 1-3 cr.**

This course brings together students and professors who have mutual interest in some topic not otherwise available among the usual mathematics offerings. Examples are: Number Theory, History of Mathematical Thought, Mathematical Logic, Combinatorics, Computer Graphics, Computer Architecture, Computer Software, Operating Systems, Data Management, Simulation and Modelling, Artificial Intelligence, Ecosystems Analysis and Prediction, Mathematical Political Science, Models of Economic Growth, Mathematical Models of Facilities Location, Mathematical Methods for the Life Sciences. P: jr st and cons inst.

**600-497 Internship in Mathematics 3-12 cr.** See page 113.

**600-498 Independent Study 1-4 cr.** See page 113.

Other courses applicable to mathematics:

226-315 Mechanics III 3 cr.

008-704 Discrete Multivariate Statistical Analysis 2 cr.

008-767 Statistical Design and Analysis of Experiments 4 cr.

008-768 Multivariate Statistical Analysis 4 cr.

**601 Academic Support Program-Mathematics**

**601-093 Arithmetic Review 1 non-degree cr.**

A review of the arithmetical concepts needed for 601-094. Topics include operations with decimals, percents, fractions, and integers, with special emphasis upon practical applications. It will be taught in a modular form through lectures and tutorial sessions. No prerequisites. P-NC basis. (J)

**601-094 Elementary Algebra 3 non-degree cr.**

Intended as a preparation for Math 101. Topics include binary operations, variable expressions, factoring, equations of higher degree, fractional equations, absolute value, and operations with rational expressions. Offered on pass/no-credit basis except by petition. No prerequisites. Required for students with ACT math score of 13 or lower. (F,S)

**644 Military Science**

**644-123 Exercise Leadership I 1 cr.** See 742-123.

**644-211 Introduction to Military Science I (MS 11) 2 cr.**

(Pre-Professional Course) Introduces first year students to the ROTC program, an overview of Army life, the Department of Defense and the Army's tasks and roles in national defense and community activities. Provides fundamental knowledge and applicable skills in map reading, radio and telephone procedures, CPR, and orienteering through practical application in the classroom and field. Includes a summary of Army branches and their responsibilities and roles as part of the Army team. (F)

**644-212 Introduction to Leadership and Land Navigation II (MS 12) 2 cr.**

(Pre-Professional Course) Expands upon experiences in MSH 11. Provides a foundation in exploring and understanding formal leadership and management theory and how it applies in military and civilian environments. A continuation of fundamental knowledge and skill in first aid, basic marksmanship training, and customs and courtesies. Provides a review of the Army's role in national defense and community service and an overview of the specialized organizations, units, skills, and training contributing to those services. (S)

**644-221 Military History Studies (MS 21) 2 cr.**

(Pre-Professional Course) Studies of U.S. military history, tracing the origin and development of military organization, including theories and practices of war (the evolutionary nature of war), from the American Civil War, World Wars I and II, the Korean Conflict, and the U.S. Army in Vietnam, to the contemporary military realities. Continued practical development of leadership skills through practical exercises. (S)

**644-222 Basic Leadership and Management (MS 22) 2 cr.**

(Pre-Professional Course) Development of leadership skills through introduction to military techniques of training, training management and instruction on the concept of performance-oriented training; review of fundamentals of leadership; study of styles of leadership, the setting and the problems through the use of case studies and film clips which portray the development of problems in military leadership. Leadership challenges and problem-solving techniques in the military are compared to nonmilitary situations. (F)

**644-223 Exercise Leadership II 1 cr.**

Participation in the formal calisthenics program is enhanced by personal assessment and design of exercise program. Students have leadership opportunities and learn elements of counseling for personal exercise involvement. Information on nutrition, stress control, environmental considerations, and the like, are included. The physical readiness test is administered. See 742-223. P: 742-123. (F,S)

**644-431 Small Unit Tactics (MS 31) 2 cr.**

(Professional Course) Introduction to squad and platoon level command problems and tactics, Army communication and preparation for advanced ROTC camp by review of basic military skills and subjects, advanced land navigation and orienteering, completion of precamp preparation. Continued professional development of leadership skills at the squad and platoon level through the use of unit level training techniques. P: levels one and two or basic camp or prior military service. (F)

**644-432 Professional Ethics and Management (MS 32) 2 cr.**

(Professional Course) Introduction to the professional military science (ROTC) program. Introduces juniors in military science to basic concepts of military management with an emphasis on integrating face-to-face leadership skills with management techniques. Students learn organizational theory and staff procedures and participate in a series of practical exercises designed to provide an opportunity to apply techniques of organizational decision making and communication. P: 644-211, 212, 221, 222 or equivalent military experience or cons inst. (S)

## Military Science

continued

### 644-441 Contemporary Military Seminar (MS 41) 2 cr.

(Professional Course) Introduces ROTC seniors to concepts of task organization, combined arms teamwork, basic company level tactics, and tactical planning, and combat support and combat service support aspects of military operations. Emphasizes development of a working knowledge of the technical aspects of management in the Army's unit level organization. Incorporates the fundamentals of military law. P: 644-431, 432. (F)

### 644-442 Military Management Seminar (MS 42) 2 cr.

(Professional Course) Focuses on the role of the Second Lieutenant in a military line organization and on the Army's expectations regarding his or her commission, conduct, behavior, duty performance and public image. Introduction to military law and military justice; obligations and responsibilities of an officer in both line and staff environments; active duty considerations affecting an officer and his or her family, including military movements, compensation and financial management, and career progression. P: 644-431, 432, 441. (S)

## 678 Natural and Applied Science

### 678-100 Scientific and Technical Based Problem Solving 3 cr.

Scientific literacy, an understanding of the basic assumptions, values, and objectives of the natural sciences, is a general prerequisite to learning the knowledge and following the developments of science in our society. This course seeks to enhance the science literacy of the nonscience student through a focus on the nature of and values implicit in scientific reasoning and inquiry. Parallels and contrasts between our common logical reasoning skill heritage and those of science are studied. Criteria for determining the levels of goodness, worth and beauty of scientific reasoning and inquiry are examined. Readings from the areas of puzzle solving, science investigation histories and the nature of matter and energy provide the basis for those studies. (FE)

### 678-102 Introduction to Environmental Sciences 3 cr.

The interrelationships between people and the various parts of the biophysical environment including the atmosphere, water, rock and soil, and biotic communities. Study of both the natural state and current problems of pollution and mismanagement. Scientific principles facilitate understanding of environmental processes. The social and personal consequences of environmental processes and possible solutions to current environmental problems. Designed for nonscience majors. (F,J,S)

### 678-105 Elements of Descriptive Geometry 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. P: 600-101. (F,S)

### 678-125 Introduction to Horticulture 3 cr.

Introduction to techniques of intensive plant culture. Biological characteristics of horticultural plants, identification of home and commercial plant species, plant propagation, physiology and development. Examination of selected aspects of horticultural industry including vegetables, ornamentals, orchards, and greenhouse systems. Landscape techniques, home gardens, and plants in the home. Local field trip. (F)

### 678-141 Elementary Astronomy 3 cr.

A study of the solar system, stars, galaxies, and universe. (F,S)

### 678-142 COSMOS, The Societal Implications of the Study of the Universe 3 cr.

Based on the television series, *Cosmos*, produced by Dr. Carl Sagan. The course examines the economic, educational, social and cultural impact of space exploration and of our knowledge of the universe. Students identify the major periods in human history which have to do with development of our knowledge of the *Cosmos*, examine the impact of the various scientific developments such as the Copernican heliocentric model and Darwinian

evolution. The television series also leads students to examine the way in which current human activity is bringing about change in environmental conditions and the implications of this activity for the future of the planet as a human habitat and for activity of humans on other heavenly bodies in the solar system. P: 678-141 or 754-103 or 201 or 225-111. (J)

### 678-162 Technology and Society 3 cr.

What are the effects and implications of technology on our society? How can we find out, and what can we do about it? This course considers the general problem of technology. With that as a background, some possible solutions, including alternate technologies and technology assessment, are considered. (F)

### 678-188 Issues in Biological Conservation 3 cr.

Wild animals and plants have played a central role in human history. Today, these organisms still provide us with key ecological, economic, recreational and aesthetic benefits; yet conflicts between humans and natural populations are accelerating. The course explores current issues in the use and protection of our living environment including topics such as endangered species preservation, hunting and fishing, animal rights, environmental education, biotechnology and land use help, which help to focus a general examination of human values and attitudes toward nature. P: 678-102 or 204-203. (F)

### 678-190 Emergence of Western Technology 3 cr.

Since about 1500 the technological balance of power has shifted dramatically from China, India and the Islamic world to western Europe and later to North America. This course traces the history of this transition and examines some of the factors which may have contributed to it, as well as discusses the implications and future of technology. P: 296-202 or 225-111 or 754-103 or 225-108 or 678-102 or 141. (S)

### 678-260 Energy and Society 3 cr.

A course concentrating on the issues relating energy and society rather than on energy technology. The technology studied is at a level compatible with a minimum mathematical preparation by the student. Topics covered are global energy flows, sources of energy, energy related problems, energy policy, energy conservation, energy growth, future scenarios. P: 678-102 or 754-103 or 225-111. (F,S)

### 678-281 Student-Led Courses 1-4 cr. See page 113.

### 678-283X Selected Topics 1-4 cr. See page 113.

### 678-284 Husbandry of the Land 3 cr.

Concepts of and attitudes concerning land and husbandry; historical aspects of our relationship with land; agricultural development in the U.S.; land ethics as related to land economics; conflicting demands on the land; state and national land use policies; land for the future. (F,J)

### 678-286 Forest Vegetation of Wisconsin 3 cr.

Historical (native American, settler, logger) and contemporary (browsing, herbicide, urbanization) modification of Wisconsin forest vegetation. Biology of individual species and community dynamics (competition, nutrient cycling). Current management practices (clear-cutting, genetic selection, energy plantations, complete tree utilization) and problems (pest control, recreational impact, preservation of natural remnants). P: 678-102 or 204-202. (S)

### 678-295 Water Microbiology 2 cr.

A course acquainting the professional allies of microbiology—the medically trained, the engineer, the urban planner, the conservationist—with the function of microbes in water. This includes the health aspects as well as their cleansing effects. (J)

### 678-298 Independent Study 1-4 cr. See page 113.

### 678-302 Principles of Ecology 3 cr.

The biological principles that govern the interactions of plants and animals in their physical and biotic environments. Concepts of succession, productivity, energy flows, and nutrient cycling in ecosystems. Physiological

and behavioral adaptations of individuals to their environment. People as a factor in the ecosystems and concepts underlying strategies used in the management of natural resources. Field trip required. P: 204-203. (F,S)

**678-303 Conservation of Natural Resources 3 cr.**

Principles of conservation, including the nature and extent of our natural resources; exploitation and conservation of our resource system; and the chemical, physical and biological processes occurring in nature which affect and influence our conservation and management practices. The politics and economics of resource conservation. P: 678-102 or 204-203 or 296-202. (F,S)

**678-307 Ecology of Fire 2 cr.**

The use of fire to modify vegetation by native peoples in the past and by contemporary landscape managers. Examples of landscapes considered are grasslands, chaparral, southern pine forests and northern aspen forests. Causes and control of wildfires are discussed, as well as their impact on air pollution and soil conditions. Case histories of prescribed burning, e. g., blueberry production, big game management and bird habitat preservation are analyzed. (JE)

**678-309 Ecology and Management of Endangered Species 2 cr.**

The course covers the population dynamics, niche relations and functional role of species, including those endangered, in ecosystems. Comparisons are made of mechanisms whereby species became extinct in the past and are becoming extinct today. A review is made of management tools available for species preservation, with an assessment of specific successes and failures. Management alternatives for species preservation, considering economic, political and biological limitations are evaluated. P: 204-203. (JO)

**678-313 Mechanics I 3 cr.**

Elementary vector operations, resultant of two- and three-dimensional force systems, centroids, hydrostatic forces, equilibrium of trusses and frames, displacement, velocity and acceleration components, kinematics of particles using rectilinear and curvilinear coordinates, relative motion. P: 600-202. (F)

**678-314 Mechanics II 3 cr.**

Laws of friction and impending motion, moments of inertia, virtual work, stability, translation, rotation 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: 678-313. (S)

**315 Classical Mechanics 3 cr.**

See 754-315.

**678-316 Mechanics of Materials 3 cr.**

Stress and strain, torsion, bending of beams, shearing stresses in beams, compound stresses, principal stresses, deflection of beams, statically indeterminate members, columns. P: 678-313. (S)

**678-318 Industrial Pollution Control Techniques 2 cr.**

This course first explains general air and water pollution control methods, including the nature of the major existing pollutants and a brief overview of the present governmental regulations. Then several selected types of industries (for example, paper and pulp making, cement manufacture, iron and steel processing, breweries, foundries, chemical process industries...) are discussed in detail; the general manufacturing process, how and where the major pollution arises, and the specific techniques used in that industry to control these emissions. P: 225-212. (FO)

**678-319 Industrial Pollution Control Field Trips 1 cr.**

Optional field course to accompany 862-318. Field trips are scheduled to a variety of local industries including a paper mill, foundry, MSD, etc. In addition, each student is required to prepare a research paper. P: Concurrent registration in 678-318. (FO)

**678-320 The Soil Environment 3 cr.**

The physical, chemical, and biological properties of soil; formation, clas-

sification, and distribution of major soil orders; influence of soil on agricultural, engineering, urban, and water systems. Field trip. P: 225-108 or 212; Rec: 296-202. (S)

**678-321 The Soil Environment Laboratory 1 cr.**

Laboratory and field study of physical, chemical, and biological properties of soils. Rec: credit in 678-284 or 678-320 or concurrent registration in 678-320. (S)

**678-326 Mechanics of Materials Laboratory 2 cr.**

Tensile and compression tests of wood, steel, aluminum and cast iron. Torsion, creep, beam stress and deflection. Combined stress, columns. Concrete cylinder and beam tests. P: Concurrent registration in 678-316. (S)

**678-330 Descriptive Hydrology 3 cr.**

Qualitative study of the principle elements of the water cycle including precipitation, runoff, infiltration, evapotranspiration and ground water. Specific applications of hydrologic principles to water resource projects such as low flow augmentation, flow reregulation, irrigation, public and industrial water supply and flood control. Full graduation credit is not granted for both 678-330 and 678-430. P: 296-202. (F)

**678-331 Oceanography 3 cr.**

Major disciplines in oceanography including the nature and extent of the marine environment, the physical and chemical properties of sea water, mass movements of oceanic water, marine geology, plant and animal life in the sea. Environmental problems associated with the exploitation of the marine environment and the Great Lakes. Field trip. P: 296-202. (SE)

**678-334 Solid Waste Management 3 cr.**

A study of the nature of the solid waste problem. Generation, collection, processing, and disposal of solid wastes is studied. Special attention is given to the recovery of material and energy resources from solid wastes. Guest speakers and field trips contribute to an understanding of local and regional solid waste problems and solutions. P: jr sr; Rec: 225-211, 296-202. (FE)

**678-335 Water and Waste Water Treatment 3 cr.**

Fundamentals of 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. (SE)

**678-342 Environmental Geology 3 cr.**

Applications of fundamental geologic concepts in the interpretation of environmental problems resulting from our exploitation of crustal resources. The environmental impact of construction, mining, waste disposal, natural geologic hazards, and the tapping of crustal energy reservoirs (fossil fuels, geothermal heat). Field trips. P: 296-202. (F)

**678-350 Meteorology 3 cr.**

Examines the composition and structure of the atmosphere; surveys atmospheric thermodynamics, dynamics and kinematics of air motion and radiation in the atmosphere. P: 600-202; Rec: 754-202. (FO)

**678-351 Synoptic Meteorology Laboratory 1 cr.**

Application of principles presented in 678-350 to actual synoptic-scale weather situations. Techniques of weather analysis and forecasting. P: 678-350 or concurrent registration. (FO)

**678-363 Plants and Forest Pathology 3 cr.**

Studies of important diseases of forest, shade, and orchard trees and diseases of representative economic plants; fungus deterioration in wood storage and their economic importance with methods of control; field trips. P: 204-203. (F)

**678-366 Integrated Pest Management 3 cr.**

The management of pest plant and animal populations employing an integrated combination of control methods emphasizing maximum de-

*continued*

## Natural and Applied Science

*continued*

pendency upon natural regulators of populations. Various control methods are analyzed, e.g., chemicals, disease agents, predators, parasites, hormones, breeding for resistance, habitat modification. Case histories of success and failure with integrated pest management programs for weeds, insects, fish, rodents, predators, and ungulates are discussed, as well as obstacles and incentives in the future for integrated pest management. P: 204-203. (SO)

### **678-378 Chemical Ecology 2 cr.**

Selected topics concerning the chemical interactions of organisms and the environment. Topics such as chemical communications, chemical defense mechanisms and sex attractants are covered. The course is in basic lecture format and each student prepares a paper on an aspect of chemical ecology which is of interest to him or her. P: cons inst; Rec: 225-300 or 303. (JO)

### **678-380 Radiobiology 3 cr.**

An introduction to the use of radionuclides (C-14, P-32, etc.) and sources of ionizing radiation in biology, medicine and environmental sciences. Emphasis is on 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 radionuclides in most tracer experiments. Credit is not given for both this course and 225-418. P: 225-211 and 204-202. (JE)

### **678-382 River Basins in Transition 3 cr.**

Use of the river drainage basin as an important element in planning human activities compatible with existing local natural resources is introduced. A review of the natural and human history in one or more river basins in the U.S. is presented with an emphasis on the interrelationship between the natural resources such as water, land, plants and animals and human activities such as agriculture, industry, transportation and pollution. Elements of hydrology, geomorphology and socio-economic geography are used in the review. After completing a focus on a United States river basin, an integrated global perspective is provided by including land forms, human populations, land use, economic development, climate and other important features of selected river basins throughout the world. The case study approach is used on a comparative basis to analyze and to synthesize natural science and social science data available both domestically and in other countries. Value questions associated with basin resource use such as land ownership vs. land stewardship and upstream vs. downstream water rights in arid land are included. Occasional field trips and guest lecturers are used. P: jr st. (F)

### **678-383 River Basins in Other Regions 3 cr.**

A case study investigation of interaction between human activity and natural resources in river basins in other regions. Analyzing and synthesizing natural science, social science, and cultural data. Issues of basin resource use (such as land tenure vs. land stewardship and upstream vs. downstream water rights in arid land) in agricultural, industrial, commercial, residential, and preservational contexts are examined. P: jr st; Rec: 678-382 or 296-202. (J)

### **678-384 The Environment's Response to Human Settlement 3 cr.**

Covers all facets of human settlement and resettlement as they apply to environmental impact and maintaining a steady state. The effects of initial settlement on the land and how the environment responds, and the issues and values that produce varying effects are discussed. Techniques of environmental protection for present day settlement and resettlement are covered. Each student selects a project (preferably in the Kewaunee Watershed) involving some aspect of the environment. The resulting research is reported in a research paper. (S)

### **678-385 The Environment's Response to Human Settlement Laboratory 1 cr.**

Each student manages an environmental project or a portion of a project if there is team effort, collects and analyzes the data and prepares a research paper. The paper should include literature research, project planning, data

collection, discussion of results and analysis of impact of the research. The project site will preferably be in the Kewaunee Watershed, Wisconsin. This project is an extension of the project initiated in 678-384. P: 678-384 or concurrent registration. (S)

### **678-401 Stream Ecology 3 cr.**

A study of the structure and function of stream ecosystems. Functional relationships of feeding groups, nutrient spiralling and organic matter processing are examined as responses to stream morphology, stream order and watershed conditions. Extensive field sampling of northeastern Wisconsin streams. P: 204-203. (FE)

### **678-403 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 the aquatic environment. P: 204-203 and 225-211. (SE)

### **678-415 Solar and Alternate Energy Systems 3 cr.**

A study of alternate energy systems which may be the important energy sources in the future such as solar, wind, biomass, fusion, ocean thermal, fuel cells and magnetohydrodynamics. P: 754-104 or 202. (SO)

### **678-419 Industrial Chemistry 3 cr.**

Basic concepts of applied thermodynamics, fluid mechanics, heat transfer, reactor design, and mass transfer are introduced and discussed with emphasis on their practical application. Field trips to local industries are required. P: 225-320. (SO)

### **678-421 Soils and Geology of Wisconsin Field Trip 2 cr.**

An intensive three-day field study tour of the properties, origins, and uses of major soils and landscapes of Wisconsin. This tour is offered in cooperation with UW-Madison departments of Soil Science and Geography. Pre-tour lectures at UWGB on Tuesday and Wednesday following Labor Day; depart for Madison Thursday evening. Tour leaves from Madison at 5:30 a.m. Friday with overnight stops at River Falls and Wausau and returns Sunday night to Madison. Two post-tour discussion periods at UWGB during September. Trip log and a paper on a topic related to soils and landscapes required before end of semester. Cost of tour bus, guide book, meals and lodging (3 nights) borne by student. Approximate cost in 1981 was \$100. Deposit required. Enrollment is limited. See T. H. McIntosh for tour registration form. P: 296-202. (F)

### **678-430 Quantitative Hydrology 3 cr.**

Quantitative oriented study of the water cycle including precipitation, runoff, infiltration, evapotranspiration and ground water. Numerical procedures for various water resource developments including hydrograph prediction in both urban and rural areas, reservoir and streamflow routing and hydrologic uncertainty. Full graduation credit is not granted for both 678-330 and 678-430. P: 600-202, 296-202. (SO)

### **678-434 Water Chemistry 4 cr.**

The physical, chemical, and biological factors that alter the composition of surface and ground water. Field and laboratory analysis techniques. Field trip. P: 225-311. (F)

### **678-450 Air Pollution Chemistry and Meteorology 3 cr.**

Chemical reactions and transport phenomena in the unpolluted and polluted atmosphere with emphasis upon dispersal processes and control. P: 225-212. (FO)

### **678-454 Remote Sensing of the Environment by Satellite 3 cr.**

Large area, small scale analysis of earth surface features by satellite imagery and data. Major emphasis is on use of LANDSAT (NASA Earth Resources Satellite). Hands-on experience in manual interpretation of multispectral images with respect to vegetation, geology, soils, water resources and land use. Introduction to computer-assisted analysis. Overview of other satellite systems including weather, passive and active microwave (radar) and thermal infrared. Fundamentals of the electromagnetic spectrum, sensors, and data processing systems. Public access to data

and imagery. P: 296-202 or 416-250. See 834-454. (S)

**678-460 Resource Management Strategy 3 cr.**

Applications of principles of system analysis to designing resource management systems and to developing strategies for maintaining optimum environmental utilities. Decision models and the role of economic systems in resource management. P: sr st; Rec: some background in economics or conservation. (S)

**678-466 Vegetation Management 3 cr.**

An analysis of current practices in managing U.S. vegetation, including establishment, maintenance, control and conversion. An assessment of management tools, such as cutting, grazing, chemical spraying, flooding and burning. Experience with and potential for vegetation management on the UWGB campus is observed and discussed, e.g. prairie and pond establishment, tree and shrub control, erosion control, conversion of forest to park and old field to forest, maintenance of lawns, golf greens and fence rows. The various practices and tools are evaluated in regard to their effectiveness, economic cost and environmental impact. P: 204-203. (F)

**678-475 Ecological Dynamics 4 cr.**

An advanced course exploring the key forces within ecological systems and the relevance of these forces to current ecological problems. Ecological dynamics are considered at four levels: evolutionary ecology, population ecology, community ecology, and systems ecology. The central theme uniting these topics is the interaction between organisms and their biological and physical environments. Practical applications of lecture topics are demonstrated by field trips, computer simulations, and lab exercises. P: 600-260 and 678-302; Rec: 204-303 and 600-203. (S)

**678-481 Student Led Courses 1-4 cr.** See page 113.

**678-483X Selected Topics in Natural and Applied Science 1-4 cr.** See page 113.

**678-484 Senior Honors Project 1-3 cr.** See page 113.

**678-497 Internship in Natural and Applied Science 3-12 cr.** See page 113.

**678-498 Independent Study 1-4 cr.** See page 113.

## 689 Nursing

**689-215 Here's to Your Health 3 cr.**

Students will learn to assume moral, ethic, and personal responsibility in self health enhancement. The course is structured to provide theoretical information about health and wellness with experiential exercises to heighten awareness of one's own values, attitudes, and abilities toward the goal of developing potential for one's own health. (F)

**689-315 Health Assessment of the Adult 3 cr.**

Focuses on the components of the health history; basic skills, including instrumentation, of a physical examination; and communication skills, verbal and written, pertinent to both. The intent is to identify and describe the range of normals from obvious abnormal conditions and make a judgment about health status. The course contributes to students' ability to gather comprehensive assessment data. P: registered nurse. (F,S)

**689-329 Computer Applications in Nursing 3 cr.**

Develops a beginning understanding of computer technology and how this technology can be used to manage information in nursing practice, research administration, and education. Also explores the impact of computer technology on nursing and health care industry and the role of the professional nurse in this context. P: registered nurse; Rec: 600-260 or 255-205. (F,S)

**689-411 Theoretical Foundations in Nursing 2 cr.**

Comparative study of selected conceptual models of nursing to help with understanding current practice and educational trends, curriculum design and accreditation process. Particular emphasis on professional roles, theo-

retical frames of reference, further development of a personal philosophy of nursing and identification of professional learning needs and plans to meet those needs. P: R.N. (F,S)

**689-415 Adaptation in Health and Illness 4 cr.**

Focuses on theory and application of the Adaptation Model with well and ill clients, emphasizing care of the elderly. Family and legal aspects are included. The course incorporates the steps of the nursing process. The impact of personal and professional values in decision making regarding nursing care is explored. Clinical learning experiences are provided to help demonstrate use of the Adaptation Model. P: matriculation to B.S.N. program; 689-315, 411 or concurrent registration. (F,S)

**689-419 Adaptive Parent-Child Health 4 cr.**

Addresses the adaptation experienced by a family when a child enters and develops within the system. The child's level of wellness and the effect on the family are explored. New care developments that may influence the family's adaptation are examined and applied in differing levels of health settings. P: matriculated in B.S.N. program; 689-315, 411, 415. (S)

**689-425 Adaptation to Acute and Chronic Health Problems 4 cr.**

The Adaptation Model and specific nursing competencies applied to the care of middle aged clients who are in states of ineffective adaptation due to a variety of pathophysiologic conditions of an acute or chronic nature. Special emphasis on the nature and scope of health education. Direction of study and clinical area individually negotiated with the instructor. P: matriculation to B.S.N. program; speech course; 689-315, 411 and 415. (F,S)

**689-431 Nursing Management 3 cr.**

Use of management theories, models and processes applied to the care of clients and in supervision of other health care personnel. Examines skills and strategies used in nursing management and administration. Examines some of the major concepts related to management such as organizational structure, health care team, role responsibilities, role conflicts, labor relations, budgeting, decision making, assertiveness, leadership styles, group process and performance appraisal. Apply pertinent concepts to an area of nursing practice. P: matriculation to B.S.N. program; speech course; 689-315, 411, and 415. (F,S)

**689-435 Nursing Research 3 cr.**

An introduction to the basic principles of research theory and methodology with the goal of understanding the research process and attaining the ability to critique and apply nursing research to practice. The role of the nurse as a nurse researcher is explored. The course introduces students to the research process through individual selection of a health-related problem, initial search of the literature, statement of hypothesis and proposed methodology to be used. P: matriculation to B.S.N. program; 600-260 or 255-205; 689-315, 411, 415. (F,S)

**689-441 Community Health Nursing 6 cr.**

Combines theory and clinical practice. The focus is on individuals, families, aggregates, and communities through the use of the Roy Adaptation Model and the nursing process with an emphasis on the primary, secondary, and tertiary levels of prevention. P: matriculation to B.S.N. program; 689-315, 411, 415. (F,S)

**689-451 Advanced Nursing Concepts II 4 cr.**

Synthesis of knowledge, skills and attitudes in the utilization of the adaptation framework are promoted. Students are provided with the unique opportunity to explore interests intellectually and clinically and apply strengths of their choice. Special emphasis is given to the nature of professionalism and the professional role; the autonomous role; the expanding role of the nurse; ethical issues in nursing; economic, legal and political, and social forces on nursing; the purpose and value of professional organizations. P: matriculation to B.S.N. program; 689-315, 411, 415, 419, 425; six credits upper-level electives supporting career goal. (F,S)

**689-478 Senior Distinction in Nursing 3 cr.** See page 113.

## Music

### 705 Music

#### 705-101 Basic Musicianship 3 cr.

Musical notation, scale and chord structure with reference to the keyboard; developing skills in sight singing, ear training, and rhythmic and melodic dictation. (F)

#### 705-115 Ear Training and Sight Singing 1 cr.

Concentrated drill in all aspects of musicianship. Emphasis on sight singing and aural perception in intervals, melodies, chords, and rhythms. To be taken concurrently with 705-151. (F)

#### 705-116 Ear Training and Sight Singing 1 cr.

Continued drill in all areas of musicianship. Emphasis on sight singing in more than one part, on aural perception of more complex melodies and rhythms, and on identification of chords in harmonic context. To be taken concurrently with 705-152. P: 705-115. (S)

#### 705-151, 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. Students planning a music major should enroll concurrently in 705-115 or 116. P for 151: 705-101 or background in music. (F); P for 152: 705-151. (S)

#### 705-241 Jazz Improvisation 3 cr.

Lecture and laboratory work in music improvisation skills. Lectures on notation and function of chords, chord symbols, scales and rhythms. Laboratory work in selected record listening and actual playing sessions. Rec: basic background in music reading and playing.

#### 705-251 Literature and Styles in Music I 4 cr.

Involves a historical and theoretical survey of music literature and musical style from antiquity to 1700. Music and musical attitudes are also viewed in the perspective of other arts as well as in relation to their social and cultural milieu. Related ear training and sight singing skills are developed and students also do some "composing" in period styles. P: 705-152. (F)

#### 705-252 Literature and Styles in Music II 4 cr.

Involves a historical and theoretical examination of music literature and musical style in the 18th century. Music and musical attitudes are also viewed in the perspective of other arts as well as in relation to their social and cultural milieu. Related ear training and sight singing skills are developed and students also do some "composing" in period styles. P: 705-251. (S)

#### 705-283X Selected Topics 1-4 cr. See page 113.

#### 705-298 Independent Study 1-4 cr. See page 113.

#### 705-301 Applied Music Pedagogy 1 cr.

Individual observation of private applied lessons given by UWGB faculty instructors, followed by a conference. Concurrently, the student will teach one lower-level noncredit student in the Extension/Outreach program, or one student from the String Tech class, with periodic observations by the UWGB instructor. P: applied study through 200 level. (F,S)

#### 705-315 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: 705-252.

#### 705-316 Instrumental Arranging 3 cr.

Arranging, adapting, and creating scores for small wind ensembles, as well as full band. Includes an original composition to be performed by the concert band. P: 705-252. (S)

#### 705-318 Choral Literature 2 cr.

Analysis of large choral masterpieces from Schuetz to the present. A comparative study of musical styles. Interpretive practices, and performance problems inherent in extended choral works and the vocal and instrumental resources necessary to their performance. Rec: jr st. (SE)

150

#### 705-325 Diction for the Voice: German 1 cr.

Designed for the voice student to facilitate acquiring skills needed to sing in German. Students are introduced to the International Phonetic Alphabet as a tool for pronunciation. Upon completion of the course, it is expected that students will have the skills to function as a singer in the language. P: 707-105; Rec: concurrent enrollment in applied voice. (SO)

#### 705-326 Diction for the Voice: French 1 cr.

Designed for the voice student to facilitate acquiring skills needed to sing in French. Students are introduced to the International Phonetic Alphabet as a tool for pronunciation. Upon completion of the course, it is expected that students will have the skills to function as a singer in the language. P: 707-105; Rec: concurrent enrollment in applied voice. (SE)

#### 705-327 Diction for the Voice: Italian 1 cr.

Designed for the voice student to facilitate acquiring skills needed to sing in Italian. Students are introduced to the International Phonetic Alphabet as a tool for pronunciation. Upon completion of the course, it is expected that students will have the skills to function as a singer in the language. P: 707-105; Rec: concurrent enrollment in applied voice.

#### 705-331 Choral Conducting 3 cr.

Detailed study of conducting techniques; emphasis on practical application to choral organizations. Rec: jr st. (F)

#### 705-332 Instrumental Conducting 3 cr.

Detailed study of conducting techniques; emphasis on practical application to the full score and instrumental organizations. Rec: jr st. (F)

#### 705-341 Woodwind Techniques 2 cr.

Lecture and laboratory experience in the performance of woodwind instruments including flute, oboe, bassoon, clarinet, and saxophone. Requirements are performance proficiencies on all instruments and completion of a reference syllabus. Rec: jr st. (SO)

#### 705-342 Brass Techniques 2 cr.

Lecture and laboratory experience in the performance of brass instruments including trumpet, French horn, trombone, baritone, and tuba. Requirements are performance proficiencies on all instruments and completion of a reference syllabus. Rec: jr st. (FO)

#### 705-343 String Techniques 2 cr.

Lecture and laboratory experience in the performances of string instruments including violin, viola, violoncello and string bass. Requirements are performance proficiencies of all instruments and completion of a reference syllabus. Rec: jr st. (F)

#### 705-344 Choral Techniques 2 cr.

A course addressed to the problems of conductors of school choirs and choruses, and to students who wish to improve their understanding of the art of choral singing. Its design and content are intended to deal with the principles, techniques and methods of choral conducting. Areas of particular concern are: tone, diction, rehearsal techniques, planning and organization. Rec: jr st. (SO)

#### 705-345 Percussion Techniques 2 cr.

Lecture and laboratory experience in the performance of percussion instruments including snare drum, tympani, and accessories. Requirements are performance proficiencies on all instruments and completion of a reference syllabus. Rec: jr st. (SE)

#### 705-346, 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: 707-042 or audition. (F); P for 347: 705-346. (S)

#### 705-351 Literature and Styles in Music III 4 cr.

Involves a historical and theoretical examination of music literature and musical style in the 19th century. Music and musical attitudes are also viewed in the perspective of other arts as well as in relation to their social and cultural milieu. Related ear training and sight singing skills are de-

veloped and students also do some "composing" in the Romantic style. P: 705-252. (F)

#### 705-352 Literature and Styles in Music IV 4 cr.

Involves a historical and theoretical examination of music literature and musical style in the 20th century. Music and musical attitudes are also viewed in the perspective of other arts as well as in relation to their social and cultural milieu. Related ear training and sight singing skills are developed and students also do some "composing" in 20th century styles. P: 705-351. (S)

#### 705-411, 412 Composition 3, 3 cr.

Exercises and original compositions in media from solo to quintet, in forms from binary to sonatina, etc., depending on the needs of the individual students. Rec for 411: 705-352. (F); P: 705-411 and cons inst. (S)

#### 705-417 Jazz Arranging 2-3 cr.

Acquaints students with the musical knowledge necessary to write an artistic jazz arrangement. P: four semesters of music theory or equivalent background. Rec: 705-252.

#### 705-423 Seminar in Music Literature 3 cr.

Studies in selected areas of music literature. Emphasis is on music for specific media, such as chamber music, opera, music for keyboard, etc., or on works of a single composer. The course may deal with more than one subject area during the semester. P: 705-252.

#### 705-431 Jazz Ensemble Techniques 3 cr.

Seminar lecture and laboratory experiences in procedures for rehearsing and teaching the jazz ensemble. Included will be a daily playing experience in a jazz ensemble, writing an arrangement for the jazz ensemble with clinics and lectures in jazz theory, arranging, improvisation, piano, bass, guitar, drums, trumpet, trombones and saxophone. During the second week, some time will be devoted to watching guest directors for the UWGB summer jazz camp work with their ensembles. Rec: jr st.

705-483X Selected Topics 1-4 cr. See page 113.

705-497 Internship in Music 3-12 cr. See page 113.

705-498 Independent Study 1-4 cr. See page 113.

## 707 Applied Music

### 707-001-440 Class and Private Instruction in Instruments and Voice 1-2 cr. or 3 cr.

Study of the solo literature of music through class or private instruction. Placement by audition before the applied music committee. Instruction in piano, organ, voice, flute, oboe, clarinet, saxophone, bassoon, horn, trumpet, trombone, baritone, tuba, percussion, guitar, violin, viola, cello, double bass, and harp is dependent upon available resident music staff and their teaching loads.

Students not enrolled full time must meet the following prerequisites to study applied music:

1. Concurrent registration in or completion (in residence) of 705-101 or music theory/history sequence, 705-151 through 705-352;
2. Concurrent registration in or completion of piano proficiency, 707-001 through 707-042;
3. Concurrent registration in a major performing ensemble: 707-151, 351, 707-241, 441; 707-242, 442; 707-162, 362; 707-261, 461;
4. Students enrolled in 707-401 through 707-438 must have filed an academic plan which specifies a co-major in music.

Full time students at UWGB will follow the same pattern of concurrent registration, except that those students enrolled full time, who have completed 705-101 and are waiting to take 707-151 may continue their study in applied music at the 100 level.

707-143, 343 Jazz Ensemble 1 cr.

707-144, 344 Woodwind Ensemble 1 cr.

707-145, 345 Brass Ensemble 1 cr.

707-146, 346 Percussion Ensemble 1 cr.

707-148, 348 Collegium Musicum 1 cr.

707-150, 350 New Music Ensemble 1 cr.

707-151, 351 Orchestra 1 cr.

707-153, 353 String Ensemble 1 cr.

707-162, 362 Oratorio Choir 1 cr.

707-163, 363 Vocal Ensemble 1 cr.

707-164, 364 University Singers 1 cr.

707-241, 441 Concert Band 1 cr.

707-242, 442 Marching Band 2 cr.

707-261, 461 Concert Choir 1 cr.

707-283X, 483X Selected Topics 1-4 cr.

707-298, 498 Independent Study 1-4 cr.

707-011, 012, 013 Keyboard Musicianship I 1 cr.

707-021, 022 Keyboard Musicianship II 1 cr.

707-031, 032 Keyboard Musicianship III 1 cr.

707-041, 042 Keyboard Musicianship IV 1 cr.

## 709 Theatre

709-283X Selected Topics 1-4 cr. See page 113.

709-298 Independent Study 1-4 cr. See page 113.

709-483X Selected Topics 1-4 cr. See page 113.

709-497 Internship in Theatre 3-12 cr. See page 113.

709-498 Independent Study 1-4 cr. See page 113.

### Acting

#### 709-131 Beginning Acting I 3 cr.

Through theatre games, vocal and physical exercises, and improvisation, a basic organic approach to acting technique is developed. Leads to development of skills and vocabulary that provide the basis for the actor's sense of self and ability to adapt to a variety of performance situations. (F)

#### 709-132 Beginning Acting II 3 cr.

Development of warm-up techniques, practice in group and duo improvisation, and beginning scene work and analysis. Analysis of scenes from American dramatic literature develops ability to study scripts from the actor's viewpoint and to embody insights in performance. Rec: 709-131. (S)

#### 709-141 Movement for Theatre 2 cr.

For students with little or no previous dance/movement experience who are interested in increasing movement potential for the theatre. The course presents techniques in self-awareness, body warmups, breathing, nonverbal communication, improvisation. Basic dance forms of ballet, modern and jazz are introduced as they relate to musical theatre. Movement problems in various period costumes, falls, using levels, ramps, steps, are included. (FO)

#### 709-205/305 Audition Techniques for the Actor 3 cr.

Actors will learn how to prepare classic and contemporary monologues and scenes, how to prepare professional resumes and photos, and how to deal with the business aspects of establishing a career as an actor. Students may enroll the course only once at either the upper or lower level. P: 709-131. (FE)

#### 709-231 Intermediate Acting I 3 cr.

Scene work in realistic dramas, with particular emphasis on the plays of Chekhov and Ibsen. Techniques of script analysis and character development are practiced. P: 709-132; six cr. repeatable. (F)

*continued*

## Theatre

*continued*

### **709-232 Intermediate Acting II 3 cr.**

Scene work in modern American and British comedies, including plays by Neil Simon and Noel Coward. Techniques of timing, pacing, comic invention and characterization are practiced. P: 709-231; six cr. repeatable. (S)

### **709-331 Advanced Acting I 3 cr.**

Scene work in poetic drama and period plays emphasizes techniques of verse interpretation, research into production history and performance styles, and use of appropriate movement, manners and behavior. P: 709-232; six cr. repeatable. (F)

### **709-332 Advanced Acting II 3 cr.**

The actor's role in contemporary theatre experiments is studied and experienced through research into avant-garde theatre companies and development of a performance group. P: 709-331; six cr. repeatable. (S)

### **Voice and Speech**

#### **709-233 Voice for the Actor I 3 cr.**

Introduction to principles of vocal training systems, which are widely used in actor training and provides students with a working knowledge of their vocal and physical capabilities. Work on breathing, posture, and development of warm-up procedures. Detailed work in the systems as appropriate. (F)

#### **709-234 Voice for the Actor II 3 cr.**

Development of key concepts of vocal and physical exploration. Application of vocal life to problems facing the performer; control of pitch, rate, and volume; verse speaking; textual analysis; rehearsal procedures and audition; preparation. Rec: 709-233. (SO)

### **Dance**

#### **709-128 Beginning Jazz Dance 2 cr.**

Introduces the beginning dance student to the techniques of dance; specifically to the theories and practice of the jazz genre. Repeatable up to six credits. (F,S)

#### **709-137 Beginning Ballet 2 cr.**

Development of strength, flexibility, coordination, rhythm, and correct body placement as these elements pertain to the technical and stylistic demands of ballet upon the human body. Repeatable up to six credits. (F,S)

#### **709-138 Continuing Beginning Ballet 2 cr.**

Continuing development of strength, flexibility, coordination, rhythm, and correct body placement as they pertain to the technical and stylistic demands of ballet to the human body. P: 709-137. (F)

#### **709-145 Beginning Modern Dance 2 cr.**

The use of the medium of modern dance both technically and stylistically to develop strength, flexibility, coordination and rhythm in the human body which leads to physical self expression. Repeatable up to six credits. (F,S)

#### **709-228 Intermediate Jazz Dance 2 cr.**

Continued study and execution of the style and techniques of jazz dance. A study of the styles of major choreographers in the American musical theatre. Rec: concurrent enrollment in ballet or modern dance. Repeatable up to four credits. (F,S)

#### **709-237 Intermediate Ballet 2 cr.**

A progression from Elementary Ballet with more complex rhythmical, spatial, and technical problems. Introduction of pointe work for women. Importance of body size to technical development with the relationship of weight and diet emphasized. Rec: two semesters of Elementary Ballet. Repeatable up to eight credits. (F,S)

#### **709-245 Intermediate Modern Dance 2 cr.**

Progression from elementary modern dance with increasingly more complex technical problems. Increasing emphasis on understanding and ex-

ecuting major modern dance styles. Importance of body size to technical development with the relationship of weight and diet emphasized. Rec: four credits of 709-145. Repeatable up to eight credits. (S)

#### **709-328 Advanced Jazz Dance 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 stressed. P: four credits of 709-228; repeatable up to ten credits.

#### **709-337 Advanced Ballet 2 cr.**

A progression from Intermediate Ballet with advanced technical problems, study and analysis of various styles of ballet, emphasis on pointe work for women, partnering, and ballet performance techniques. P: 709-237. Repeatable up to ten credits.

#### **709-340 Dance Techniques 2 cr.**

Technical ballet forms transposed into modern interpretations. In-depth study specializing in a particular style. Rec: 709-237 and 228 or 245.

#### **709-345 Advanced Modern Dance 2 cr.**

Progression from Intermediate Modern Dance to a high proficiency of technical ability in modern dance. Emphasis on performance level of ability in modern dance. P: four credits of 709-245. Repeatable up to ten credits.

#### **709-440 Choreography 2 cr.**

Technical forms and applications for composition of movement for presentation. In-depth study of rhythmic patterns and their relationships to movement, as well as creative content, musical interpretation, projection, and dynamics. Movement and placement for large ensembles are included. P: 709-228 or 237 or 245. (FE)

### **Technical Theatre**

#### **709-220 Stage Management 3 cr.**

Acquaints students with the procedures and functions of both the professional and nonprofessional stage manager. It also serves students who in other capacities will be in contact with stage managers so they understand the needs, functions, and usefulness of the stage manager's position. Skills such as department organization, scheduling procedures, and budget responsibility are gained which may be applied to other fields as well as theatre. (S)

#### **709-221 Theatre Production Techniques I: Stagecraft 3 cr.**

Lectures and laboratories in the organization and operation of theatre productions, with emphasis on beginning stagecraft, lighting, sound, and scene design. Participation in a theatre production (minimum of 40 hours). Required of students with an emphasis in theatre. (F)

#### **709-222 Theatre Production Techniques II: Costume/Makeup 3 cr.**

Lectures and laboratories in the organization and operation of theatre production with emphasis on costuming, makeup, and an introduction to costume design. Participation in a theatre production (minimum of 40 hours). Required of students with a co-major in theatre. Rec: 709-221. (S)

#### **709-224 Scenography: Introduction to Theatre Design 3 cr.**

An introduction to theatrical design, specifically scenic, lighting, and costume design, with emphasis in the visual interpretation of theatrical literature. Students participate in projects, critiques, and examinations in set, lighting, and costume design. Students are expected to have an understanding and working knowledge of basic theatrical crafts. P: 709-221, 222; Rec: 242-141, 142. (F)

#### **709-321 Scene Design 3 cr.**

Concentration on the practical techniques of scene design. Lectures and laboratories on the skills of 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. Plays are studied and designed in class and individual projects are required. Rec: 709-221, 222. (SO)



**709-322 Costume Design 3 cr.**

History of costumes as they relate to the theatre. Costume design in relation to the play and the actor. A study of the processes behind costume design with emphasis on fabric, color and line, mass, and light. Participation in a theatre production (minimum of 40 hours). P: 709-221, 222. (FO)

**709-323 State Lighting 3 cr.**

The aesthetic practice of design of lighting in theatrical production. The study of composition and psychological effects of stage lighting. An understanding of contemporary equipment and control systems with supporting laboratory practice. Individual projects and participation in a theatre production (minimum of 40 hours). Rec: 709-221, 222. (F)

**709-325 Three-Dimensional Stage Makeup 3 cr.**

Lectures and laboratories on the principles and application of stage makeup, with emphasis on materials, light and color, and character analysis. Participation in a theatre production (minimum 40 hours). Rec: 709-221, 222. (FE)

**709-423 Advanced Stage Lighting 3 cr.**

The aesthetic practice of lighting in theatrical productions, with emphasis on preparation for the lighting designers union exam. Practical application of the tools used in lighting. Advance work and individual projects required. Continuation of 709-323. P: 709-323. (SE)

**709-424 Advanced Technical Practices 3 cr.**

Studies in modern theatre technology, electronics, optics, and stage mechanics with an emphasis on the artistic potentialities presented by these developments. Individual projects and participation in a theatre production is required. P: 709-221, 222. (F)

**Theatre History/Literature/Criticism****709-235, 335 Theatre Performance in the Community 1-3 cr. ea.**

For students who wish the experience of participating in a theatre production with the opportunity to become involved in their area of greatest interest. May include performance as well as technical work in plays, dance, or readers theatre performance in high schools, for children, or for community groups. May be repeated for up to six credits of 235 and three credits of 335 or repeated for three credits of 235 and six credits of 335. P for 335: jr st. (F,J,S)

**709-309, 310 Theatre History I, II 3, 3 cr.**

Theatre art and craft, its functions in and significance to the different cultures in which it has thrived. (309, F) (310, S)

**709-351, 352 Directing I, II 3, 3 cr.**

Theories and techniques of theatrical staging. Relationship of the director to the actors. Students direct scenes of varying lengths and complexity from different kinds of drama and types of staging. Study of dramas, dramatists, critics, and directors; staging exercises. Students interested in directing should plan their program in consultation with the theatre chairperson. P for 352: 709-351. (351, FO) (352, SE)

**709-403, 404 Seminar in Theatre Arts 3, 3 cr.**

Individual or small group study focused on a specific area or areas of theatre interest and related to other disciplines whenever possible. Pertinent in the study of theatre of various periods and cultures. Rec: 12 credits in theatre arts courses.

**709-405 Theatre Management 3 cr.**

A course in theatre management on both the professional and nonprofessional levels. Will include the organization and classes of professional theatres and types and organization of nonprofessional theatres. Financial or business management, box office procedures, and promotion and publicity units will pertain to both the professional and nonprofessional theatres. Rec: six credits of theatre courses. (SE)

**709-409 Theatre Criticism 3 cr.**

A careful look at the major statements in western theatre criticism from the Greeks to the present. The approach is one of historical development,

together with applied criticism. Selected major dramatic texts are analyzed in light of their contemporary and historically precedent critical theories of what theatre is or should be. The format is that of a senior-level seminar. P: 709-309 and 709-310. (SO)

See also relevant courses in other areas including 242-241, 242, Introduction to Theatre History I, II and relevant courses in literature and language.

**736 Philosophy****736-101 Introduction to Philosophy 3 cr.**

A general introduction to the basic ideas and problems of philosophy. The course deals with the various disciplines and schools of philosophy with some emphasis on the important issues and their relevance to the present world. (F)

**736-102 Problems in Ethics 3 cr.**

Discussion and examination of ethical problems which are significant to an individual in the contemporary world. In addition to traditional issues, this course also examines current ethical issues in such areas as law, medicine, public policy, business, and education. (F)

**736-104 Freedom and Individuality 3 cr.**

The notions of freedom and individuality and their significance for an individual in a complex and highly structured society. Emphasis on the relation of historical considerations to contemporary issues. (S)

**736-105 Introduction to Social and Political Philosophy 3 cr.**

An introductory survey of the basic concepts in social and political theory, including the ideas of natural law and right, social and political justice, duty, obligation, and freedom. (S)

**736-106 Pacifism and Violence 3 cr.**

The value and possibility of the pacifist desire to eliminate violence from human affairs will be examined through reflection upon possible sources, types, and functions of human violence. This course involves reading and discussion of books in such fields as literature, psychology, and philosophy. (F)

**736-111 Elementary Logic 3 cr.**

A course structured to help students recognize and judge the validity of various types of reasoning, especially those which are employed in non-technical contexts. (S)

**736-201 Logic, Language and Intelligence 3 cr.**

A contemporary exploration of the classical conception of the human person as the animal which uses language to reason. Various logics (classical lower and higher order, modal, epistemic, and deontic) are considered, and their relevance to the topic of intelligence is explored in the context of questions such as: To what extent is intelligence the capacity to reason, and what is the relation of language to reason and intelligence? What are some of the limits of classical reason, and does intelligence transcend these limits? To what extent does the digital computer's capacity to reason constitute "artificial" intelligence? Rec: 736-111 or cons inst. (SE)

**736-207 Philosophy and Literature 3 cr.**

A study of issues shared between philosophy and literature as reflected in literary works. Emphasis is on the nature and meaning of literature for an understanding of the world. (F)

**736-208 Science and Human Values 3 cr.**

An examination of the implications of the social and natural sciences for human values; a study of the history of the distinction between fact and value in segments of human life such as politics, law, and medical technology. (F)

**736-209 Reason and Passion: Philosophical Issues in Film 3 cr.**

An exploration, through discussion of films, readings, and lectures, of the tension between reason and passion in human life. This general topic is

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## Philosophy

*continued*

treated under four headings: tolerance, justice, truth, and practicality, each of which represents reason in tension with passion. Required reading of books by authors such as Plato, J. S. Mill, and Freud, and viewing of films by such producers as Bergman and Kubric, serves as a basis for philosophical reflection on the central issue of the course. (J)

### 736-210 Civilization and Culture 3 cr.

This course investigates the value to humans of being civilized and of belonging to cultures, by raising and pursuing answers to such questions as the following: what is the relation between being civilized and being human? Is it necessary to belong to a culture in order to be human? Do some cultures promote human development while others obstruct it? (S)

### 736-211 The Arts and Human Existence 3 cr.

A study of the nature and meaning of the various fine arts such as painting, literature, music, and film, with some emphasis on the nature of the work of art and the creative activity of the artist. This course stresses the significance of art for human existence. (S)

### 736-213 History of Philosophy I 3 cr.

An examination of the origins and early development of Western philosophy in the context of classical Greek culture. The course provides an introduction to the thoughts of Plato, Aristotle, and selected pre-modern thinkers and movements, with an emphasis on clarifying issues which have endured as abiding concerns of the Western philosophical tradition. Rec: 736-101 or 102. (F)

736-283X Selected Topics 1-4 cr. See page 113.

736-298 Independent Study 1-4 cr. See page 113.

### 736-301 Criticism of Values 3 cr.

An examination of the possibility for rationally adopting any value or set of values. Such issues as the nature of value, the ability to know value, the problem of change and endurance of values are studied through examination and discussion of works by various traditional and contemporary authors. Rec: jr st and one course in philosophy. (SE)

### 736-304 American Philosophy 3 cr.

A survey of some of the major thinkers and ideas in the American philosophical tradition, including a discussion of the view of Peirce, James, Royce, Dewey, and Santayana. The course concentrates on those schools and movements that are distinctly American such as Transcendentalism, Naturalism, Pragmatism, and Instrumentalism. Rec: jr st and a course in philosophy. (FE)

### 736-314 History of Philosophy II 3 cr.

An examination of major thinkers and movements representative of philosophical thought from the 17th century to the present. Rec: 736-302. (S)

### 735-315 Philosophy of Work and Leisure 3 cr.

The roles played by work and leisure in human existence and their relative value from the standpoint of the human process in general. Rec: a course in philosophy or social science. (FO)

### 736-322 Aesthetics 3 cr.

A survey of some of the main philosophical theories of art and beauty in Western culture with an emphasis on developing a critical understanding and appreciation of the nature and purpose of art. Rec: a course in philosophy. (FE)

### 736-324 Contemporary Philosophical Movements 3 cr.

A study of current philosophical movements in Europe and America. Different movements are studied at different times (e.g. phenomenology, existentialism, analytic philosophy, intuitionism, pragmatism and Marxism). Variable content. Rec: 736-314. (SE)

### 736-325 Marxist Humanism 3 cr.

A study of Marx's writings, concentrating on his concern for the value of human life and activity. Certain issues are examined in detail, such as

alienation, class struggle, historical process, the relation of the individual to society. Rec: a course in philosophy. (SE)

### 736-326 Philosophy, Politics and Law 3 cr.

A critical and systematic study of the nature of politics and law and their interrelations, of general legal theory, legal rights, judicial reasoning, the problems of justice, property and morality and law. Rec: a course in philosophy. (FE)

### 736-327 Ethics and the Medical Profession 3 cr.

Develops conceptual skills and tools for recognizing and defining ethical issues having to do the relationship of medical professionals and patients, the rights of patients, public health and medical resources, truth-telling, suffering and death, medical experimentation and technology, law, politics, and medicine. The goal is to provide a general humanistic introduction to problems of ethics in the medical profession. Rec: jr st. (SO)

### 736-404 Major Philosophical Figures 3 cr.

A study in depth of the thought of a selected figure who has made a significant philosophical contribution. Different thinkers are studied at different times (e.g., Plato, Aristotle, Leibniz, Hume, Kant, etc.). Variable content. Rec: cons inst. (SO)

### 736-405 Major Philosophical Issues 3 cr.

A study in depth of selected philosophical issues. Different issues are studied at different times (e.g. problems of being; problems of knowledge and reason; problems of value, etc.). Variable content. Rec: cons inst. (SO)

### 736-406 Philosophical Problems in the Sciences 3 cr.

Philosophical examination of the logic and knowledge claims of the various natural and social sciences, with emphasis on questions of their foundations and assumptions bearing on their interpretations of nature, the social world, the human individual. A study of such problems as freedom and determinism, the nature of human actions, etc., in the light of the methods and results of the various sciences. Different sciences are studied at different times (e.g. physics, mathematics, psychology, sociology, economics, political science). Variable content. Rec: two courses in philosophy. (FO)

736-478 Senior Distinction in Philosophy 3 cr. See page 113.

736-483X Selected Topics 1-4 cr. See page 113.

736-497 Internship in Philosophy 3-12 cr. See page 113.

736-498 Independent Study 1-4 cr. See page 113.

## 742 Physical Education

### 742-101 Swimming I 1 cr.

Fundamental swimming, basic water survival skills, and safety taught to students with minimum swimming ability. American Red Cross certification available. (F,S)

### 742-116 First Aid and Emergency Care Procedures 2 cr.

Provides information and practical training in Red Cross, medical self help, and emergency medical procedures. American Red Cross certification available. (F,S)

### 742-117 Cardiopulmonary Resuscitation 1 cr.

Causes and effects of respiratory, cardiac and circulatory insufficiencies and arrests are explored as well as appropriate emergency care responses for such crises. In addition to readings and classroom interaction, students develop resuscitation skills on adult and infant mannequins. Skill and written exams are required for certifications from the American Red Cross and from the American Heart Association. (F,J,S)

### 742-121 Personal Conditioning 1 cr.

The principles of exercise physiology are introduced as they relate to muscular and organic stress from participation in calisthenics and exercise with light apparatus. Conditioning programs such as circuit and interval training, isotonic and isometric exercise, etc., are explained. Students select a specific program and goal, design a personal exercise program

within that context and plot progress. Such insights and experiences seek to motivate students toward life-long fitness. (F,J,S)

**742-122 Training with Weights 1 cr.**

The theory of heavy resistance training and its effects upon the musculature is presented along with the basic principles of the several styles of training with weights. Students select a specific training style, design a personal exercise program and plot progress. Safety considerations are stressed. (F,S)

**742-123 Exercise Leadership I 1 cr.**

Introduction to a formal, concentrated and progressive program of calisthenics based upon the U.S. Army's physical readiness program. Students also learn to function as leaders for group exercise. The physical readiness test is administered. Supplementary information on weight control, cardiovascular training, posture, etc., is included. (F,S)

**742-124 Conditioning Through Running 1 cr.**

Designed for the individual who prefers a program of vigorous exercise to one of primarily recreational nature. Emphasis is on cardiovascular benefits of running and the practical application of various types of running to improve physical fitness. (F,S)

**742-126 Backpacking 1 cr.**

The mechanics of walking with a moderate load are emphasized. Packing, shelter construction, proper equipment and cold weather survival are integral to the course. Snowshoes or cross-country skis may be used in season. An overnight field trip is required. (F)

**742-145 Golf I 1 cr.**

The fundamental skills of grip, stance and stroking with irons and woods are taught with emphasis upon efficient mechanics and control. Information about history, equipment, rules, etiquette, safety, and strategy necessary for responsible play also are included. Students are critiqued on their practice on the range and play upon the campus course. (S)

**742-148 Karate I 1 cr.**

Instruction in basic techniques of striking and kicking and their defenses as used in karate. The history, philosophy and traditions of karate are stressed. Personal conditioning and self-discipline are inherent to the course. (F,S)

**742-154 Tennis I 1 cr.**

Designed to develop basic skills and techniques so students have confidence to pursue tennis as a lifetime activity. It includes the forehand, backhand, flat serve, volley, lob, smash, footwork, singles and doubles positioning and strategy, regular and no-add scoring, U.S.T.A. rules, care and selection of equipment. (F,S)

**742-159 Racquetball I 1 cr.**

Instruction in basic skills and understanding necessary to engage in racquetball as a competitive recreational activity. Service, service returns, and rallying skills are taught. Information about history, rules and courtesies, equipment, and common strategies are included. (F,J,S)

**742-161 Basketball Team Play 1 cr.**

Intended for students who wish to improve their knowledge of or insight into the game as players or as spectators. Not geared for the coach or the varsity player. Provides instruction and practice on the offensive and defensive fundamentals of team play and individual basic skills. Offensive and defensive formations are presented along with the strategies commonly employed to exploit or counter them. (F)

**742-170 Volleyball Team Play 1 cr.**

The proper execution of passing, setting, spiking and saving are emphasized. Information about the development of the game, its rules and etiquette, and equipment used is included. (S)

**742-171 to 184 Officiating (sport) 1 cr.**

Provides interpretation of the rules and officiating mechanics of a specific sport in preparation for students to become officials. Class members are encouraged to register with the Wisconsin Interscholastic Athletic Associa-

tion and may become eligible to officiate interscholastic, recreation, or other league contests.

Approved courses are:

171 Officiating Basketball (FO)

179 Officiating Softball/Baseball (SO)

181 Officiating Swimming and Diving

183 Officiating Volleyball (SE)

**742-199 Snowshoeing 1 cr.**

Instruction in the basic techniques of snowshoeing, including uphill travel, downhill travel, turning and trail breaking. Procedures for winter camping are presented, with specific emphasis on safety and cold weather survival. One overnight field trip required. (J)

**742-201 Swimming II 1 cr.**

Emphasizes improvement of basic swimming techniques. Satisfactory completion enables students to enroll in subsequent aquatic courses. American Red Cross certification available. P: 742-101 or equivalent. (F,S)

**742-202 Swimnastics 1 cr.**

Swimnastics is the study and use of various conditioning and fitness activities specifically designed for the pool or aquatic medium.

**742-204 Lifesaving 1 cr.**

Includes principles and techniques of personal safety, victim rescue, resuscitation, preventive lifeguarding, small craft safety, and first aid. Red Cross Advanced Lifesaving certification available. P: 742-201 or equivalent. (F)

**742-205 Water Safety Instruction 2 cr.**

Trains instructors to conduct swimming programs sponsored by the American Red Cross. Swimming skills are perfected so instructors can serve as good models and gain the confidence of students. Successful methods of planning lessons, organizing classes, presenting material, and evaluating progress are studied. American Red Cross certification available. P: 742-204 or Advanced Lifesaving Certificate. (S)

**742-208 Scuba 2 cr.**

The nature and use of equipment peculiar to skin and scuba diving is taught along with basic diving skills and considerations necessary for functional diving. Lectures are on the 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. P: 742-201 or equivalent. (F,S)

**742-212 Sailing I 1 cr.**

Introduction to sailing including terminology, kinds of boats, water safety, and practical sailing experience. Individualized instruction is given in boats. Designed for those with little or no previous sailing experience. (F)

**742-213 Sailing II 1 cr.**

Advanced techniques of sailing including safety, weather, and navigation.

**742-221 Slimnastics 1 cr.**

Introduces a variety of conditioning programs, including diet and exercise techniques for attaining desired weight and figure goals to improve and maintain a positive body image. (F,S)

**742-223 Exercise Leadership II 1 cr.**

Participation in the formal calisthenics program is enhanced by personal assessment and design of exercise program. Students have leadership opportunities and learn elements of counseling for personal exercise involvement. Information on nutrition, stress control, environmental considerations, and the like, are included. The physical readiness test is administered. P: 742-123. (F,S)

**742-226 Orienteering 1 cr.**

Designed for persons interested in outdoor recreation and wilderness travel. Orienteering is the ability to navigate across familiar and unfamiliar territory by imaginative and intelligent use of map and compass. (S)

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## Physical Education

*continued*

### 742-248 Karate II 1 cr.

Builds upon basic skills and physical and mental development of beginning karate. The opportunity to improve students' karate rank is provided by continuing instruction in offensive and defensive techniques in conjunction with voluntary competition. P: 742-148 or equivalent. (F,S)

### 742-254 Tennis II 1 cr.

Improves basic skills and develops intermediate skills such as the loop swing, tip-spin ground strokes, spin serve, one-half volley, drop volley, drop shot, approach shot, and more advanced strategy for both singles and doubles. P: 742-154 or equivalent. (S)

### 742-259 Racquetball II 1 cr.

Provides students with comprehensive insight into all aspects of the sport: safety, conditioning, strategy, and skill analysis for singles, doubles, and other play variations. (F,S)

### 742-402 Psychology and Sociology of Sport 2 cr.

The effects of competition and cooperation, values, spectators, and group interaction on overall performance are examined and compared in relation to social and psychological factors affecting athletes. Individual differences in motivation, personality, and social factors are analyzed to provide a basis of meaningful study for prospective coaches. P: 820-102, 202 or 900-202. (J)

### 742-403 Organization and Administration of Athletics 2 cr.

A functional course in various phases of organizing and administering an interscholastic athletic program with application to athletics in nonacademic environments as well (e.g. boys' clubs, tennis clubs). P: jr st and either 742-401 or 402. (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 or equivalent. (F)

### 742-406 Prevention and Treatment of Athletic Injuries 2 cr.

Provides prospective coaches with basic insight into the nature of common athletic injuries. Emphasis is upon prevention, physical conditioning, strapping, properly fitted and designed equipment, condition of the competition site, conduct of practices, and respect of existing injuries. Treatment considerations include estimating the nature and extent of the injury, feasibility of moving the victim, immediate care at the scene, modes of required transport, sideline care, training room modalities, referral for definitive diagnosis, and treatment of simple follow-up rehabilitation. P: 478-102 or equivalent competency in gross human anatomy and jr st. (S)

### 742-410-434 Principles of Coaching 2 cr.

Fosters inquiry into the materials, drills, offenses, and defenses of specific sports. The literature of the field, personal interviews and observations, staff lectures and/or conferences are the tools of the course. Students collect materials for selected aspects of chosen sports and organize them appropriately for future use in coaching. P: jr st, permission of instructor/coaching certification adviser. (F,J,S)

### 742-435 to 459 Field Experiences in Coaching 2 cr.

Culminates study and preparation for a practical coaching experience. Participation in practice, competitive and other coaching experiences under the supervision of an experienced cooperating coach. Student coach maintains daily log and consults with and is observed by CCP adviser. P: jr st, 742-401, 402, 403, 405, 406, 410 to 434 (Principles of Coaching) or equivalents and/or permission of instructor/coaching certification adviser. (F,J,S)

## 754 Physics

### 754-103 Fundamentals of Physics I 5 cr.

A noncalculus physics course covering fundamentals of mechanics, energy, power, thermodynamics and sound. Applications to the areas of biology, chemistry, the earth sciences and technology. P: 600-104 or equivalent. Graduation credit will not be awarded for both 754-103 and 201. (F)

### 754-104 Fundamentals of Physics II 5 cr.

A noncalculus physics course covering fundamentals of electricity and magnetism, electronics, light, atomic and nuclear structure and relativity. Applications to the areas of biology, chemistry, the earth sciences and technology. Field trip required. P: 754-103. (S)

### 754-201 Principles of Physics I 5 cr.

A calculus physics course intended for students of science and engineering. Fundamentals of mechanics, Newton's laws, momentum, energy, fluid statics and dynamics; temperature, heat transfer, thermodynamics; vibrations, waves and sound. P: 600-202 or concurrent registration in 600-202 with cons inst. Graduation credit will not be awarded for both 754-201 and 103. (F)

### 754-202 Principles of Physics II 5 cr.

A calculus physics course intended for students of science and engineering. Electric forces and fields, DC and AC circuits, magnetism; atomic structure, semiconductors; electromagnetic waves, light; relativity, quantum effects, nuclear physics and elementary particles. P: 754-201 and credit or concurrent registration in 600-203 with cons inst. Graduation credit will not be awarded for both 754-202 and 104. Field trip required. (S)

### 754-283X Selected Topics 1-4 cr. See page 113.

### 754-298 Independent Study 1-4 cr. See page 113.

### 754-313 Mechanics I 3 cr.

See 678-313.

### 754-314 Mechanics II 3 cr.

See 678-314.

### 754-315 Classical Mechanics 3 cr.

Origin and development of mathematical physics; mathematical techniques especially the use of vectors, tensors, Fourier analysis, and generalized coordinates in physical problems; conservation laws and their relationship to mechanical problems; the physical basis of control and feedback; introduction to rigid body dynamics, accelerated coordinate systems, introduction to acoustics. Same as 678-315. P: 754-202, 600-209 and 305. (SE)

### 754-317 Electromagnetic Radiation 3 cr.

A firm foundation in geometrical optics and the nature of electromagnetic radiation is applied in the discussion of optical instruments and the measurements of electromagnetic radiation. Topics may include solar radiation, atmospheric optics, photochemistry, and plant growth chambers. P: 754-202. (FO)

### 754-318 Optics Laboratory 1 cr.

Experiments in geometrical and physical optics, optical instruments and measurements, properties of lasers. P: 754-317 or concurrent enrollment. (FO)

### 754-320 Thermodynamics and Kinetics 3 cr.

See 225-320.

### 754-321 Structure of Matter 3 cr.

See 225-321.

### 754-322 Thermodynamics and Kinetics Laboratory 1 cr.

See 225-322.

### 754-323 Structure of Matter Laboratory 1 cr.

See 225-323.

**754-404 Electricity and Magnetism 3 cr.**

An advanced approach to electrical and magnetic phenomena; plasmas, waveguides, electrical energy generation and transmission, Maxwell's equations and electro-magnetic waves, electric and magnetic properties of matter. P: 754-202 and 600-209. (FE)

**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. (SE)

**754-415 Solar and Alternate Energy Systems 3 cr.**

See 678-415.

**754-417 Nuclear Physics and Radiochemistry 3 cr.**

See 225-417.

**754-418 Nuclear Physics and Radiochemistry Laboratory 1 cr.**

See 225-418.

**754-455 Microprocessors and Microcomputer Systems 3 cr.**

See 600-455.

**754-483X Selected Topics 1-4 cr.** See page 113.**754-497 Internship in Physics 3-12 cr.** See page 113.**754-498 Independent Study 1-4 cr.** See page 113.**778 Political Science****778-100 Introduction to Political Science 3 cr.**

A survey of the major areas of modern political science: political philosophy and theory, including methodology; comparative government; political development and change, including revolution; and international relations and politics. Topics covered include: the balance of power, liberty and freedom, justice and equality. (F,S)

**778-101 American Government and Politics 3 cr.**

An introduction to the institutions and political processes of American government, with emphasis on the national level. The course covers the nature of political analysis; the constitutional, ideological, and cultural bases of American politics; public opinion and political information; the role of political parties, elections, and interest groups; policy-making processes in the Congress, the presidency, the courts, the bureaucracy, and state and local government; and issues and controversies in politics and public policy. (F,S)

**778-102 Introduction to Public Policy 3 cr.**

A survey of contemporary issues in American public policy, with emphasis on approaches used in the study of public policy. Among questions examined are how factual and value issues can be separated in policy debate, what type of reasoning underlies policy arguments, how data used in support of policy arguments can be evaluated, and how political ideologies shape the consideration of policy alternatives. Substantive public policies such as those dealing with the American economy, energy development and conservation, environmental quality, and the welfare state and social programs are considered. (J,S)

**778-215 Understanding Presidential Elections 3 cr.**

An examination of the electoral system affecting presidential campaigns and elections. Topics include 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. Students participate in a particular campaign and compare practical political strategies and activities to theoretical ideas. Offered only during presidential election years.

**778-218 Political Behavior 3 cr.**

An introduction to political behavior, with emphasis on individual political beliefs and behavior. Special attention is given to the relationship between

political knowledge and political behavior. Topics include: political socialization, public opinion, personality and politics, the mass media, and political participation. Students introduced to empirical political analysis, both qualitative and quantitative. (J)

**778-283X Selected Topics 1-4 cr.** See page 113.**778-298 Independent Study 1-4 cr.** See page 113.**778-301 Environmental Politics and Policy 3 cr.**

An introduction to political issues in the formation, implementation, and impact of contemporary environmental policies, primarily in the United States. Topics include the nature and scope of environmental, energy, and resource problems; contrasting views of long-term environmental futures; the modern environmental movement and its critics; the politics of policy making and implementation; and selected issues in environmental, resource, and energy policy. P: 778-101 or 950-102 or cons inst. (S)

**778-305 Urban Politics and Policy 3 cr.**

Concerned with urban social theory and its relation to urban political processes and public policy. Of central concern is the question: To what extent are basic human needs, as identified by urban theorists, frustrated and/or fulfilled by urban political processes and public policy? Policy arenas examined include: urban renewal, welfare policy, urban transportation, fiscal policy. See 950-331. P: jr st; 778-101 or 950-200. (S)

**778-306 Regulatory Policy and Administration 3 cr.**

An examination of the purposes, structure, legal aspects, and operation of public regulatory agencies and programs in the United States. Topics include theories and controversies underlying regulatory policy, issues in contemporary regulatory policy and administration, and rational methods for risk analysis and regulatory decision making. Case studies and exercises cover a variety of regulatory processes, including those associated with public health, consumer protection, product safety, and environmental quality. Particular attention is given to the administrative and political issues raised by the growth and nature of public regulation and by proposals for change, and to practical skills for developing and evaluating regulatory programs. P: 778-101, 950-102 or cons inst. (FO)

**778-310 The American Presidency 3 cr.**

An examination of the American presidency, with emphasis on recent presidents and public policy making. Topics include: the history of the presidency; the nature and use of presidential power; presidential nominations and elections; the organization and operation of the executive office; the presidential role in public policy making; the relationship between the president and other key political actors, including the Congress, the bureaucracy, interest groups, public opinion, and the media; and presidential leadership and personality. P: jr st; prior course in political science; Rec: 778-101. (SO)

**778-312 Community Politics 3 cr.**

An examination of power and decision making at the community level, focused on the question: "who governs?" Careful attention is given to alternative theories and approaches to community politics and to methods for the conduct of empirical research in the field. Class assignments include the study of local power structures and local policy formation. P: jr st; prior course in political science; Rec: 778-101. (FO)

**778-314 Administrative Law 3 cr.** See 950-376.**778-320 Constitutional Law 3 cr.**

An examination of the law of the United States Constitution as that law has been developed by decisions of the United States Supreme Court. Topics include: the general structure of the Constitution, federalism, the doctrine of separation of powers, the limitations upon the powers of the United States and of the states imposed by the guarantees of rights and liberties to individuals made in the Constitution and amendments to it. The structure, operation and jurisdiction of the United States courts are also considered. See 875-320. Rec: 778-101. (S)

continued

## Political Science

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### 778-330 Law and the Judicial Process 3 cr.

An examination of courts as institutions of government and law as an instrument of government. Topics examined include: the judiciary in the American system of government, the nature of the judicial process, judicial decision making, judicial policy making, compliance with judicial policies, and theories of law and jurisprudence. See 875-330. P: jr st; prior course in political science; Rec: 778-101. (FO)

### 778-340 Political Theory 3 cr.

The foundations of Western political theory from the Greek polis to the 20th century. Leading political theorists are analyzed and discussed in their historical contexts and in terms of their basic ideas and concepts. The basic axiom of the course is that in order to understand particular political events, we need to understand general characteristics of governing, government, and politics. To help students gain such an understanding, the course attaches the study of politics to the history of Western political thought and practice. P: jr st; prior course in political science; Rec: 778-100. (F)

### 778-351 Comparative Political Systems 3 cr.

An introduction to comparative political analysis, stressing both the structure of political systems and major functions. Particular attention is given to the politics and government of Great Britain, France, the Soviet Union, and selected other developed nations. P: jr st; prior course in political science; Rec: 778-100. (FE)

### 778-353 Politics of Developing Systems 3 cr.

Political processes in contemporary developing systems, with particular attention to problems of nation building, the formulation of cross national comparisons, and emerging patterns of regional cooperation. P: jr st; prior course in political science; Rec: 778-100. (SE)

### 778-360 International Politics 3 cr.

An overview of international politics, including an analysis of "the national interest," the nation-state systems, nationalism, arms control and disarmament, international conflict, and conflict resolution. Examples are drawn from both the American and non-American perspective. P: jr st; prior course in political science; Rec: 778-100. (FO)

### 778-368 Geopolitics of World Regions 3 cr.

An examination of the impact of social, physical, and cultural geographic factors on political behavior and relationships, including political conflict. Topics include concepts such as political space, political territoriality, the organization of space for political purposes, and the nature of boundaries. The course also considers human movement and migration as a political and social process, and examines the impact of regional relationships on global, social, economic, and political structures. See 416-368 and 834-368. Rec: 778-100. (F)

### 778-378 Geography of Conflict Areas 3 cr.

See 416-378.

### 778-408 Public Policy Analysis 3 cr.

An introduction to public policy analysis and to the policy-making process in American government. Topics include approaches to the study of public policy, the nature of public problems, the policy agenda, policy formulation, assessment of policy alternatives, policy adoption, policy implementation and evaluation, and the use of policy analysis in decision making. Special attention is given to the political aspects of policy analysis, to models and methods for critical analysis and rational design of public policies, and to practical applications of policy studies. Develops skill in legislative research, the preparation of position papers and other policy-development documents, and methods of policy analysis and evaluation. P: 778-101 or 950-102. (F)

### 778-410 Intergovernmental Relations 3 cr.

An analysis of the American system of government as a federal system with governments operating on three levels (federal, state, and local), yet functioning as one integrated and interdependent system. Attention is given

to constitutional bases of federalism, how intergovernmental relations affect public policy, and revenue sharing. P: jr st; prior course in political science; Rec: 778-101. (SE)

### 778-412 Political Parties and Pressure Groups 3 cr.

An examination of the nature and role of political parties and pressure groups in the American political system. Topics include the environment, structure, and activities of major and minor political parties; the changing character and functions of the national parties, especially their role in the electoral process; and the organization, politics, techniques, and influence of contemporary pressure groups in American politics. P: jr st; prior course in political science; Rec: 778-101.

### 778-416 American Legislative Process 3 cr.

An examination of legislative institutions and policy making, with special emphasis on the United States Congress. Topics include: the role of legislatures in American politics; the electoral process; the nature of representation and the impact of the public on policy decisions; the political behavior of legislators; the impact of formal and informal institutions and practices on public policy making; political parties, leadership, staffs, committees, rules and norms, interest groups and lobbying; the role of the mass media; the role of legislatures in policy innovation and social change. P: jr st; prior course in political science; Rec: 778-101. (SO)

### 778-460 American Foreign and Defense Policies 3 cr.

An examination of the major foreign and military problems facing the United States. Includes discussion of such topics as the organization and role of the military in American life; strategic and tactical military theory; the intelligence community, alliance politics, and the foreign policy-making process in the United States and an assessment of its effectiveness. P: jr st; prior course in political science; Rec: 778-100. (SO)

778-483X Selected Topics 1-4 cr. See page 113.

778-497 Internship in Political Science 3-12 cr. See page 113.

778-498 Independent Study 1-4 cr. See page 113.

## 820 Psychology

### 820-102 Introduction to Psychology 3 cr.

Introduction to the understanding of behavior from psychophysiological, cognitive, social, and clinical perspectives; important issues, methods, and findings in the study of psychological processes. (F,S)

### 820-202 Introduction to Social Psychology 3 cr.

Introduction to social psychology; attitude formation and change, group processes, communication, roles, multiple group membership, social prejudice. Rec: soph st. (F,S)

### 820-205 Psychology of Human Adjustment 3 cr.

Personality adjustment and maladjustment in normal persons; need, frustrations, and conflict; adjustive techniques; analysis and rehabilitation. (F,S)

820-283X Selected Topics 1-4 cr. See page 113.

### 820-290 Environmental Psychology 3 cr.

A basic introduction to human-environment relationships that examines ways in which the physical environment influences human behavior. It introduces students to a variety of human-environmental relationships such as attitudes and beliefs about the physical environment, measuring and conceptualizing human response and behavior to physical environments, perceiving and knowing the physical environment, human social behavior in unusual environments, and geophysical factors that influence human behavior. (F)

820-298 Independent Study 1-4 cr. See page 113.

### 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 in designing, conducting, interpreting and reporting research. Rec: 255-205 or 600-260. (F,S)

**820-306 Psychology of Perception 3 cr.**

Nature of perceptual processes and their functional relationships to environments, behavioral, and central factors such as motivation, learning and personality. Rec: jr st. (F)

**820-309 Psychology of Motivation 3 cr.**

The initiation and direction of behavior; role of physiology, personality, and environment in motivation; conflict, persistence, and change of motives; social motivation of achievement. P: jr st and 820-102 or 481-210. (F)

**820-311 The Psychology of Sports and Exercise 3 cr.**

An upper-level introduction to the study of the psychological aspects of involvement in sports. The course examines the relationship between participation in physical activity and psychological variables such as mental health, affiliation, aggression, motivation, and the role of sports in society. Little emphasis is placed on specific applications to coaching. P: 820-102, 202, or 900-202; Rec: 478-102, 255-205.

**820-315 Educational Psychology 3 cr.**

An overview of the psychological processes involved in teaching, learning, and their interaction. Topics include motivation, individual differences, classroom management, cognition, group processes, and educational assessment. Students will be required to complete several written assignments integrating observations of learning with educational analysis based upon library research. P: 820-102 or 481-210; Rec: course in education. (S)

**820-335 Psychology of Attitude and Public Opinion 3 cr.**

Analysis of attitudes; social factors in the formation and change of attitudes; expression of attitudes in public opinion, voting, and consumer behavior; polling techniques and problems. P: jr st. (S)

**820-337 Social Behavior Dynamics 3 cr.**

Important factors in social behavior, roles, multiple-group membership, cognitive processes, motivation, aggression, social prejudice. P: 820-202 and soph st. (F)

**820-415 Organizational Psychology 3 cr.**

Relation between social structure and psychological behavior, problems of bureaucracy, leadership styles, communication networks, decision-making processes, and group productivity. P: jr st. (F)

**820-416 Psychology of Intergroup Relations 3 cr.**

The psychology of conflict and cooperation, cleavage and integration. Principles and applications in such contexts as industrial organizations, cross-generation adjustments, race relations, and international relations. P: jr st. (S)

**820-417 Psychology of Cognitive Processes 3 cr.**

Examines the contemporary theory and research on thinking processes; how people understand and interpret events around them; specific consideration is given to 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.**

Methods and 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. P: a course in statistics or human development or psychology and jr st. (S)

**820-429 Theories of Personality 3 cr.**

Major ideas and systematic statements about the organization, function, change, and development of human personality. Readings acquaint students with a variety of personality theorists, such as Freud, Adler, Jung, Sullivan, Erikson, Dollard and Miller, Skinner, and selected existential-

ists. P: upper-level human development or psychology course; Rec: jr st. (F,S)

**820-430 History and Systems of Psychology 3 cr.**

This seminar focuses on the major schools, figures, trends, and systems of thought in the field of psychology. It reviews the development of the field by looking at shifts in the conceptualization of the problems, phenomena, methods, and tasks for psychology. P: 820-102, 300, one upper-level 820 course, jr st. (J)

**820-435 Abnormal Behavior 3 cr.**

Deviations from normal intellectual, physical, emotional, and social development (e.g., retardation, psychopathology, emotional problems) throughout the life cycle are covered. Biological and environmental origins of deviations are examined. P: upper-level human development or psychology course. (F,S)

**820-438 Group Dynamics 3 cr.**

Psychological principles as they apply to the individual in social groups, experimental analyses of group formation, maintenance, morale, and productivity. P: jr st. (F)

**820-466 Clinical and Community Psychology 3 cr.**

Describes the typical activities, social functions, major theories, history and future trends of these two applied fields. Evaluates effectiveness of typical activities. The fields are differentiated from other human service fields. Discusses programs of study and training for aspiring psychologists, licensing qualifications, and occupational opportunities. Presents research on characteristics of practitioners. Most suited for persons considering careers in these fields. P: 820-102. (S)

**820-483X Selected Topics 1-4 cr.** See page 113.

**820-497 Internship in Psychology 3 cr.** See page 113.

**820-498 Independent Study 1-4 cr.** See page 113.

## 834 Regional Analysis

**834-205 Introduction to Cooperative Principles and Functions with Regional Variations 3 cr.**

Various aspects of cooperatives; their history and development, present status and scope and future opportunities. Member relations and communications, financial and legal structures, policies and objectives. (JE)

**834-220 Introduction to Regional Analysis 3 cr.**

The choices that people can and must make in the use of the limited space and resources available to them to satisfy their needs. Methods of defining regions, as based upon human activities and the nature of the total environment are developed. Field trip required. (F,S)

**834-222 The Ocean of Air: An Introduction to 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. See 296-222. (F,S)

**834-281 Student-Led Courses 1-4 cr.** See page 113.

**834-283X Selected Topics in Regional Analysis 1-4 cr.** See page 113.

**834-298 Independent Study 1-4 cr.** See page 113.

**834-309 Urban and Regional Economic Theory 3 cr.**

Basic concepts in the economics of regions and urban areas. Concepts developed include industrial location theory, central place theory, land rent theory, economic base theory, and input-output analysis. Concepts are applied to problems of economic development, urbanization, and place prosperity. P: 298-203; Rec: 298-202. (F)

**834-322 Regional Planning 3 cr.**

The concept of planning, the history of its use in the development of

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## Regional Analysis

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regions, and the present status of planning in the United States with some international comparisons. P: jr st. (F)

#### **834-323 Land-Use Controls 3 cr.**

Provides an opportunity to appreciate various forms of public land-use controls to students interested in land-use planning and administration; as such, the course aims to meet the needs of the students of Regional Analysis, Urban Studies, and Public and Environmental Administration in particular, and of those who are interested in the spatial manifestations of socio-economic functions in general. The course addresses "what, why, and how" aspects of land-use controls. The "what and why" aspects are dealt with through lectures/discussions in the classroom, and the "how" aspect, being applied in nature, is illustrated with reference to a "real world" situation. Students analyze zoning and subdivision regulations of a selected community. P: jr st. (SE)

#### **834-325 Behavior in Designed Environments I 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. See 950-325. P: 820-102 or 202. (F)

#### **834-326 Behavior in Designed Environments II 3 cr.**

The application of techniques and knowledge of the environment-behavior relationship to studies of the designed area. The student develops and carries out all aspects of detailed study of a selected environment-behavior problem. See 950-326. P: 834-325. (SE)

#### **834-335 Transportation Systems in the United States 3 cr.**

Intercity transportation systems in the United States, their development, impact, present character problems and trends. P: jr st. (S)

#### **834-340 Economics of Land Use 3 cr.**

Study of economic relationship between humans and land. Emphasis is on the principles governing the land use and conservation, and in particular, the institutional arrangements—the working rules—of this basic resource. Application of principles in policy making in the areas of land valuation, taxation, and zoning in the context of economic regional development. Land-use policies as they relate to management of public and private lands are studied intensively. P: jr st. (S)

#### **834-342 Community Economic Development 3 cr.**

Study of various forces involved in the process of community economic development. Includes the resource potentials—human and nonhuman—motivation, values and attitudes. The importance of education, and other institutional factors such as family, the political institutions and social and cultural institutions are studied and analyzed. The social and economic structures—transportation, communication, community services—are examined from the point of view of community development. P: jr st. (F)

#### **351 Elements of Cartography 3 cr.**

See 416-351.

#### **353 Air Photo Interpretation 3 cr.**

See 416-353.

#### **355 Introduction to Quantitative Methods of Spatial Analysis 3 cr.**

See 416-355.

#### **834-356 Environmental Impact Analysis 3 cr.**

Procedural requirements of NEPA; State NEPA equivalents; methodologies of and approaches to environmental impact analysis; assessment of alternatives; interdisciplinary exposure to substantive types of impacts using natural and social sciences; emphasis on social impact analysis; local field project in impact analysis. P: jr st. (FO)

#### **834-365 Impressions of Southern Africa 3 cr.**

This dynamic and troubled region is studied from a variety of perspectives—those of the Africans, the colonial administrators, the entrepreneurs, the

settlers, and the world community. Using a variety of resources, an attempt is made to understand how different groups of peoples, each with their own values, technology, and institutions, have created the spatial variations and conflict in Southern Africa. P: 416-102. (J)

#### **834-368 The Geopolitics of World Regions 3 cr.**

An examination of the impact of geographic factors on political behavior and relationships. Topics include concepts such as political space, political territoriality, the organization of space, and the nature of boundaries. The course also considers movement and migration as a political and social process and examines the impact of regional relationships on global social, economic, and political structures. See 778-368 and 416-368. Rec: 778-100. (F)

#### **834-372 Analysis of the Great Lakes Region of North America 3 cr.**

A systematic analysis of the areas surrounding the Great Lakes of the United States and Canada; internal and external relationships; economic activities; regional change and problems. P: soph st. See 416-372. (S)

#### **834-377 Analysis of Northern Lands 3 cr.**

A topical and regional analysis of the subarctic and arctic areas of North America and Eurasia; regional emphasis on Alaska, northern Canada and Scandinavia. P: soph st. See 416-377. (F)

#### **834-392 Analysis of South Asia 3 cr.**

Regions of South Asian countries in various stages of development. Emphasizes the interaction of physical and human resources. P: soph st. (J)

#### **834-395 Seminar: Transportation Systems in Wisconsin 3 cr.**

An analysis of the existing character of intercity rail, highway, water, pipeline, and air transportation in Wisconsin. Existing problems are identified and plans for the future evaluated. Each student will do a research paper dealing with one of the above types of transportation. P: jr st. (J)

#### **834-407 Urban and Regional Economic Analysis 3 cr.**

Advanced theory and methods in urban and regional economics. Course focuses on local issues of economic development, resource management, public finance, and labor market analysis. Students are required to explore in some depth local issues of their choice and to report the results of their explorations in class. P: 298-309.

#### **834-421 Techniques and Methods of Regional Planning 3 cr.**

The use and application of basic tools for urban and regional planning; source of data and other information; techniques and methods of population, economics, land use, housing, and transportation analysis and projects. P: jr st. (S)

#### **834-454 Remote Sensing of the Environment by Satellite 3 cr.**

Large area, small scale analysis of earth surface features by satellite imagery and data. Major emphasis will be on use of LANDSAT (NASA Earth Resources Satellite). Hands-on experience in manual interpretation of multispectral images with respect to vegetation, geology, soils, water resources and land use. Introduction to computer-assisted analysis. Overview of other satellite systems including weather, passive and active microwave (radar) and thermal infrared. Fundamentals of the electromagnetic spectrum, sensors, and data processing systems. Public access to data and imagery. See 678-454. P: 296-202 or 416-250. (S)

#### **834-472 Senior Seminar in Regional Analysis 3 cr.**

A seminar focusing on regional problems relating to land use, economic development, outdoor recreation, transportation or others which might be of personal concern. Student research projects of a professional quality are included. P: sr st. (F,S)

#### **834-478 Senior Distinction in Regional Analysis 3 cr.** See page 113.

#### **834-481 Student-Led Courses 1-4 cr.** See page 113.

#### **834-483X Selected Topics in Regional Analysis 1-4 cr.** See page 113.

#### **834-484 Senior Honors Project 3 cr.** See page 113.



834-497 Internship in Regional Analysis 3-12 cr. See page 113.

834-498 Independent Study 1-4 cr. See page 113

## 867 Senior Seminars

### 867-401 The Role of International Organizations in Support of Cultural and Scientific Developments 3 cr. (V. Nair)

Examines working conditions and nature of activities of international organizations supporting the work of the United Nations as well as the global problems and decision-making processes involved. P: sr st. (J)

### 867-402 Images of Woman and Man 3 cr. (J. Brickley and S. Bremer)

Western man has created clear-cut images of woman and man as interdependent (but not equal) opposites. These are treated as complex, far-reaching, and powerful strategies for organizing experience. These cultural images are identified, their purposes considered, and preservation and changes debated. Alternatives to traditional modes of treating men and women are considered. P: sr st. (F,S)

### 867-406 Science and the Quality of Life 3 cr. (G. O'Hearn)

Students conduct in-depth analyses on the impact of selected scientific developments on the quality of contemporary life using the analytic tools developed in their respective concentrations/majors. This interdisciplinary analysis of the impact of scientific and technological developments is designed to help students develop expertise in practical problem analysis, in communicating results to a cross section of individuals of varied backgrounds and training, and in examining the results for implications of public policy. P: sr st. (F,S)

### 867-410 Biopolitics 3 cr.

A consideration of "biology" and its possible effects on society; biologists and their attitudes toward ethical practices in research; the applications of research findings and the relation of political and national concerns to science and research; and the desires, attitudes and welfare of society as they relate to "biology." P: sr st.

### 867-412 The Impact of Science and Technology on Society 3 cr. (J. Wiersma)

Examines various technologies from both historical and present day perspectives and makes projections for the future. In general, the course 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 scrutinized. P: sr st. (S)

### 867-413 Imagination and Myth 3 cr. (E. Lauter)

Instead of presenting myths as if they were repositories of ancient history, this course investigates the ongoing process of mythmaking as it is still practiced in various fields. After an introduction to several approaches to myth, students read several contemporary texts in order to learn to recognize, evaluate, and participate in myths with intelligence. A final project engages students in the act of mythmaking. P: sr st. (F)

### 867-415 Applied Imagination 3 cr. (F. Fischbach)

Examines the nature and uses of a variety of practical means for defining and developing solutions for contemporary problems of a largely tangible nature, on both an environmental and individual scale. Students develop attitudes and abilities that help them meet future challenges by creatively finding better approaches to problem situations and evaluating ideas aimed at their resolution. Emphasis is on developing personal creativity and using that talent to make decisions. P: sr st. (S)

### 867-418 Science as Metaphor 3 cr. (D. Galaty and H. Harris)

Students from a variety of disciplinary and interdisciplinary programs examine the 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. "A man's reach should exceed his grasp or what's a metaphor." (Apologies to R. Browning). P: sr st. (F)

### 867-420 The Organization in Modern Society 3 cr. (J. Harris, M. Troyer)

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. (S)

### 867-421 Science Fiction: The Social, Political, and Physical Future Through Literature 3 cr. (M. Greenberg)

Examines probable and improbable alternative futures as viewed through the work of leading science fiction writers. Special attention to moral and ethical implications of new technology, new forms of social control and organization, changing religious perspectives, and new lifestyles. P: sr st. (F,S)

### 867-424 Stereotypes and Minority Groups 3 cr. (S. Bremer, B. Baker)

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—as individuals, as groups, and as a society—should do about stereotyping and maintenance of minority groups. P: sr st. (F)

### 867-426 The Search for an Ideal Community: Planned New Towns and Cities 3 cr. (W. Laatsch)

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; field trip.

### 867-430 Value, Reason, and Action in Art and Society 3 cr. (G. Null)

A transdisciplinary exploration of the problem of action in abstract theoretical and concrete applied contexts. The goal is to sharpen and enlarge the student's perspective on, analytical ability in relation to, and interest in the problem of the relation of self to society in the context of deliberately conceived, planned, and executed practical actions. Since social action is a fundamental and recurrent aspect of every individual's experience of him/herself in relation to cultural and subcultural contexts, the seminar will emphasize reflection on and conceptual articulation of universally practiced but seldom examined aspects of action. P: sr st.

### 867-432 Rebels and their Causes: Explorations in Biographies of Personal Rebellion and Social Change 3 cr. (H. Kaye)

This seminar will attempt to join our own individual journeys of discovery to an understanding of other person's crises in their social and political context. Students will read and discuss biographies or autobiographies of persons who have experienced crises between their values, observations, or personalities and the demands of society. The first weeks will be spent in detailed discussion of the social contexts, personal background, actions, and some of the writings about and by Tom Paine, Mary Wollstonecraft, Toussaint L'Overture, Emiliano Zapata, and V.I. Lenin. Then students will choose others to read and discuss. People such as Emma Goldman, Peter Kropotkin, Ho Chi Minh, Eugene Debs, Vincent Van Gogh, Gauguin, Jack Kerouac, Fyodor Dostoyevsky, Hermann Hesse, Nikos Kazantzakis, Henry Miller, Anais Nin, Frank Kafka, T.E. Lawrence, Isadora Duncan, Marilyn Monroe, St. Francis of Assisi, Albert Schweitzer, Henry David Thoreau, Bertrand Russell, Carl Gustav Jung, Albert Einstein, Wilhelm Reich, and Robert Oppenheimer are among possibilities. P: sr st. (F,J)

### 867-433 Cultural Evolutionism: A Predictive Model of the Future 3 cr. (J. Mannino)

The theory of cultural evolutionism is presented and several hypotheses are drawn from it and applied to designated problem areas in modern industrialized cultures around the world. Students examine various implications derived from testing this theory based upon their individual interests and research efforts. In addition, the historical development of similar

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## Senior Seminars

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social evolutionary theories and predictive models of culture ranging from Jeremy Bentham to Karl Marx to Herbert Spencer are discussed and analyzed. Students are encouraged to react to and challenge the models and present alternative interpretations. P: sr st.

#### **867-435 American Rural Society and Social Change 3 cr. (T. Galt)**

Examines general issues and trends in social change and American rural society and agriculture in historical and contemporary perspective. Students make seminar presentations focusing upon rural social and agricultural issues in Wisconsin. (S)

#### **867-439 Topics in Human Rights 3 cr. (N. Pollis)**

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. (F,S)

#### **867-440 Global Disarmament: A Seminar in Alternative Future Investments 3 cr. (N. Petrakopoulos)**

It is becoming increasingly clear that the world cannot afford unending hostility as the cost of "defense" is approaching more than \$800 billion a year worldwide. It is also becoming clear that such expenditures have not succeeded in maintaining or increasing any nation's sense of security. This seminar examines the assumption that the arms race is a worldwide phenomenon ultimately controllable only through the most comprehensive and universal means. We assume that the principal military spenders (U.S., U.S.S.R., China, West Germany, France, United Kingdom) can find and forge a civilized basis of collaboration and thereby pave the way to a promising and practical global disarmament system. The scientific, economic, and socio-political reasons as to why these assumptions are not utopian are discussed. A systematic global disarmament scheme would release immense human and material resources which could be applied to solving multiple problems. Therefore, the seminar also focuses on the implications of global disarmament for the quality of life. In what ways would people search for status and satisfaction? What kinds of scientific, spiritual, cultural, and material growth are possible? How could the transition from a global war economy to a civilian economy be achieved? P: sr st.

#### **867-441 Worldviews: Perceptions That Shape Actions and Values 3 cr. (J. Salisbury)**

This seminar begins with the assumption that people (and indeed societies) adhere to a worldview by which they make sense of their lives. Furthermore, people tend to try to act consistently with their understanding of the world, thus contemporary problems can be better understood within the recognition of the existence of various worldviews. This seminar will explore some worldviews and encourage students to explore problems within this conceptual framework. P: sr st. (F)

#### **867-442 Language: Power and Style 3 cr. (C. Abbott)**

In our thoughts and actions we both shape and are shaped by the language we use. Any people who share a language share an agreement on what the words and phrases of the language mean. That agreement is constantly being renegotiated. We are not often aware of the processes of that renegotiation and we are probably even less aware of how the agreements made affect our own thinking, imagination, and social contacts. But we cannot escape being affected. This course will focus on that agreement to understand better: how the agreement is negotiated; who or what exerts the most powerful influences; what we as individuals lose or gain in the process. Of special interest is the power we, as individuals or as members of groups, have in determining the kind of language we use. We will also try to understand better what effects language has on our thoughts, attitudes, imaginations, perceptions, and social contacts. Then we will try to formulate and articulate individual attitudes toward language. Just as citizenship entails certain responsibilities and privileges so does being a speaker of a language. And just as there is a wide range of reasoned attitudes citizens may have toward the state, there is an equally wide range of attitudes speakers may have toward their language. P: sr st. (S)

#### **867-443 The Scientific Perspective and the Human Self Image 3 cr. (R. Stevens)**

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 in understanding the complex nature of humans. Topics include the impacts of the physical sciences upon the social sciences, social influences on the processes and conclusions of science, the impact of a scientific social philosophy upon the development of personal identity and the validity of science in exploring such human experiences as love, hope, altruism, and free will. P: sr st.

#### **867-444 Liberal Learning and Decision Making: The Search for Connections 3 cr. (A. Hartley)**

Explores the question—what is there about liberal learning which affects the quality of decision making? World conditions—hunger, nuclear armament, energy shortage—exemplify the need for understanding the cognitive and personal development aspects of the decision-making process.

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. (S)

#### **867-445 Senior Seminar: Conservatism 3 cr. (J. Rodesch)**

Conservatism as value, attitude, belief, program and ideology; the historical development of the concept since the eighteenth century and its application to modern issues. The course surveys a representative selection of conservative literature, emphasizing English and American political and cultural traditions. The survey is intended to enable students to develop historical or formal definitions for the concept of conservatism. Students will also examine a sustained piece of conservative writing in political theory or cultural criticism in order to analyze systematically an articulated conservative position. P: sr st.

#### **867-446 Varieties of Educational Experience 3 cr. (D. Jowett)**

A biographical approach to the study of the purposes and outcomes of education. In reflecting on educational systems and the history of education, emphasis is placed on the experience of individuals. Students read a number of biographical and autobiographical studies of men and women of various backgrounds, careers, and times to provide a basis for discussing comparative systems and kind of education. The course seeks to consider relationships and tensions between informal and formal learning, between the purposes of individuals in pursuing education with the purposes of the schools and most especially the kinds of outcomes that result from interaction of social and individual purposes. P: sr st.

#### **867-447 Indian Treaty Rights: The Wisconsin Chippewa Case 3 cr. (case may vary from year to year) (J. Clifton)**

Federal Court-awarded treaty rights for Indians have created great controversies in the United States. This is an in-depth analysis of the antecedents and consequences of such decisions. It requires multidisciplinary approaches to knowing, from anthropology to law and environmental studies. Various underlying issues must be understood, special rights for categories of citizens, interest group politics, state-federal relations, the Courts' use of expert knowledge, ethics and social justice, ethnic groups relations, natural resource allocation, and the like. P: sr st. (S)

#### **867-448 Lost and Found Landscapes 3 cr. (W. Laatsch, M. Thron)**

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; field trip. (J)

#### **867-449 Common Differences in American Culture 3 cr. (L. Walter)**

Examines American culture through a comparison of various cultural groups in the U.S., specifically middle class, Indians, black, Chinese, and Jewish Americans. Students analyze various sources of tension and conflict, including gender, race, ethnicity, and generation, through readings,

discussion, term papers, and student presentations; and explore how these conflicts have been, or might be, resolved; as well as how the resolutions have changed our conception of what it means to be American. P: sr st. (F)

**867-450 Hispanic Culture in the United States 3 cr. (R. Hutchison)**  
Provides a greater personal and intellectual understanding of the cultural backgrounds of Hispanic groups in the United States. Topics include family structure, street gangs, employment, language practices, traditional folk beliefs, (mal ojo, brujeria, etc.), illegal immigration, and other public policy issues which will challenge American society in the future. P: sr st. (J)

## 875 Social Change and Development

### 875-202 Fiction in Other Cultures 3 cr.

Focuses on the relationship between fiction and the social sciences, particularly on how the two areas of knowledge are related in that both attempt to show humans and human societies and cultures as they really are. The course demonstrates that there is a need for both the imaginative and scientific approaches if we are to reach some understanding of our own personal and societal values and of the personal and societal values of other cultures. Students examine what happens when those cultural values clash, what can be done to avoid or lessen such clashes, and how we can best understand, if not embrace, the values and commitments of a variety of other cultures.

### 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.

In the struggle between individual freedom and institutional power, our freedoms have become more fragile and vulnerable, while institutional and governmental authority have become more subtle and powerful. The increasing infringement upon individual freedoms, and increasing institutional power and prerogative, raising ever important questions of ethics, morals, and values concerning freedom and social control which this course explores. A significant portion of time is spent on individuals' freedoms and institutional controls from other culture perspectives. P: 255-102. (FO)

### 875-235 Sex and Society 3 cr.

Examines some of the major social, political and personal issues related to sexual attitudes, sexual behavior, and sexuality in American society. Areas of study include changing sexual attitudes and behavior patterns; varieties of sexual expression (including homosexuality, bisexuality, transsexualism); the politics of socio-sexual issues (pornography, prostitution, health care, sex education, homosexuality); sexual offenses and offenders; sex counseling and therapy, and sex and ethical issues. P: one previous social science course. (F,S)

### 875-241 Women and Changing Values 3 cr.

Examination of traditional restrictions placed on women in family roles, sexual behavior, economics, politics, and religion to determine if they are crumbling. Discussion of what new roles and values are possible or probable, whether the more prescribed traditional values and roles are still valid, and how individuals can adapt to change. (F)

### 875-265 Folk Music and Social Change 3 cr.

Analyzes nonelite song as a form of socio-political expression and protest in modern societies. Using an interdisciplinary and comparative social science approach, the course explores a variety of musical developments in several different countries in an attempt to understand the history of common people through their songs and ballads, and the socio-political movements which accompanied them. Although folk songs and kindred traditions of nonelite music are emphasized, some attention may be paid to

other popular musical styles such as rock, jazz, country, bluegrass, reggae, highlife, and Norteno music. Among the examples that may be discussed are American folk songs generated by the depression and dust bowl of the 1930's; the protest and topical American folk music of the 1960's; the "New Song" movement in Chile; the vocal traditions of Irish rebellion; songs of black struggle in North America and southern Africa; Appalachian coal miners' songs; and the revolutionary songs of Maoist China. The song is placed in its historical, social, cultural, political, and economic context. (JO)

### 875-270 Third World: Development or Despair 3 cr.

Surveys causes and consequences of development and underdevelopment in selected nations and regions. Examines such themes as natural resources, imperialism, neocolonialism, population, education, food and fuel, employment, health, and political power. Emphasizes various cases indicating possible futures for the world's poor people. P: 156-100 or 298-102 or 202, or 778-100 or 875-100 or 900-202. (F,J,S)

### 875-273 Blood, Honor and Envy: Values and Society in Southern Europe 3 cr.

Examines some values themes found in historical and contemporary societies in southern Europe (Greece, Italy, southern France, Spain). These include honor and shame, family loyalty, the menace of envy, male and female relationships, and political organization, among others. The values, and the sometimes rightly elaborated symbolic systems through which they are expressed (e.g., the bullfight, the evil eye belief system, the cult of saints and the virgin, etc.), are studied through case studies. Values themes are examined in the context of both historical process and social structure and comparisons across southern European cultures and with North American culture will be stressed. P: 156-100 or 900-202. (F,S)

### 875-275 The Vietnam War in Historical Perspective 3 cr.

An introduction to the conflicts and upheavals in Indochina from World War II to the present, with particular attention to the Vietnam War. The role of the United States in Indochina, the effect of that activity on both the United States and Indochina, and the Indochinese contest of revolution and change are emphasized. Rec: soph st. (JE)

### 875-281 Student-Led Courses 1-4 cr. See page 113.

### 875-283X Selected Topics in Social Change and Development 1-4 cr. See page 113.

### 875-298 Independent Study 1-4 cr. See page 113.

### 875-303 Criminal Justice Process 3 cr.

Familiarizes students with the workings of the American criminal justice system. Included are analyses of a variety of issues concerning policing, the court system, and the system of corrections. The course also sensitizes students to ethical problems such as police use of deadly force, police corruption and brutality, the scope and nature of plea bargaining, disparities in sentencing, etc. P: 900-202 or 820-102 or 156-100 or 778-100. (S)

### 875-320 Constitutional Law 3 cr.

Interpretations of the constitution and the development of our legal system. The law as a parameter and a molder of processes in society, current trends in constitutional law, implications for our development, and social options available if different interpretations occur. See 778-320. Rec: 778-101. (S)

### 875-325 Law in Society 3 cr.

Examines the place of law in society and in relationship with other social institutions. Law in society is viewed from historical and cross-cultural perspectives. See 950-379. P: jr st. (F)

### 875-330 Law and the Judicial Process 3 cr.

See 778-330.

### 875-333 Social Change in a Selected Area 3 cr.

Processes and strategies of social change and development in a selected

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## Social Change and Development

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nation or set of nations. Course may be repeated for credit each time it focuses upon a different area. P: two lower-level courses in political science, economics, anthropology, sociology, or history. (F,S)

### **875-340 Women, Work, and Family 3 cr.**

Focuses on the problems women encounter as workers. The implications of such issues as women's double shift (as public and domestic worker), the socialization of domestic work, wages for housework and child care, women as a reserve labor force, differential wage scales and job segregation will be explored within a study group format. Analysis of the socioeconomic variables and ideologies which have shaped and supported women's place in the economic system; and examination of strategies for change, including legal action, social protest, trade unionism, community action, and the women's movement. (F)

### **875-342 Women, Myth, and Identity 3 cr.**

How archetypal and mythological images of women influence contemporary images of women and their roles. How early images of women, such as those revealed in Paleolithic cave art, early Mediterranean civilizations, Greek mythology, and Judaeo-Christian tradition, continue to influence modern images of women. Freudian and Jungian psychoanalytic theories concerning women. Prevailing images of women in education, economics, family, the sciences, politics, the arts, in our own and other cultures, are investigated to determine if the images are similar, if they are valid, and if there is a universal need for change. (S)

### **875-345 Women in Cross-Cultural Perspective 3 cr.**

Research materials and analytical tools from anthropology and sociology used to examine the changing position of women in selected pre-industrial, developing, and industrial societies. In addition to analyzing women's status and role in particular social context, comparisons across societies are drawn and reasons for differences proposed and discussed. Special emphasis on discovering the cultural, social, political, and economic institutions which shape women's lives worldwide. P: 875-241. (S)

### **875-348 Women and the Law 3 cr.**

Examines the changing legal status of women in relationship to other social forces. Surveys major historical landmarks in the development of women's legal rights and the current status of such areas as property rights, family law and employment opportunity. Based on an examination of the effectiveness and limitations of various legal tools—ERA, legislation, and lawsuits—in the struggle for women's equality, discusses alternative strategies for future action. P: soph st.

### **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. (S)

### **875-361 Historical Perspectives on Social Change 3 cr.**

Application of the concepts and models of social change discussed in 875-360 to the question of the processes of social change through time. Emphasis on both the historical processes of social change and on values implicit in them. Rec: 156-100 or 900-202 and 448-100 or 493-202. (F)

### **875-365 Development Planning 3 cr.**

Historical overview of population technology, and economic development. Survey of the current and projected future situations in population, resources, and socioeconomic geography in the world's poor countries. A framework, based upon the concept of human resources (population weighed by "quality" of human potential), for considering, "What is the role of population in the economics of poor countries in the world today?" P: 875-360, 361 or 478-321.

### **875-367 The Structure of Evil and Western Culture 3 cr.**

Traditional conceptions of good and evil, enshrined in Western culture as ideals for human experience and behavior, have been fundamentally challenged in this century by authors who argue that these cultural values are

negative or evil rather than positive or good. The course examines this claim through reading and discussion of major works in order to gain better understanding of our traditional values. Rec: jr st or cons inst. (SO)

### **875-371 Motivation and Social Change 3 cr.**

A selective review of motivation theory with applications to change-related behaviors such as innovation, leadership, and entrepreneurship. Motivationally based theories of economic development. The interaction of psychological and sociocultural forces in collective phenomena such as social movements, the diffusion of innovations, and generational changes. P: jr st. (S)

### **875-380 Families and Sexuality: Politics and Public Policy Issues 3 cr.**

Examines political process and public policy issues related to families and sexuality in American society. The course develops theoretical models for understanding such issues; provides a historical overview on specific policy developments since the 1960s; and analyzes a number of current policy issues in depth (e.g., child abuse and other forms of domestic violence, teenage childbearing/childrearing, AIDS, abortion, child care, homelessness, and social implications of reproductive technologies). P: 481-210, 875-235, or 900-308 and one additional course in social science. (S)

### **875-400 Environmental Law 3 cr.** See 950-378.

### **875-440 Women and Religion 3 cr.**

Religion is an extremely powerful force in all societies and cultures. It is, however, a force whose pervasiveness, whose influence in all areas of human endeavor, is not fully recognized or understood. This course examines organized religions, principally those in the Judeo-Christian tradition; it explores the history of organized religions, theologies and religious traditions as they shape and enforce the "accepted" roles and rules for women and men. Rec: 493-101 or 102 or course in women's studies. (F)

### **875-470 Senior Seminar in Social Change and Development 3 cr.**

A rigorous analysis of an important social change issue or of the work of an important social change theorist. The emphasis is upon intellectual depth. P: 875-360/361. (F,S)

### **875-478 Senior Distinction in Social Change and Development 3 cr.** See page 113.

### **875-481 Student-Led Courses 1-4 cr.** See page 113.

### **875-483X Selected Topics in Social Change and Development 1-4 cr.** See page 113.

### **875-484 Senior Honors Project 3 cr.** See page 113.

### **875-497 Internship in Social Change and Development 3-12 cr.** See page 113.

### **875-498 Independent Study 1-4 cr.** See page 113.

## 892 Social Services

### **892-202 Introduction to Social Services 3 cr.**

The role of social change in modern society; field methods, principles, scope of the social services. (F)

### **205 Personal Values and Social Reform 3 cr.**

See 493-205.

### **892-257 Training in Social Service Skills and Techniques 3 cr.**

The lab consists of a number of learning experiences intended to assist students in developing and/or increasing skills and awareness required for competent behavior as a helping person. Areas of focus include: (1) inner communication and awareness of personal values and behaviors; (2) other communication including dissecting messages, increasing listening skills, negotiating contracts and understanding roles within a system; and (3) assertion training for use in intervention with clients, colleagues and administrators. Students will learn about and share information on various helping agencies in the community.

**892-275 American Social Welfare 3 cr.**

A descriptive and analytical overview of the institution of American social welfare: specifically, how this country has developed social policies and services to meet social problems and the institutional arrangements that have emerged to provide people with resources and services to meet their needs. The historical perspective, culture, traditions, and values that are reflected in social policy and services are included. The course includes a unit on the organization of social welfare services to meet the needs of native Americans. P: None. (F)

**892-281 Student-Led Courses 1-4 cr.** See page 113.**892-283X Selected Topics in Social Services 1-4 cr.** See page 113.**892-298 Independent Study 1-4 cr.** See page 113.**892-300 Introduction to Field Experience in a Social Service Agency 1-3 cr.**

Offers an introductory exposure to working in a social services agency. A supervised program of observation and assistance to the agency is provided by a professional staff member of the agency. This course is necessary for students seeking career preparation in social work or human development. Students are expected to contract for placement with an approved social services agency for 40 hours of time per credit. A written assignment discussing the experience is required. P: concurrent enrollment in 892-305 or 370. (F,S)

**892-305 The Social Work Profession 3 cr.**

An orientation to the knowledge, skills, and values of professional social work practice. Professional competencies expected of a Bachelor of Social Work graduate are defined and related to field training experiences. Required for B.S.W. majors and may be taken concurrently with 892-300. Introduction to Field Experience. P: 892-275. (F)

**892-360 Social Service Delivery Systems and Cultural Differences 3 cr.**

Social service programs of culturally and technologically different societies are visited. The nature of the differences between the care-giving institutions are related to the cultures from which they emanate and which, in turn, they service. Offered in January and summer.

**892-370 Principles of Social Service Methods I 3 cr.**

Applications of concepts important to the understanding of individual, group, organizational, and community dynamics to generic social service practices. Students bring to the class issues generated through their exposure to field placement activities. Discussions focus on applying conceptual tools for assessing the variety of responses to changing social needs from the perspective of the consumer of the service, the service deliverer, and the needs of society. Students develop an understanding of what they want to do and methods to achieve their goals. Skills to influence individuals, groups, and organizations are refined through the field experience. Concurrent registration in 892-330 and 402. P: 892-202. (F)

**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. This framework is used to organize and apply the content to social work practice. P: 892-305, 481-331, 478-102; Rec: 900-208, 875-203, 820-202. (S)

**892-402, 403 Field Practicum I, II 5, 5 cr.**

Actual social service work through placement in a social service agency; weekly seminar meetings and written reports. P for 402: concurrent enrollment in 892-411. (F). P for 403: 892-402 and concurrent enrollment in 892-420. (S)

**892-411 Social Work Methods II 3 cr.**

Students apply various social service methods to stimulate the clients and the placement agency into greater effectiveness in the direction of their/its goals. A dual focus of client change and organizational change using

general problem-solving methods for change is developed. P: 892-370; Rec: 481-433 or 875-360. (F)

**892-420 Social Work Methods III 3 cr.**

A continuation of the methods of intervention sequence. This final course focuses on theory and methods of planned change interventions, as well as the skills necessary to implement change efforts across all size client systems. The course also serves to integrate and help students relate theory to field practicum experiences. P: 892-370, 411. (S)

**892-430 Social Policy Analysis 3 cr.**

Focuses on helping students further and deepen their knowledge and skills in analyzing and formulating social policy. The course builds on foundation content related to social policy and draws upon students' experiences in the senior field practicum in order to help them develop skills in policy analysis and intervention. A unit is included on social policy related to the Native American population. P: 892-275. (F)

**892-460 Evaluation of Practice 3 cr.**

An introduction to the principles of evaluation is applied to helper-client relationships within the context of various approaches to social intervention (one-to-one, group, agency, community). Practice evaluation is compared and contrasted with program evaluation. The assumptions and limitations associated with various clinical evaluation models are explored. The social, political, and philosophical issues of accountability are raised. Finally, the student has an opportunity to apply an evaluation approach to an actual experience. Experience in a social service agency is necessary to provide actual material for the application of the course principles. Students who do not have a current practice experience can make alternative arrangements with the course instructor. P: 892-370, 411. (S)

**892-481 Student-Led Courses 1-4 cr.** See page 113.**892-483X Selected Topics in Social Services 1-4 cr.** See page 113.**892-497 Internship in Social Services 3-12 cr.** See page 113.**892-498 Independent Study 1-4 cr.** See page 113.**900 Sociology****900-202 Introduction to Sociology 3 cr.**

Introduction to major sociological concepts and ideas and their application to contemporary problems of societies. (F,S)

**900-283X Selected Topics 1-4 cr.** See page 113.**900-298 Independent Study 1-4 cr.** See page 113.**900-301 Foundations for Social Research 3 cr.**

An integrated introductory examination of the nature of science, theory, methodology and statistics. The emphasis is on identifying and interpreting relationships between social phenomena. This is assured by applying the conceptual tools provided in the course to specific problems. Same as 255-301. P: 255-205 or cons inst. (F,S)

**900-302 Class, Status, and Power 3 cr.**

Class, status and power as determinants of group interests, preferences, ideologies, and struggles; examination at the national and international level. P: 900-202. (SE)

**900-304 Deviant Behavior 3 cr.**

Description and analysis of the range of behavior regarded as problematic in contemporary society; evaluation of the major theoretical positions on norm constriction, labeling, causes and treatment. P: 900-202. (SO)

**900-307 Social Theory 3 cr.**

A critical analysis of classical and contemporary social theories with attention to their social and intellectual context, and contemporary application. P: 900-202. (SO)

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## Sociology

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### **900-308 Sociology of the Family 3 cr.**

A sociological approach to marriage and families in American society. The course covers theories of historical changes in family life; the problems of defining family; social class, ethnicity and gender as key variables in the study of families; love and marriage markets; premarital and marital sex; family power, conflict and decision making; family production and reproduction; life transitions; and divorce and remarriage. P: 900-202, 481-210, 156-100 or 820-202. (F,S)

### **900-311 Collective Behavior and Social Movements 3 cr.**

Analysis of structure and processes of crowds, social movements, and masses with emphasis on societal contexts and relationships to social change. P: 900-202. (SO)

### **900-375 Sociology of Sexuality and Intimate Relations 3 cr.**

A social constructionist approach is used to analyze the creation of the modern emphasis on intimacy and sexuality as essential aspects in the development of self and personal life. Particular subjects covered include gender and intimate experience; changing ideas of love, intimacy and erotic pleasure; concepts of sexual health; the politics of sexual identities and communities; social movements related to socio-sexual issues; mass cultural influences on intimate and sexual relations; and impacts on children and child rearing. P: 875-235 and 900-202 or 900-202 and two other social science courses. (FE)

### **900-404 Criminology 3 cr.**

Analysis of the relationship of crime and society focusing on causes of crime and programs of control. P: 900-202 and one 300 level course in sociology. (F)

### **900-483X Selected Topics 1-4 cr.** See page 113.

### **900-497 Internship in Sociology 3-12 cr.** See page 113.

### **900-498 Independent Study 1-4 cr.** See page 113.

## **950 Urban and Public Affairs**

### **950-102 Introduction to Public Policy 3 cr.**

A survey of contemporary issues in American public policy, with emphasis on approaches used in the study of public policy. Among questions examined are how factual and value issues can be separated in policy debate, what type of reasoning underlies policy arguments, how data used in support of policy arguments can be evaluated, and how political ideologies shape the consideration of policy alternatives. Substantive public policies such as those dealing with the American economy, energy development and conservation, environmental quality, and the welfare state and social programs are considered. (F,J)

### **950-200 Introduction to Urban Studies 3 cr.**

Looks at the richness and complexity of the human experience in the modern city. We examine the city as an arena in which interrelationships between enduring human concerns and social institutions find articulation and ask how the city influences these as well as how the established institutions and concerns influence the city. (F)

### **950-201 Problem Analysis and Decision Making 3 cr.**

Focuses on theories and methods applicable to identifying and analyzing problems and issues and to developing alternative problem-solving strategies. Considers the role of facts and values in problem identification, criteria appropriate for distinguishing between private and public problems, and develops skills in problem analysis and problem solving. (S)

### **950-210 Drawing Systems for the Designer 3 cr.**

Introduction to the theory and practical application of various drawing systems, including orthographics, axiometrics, and perspectives. Emphasis is on the use of these drawing systems as aids in the design process. Projects ranging from working drawings to finished display renderings done in a variety of media. Rec: 168-106. (J)

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### **950-215 Introduction to Public Administration 3 cr.**

Examines principal tools and methods for planning, designing, analyzing, and managing public systems. Provides understanding of the structure of public systems, their environment and restrictions on them, decision-making processes, and possible features of service delivery systems. Develops skill in application of systems design and analysis techniques to problems associated with planning and managing public systems. P: 778-101 or 950-102. (F,S)

### **950-281 Student-Led Courses 1-4 cr.** See page 113.

### **950-283X Selected Topics in Urban and Public Affairs 1-4 cr.** See page 113.

### **950-298 Independent Study 1-4 cr.** See page 113.

### **950-302 Urban Behavior 3 cr.**

This course focuses on the life that people live in cities. It examines how we perceive and form impressions about urban areas, how we use urban areas, and how we interact with others in these settings. The topics covered are psychological in nature, but rely on material from a variety of disciplines. P: 950-200 or 820-102. (SO)

### **950-303 Urban Sociology 3 cr.**

The study of social life and population groups in the urban environment. Our concern is with the social and psychological consequences of city life and the political and economic forces which have produced the industrial and corporate cities of the present day. Other topics include theories of "community," the location of industrial and commercial areas, the distribution of racial and ethnic groups, and urban problems such as poverty, housing, and public services. P: 950-200 or 900-202. (FE)

### **950-306 Regulatory Policy and Administration 3 cr.**

An examination of the purposes, structure, legal aspects, and operation of public regulatory agencies and programs in the United States. Topics include theories and controversies underlying regulatory policy, issues in contemporary regulatory policy and administration, and rational models and methods for risk analysis and decision making. Case studies and exercises will cover a variety of regulatory processes, including those associated with public health, consumer protection, product safety, environmental quality, and energy development and use. See 778-306. P: 778-101 or 950-102. (FO)

### **950-307 Urban Public Law 3 cr.**

Examines the changing character of United States' public law toward urban communities as that law is expressed in Congressional statutes, judicial decisions and administrative rules. The response of public law to housing problems, equalization of municipal services, school desegregation, land use, growth controls, etc., are analyzed. The course requires an in-depth description and analysis of national public laws (statutes), rules (administrative), and order (administrative and judicial) having to do with the urban setting. Students study government documents as primary materials. The government document center serves as a laboratory. P: 950-200 or 778-101. (SE)

### **950-309 Urban and Regional Economic Theory 3 cr.**

Basic concepts in the economics of regions and urban areas. Concepts developed include industrial location theory, central place theory, land rent theory, economic base theory, and input-output analysis. Concepts are applied to problems of economic development, urbanization, and place prosperity. P: 298-203; Rec: 298-202. (F)

### **950-313 Cities Past, Present and Future 3 cr.**

A historical analysis of the development of urban settlements and the influences of social and technological change on urban structure. The course allows students to examine major topics of urban studies (including the organization of economic and social activities in urban space, the distribution of occupational and population groups, and the aesthetic qualities of cityscapes) in historical and cross-cultural settings. P: 950-200; Rec: 448-100. (S)

**950-320 Local Government Operations I 2 cr.**

History, functions, powers, and principal officers of the several types of local governments in the U. S. Introduces participants to major organizational characteristics and administrative operations of such jurisdictions. Emphasizes development of student skills in supervision, public and interpersonal relations, communications, and in elementary methods for budgeting and administrative analysis. P: introductory course in American government, and public administration or registration in Municipal Clerks Institute. (SO)

**950-321 Local Government Operations II 2 cr.**

Major ideas, issues, and policies concerning jurisdiction, formation, and administrative operations of local units of government; introduces selected administrative and service delivery operations of such units, and to the use of computers in local government. Emphasizes development of skills in supervision, public and interpersonal relations, administrative analysis, and in use of productivity improvement and program evaluation methods. P: 950-320. (SO)

**950-322 Local Government Operations III 2 cr.**

Local government applications of productivity improvement techniques and of methods for analyzing policy problems, issues, and alternative problem solutions, including benefit-cost analysis. Also examines the probable future environment of local governments and emphasizes means for improving local government relationships with the public and other jurisdictions of government. P: 930-321. (SO)

**950-325 Behavior in Designed Environments I 3 cr.**

How the physical development of indoor and outdoor living spaces, including their location, form, and design, influence and shape human behavior. Introduction to contributing variables and techniques of measuring environment-behavior relationships. See 834-325. P: 820-102 or 202. (F)

**950-326 Behavior in Designed Environments II 3 cr.**

Application of techniques and knowledge of the environment-behavior relationship to studies of the designed area. Students develop and carry out all aspects of a detailed study of a selected environment-behavior problem. See 834-326. P: 950-325. (SE)

**950-330 Environmental Politics and Policy 3 cr.**

An introduction to political and administrative aspects of environmental problems, with special emphasis on American politics and public policy. The nature and scope of environmental problems; the environmental movement and processes of agenda setting; the role of public opinion and interest groups; the policy-making process; decision making in administrative agencies; policy evaluation; selected problems and issues in environmental policy and administration; and political issues in adaptation to a sustainable society. See 778-301. P: 778-101 or 950-102. (S)

**950-331 Urban Politics and Policy 3 cr.**

Concerned with urban social theory and its relation to urban political processes and public policy. Of central concern is the question: To what extent are basic human needs, as identified by urban theorists, frustrated and/or fulfilled by urban political processes and public policy? Policy arenas examined include: urban renewal, welfare policy, urban transportation, fiscal policy. See 778-305. P: jr st, 778-101 or 950-200. (S)

**950-341 Cities in Literature and Art 3 cr.**

Focus is on American writers and artists. Selection of novels, poems, plays, autobiographies, paintings, buildings, and photographs highlights historically important images of the city in America. The course considers what works of literary and visual art can tell us about cities, how the images created by writers and artists relate to their own urban experience and to ours, and how our cultural imagery can expand or limit our urban possibilities. P: 950-200 or 875-201 or one literature course.

**950-344 Leadership in Organizations 3 cr.**

Covers roles, functions, and environments of organizational supervisors, project leaders, executives, managers, administrators, and other adminis-

trative agents, especially in public enterprises; the relationships between the behavior of administrative agents and work group performance in a variety of organizational and program settings. P: jr st. (S)

**950-345 Women in American Perspective 3 cr.**

Provides a historical survey of the changing situations and various contributions of women in American society. It covers the colonial, frontier, Jeffersonian, urban-industrial, and modern periods, and it includes an in-depth study of the turn-of-the-century women's movement. It also uses social analyses and individual life histories to explore the impact of sex role problems on contemporary women from different socioeconomic, ethnic, and personal backgrounds. Same as 448-345. P: 875-241. (F)

**950-351 Transportation and the City 3 cr.**

The impact of the transportation subsystem of the city upon other urban subsystems (residential, commercial) and upon urban dwellers. P: jr st and 778-101 or 950-200 or 102. (F)

**950-363 Urban Aesthetics 3 cr.**

An investigation of the physical/visual form of the American urban place. The city is analyzed as a response to the aesthetic and value systems of its inhabitants to the history of American urbanization; and to those bureaucratic systems which impact its form. This course is designed around a series of mandatory field trips and other case studies. P: jr st and 950-200.

**950-375 Women: Strategies for Change 3 cr.**

Designed to combine theoretical knowledge and practical experience in an effort to understand and evaluate alternative strategies for change in the status of women in society today. Intended for students with some background in women's studies and/or community activism. Differing theoretical approaches to social change for women are contrasted, focusing on their concepts of power relations, methods of reform, and effectiveness. Student projects concentrate on acquiring practical skills for social change, through community projects, or through internships with appropriate organizations, office-holders, or other skilled individuals of the student's choice. P: course in women's studies, jr st. (S)

**950-376 Administrative Law 3 cr.**

Focuses on administrative law in the American federal (i. e., intergovernmental) system. The course is to: a) provide students with a comprehensive coverage of fundamentals of administrative law; b) assist students in understanding connections between administrative law issues and issues of public policy; c) introduce students to the legal dimensions of administrative problems. Administrative law has to do with powers and procedures generally applicable to all administrative agencies and derives from constitutions (state and federal), statutes, common law, and rules, regulations, and orders of administrative agencies. P: 778-101 or 950-200 or cons inst.

**950-378 Environmental Law 3 cr.**

An overview of major environmental laws, including historical development, the structure of the law, and the implementation of these laws by federal, state, and local agencies. Special emphasis is given to the impact of landmark legislation, particularly the National Environmental Policy Act and the Clean Air Act, on state and local regulatory authority. Other topics include: administrative agencies and process; the influence of the courts; economic approaches to environmental regulation; national and international policy questions related to such issues as acid rain, toxic wastes, and nuclear waste disposal; citizens' suits and questions of legal standing; and environmental mediation. P: jr st and introductory political science or public administration course. (FO)

**950-379 Law in Society 3 cr.**

Examines the place of law in society and in relationship with other social institutions. Law in society is viewed from historical and cross-cultural perspectives. See 875-325. P: jr st or cons inst. (F)

**950-402 Resource Economics Analysis 3 cr.**

Application of tools and concepts in current economic decision making

*continued*

## Urban and Public Affairs

### *continued*

with special emphasis upon common property resources management (i.e., water and air). Same as 298-402. P: jr st and 298-203. (SE)

### **950-406 Administration of Local Government 3 cr.**

Covers contemporary problems and trends in intergovernmental relations and in the organization, management, and financing of local governmental and public service entities. Examines ideas and issues concerning the management of such entities and means for improving and/or reducing the costs of local governmental services, including service consolidation, interjurisdictional contracts and compacts, and metropolitan government. Emphasizes local governmental systems, institutions, and administrative arrangements in Wisconsin, and includes supervised student research on topics of interest to class members. P: 778-101 or 950-215. (FE)

### **950-407 Urban and Regional Economic Analysis 3 cr.**

Advanced theory and methods in urban and regional economics. Course focuses on local issues of economic development, resource management, public finance, and labor market analysis. Students are required to explore in some depth local issues of their choice and to report the results of their explorations in class. P: 298-309.

### **950-408 Public Policy Analysis 3 cr.**

An introduction to public policy analysis and to the policy-making process in American government. Topics include approaches to the study of public policy, the nature of public problems, the policy agenda, policy formulation, assessment of policy alternatives, policy adoption, policy implementation and evaluation, and the use of policy analysis in decision making. Special attention is given to political aspects of policy analysis, to models and methods for critical analysis and rational design of public policies, and to practical applications of policy studies. Develops skills in legislative research, preparation of position papers and other policy development documents, and methods of policy analysis and evaluation. Same as 778-408. P: 778-101 or 950-102. (F)

### **950-409 Public Finance and Fiscal Policy 3 cr.**

Effects of government spending and taxation on resource allocation, incomes, prices, and employment. Includes a consideration of the uses and effects of fiscal policy. See 298-306. P: 298-202 and 203. (S)

### **950-412 Urban Planning I 3 cr.**

Planning as a generic process—a critical examination of planning theory focusing on models of rationality, valuation processes, political decision making, governmental structure, and fiscal policy. The seminar juxtaposes theoretical analysis with case studies from actual planning practice to illuminate the history of planning in the American city, contemporary issues in planning, and the role of the planner in local governmental decision making. P: 950-200; Rec: 778-101 or 950-102. (F)

### **950-413 Urban Planning II: Community Project 6 cr.**

A field research seminar focusing on the planning/decision making processes in an ongoing program for revitalizing a west Green Bay neighborhood. Seminar members constitute a planning team, expected to make all of the organizational and operational decisions necessary to make the team an integral part of the community program. Topics and/or activities which the seminar may investigate include the planner as advocate and change agent; information requirements in planning; interest groups involved in community decision making; definition making; definition of the community and description of its residents; analysis of community needs; systems of service in the community; designing and implementing intervention strategies; basic systems for generating and organizing information for planning, and intervention activities. P: 950-412.

### **950-415 Public and Nonprofit Budgeting 3 cr.**

Covers the history, philosophy, purposes, attributes, types, and operational elements of major public budgetary systems used in the United States, with emphasis on object, performance, program, and PPB systems and their applicability to various programs, organizations, and governmental jurisdictions. Examines principles and methods used in designing and managing

public budgeting systems and relationship between program planning, policy planning, and budgetary operations. Develops skill in applying analytic and decision-assisting tools to public budgetary operations. P: 778-101 or 950-102 or 215. (S)

### **950-451 Decision Theory and Methods 3 cr.**

Provides fundamental skills in program planning and evaluation. Theory is introduced to explain practical application. Emphasis is on building skills and understanding: how to plan for effective implementation; how to apply cost-effectiveness analysis; how to do cost estimating; how to schedule priorities; how to design evaluation into programs from the start. For persons interested in government, business, or nonprofit organizations. P: 255-205 or 600-260. (F)

### **950-452 Planning Theory and Methods 3 cr.**

Focuses on planning for complex socio-technical systems in the public sector, including analysis, design, evaluation, and control. Covers the theory of planning, general systems theory, the political and administrative setting of public planning operations, and methods of planning analysis, such as cost-effectiveness analysis and model building. Emphasizes practical application of theory and methods through case studies and projects, and provides both a theoretical and methodologic basis for study of specialized fields of planning, including those concerned with urban, regional, land use, environmental policy, and resource planning. P: one course in statistics or cons inst. (S)

### **950-470 Capital Projects Planning and Programming 3 cr.**

Methods for determining demand for selected kinds of capital projects emphasizing public sector and environmentally related facilities. Preparation of capital projects budgets, pre-architectural plans and specifications, and capital project programs. The logic of capital budgeting decisions, and of project funding alternatives, especially in public sector projects. Role of retirement funds, revenue, and general obligation bonds in public sector capital project programs. Rec: 950-451. (FO)

**950-481 Student-Led Courses 1-4 cr.** See page 113.

**950-483X Selected Topics in Urban and Public Affairs 1-4 cr.** See page 113.

**950-484 Senior Honors Project 3 cr.** See page 113.

**950-497 Internship in Urban and Public Affairs 3-12 cr.** See page 113.

**950-498 Independent Study 1-4 cr.** See page 113.



# 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; for a student on probation, the maximum is 15 credits. Lower pro rata limitations are specified for shorter terms.

**Minimum Credit Load**—a specific minimum number of credits (excluding audit credits) that a student must carry to be eligible for a variety of programs and benefits, such as athletics, financial aid, family health insurance coverage, summer employment, and loan repayment referrals.

**Attempted or Grade Point Credits**—the number of credits taken for a grade that will affect the grade point average. Some attempted credits may not count toward degree credits. Some physical education courses, for example, may not result in degree credit and do not affect the grade point average.

**Degree Credits**—those credits that count toward the 124 credits required for a bachelor's degree. Certain courses in physical education and all academic support courses do not result in degree credits even though they may have a credit value assigned for measuring credit load for some

purposes. Some physical education credits may be held in escrow and added to the total earned credits at graduation.

**Completed Credits**—the number of credits (excluding audit credits) for which a final grade is received. Pass-no credit credits passed, degree credits, and attempted credits are included. Temporary grades of I or N are excluded.

**Audited Credits**—credits for courses in which a student chooses to enroll as an auditor. These credits are counted for maximum credit load and fee assessment, but they are of no significance for any other purpose, such as graduation or grade point average. Enrollment as an auditor is subject to special conditions.

**P-NC Credits**—pass-no credit is a specific grading option. These credits have no effect on grade point average, but, if passed, may add to the degree credits earned. Students complete a special request form to elect P-NC grading.

**Grade Point Average (GPA)**—a numerical value derived from dividing the number of grade points earned by the number of credits attempted on a regular grade basis. P-NC, incomplete, and audit grades and credits have no effect on grade point average. Only courses attempted at UWGB are included in a student's GPA.

**Example of GPA for a semester:**

Course	Grade	Grade Credits	Grade Points
Art 105	A	3	12
Math 104	BC	4	10
History 205	C	4	08
English 093	P	3	00
<i>(Academic Support)</i>			
<b>Total</b>		<b>11</b>	<b>30</b>

30 divided by 11 equals  
**2.73 grade point average**

**Cumulative Grade Point Average**—GPA for all completed terms at UWGB. It is calculated by dividing the cumulative total grade points earned by the cumulative total grade point credits.

**Probation**—a nonpunitive warning status assigned to a student who shows lack of academic progress as measured by successfully completed credits or for inadequate

performance as measured by grade point average. Probation is an advisory warning that improved performance is necessary to continue as a student.

**Academic Drop**—a status assigned when a student's record of academic progress and/or achievement is unacceptable. Students receiving a drop are not permitted to continue to enroll at the university.

**Good Standing**—a status assigned when a student is making adequate academic progress and his or her cumulative grade point average is 2.00 or better.

## Academic Standing

Every student is expected to maintain certain standards of academic achievement in all work carried at the university. Standards are described in terms of quality of work as measured by the semester and cumulative grade point averages, and by quantity of work satisfactorily completed, as measured by the proportion of the attempted credit load completed each semester.

Certain exceptions are allowed for part-time students, but unless otherwise stated, part-time students are expected to meet the same academic achievement standards as any other student.

Academic standings are reviewed at the end of each term. A revised standing is reported to every student on the final grade report issued after each term.

## Grading System And Grade Points

Grade point averages indicate academic and class standing and are a means of measuring the quality of a student's academic work. Grade point averages are computed on a 4.0 basis. See chart for letter grade point values.

A student who elects to take courses on a pass-no credit basis should be aware of certain restrictions. See the special section on P-NC grading.

Since grading standards differ from institution to institution, grades received from other institutions are not used in computing grade point averages. *continued*

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
PR (Progress—temporary grade for an internship or thesis course)	No effect
P (Passed thesis or internship)	No effect
NC (Unacceptable thesis or internship)	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)	No effect until removed or lapsed into tentative grade assigned if required work is not completed. Work must be completed by deadline set by the instructor, or the last day of classes for the following semester, whichever comes first.

## Probation and Drop Status

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. A drop 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 drop status 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 a drop action at the end of that term. Drop actions will not be taken solely on the basis of inadequate achievement in the January interim for students who were not enrolled in the fall semester, however.

Each student is expected to complete a certain portion of the credits for which he or she originally enrolled. Failure to meet this standard in a given semester will result in a status of probation, continued probation, or drop. 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.

### *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 a drop status.
- action on part-time students is withheld until they have attempted at least 12 credits at UWGB.

#### Credit Completion Requirement and Action

original credit load*	credits completed	status
12 or more	8 or less	probation
9-11	5 or less	probation
6-8	2 or less	probation

### *For a Student on Probation*

#### Grade Point Requirement and Action

- 1.50 to 1.999 end of semester or term cumulative GPA results in continued probation for one term.
- 1.49 or less end of semester cumulative GPA results in a drop status.
- 2.0 or better end of semester or term GPA and a 2.0 cumulative GPA results in a return to good standing.

#### Credit Completion Requirement and Action

original credit load*	credits completed	status
12 or more	8 or less	drop
9-11	5 or less	drop
6-8	2 or less	drop
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 a drop 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

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 a drop 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 drop.)

Drop status is assigned for a period of one semester for the first drop. If a student is dropped for a second time, the drop status is for two semesters. Students who are dropped must apply for readmission to the university if they want to return. Such readmission may be granted or denied.

A student who is dropped at the end of the fall semester may enroll in the January interim with

the understanding that he or she is not eligible to continue for the spring semester unless achievements during the January interim result in a return to good standing or continued probation. A student who is dropped at the end of the spring semester may enroll in the summer session with the understanding that he or she is not eligible to continue for the fall semester unless achievements during the summer session result in a return to good standing or continued probation.

Conditional matriculants must meet special contractual requirements specified at the time of admission. When a CM student is removed from that status, he or she must then meet all normal requirements. The admission review committee makes determination for drop actions or continued conditional matriculant status for students enrolled in that classification.

## Appeals

Academic probation is a nonpunitive warning and is not subject to an appeal.

Academic drop status may be appealed to the vice-chancellor through his or her designated representative, the associate vice-chancellor for institutional research. The vice-chancellor may seek advice from the academic actions committee. Appeals must be filed within seven working days from the date printed on the grade slip or student record report. A student who is allowed to continue as a result of an appeal is on continued probation and is subject to any special conditions that may be designated. An academic drop provides time for a student to give careful thought to the circumstances that resulted in the drop action. Dropped students may seek appropriate noncredit remedial help, and reassess their goals in the context of the academic achievement record they have compiled. Appeals must include a clear explanation of the problems that resulted in inadequate achievement and a statement explaining how the student proposes to resolve those problems.

Students planning appeal should consider:

- Are the relevant facts and dates clearly stated and documented?
- Are the extenuating circumstances cited of an inforceable nature?
- Are relevant recommendations from the instructor(s) included, if this is appropriate?
- Do statements in the appeal distinguish between needs and wants?
- Is the educational rationale for the request clearly stated?

### Limited Rights To Appeal An Academic Drop Action

A student who earns an academic drop action must file written appeal for an exception within seven working days from the date printed on the grade slip or the student record report. Record reports are mailed to students at the end of each term. Failure to meet the seven-day deadline results in an assumption on the part of the university that the student plans no appeal.

The university's assumption of no appeal can result in:

- cancellation of housing in University Village;
- cancellation of advance registration for the next semester.

Appeals are filed with the associate vice-chancellor through the Office of the Registrar.

If an appeal is filed before the seven-day deadline, a student can expect to know the outcome of the appeal within seven working days of the date the appeal was filed. If the student wants notification of results by mail, he or she must enclose a self-addressed, stamped envelope with the appeal. If no other arrangement is made, a student may pick up a copy of the appeal results at window 7 of the Registrar's Office.

According to academic rules and regulations, a student who is dropped at the end of the fall semester may complete the January interim and a student who is dropped at the end of the spring semester may complete the sum-

mer session. However, continuation in either of these special terms does not change the requirement to file an appeal within the seven-day deadline nor does it guarantee permission to register for the following semester.

If the appeal is denied by the vice-chancellor's designee, a student has the right of further and final appeal to the student-faculty academic actions committee providing the second appeal is filed within five working days of the denial. Second appeals should be filed at window 7 of the Registrar's Office. As a part of a written appeal, students may request a personal appearance before the committee when it meets to review the appeal. The chairperson will notify the student of the day and time of the scheduled appeals meeting.

Grade slips are mailed by first-class mail on this schedule:

- End of fall semester: on the Friday before the January interim, using the local address of record.
- End of January interim: on the Friday after the January interim, using the local address of record.
- End of spring semester: on the second Monday after the end of final exams, using the home or permanent address of record.
- End of summer session: on the Friday after the last day of classes for the eight-week session, using the home or permanent address of record.

Students may choose to have all mailings made to a single address. This option must be indicated on an address correction form supplied by the Office of the Registrar.

Mail forwarding is a student's responsibility. Written notice of a change of address to all mailers is also a student's responsibility. Student failure to provide a prompt forwarding or proper notification of change of address is not an acceptable excuse for exceptions in the appeal process.

### Readmission

Readmission after an academic drop 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 drop is always readmitted on probation and is subject to normal standards of progress and achievement. An application for readmission should be submitted to the director of admissions at least 30 days before the desired term of admission to allow for the full review process.

### Grades and Grade Appeals

Each student receives a grade from the instructor of a course at the end of a semester or session. Instructors must forward grades to the Registrar's Office no later than 96 hours after the final examination. Information on current grading policies is sent to instructors each semester along with grade rosters.

If a student is dissatisfied and wishes to appeal a particular course grade, he or she must first contact the instructor who issued the grade. If the student is still dissatisfied, he or she may appeal further to the concentration or professional program chairperson. The chairperson, in turn, consults with the course instructor. If a student wishes to appeal still further, he or she contacts the vice-chancellor for academic affairs who also consults with the instructor and the appropriate chairperson. The vice-chancellor or chairperson acts in an advisory capacity to the student and the instructor.

### Grade Changes

All final grades—except for incompletes (I)—become permanent grades after the last day of classes for the next semester. Any discussions with faculty regarding grade levels or missing (N) grades must be pursued within this time period.

### Grade Changes for Graduating Seniors

Grades for graduating students become permanent and unchangeable for any reason after a period of 15 working days following the end of a semester or summer session.

### Incompletes

If a student is unable to take or complete a final examination or other course work, due to unusual but acceptable circumstances, he or she may arrange with the instructor to receive an incomplete. The incomplete grade is filed with two tentative grades: one indicates the quality of the work to date; the second is to be assigned if no more work is completed. A specific deadline is set for completing the work required to remove the incomplete. The instructor files an incomplete removal form, stating both the conditions for removal and the deadline, before an incomplete grade is accepted for recording. If a course is incomplete, a student's grade point average and degree credits remain undetermined until the permanent grade is established. However, a tentative academic action may be assigned on the basis of grades and credits received in other courses. Tentative actions are reviewed after the incomplete has been converted into a permanent grade.

### Incompletes for Graduating Seniors

Seniors expecting to graduate must remove pending incompletes by the end of the sixth week of their final semester of attendance. Outstanding incompletes are considered as I grades and do not count toward degree credits or grade points for purposes of estimating eligibility for graduation and possible honors.

Students who expect to graduate in December must have all incompletes removed by February 22 or request deferral of graduation until the following May.

### Removal of Incompletes

The course instructor sets a specific deadline for removal of an incomplete and informs the student, the Office of the Registrar, and the academic unit chairperson. If no earlier deadline is specified, an incomplete (I) must be removed no later than the last day of classes for the next semester. If no other grade is submitted

*continued*

## Academic Rules and Regulations

by the instructor within this period, incomplete grades become a permanent grade of F. The student's grade point average and earned credits reflect the F grade.

A student may file a special petition for an exception to the incomplete removal deadline if bona fide unanticipated extenuating circumstances prevented compliance with the removal deadline. These circumstances might be valid:

- The student has serious physical or mental health problems which are documented by statements from a physician or professional counselor.
- The student has had a death or serious illness in the immediate family and this is documented by a physician's statement.
- The course instructor is on leave during the semester for removal.

For graduating seniors, all I grades must be converted to a permanent passing or failing grade before the commencement date. All grades on the record become permanent as of that date with no possibility for removal or change.

An incomplete grade is normally a temporary grade given due to circumstances explained in the previous paragraph.

### Repeating Courses

A student may choose to repeat any course. Repeated courses are designated with a letter R after the course title on the transcript. When a repeated course is complete, the original grade and entry on the transcript remain. However, the credits, grade, and grade points earned for the most recent completion are used to calculate cumulative attempted credits, grade points earned, and grade point average. Courses repeated at another institution have no effect on grade point average at UWGB.

Repeated courses do not count toward fulfilling standards of

progress requirements or for probation and drop status purposes unless the previous grade was NC, F, WF, S, or U.

The university does not guarantee the right to retake any course. Courses may be deactivated, discontinued, or offered on a different schedule.

A course repeat card should be filed with the Office of the Registrar to ensure that a recalculation of the grade point average is completed.

### Course Prerequisites

Course prerequisites are shown in the descriptions of many courses in the university catalogs and *Timetable*. They are indicated by the designation P.. Prerequisites indicate the minimum level of proficiency or background knowledge needed to successfully achieve course objectives.

Exceptions to prerequisites may be made by the course instructor or the instructional unit chairperson. Students who do not meet prerequisites are responsible for seeking approval for exceptions before enrolling in a course. Students who do not observe prerequisites will not be allowed to enroll in a course.

### Recommended Prior Courses

Recommended prior courses are also designated in course descriptions by the designation Rec.. Recommended courses are basically advisory and are usually lower-level courses. Students who have the knowledge or skill recommended for a course may enroll without completing prior recommended courses, but they do so at their own risk. Students can not expect a course instructor to hold back the progress of a class for those who have not taken the recommended prior courses. If students misjudge their ability to take a course without the recommended prior courses, they may get a much lower grade than they would wish. They also run the risk of feeling compelled to drop

the course, thereby losing tuition and book and materials costs.

In performance courses requiring an audition, students are responsible for making their own arrangements for the audition before classes begin.

### Audit Enrollment

If enrollment capacities permit, a student may audit a course if space is available after students enrolled for credit are accommodated. Special policies apply to senior citizen guest students and others who enroll under the special half-price fee arrangement. 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. Registered students are obligated to pay all fees and penalties as listed on the fee schedule. Failure to attend class does not alter academic or financial obligations.

### Maximum and Minimum Credit Loads

A student in good academic standing may register for any number of credits up to a maximum of 18 credits per semester. A student is not allowed to register for credits in excess of 18 without written permission from the vice-chancellor's designee, the director of academic advising. This written permission must be gained before the first day of classes. Normally, only honors students are considered for credit overloads.

Course adds that would exceed the 18-credit maximum are not processed if prior permission for an overload has not been granted.

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 drop status purposes may be affected.

### Maximum Credit Load for Students on Probation

Maximum semester credit load for a student on probation is 15 credits. During the summer session, the limit is six credits.

### Course Adds And Drops

#### Course Adds

After final registration, students may add other courses to their programs if such additions do not exceed the maximum credit load limitation and if adds are completed before a specific deadline. During a normal semester the add period is limited to the first two weeks of classes. For shorter terms, an earlier deadline is in effect. A student may petition for an exception if unforeseeable extenuating circumstances prevented deadline compliance.

#### Course Drops

The course drop deadline is established to give students ample opportunity to discover what content a course will cover, the type of readings and projects to be assigned, the instructor's teaching style, and the methods of evaluation. In some courses, feedback from a formal evaluation process may not be available before the drop deadline. In such cases, it is the student's responsibility to contact the instructor before the drop deadline to obtain information useful in making the drop decision. Therefore, lack of feedback in the form of grades on papers or exams is not acceptable to justify a late drop.

The drop deadline is intended to stimulate a student to weigh carefully all of the important considerations and to do this as early as possible. If a student decides that a course does not fulfill expectations, an early drop permits the student to devote a greater portion of available study time and effort to remaining courses, and the instructor is able to devote more time and effort to students participating in the course. The 8-week deadline for 14-week semester courses provides adequate opportunity to make drop decisions.

The phases of the course drop policy are:

First 4 weeks of a 14-week semester—

- student may drop any course without the instructor's signature
- permanent records show no drop

Fifth through eighth weeks—

- course appears on permanent record with the symbol W (withdraw) or DR (dropped)

Ninth through 14th weeks—

- no official drops allowed; WF grade or F appears on transcript

See table for terms or classes of a shorter duration than 14 weeks, showing established pro rata deadlines.

A course week always ends on a Friday. All courses beginning or ending on nonstandard session weeks have a nonstandard drop deadline.

## Withdrawal From The University

A student who desires to withdraw from all academic course work at any time after completing the study list request form or final registration must see a counselor in the Student Counseling and Development Office or an adviser in the Office of Academic Advising. A complete withdrawal without failure may be requested at any time before 4:30 p.m. on the afternoon of the last day of regularly scheduled classes during the 12th week of a semester, the sixth week of an eight-week summer session, or the second week of January interim. If a student has not attended classes or taken the final examination in a course, a grade of WF (unofficial withdrawal) is given unless official withdrawal procedures are followed.

A decision to withdraw should be given careful consideration in terms of academic retention and probation policy, veteran's benefits, financial aid, family health insurance coverage, student loan repayment deferral, and other situations which have specific consequences from withdrawal. A student who withdraws from two consecutive semesters must seek readmission to the university to enroll again.

Withdrawal during the fifth through 12th weeks of a semester results in permanent recording of

all courses of record at that time with a symbol of W (withdraw) 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 drop action.

## Late Program Changes and Withdrawals

A student may receive permission to drop a course or courses after the eight-week deadline, or make a complete withdrawal after the normal 12-week deadline, if one of these criteria can be verified:

- the student has serious mental or physical health problems verified by statement from a physician or professional counselor;
- there is a death or prolonged serious illness in the immediate family, also verified by the family physician.

Under the circumstances above, a counselor in the Student Counseling and Development Office or an adviser in the Office of Academic Advising may grant permission for a late drop or withdrawal. If a student has any other reason for requesting a late drop or withdrawal, he or she should direct a written appeal, stating the circumstances, to the associate vice-chancellor, who is the vice-chancellor's designee.

## Pass-No Credit Enrollment

Students may choose the pass-no credit (P-NC) grading option if they do not want a regular grade in a course that would affect their grade point average. The decision

to take a course on a P-NC basis must be made within the first two weeks of a semester, the first week of an eight-week summer session, or the first two days of a January interim. The P-NC request form must be filed with the study list request form, the program change form, or the final registration form.

Some courses may not be elected on a pass-no credit basis if they are taken to fulfill certain requirements. These include:

- general education courses, including senior seminars;
- interdisciplinary or disciplinary major courses (300 or 400 level);
- courses used to fulfill the English composition requirement;
- professional program courses (300-400 level including all courses in the teaching majors and minors, except student teaching);
- interdisciplinary or disciplinary minor courses;
- senior honors (484) projects and/or distinction in the major (478) projects;
- independent study (298/498) courses.

Electives may be taken on a P-NC basis. Nondegree credit courses (such as Academic Support Program courses) and student teaching are offered exclusively on a P-NC basis.

If students have any doubt as to whether a P-NC graded course can count for degree requirements, they should consult the Office of the Registrar before the P-NC change deadline.

For pass-no credit, grades of A, AB, B, BC, or C, are designated "pass." The grade is recorded on the final grade slip and the permanent record cards as a P. P grades are not used in computing grade point average, but the earned credit do count toward graduation.

Grades of D, F, or WF appear on the grade slip as NC or "no credit." An NC does not affect grade point average, nor does it add to earned credits.

A student may elect P-NC grading, for example, if he or she would like to explore a completely new area of interest but

*continued*  
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Course Drop Timetable

Course Length in Weeks	Drop Deadline—End of Course Session Week	"W" or "DR" Symbol Recorded After
1 .....	Wednesday, Week 1	
2 .....	Friday, Week 1	Friday, Week 1
3 .....	Wednesday, Week 2	Friday, Week 1
4 .....	Friday, Week 2	Friday, Week 1
5 .....	Wednesday, Week 3	Friday, Week 1
6 .....	Friday, Week 3	Friday, Week 2
7 .....	Wednesday, Week 4	Friday, Week 2
8 .....	Friday, Week 4	Friday, Week 2
9 .....	Wednesday, Week 5	Friday, Week 2
10 .....	Friday, Week 5	Friday, Week 3
11 .....	Wednesday, Week 6	Friday, Week 3
12 .....	Friday, Week 6	Friday, Week 3
13 .....	Wednesday, Week 7	Friday, Week 3
14 or more (normal semester course)	Friday, Week 8	Friday, Week 4

## Academic Rules and Regulations

cannot estimate the difficulty of the work required and the level of other students in the course.

Students considering applying for graduate or professional schools or transferring to another undergraduate campus should keep in mind that P-NC grading may have an adverse effect on admission. Graduate and professional schools generally prefer letter grades, because such grades enable them to better judge potential for academic success.

### Program Declaration and Advisers

To ensure the best possible program planning and course selection, students should seek advice and information early on majors, minors, general education requirements, supporting courses, and other requirements and programs. Matriculated students must select an academic adviser to assist with course selection before each registration. The adviser's approval signature must be on the study list request form for each semester until the student has filed an academic plan form. A student who attains junior standing (54 or more degree credits completed) must declare a major before he or she is allowed to register for another term. A student who has attained senior standing (84 or more degree credits) must file an approved academic plan form before he or she can register for another term.

### Independent and Internship Study

Regular semester add and drop deadlines apply to independent and internship study.

Students may receive credit for independent study under the course numbers 298 for lower-level work or 498 for upper-level work. Enrollment may be for one to four credits per course.

To arrange for independent study, a student should find an instructor who will support the study. The student must prepare a statement of objectives and a list of readings and/or research projects that will

fulfill the objectives. The proposal must be described on a form available for the purpose. This written proposal, approved by the instructor, must be filed in the Office of the Registrar at the time of registration or course addition.

#### Independent study courses are subject to these limitations:

- independent studies cannot duplicate a regular UWGB course; independent study is intended to expand the curriculum.
- a freshman or sophomore must have a minimum cumulative grade point average of 2.5 and a junior or senior must have a minimum of 2.0 to do independent study.
- independent study cannot be elected on audit or pass-no credit basis.
- independent study may be taken only with a regular member of the UWGB faculty or academic staff.

### Honors

**Senior Distinction in the Major**  
Senior distinction in the major is different from all-university honors. Some students may be eligible for both recognitions of excellence. A project for distinction in the major must be separate from any project for summa cum laude honors.

To be eligible for senior distinction in the major, a student must:

- have a minimum 3.50 GPA for all courses indicated on the academic plan for the major;
- have a minimum 3.75 GPA for all upper-level courses indicated on the academic plan for the major;
- complete a senior distinction project in the major.

Senior distinction in the major projects should be planned during the junior year. Students should enroll for honors study (478 course number) during the first semester of registration with senior standing (84 or more degree credits) to ensure adequate time to complete it by graduation. Students should plan with sponsoring faculty during the junior year to determine that possible special needs for library resources, equipment, supplies, or field research will be available.

Distinction projects must be completed by the end of the sixth week of the semester of graduation (or be certified by sponsoring faculty that the course will be finished before the end of the semester).

Regular semester add and drop deadlines apply to distinction in the major projects. No P-NC grading is permitted.

**Graduation or Degree Honors**  
Honors requirements for students who earn baccalaureate degrees are:

- cum laude designation requires a cumulative grade point average from 3.5 to 3.749;
- magna cum laude designation requires a cumulative grade point average of 3.75 or higher;
- summa cum laude designation requires a cumulative grade point average of 3.75 or higher and successful completion of a senior honors project (484 course number).

The cumulative grade point average must be achieved on the basis of a minimum of 60 regularly graded (not P-NC or audit) credits taken in residence at UWGB. Senior honors projects should be planned during the junior year. Enrollment should be completed during the first semester of registration with senior standing (84 or more degree credits) to ensure time for completion before graduation. Students should consult with faculty during the junior year to plan for special library resources, equipment, supplies, or field research that may be necessary. Honors projects must be completed by the end of the sixth week of the semester of graduation (or be certified by the sponsoring instructor that the course will be finished before the end of the semester).

### Time Limitation Policy

Effective with the 1981-82 fall semester and thereafter, an undergraduate who is enrolled for the first time as a matriculated (degree candidate) student at UWGB is subject to a time limitation policy for fulfilling general degree requirements.

Students are encouraged to fulfill lower-level general degree requirements as soon as possible because these constitute the broad liberal education base for further studies at the upper level. General degree requirements are defined as the general education requirements in the three domains of knowledge—social sciences; natural sciences and mathematics; and humanities and fine arts—and the English composition competency requirement, or similar equivalent requirements that may be placed in effect in the future. Senior seminar is excluded.

Stipulations of the limitation policy are:

- a student is assured of the right to follow general degree requirements stated in the catalog in effect at the time he or she first enrolled as a matriculated degree candidate. This right extends for a maximum period of five years from the date of first matriculation. Any period of voluntary or involuntary absence from the university is counted toward the five-year time limit. If the required courses are still available, a student may petition to extend the five-year limit. If a set of requirements is fulfilled within the five-year period, those requirements will be honored even if the actual graduation date extends beyond the five-year period.

- if new general degree requirements are made effective within a student's five-year limit period, he or she has a right to elect to fulfill those new requirements. If this option is exercised, a student has a five-year limit to fulfill the new requirements.

- if, within a five-year limitation period, the university discontinues a general education sequence course, and the student has already taken the first course in a sequence, the university has an obligation to devise reasonable substitutions that will not place the student at a disadvantage within his or her five-year limit.
- a student may always exercise an option to fulfill general degree requirements stated in the catalog in effect at the time he or she is ready to graduate.

# Financial Aid Refund Payment Schedule

Students receiving financial aid who drop credits must repay financial aid funds they have received. The amount of repayment is based upon federal Department of Education regulations (paragraph 668.21 of the federal financial aid regulations).

Students will be notified in writing about the amount of repayment due after the Financial Aid Office is notified about the withdrawal or credit drop. **The aid must be repaid by the student before future aid may be granted.** Also, failure to repay or to make appropriate arrangements will result in a hold being placed on the release of the student's official university records.

The calculated refund amount of federal and state funds will be returned to funding sources as indicated:

**Federal funds—**Perkins

SEOG

GSL

PELL

**State funds—**WHEG

TIP

Tuition grants

WIG

Lawton

AOP

**Other funds—**BIA

Institutional

Student

Students enrolled for sessions of less than the usual term duration who drop credits or withdraw, shall have a proportional repayment calculated on an individual basis.

Students who wish to appeal the amount of repayment due may provide written documentation of the request and should discuss the situation with a financial aid counselor.

## Refund and Repayment Schedule

Fall/Spring Semesters			Summer Session		
Action During Week	Tuition Refund	Repayment of Aid for Noninstitutional Costs	Action During Week	Tuition Refund	Repayment of Aid for Noninstitutional Costs
1	100%	100%	1	100%	100%
2	80%	80%	2	70%	80%
3	60%	75%	3	30%	70%
4	40%	70%	4	0	60%
5	0	63%	5	0	45%
6	0	56%	6	0	30%
7	0	49%	7	0	15%
8	0	42%	8	0	0
9	0	35%			
10	0	28%			
11	0	21%			
12	0	14%			
13	0	7%			
14	0	7%			
15	0	0			
16	0	0			
17	0	0			
18	0	0			

# Standards of Academic Progress Required

To Receive Financial Aid

The university's policy for standards of academic progress required to remain eligible for financial aid is governed by federal regulations published in the October 6, 1983 Federal Register Part 668.16. Following is a statement of the policy that has been enforced for UWGB aid recipients. It has been in effect since January 1, 1984 and revised based on the Reauthorization Education Bill signed October 17, 1986.

## Undergraduate Students

**Duration of Eligibility.** Students enrolling on a full-time basis (12 credits or more) are eligible to receive financial aid for a maximum of 6 years or 12 semesters. Students enrolling on a part-time basis (6 to 11 credits) are eligible to receive financial aid for a maximum of 11 years or 22 part-time semesters. If a student enrolls for some semesters as a full-time student and for others as a part-time student, a proportional total number of semesters will be computed. Attendance during summer session for 6 credits or more will be counted as one part-time semester.

**Credit Hours to be Completed.** A student must have successfully completed the following minimum cumulative credits by the end of the designated academic year and the minimum credits per semester as a full or part-time student. Students starting mid-year (spring term) will be reviewed for partial year compliance at the end of that term.

**Extended Degree** students must satisfactorily complete contract work in progress before new aid may be provided for an equivalent of 12 full-time semesters.

## Graduate Students

**Duration of Eligibility.** Graduate students enrolled in a Master's Degree program may receive financial aid for a maximum of 3 years or 6 semesters as full-time students and for a maximum of 5 years or 10 semesters as part-time students. Attendance during summer school for 3 or more credits will be counted as one part-time semester.

**Credit Hours to be Completed.** A graduate student who receives financial aid must complete a minimum of 6 credits per semester as a full-time student or 3 credits per semester as a part-time student. The student must also successfully complete the following cumulative number of credits by the end of each year.

## General Information About Aid Eligibility

**Credit hour enrollment** will be established by the number of credits for which the student is enrolled as of the end of the second week of classes for any term.

**Successful completion** means that a grade of A, AB, B, BC, C, D, or P was earned, exclusive of previously passed courses which are being retaken voluntarily.

**Other aid regulations** must be adhered to, and may limit aid awards to students because of other program regulations.

**Non-degree students (specials)** are not generally eligible for financial assistance.

**Review.** A review of each aid recipient's eligibility will be made at the end of the academic year (between spring and fall semesters). Notification of probation or ineligibility will be sent to students at that time. Students on probation will be reviewed at the end of the next semester to determine continued aid eligibility. Students will be eligible to receive aid during the initial probationary warning period.

**Ineligibility for Aid.** A student not making adequate progress will be ineligible for additional aid. In order to again become eligible for aid, the student must enroll

Undergraduate Students Credit Completion Scale		
Full Time		
Year In School	Semesters Completed	Required Cumulative Credits
1	1	9
	2	18
2	3	27
	4	36
3	5	46
	6	57
4	7	67
	8	78
5	9	90
	10	102
6	11	114
	12	126 +

Students must complete a minimum of 9-12 credits per semester depending upon year in school.

Part Time		
Year In School	Semesters Completed	Required Cumulative Credits
1	1	3
	2	6
2	3	12
	4	18
3	5	24
	6	30
4	7	36
	8	42
5	9	48
	10	54
6	11	60
	12	66
7	13	72
	14	78
8	15	84
	16	90
9	17	96
	18	102
10	19	108
	20	114
11	21	120
	22	126 +

Students must complete a minimum of 3 credits for the first two semesters and 6 credits thereafter.

and earn sufficient credits to regain good standing according to the credit completion scale. The student must enroll and make up the deficiency without aid before future assistance can be provided.

**Appeal Procedure.** If a student is denied aid due to lack of progress, the student may appeal the determination by writing a letter explaining the reasons for lack of progress and providing evidence

Graduate Students Credit Completion Scale		
Full Time		
Year In School	Semesters Completed	Required Cumulative Credits
1	1	6
	2	12
2	3	18
	4	24
3	5	30
	6	36

**Part Time**

Year In School	Semesters Completed	Required Cumulative Credits
1	1	3
	2	6
2	3	9
	4	12
3	5	15
	6	18
4	7	24
	8	27
5	9	31
	10	36

of mitigating circumstances. The appeal must be submitted to the financial aid office. The financial aid staff will review the appeals in committee and reach a final determination.

**Starting Point.** Effective September 1984, each student will have a semester starting point calculated from which future completion requirements will be measured. This starting point will be either the total number of semesters for which a student has been enrolled or the cumulative total of successfully completed credits, whichever is most advantageous to the student. For transfer students, the starting point will be determined by the cumulative total of successfully transferred credits.

**Completion Scale.** Based upon the required credit completion scale, the student must achieve both the cumulative total and per semester credits for the subsequent semester in order to avoid probationary or termination status.

This policy is subject to review as needed. For questions or additional information contact the Financial Aid Office (414) 465-2075.





**UW-Center System Course Equivalency Tables**

<b>Center System Courses</b>	<b>UWGB Courses</b>	<b>Center System Courses</b>	<b>UWGB Courses</b>	<b>Center System Courses</b>	<b>UWGB Courses</b>	<b>Center System Courses</b>	<b>UWGB Courses</b>
<b>Communication Arts</b>		EDU 223	302 elective	FRE 276	552 elective	GEO 350	678-303
COM 100	246 elective	EDU 251	Departmental review (3)	FRE 277	Determined by topic	<b>Geology and Meteorology</b>	
COM 101	246-166	EDU 283	Departmental review (3)	FRE 291	Determined by topic	GLG 100	296 elective
COM 102	246 elective	EDU 300	302-410	FRE 299	Determined by topic	GLG 101	296-202
COM 103	246-133	EDU 330	820-315	GER 101	556-101	GLG 102	296-302
COM 110	246 elective	<b>Engineering</b>		GER 102	556-102	GLG 104	296 elective
COM 130	242 elective	EGR 100	No equivalent	GER 118	556 elective	GLG 130	296 elective
COM 131	709-235	EGR 106	246 elective	GER 119	556 elective	GLG 131	416-250
COM 150	242-210	GRA 102	678-105	GER 201	556-201	GLG 135	296 elective
COM 160	246 elective	GRA 113	678 elective	GER 202	556-202	GLG 169	296 elective
COM 201	246-202	MEC 201	678-313	GER 215	556 elective	GLG 201	296 elective
COM 202	246 elective	MEC 202	678-314	GER 216	556 elective	GLG 228	678-331
COM 203	246-203	MEC 203	678-316	GER 219	556 elective	GLG 291	296 elective
COM 204	246 elective	<b>English and Literature</b>		GER 221	556-329	GLG 297	Determined by topic
COM 206	246 elective	ENG 101	552-100	GER 222	556-329	GLG 299	Determined by topic
COM 206	246 elective	ENG 102	552-105	GER 225	556-225	GLG 301	296-340
COM 220	246 elective	ENG 201	552 elective	GER 226	556-325	GLG 302	296-442
COM 230	246 elective	ENG 202	552 elective	GER 275	552 elective	GLG 306	296 elective
COM 231	709-221	ENG 203	552-212 or 213	GER 276	552 elective	GLG 314	296-350
COM 232	709-131	ENG 204	552-212 or 213	GER 277	Determined by topic	GLG 316	296 elective
COM 234	709-221	ENG 210	552 elective	GER 291	Determined by topic	GLG 350	296 elective
COM 266	246 elective	ENG 220	242-160	GER 299	Determined by topic	GLG 409	296-380
COM 267	246 elective	ENG 250	552-104	SPA 101	558-101	GLG 414	296-366
COM 268	246 elective	ENG 260	552-214	SPA 102	558-102	GLG 443	296-470
COM 298	Determined by topic	ENG 261	552-215	SPA 118	558 elective	MLG 100	834-222
COM 299	Determined by topic	ENG 262	552-216	SPA 119	558 elective	<b>History</b>	
COM 348	709 elective	ENG 263	552-217	SPA 201	558-201	HIS 101	448-250
COM 349	709 elective	ENG 264	552 elective	SPA 202	558-202	HIS 102	448-206
<b>Computer Science</b>		ENG 265	552 elective	SPA 210	558 elective	HIS 105	493-101
CPS 100	Elective	ENG 266	552 elective	SPA 221	558-329	HIS 106	493-102
CPS 101	General elective	ENG 267	552 elective	SPA 222	558-329	HIS 110	448 elective
CPS 110	600-155	ENG 270	552 elective	SPA 225	558-225	HIS 111	448-201 and/or elective
CPS 113	600-256	ENG 272	552 elective	SPA 226	558-325	(plus CS HIS 112)	
CPS 111	(Faculty members will review computer science transfer courses individually. Center System courses do not necessarily parallel UWGB courses.)	ENG 274	552-106	SPA 236	493 elective	448-201 and/or elective	
CPS 130	computer science transfer courses individually. Center System courses do not necessarily parallel UWGB courses.)	ENG 276	552 elective	SPA 266	552 elective	(plus CS HIS 111)	
CPS 131	computer science transfer courses individually. Center System courses do not necessarily parallel UWGB courses.)	ENG 280	552 elective	SPA 275	552 elective	HIS 112	448-201 and/or elective
CPS 133	computer science transfer courses individually. Center System courses do not necessarily parallel UWGB courses.)	ENG 290	Determined by topic	SPA 277	Determined by topic	(plus CS HIS 111)	
CPS 120		ENG 299	Determined by topic	SPA 291	Determined by topic	HIS 114	448 elective
CPS 210		ENG 351	552 elective	SPA 299	Determined by topic	HIS 115	448-202
CPS 211		ENG 353	552 elective	<b>Geography</b>		HIS 116	448 elective
CPS 213	600-256	ENG 355	552 elective	GEO 101	416-202	HIS 117	448 elective
CPS 231	See note above.	ENG 370	Determined by topic	GEO 104	296 elective	HIS 118	448 elective
CPS 243	600-257	ENG 380	Determined by topic	GEO 110	416-102	HIS 119	448-203
CPS 250		<b>Foreign Language</b>		GEO 115	416-215	HIS 120	448-204
CPS 251		FRE 101	554-101	GEO 120	296 elective	HIS 121	448-251
CPS 252		FRE 102	554-102	GEO 121	834 elective	HIS 122	448-251
CPS 253		FRE 118	554 elective	GEO 123	834-222	HIS 123	448 elective
CPS 254		FRE 119	554 elective	GEO 124	296-202	HIS 124	448 elective
CPS 255		FRE 201	554-210	GEO 125	296-200	HIS 126	448 elective
CPS 260		FRE 202	554-202	GEO 130	678-102	HIS 127	448 elective
CPS 270	600-351	FRE 215	554 elective	GEO 277	416 elective	HIS 128	448 elective
CPS 291	Determined by topic	FRE 219	554 elective	GEO 291	Determined by topic	HIS 150	448 elective
CPS 299	Determined by topic	FRE 221	554-329	GEO 297	Determined by topic	HIS 178	448 elective
<b>Education</b>		FRE 222	554-329	GEO 299	Determined by topic	HIS 183	448 elective
EDU 100	302 elective	FRE 223	554-329	GEO 300	416 elective	HIS 185	448 elective
EDU 101	302 elective	FRE 225	554-225	GEO 324	416 elective	HIS 190	448 elective
EDU 200	302 elective	FRE 226	554-325	GEO 341	416-371	HIS 195	448 elective
		FRE 227	554-329	GEO 342	416-235	HIS 197	448 elective
		FRE 225	554-225	GEO 347	416 elective	HIS 198	242-210
		FRE 226	554-325	GEO 348	416 elective	HIS 203	448 elective
		FRE 275	552 elective	GEO 349	834-382	HIS 211	448 elective

**UW-Center System Course Equivalency Tables**

<b>Center System Courses</b>	<b>UWGB Courses</b>	<b>Center System Courses</b>	<b>UWGB Courses</b>	<b>Center System Courses</b>	<b>UWGB Courses</b>	<b>Center System Courses</b>	<b>UWGB Courses</b>
HIS 213	448 elective	MAT 271	600-309	PHI 226	736-207	POL 213	778 elective
HIS 215	448 elective	MAT 272	600 elective	PHI 240	736 elective	POL 219	778 elective
HIS 289	448-310	MAT 299	Determined by topic	PHI 241	736-102	POL 220	778 elective
HIS 290	448-311	MAT 320	600-305, 320	PHI 242	736 elective	POL 221	778 elective
HIS 291	448 elective	<b>Military Science</b>		PHI 248	478-205	POL 223	Determined by topic
HIS 293	448 elective	MLS 101	644 elective	PHI 253	736-211	POL 225	778 elective
HIS 295	448 elective	MLS 102	644 elective	PHI 258	736 elective	POL 243	950-102
HIS 296	448 elective	MLS 201	644-221	PHI 291	Determined by topic	POL 250	950 elective
HIS 297	448 elective	MLS 202	644 elective	PHI 299	Determined by topic	POL 260	778 elective
HIS 299	Determined by topic	MLS 251	644 elective	PHI 348	736 elective	POL 275	778 elective
<b>Interdisciplinary Studies</b>		<b>Music</b>		<b>Physical Education</b>			
INT 100	Faculty evaluation	MUS 070	707-151	PED 120	Credits earned in certain physical education courses may be counted as degree credits. See current <i>Timetable</i> for statement policy.	POL 298	Determined by topic
INT 101	875 elective	MUS 071	707-242	PED 121		POL 299	Determined by topic
INT 102	678-102	MUS 072	707-261	PED 122		POL 308	778 elective
INT 105	246 elective	MUS 073	707-164	PED 123		POL 324	778-412
INT 195	875 elective	MUS 074	707-143	PED 201		POL 352	778 elective
INT 197	246/168-243	MUS 075	707-163	PED 202		POL 354	778 elective
INT 250	678-260	MUS 076	707-144	PED 203		POL 385	778 elective
INT 291	Determined by topic	MUS 077	707-MUS 145	PED 204		<b>Psychology</b>	
INT 294	General elective	MUS 078	707-MUS 146	PED 205		PSY 201	820-102
INT 295	General elective	MUS 079	707-153	PED 206		PSY 202	820-102
INT 296	General elective	MUS 107	705 elective ****	PED 207		PSY 203	820 elective
<b>Learning Resources</b>		MUS 115	705 elective ****	PED 208		PSY 204	820 elective
LEA 100	No transfer	MUS 121	705 elective ****	PED 209		PSY 205	820-205
LEA 101	No transfer	MUS 130	705 elective ****	PED 210		PSY 208	820 elective
LEA 102	No transfer	MUS 131	705-101	PED 211		PSY 210	255-205
LEA 104	No transfer	MUS 132	705-101	PED 212		PSY 224	General elective
LEA 105	No transfer	MUS 136	705 elective****	PED 213		PSY 225	820-300
<b>Lecture (University) Forum</b>		MUS 145	705 elective****	PED 214	PSY 250	481-210	
LEC 101	Social Science elective	MUS 147	705 elective****	PED 215	PSY 254	820 elective	
LEC 102	No transfer	MUS 148	705 elective****	PED 216	PSY 299	Determined by topic	
LEC 103	No transfer	MUS 154	705 elective****	PED 217	PSY 411	Determined by topic	
<b>Mathematics</b>		MUS 160	705 elective****	PED 291	PSY 449	204-345	
MAT 081	No transfer	MUS 170	705-101	PED 299	PSY 507	481-429	
MAT 091	No transfer	MUS 171	705-115, 151	<b>Physics</b>			
MAT 102	600 elective	MUS 172	705-152, 116	PHY 107	Physical Science elective	PSY 509	481-435
MAT 105	600-101	MUS 173	242-120	PHY 110	Physical Science elective	PSY 530	820-202
MAT 110	600-104	MUS 174	242-121	Determined by topic			
	(plus CS MAT 113)	MUS 271	705-251	PHY 120	754-103	PSY 560	481-331
MAT 113	600-104	MUS 272	705-252	PHY 141	754-104	PSY 561	481-322
	(plus CS MAT 110)	MUS 273	242 elective	PHY 142	754-201	PSY 562	481-433
MAT 117	600-260	MUS 275	705 elective	PHY 201	754-202	<b>Sociology</b>	
MAT 118	600 elective	MUS 276	705 elective	PHY 202	754-202	SOC 101	900-202
MAT 119	600 elective	MUS 280	705 elective	PHY 205	754 elective	SOC 120	900-208
MAT 124	600-104	MUS 281	705-331 and 1 cr. 332	PHY 211	754-201	SOC 125	900 elective
MAT 130	600-281		(plus CS MUS 280)	PHY 212	754-202	SOC 130	900 elective
MAT 131	600 elective	MUS 295	Determined by topic	PHY 213	754 elective	SOC 131	900 elective
MAT 132	600-282	MUS 299	Determined by topic	PHY 291	Determined by topic	SOC 134	900-203
MAT 211	600-201	<b>Philosophy</b>		PHY 299	Determined by topic	SOC 138	875-241
MAT 212	600 elective	PHI 100	No transfer	Determined by topic			
MAT 220	600 elective	PHI 101	736-101	<b>Political Science</b>			
MAT 221	600-202	PHI 102	736 elective	POL 101	778-100	SOC 160	900-375
MAT 222	600-203	PHI 103	736 elective	POL 104	778-101	SOC 170	900 elective
MAT 223	600-209, 305	PHI 106	736 elective	POL 106	778 elective	SOC 250	900 elective
MAT 230	600-242	PHI 201	736 elective	POL 110	778 elective	SOC 291	Determined by topic
MAT 232	600 elective	PHI 202	736 elective	POL 116	778 elective	SOC 293	Determined by topic
MAT 240	600 elective	PHI 210	736 elective	POL 199	778 elective	SOC 299	Determined by topic
MAT 262	600-320	PHI 211	736-111	POL 201	778 elective	SOC 357	900-301
		PHI 220	736-208	POL 206	778-353	SOC 530	820-202

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