1980-1982
Undergraduate Catalog
University of Wisconsin
Green Bay

Contents

Introduction

INTRODUCTION

The University of Wisconsin–Green Bay offers challenges and opportunities to students who come with a variety of perspectives, expectations, and goals by combining strengths from two long-established traditions in higher education. The land grant tradition contributes emphasis on practical application of learning, experience, and career orientation. The liberal arts tradition provides rigorous learning in the academic disciplines, critical analysis of issues and values, and concern for the individual.

The combination of these two traditions at UWGB provides particularly strong preparation for the future. It goes beyond imparting today's information and helps students to prepare for the uncertainties of the future.

What is certain is that many career opportunities available now will disappear; within a decade there will be new occupations unheard of today. Employment trends show that most persons entering a career now can expect to change fields at least once during their lifetimes. Furthermore, facts learned today will become outdated with increasing frequency. The person most prepared for such a world will be the person with the broadest abilities and preparation—the person who is prepared to be a life-long learner.

What enables the University to combine the best of two traditions is its distinctive academic plan. Through it, students build their academic programs by choosing from among several "building blocks" and combining them in ways that best meet their needs. This gives students a great deal of flexibility in shaping their own educational experiences. The basic components from which students choose are:

Concentrations. These are units which apply knowledge from several disciplines to particular sets of problems or issues. For example, Human Development applies all of the appropriate disciplines to the study of humans throughout their life span—from conception through old age. Communication and the Arts studies the roles and effects of all types of communication upon the human environment. Every student chooses an interdisciplinary concentration. The 11 concentrations are broadly defined so that nearly every student can find one to encompass his or her particular academic interests.

Disciplinary Programs. These provide learning in the traditional subject areas.

Professional Programs. Preparation for particular career fields is gained through these units.

Students can begin with the component that makes most sense for their particular goals and interests. For example, a student may come to UWGB knowing he or she wants to major in a subject such as history. That student would begin with the history disciplinary program and add a concentration. A student who wants to study history in the context of the humanities would likely select the Humanistic Studies concentration; one interested in contemporary urban problems might choose the Urban Studies concentration. If the student wanted ultimately to teach history at the high school level, he or she would add the Education professional program.

Or, a student could start with a topic such as alternative energy sources. That student would probably select the interdisciplinary concentration in Science and Environmental Change and add appropriate disciplinary programs—physics, chemistry, earth science. A professional program in Environmental Planning could add specific career preparation for planning and administration.

A student may begin with the career orientation. A nurse who has an R.N. diploma may feel the need for a bachelor's degree to advance in the field. In that case, the first component would be the nursing degree completion professional program. The Public and Environmental Administration professional program might be the first choice of a student seeking a career in public administration.

This way of planning a program allows students to choose some non-traditional combinations to meet their particular needs—business and graphic communication to prepare for management positions in the graphic arts industry; social sciences and public administration to prepare for human services administration; science and the social sciences to develop social change skills in addition to a foundation in the sciences; the arts and business to prepare for arts management.

The common element in all students' academic programs is the all-University requirement. This insures some acquaintance with each major body of knowledge—the fine arts and humanities, the social sciences, and the natural sciences—and students fulfill the requirement from an ample list of choices.

The interdisciplinary approach provided by this academic plan helps students to see relationships between the traditional disciplines, apply resources from various disciplines to complex problems, relate what they are studying in classes to what they hope to do after graduation, and be prepared to work with persons whose specialties are different from their own.

The built-in flexibility which enables students to shape their own educational programs offers possibilities for personalization and innovation in other ways, among them: independent studies; credit by test; student-led and student-initiated courses; testing out of courses; internships; exchange; travel; credit for prior learning; and personal majors. All of these possibilities are described in greater detail elsewhere in this catalog.

While students take the initiative in planning their educational experiences, the University provides ample resources for guidance. The office of Academic Advising helps students select courses when they register, plan a study program to meet graduation requirements, and refers students to faculty advisers in their areas of interest. The office of Placement and Career Development is a primary resource for career planning, but the Counseling and Student Development Center can help, too, particularly for students who are just beginning to evaluate their skills and interests toward making career choices.

Concern for the individual at UWGB is expressed in ready access to the services of these offices and others, and in other ways: the individualized approach to admissions, flexibility in course planning, and availability of small classes which promote open, informal relationships between students and faculty.

The opportunity for individual attention is one of the reasons students choose to attend UWGB. The University's size and the opportunity to work while attending were the two most often cited reasons for choosing UWGB by 1978 freshmen. Other reasons most often given included: the general atmosphere at UWGB, special programs offered, independence allowed, and the University's good reputation.

UWGB's academic plan implies both freedom and responsibility for its students. The opportunities to shape their own educational experiences offer students a great deal of freedom, but the student is responsible for taking advantage of those opportunities. Ultimately, a productive and satisfying experience in college and after depends upon the student's own capabilities, initiative, and resourcefulness.

HISTORY

In 1965, when the Wisconsin Legislature authorized a new campus of the University of Wisconsin System for Northeastern Wisconsin, Green Bay was already the home of a two-year University of Wisconsin Center enrolling about 1,000 students. The center 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 shores of Green Bay.

The campus today includes 12 major new buildings, an arboretum linking major natural areas along the campus boundary, a golf course, a waterfront recreation facility, and ample open space.

UWGB operates under a mandate to provide strong programs in the liberal arts as the foundation for all of its degrees, emphasize teaching excellence, relate instruction to regional needs, offer a comprehensive program of continuing education, support a commitment to special needs of non-traditional students, and serve as a center for applied research on regional problems. In 1974 the Regents of the University of Wisconsin System further defined the University's purposes and character by naming it one of two "special mission" campuses in the state. UWGB was charged with a statewide mission to offer "a focused, institutionwide academic program that is substantially unique in both its goals and organization," emphasizing interdisciplinary, problem-centered study of humans in their environments.

The University cooperates with the University of Wisconsin campuses at Oshkosh, Milwaukee, and Parkside in the Urban Corridor Consortium.

UWGB 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. Accreditation is granted after a thorough examination of all aspects of a college or university by a team of faculty and administrators from established institutions.

STUDENTS

The University has 3540 undergraduate students and about 380 students in its master's degree program.

Although most (93 percent in 1979-80) of the University' students are from Wisconsin, the student body reflects a healthy diversity. Fifty-eight of Wisconsin's counties are represented, as well as 33 other states and Washington, D.C. International students from 24 countries attend UWGB; among them are students from Hong Kong, Japan, Nigeria, Thailand, Kenya, Guyana, Ghana, Ecuador, Turkey, Iran, Malaysia, Saudi Arabia, Costa Rica, Ethiopia, Italy, Libya, Singapore, and Uganda.

UWGB students bring a variety of contributions to the classroom and campus through their range of ages and experience. Over one-third of the undergraduates at UWGB are 25 years or older. In 1979-80, women undergraduates outnumbered men (55 percent to 45 percent). Many students have attended some other college or university before UWGB.

Among the challenges of attending UWGB are its high academic standards. In the 1979-80 academic year, 93 percent of the regularly admitted incoming freshmen ranked in the upper half of their high school graduating classes and 49 percent came from the top quarter.

UWGB graduates do well in job placement and in admission to graduate and professional schools.

A study of the graduates from the 1978-79 academic year showed that six months after graduation 90 percent of those who responded were employed, attending graduate or professional schools, or pursuing teacher certification. (Sixty-nine percent were employed; 21 percent continuing their educations.) One percent of the graduates was not seeking employment, leaving nine percent seeking jobs at the time of the study. Ninety percent of the graduates responded to the study.

A number of the graduates were in the master's degree program or seeking teacher certification at UWGB.

Other 1978-79 graduates continuing their education were distributed widely across the United States and in other countries. Graduates were attending law schools at UW–Madison, Lewis and Clark, and the College of William and Mary. Master's degrees in library science were the goals of the students at UW–Madison and UW–Milwaukee. Graduates were pursuing studies in linguistics at the State University of New York at Buffalo, and Sophia University in Japan. Two were studying German language at universities in Germany. Graduates were admitted into Ph.D. programs in anthropology at the University of Minnesota and physiology at Dartmouth and UW–Madison. The variety of other graduate studies and locations was broad: theater and children's theater at Villanova and Virginia Polytechnic; women's studies and recreation at North Texas State; dentistry at Marquette; piano pedagogy at University of Colorado; dietetics at University of Ohio; philosophy at University of Washington; psychiatry at Arizona State; ecology at the University of California–Davis; demography at University of Michigan; divinity at Concordia Seminary, St. Louis; urban and regional planning, and crop production at UW–Madison; environmental engineering and chemistry at University of Minnesota; and many others.

FACULTY

Faculty members at UWGB, primarily engaged in teaching, also are recognized for their commitment to community concerns. Many are involved in research and consulting work for private and public agencies—work which often provides practical experience opportunities for students. A number of faculty members have demonstrated substantial achievements in the practice of fields in which they teach. Examples include some of the faculty members in business and in public administration, the sciences, art, and other areas.

Of the 163 full-time faculty members, 91 percent hold the Ph.D. degree or an equivalent terminal degree in their fields.

CAMPUS

The campus and facilities of the University of Wisconsin–Green Bay are new, attractive, functional, and planned especially to enhance the academic program.

The campus, located seven miles from the city center of Green Bay, Wisconsin, provides a harmonious setting for a university with UWGB's academic program. The 645-acre site slopes from an important geologic formation—the ridge of the Niagara Escarpment which creates Niagara Falls hundreds of miles to the east—to the waters of Green Bay. The gently rolling terrain formerly was farmland and a private golf course. The Cofrin Memorial Arboretum is being developed around the entire campus periphery which includes the bay shore, a small stream valley, meadows, and some wooded areas. The skyline of the central city is clearly visible from the campus setting. Not many miles away are the lakes and forests of Northern Wisconsin and the recreational and natural area of Door County. Thus, the variety of environments provided by UWGB's setting is most appropriate for a University where knowledge from the classroom often is tested by practical application to off-campus situations.

The central landmark on campus is the eight-story Library Learning Center. Clusters of academic buildings are grouped like points of the compass on the north, south, and west around the Library Learning Center. This grouping includes the University Commons.

The academic buildings and the Commons are connected outdoors by plazas and walkways and indoors by a system of concourses. The concourses and ramps and elevators in every building make the University particularly accessible to handicapped students and visitors.

The Phoenix Sports Center, east of the academic buildings, includes the gymnasium, swimming pool, handball courts, team rooms, and other indoor athletic facilities. Tennis courts, baseball and softball diamonds, and other playing fields are nearby. UWGB's soccer team plays its games at Phoenix Field on the campus' east side.

Student apartments are near the Commons and academic buildings and not far from the gym, swimming pool, and other sports facilities.

Three other buildings are used for student activities. Shorewood Club West has a rathskeller, fireplace lounge, and game rooms; Shorewood Club East contains cafeteria facilities and a large room that can be used for special events; and the Pro Shop houses student organizations. The Shorewood Clubs are headquarters for golfing in summer and cross-country skiing in winter.

Beside the bay is the Outing Center, a focal point for summer recreation. Canoes, sailboats, and other recreational equipment are available for rent. On the shore near the Outing Center is Communiversity Park, a picnic and recreation area.

Near the University's main entrance are the Children's Center, a service available to children of students and staff, and the Ecumenical Center, headquarters for the interfaith campus ministry.

Since the primary buildings are clustered, much of the campus is left open for recreational use. The nine-hole golf course is used in winter for cross-country skiing. Bicycle, cross-country skiing, and pedestrian paths connect all parts of the campus.

COMMUNITY

Green Bay is the site of Wisconsin's oldest European settlement. The French explorer Jean Nicolet sailed into the bay of Green Bay in 1634, fourteen years after Plymouth Rock, and landed not far from the present site of UWGB. Before the French arrived, the area was the home of the Potawatomi, Winnebago, Menominee, Sauk, Fox, and Chippewa Native American people.

The first Europeans were fur trappers and missionaries and they were followed by lumbermen. Green Bay's location at the mouth of the Fox River, connecting inland waterways with the Great Lakes, caused it to develop early as a trading center. Since the completion of the St. Lawrence Seaway in 1959, Green Bay has been an international port.

Today, Green Bay's 90,000 residents include descendants of the Native American groups, French, English, Belgians, Poles, Germans, Scandinavians, Dutch, and Irish.

Green Bay is a manufacturing city and the county seat of Brown County. Major industries are paper products, metal working, and food processing, and a major interest of Green Bay area residents is its professional football team, the Green Bay Packers.

Community resources include theater and music organizations, a good public library system, daily and weekly newspapers, three AM and two FM commercial radio stations, and three commercial television stations. Broadcasting from the campus are WGBW, an FM radio station, and WPNE-TV, an educational television station. Other schools in the community include St. Norbert College, a co-educational private Catholic college in suburban DePere; and Northeast Wisconsin Technical Institute.

Although Green Bay and much of the Fox River Valley is industrial, most of Northeast Wisconsin is farmland devoted primarily to dairying. The landscape is gently rolling, marked by rounded ridges and hills shaped by the last great ice age which covered the region.

Green Bay is the gateway to two major areas of Wisconsin known for their natural beauty. Door County is the peninsula jutting into Lake Michigan which creates Green Bay. It is characterized by small farms, orchards, small villages with attractive harbors, and miles of shoreline. It has been a vacation area for a long time and is known for summer cultural activities. Northern Wisconsin is known for lakes and forests and the Lake Superior area.

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.

HOW TO USE THIS CATALOG

The catalog provides an overview of programs, facilities, services, and campus life at the University of Wisconsin–Green Bay. To make college decisions, a prospective student needs to know two important things: what a university offers and what it will expect of a student. This catalog provides both kinds of information about

UWGB. By reading it carefully, a prospective student can learn much of what he or she needs to know to plan a college education at UWGB.

However, it is not recommended that a student plan a program of study using only this catalog. Instead, after becoming familiar with the information in it and completing the steps necessary for admission, the student should begin planning an individual program of study with the help of the Academic Advising Office and the faculty advisers to whom that office can provide reference. Also available are brochures and handbooks describing specific programs in greater detail than is possible in this catalog.

These resources can help students get the greatest value from their educational experience at UWGB. Students are encouraged to use them.

EFFECTIVE DATES

Effective dates for this catalog are September 1, 1980 through August 31, 1982.

All of the information contained in this catalog was accurate at the time of its printing, which was well in advance of the 1980-81 academic year. In the normal course of things, changes in some of this information can be expected to take place before August 31, 1982. For example, fee and tuition schedules change annually by action of the University of Wisconsin System Regents and/or the Wisconsin Legislature. New courses can be expected to be added and some listed courses may be altered to remain current with needs.

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

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

Academic Program

General Information

Degrees Offered

UWGB offers a Bachelor of Arts or Bachelor of Science degree, a Bachelor of Social Work (BSW) degree, a two-year Associate of Arts degree, and a graduate program leading to the degree, Master of Environmental Arts and Science (MEAS).

The Bachelor's degree requires 124 semester hours of degree credit and a cumulative grade point average of at least 2.0. A semester's minimum load for a full-time undergraduate student is 12 credits; the normal maximum load is 18 credits. An average semester load is 15 or 16 credits. Fifteen credits are considered a maximum full-time load for graduate students.

Associate of Arts degree and Master's degree requirements are described at the end of this catalog section.

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 in the section on academic rules and regulations in the Appendix to this book.

Honors List

UWGB recognizes high scholastic achievement for full-time undergraduate students each semester by compiling an Honors List. A minimum of a 3.25 grade point average indicates Honors and a minimum of 3.50, 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 Distinction

The Senior Distinction 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 3.25 and 3.49 is graduated cum laude; between 3.5 and 3.74, magna cum laude; and between 3.75 and 4.0 summa cum laude.

For the magna and summa ranks, completion of a Senior Distinction 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 concentration program. Eligible students should consult their concentration advisers for more information about the Senior Distinction project.

Academic Rules and Regulations

Academic policies, rules, and regulations, and definitions of academic terms as they are used at UWGB are explained in greater detail in the Appendix of this book. They also are published in the *Timetable*, circulated each semester, January interim, and summer session by the Registrar's office. 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.

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 the student can concentration on a single course in a traditional topic or take advantage of a course focused on a practical application.

January course offerings include:
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 course offerings (numbered 283X, 483X and 783X) designed by faculty and students around a variety of themes from interdisciplinary

perspectives; *intensive on-campus courses*—providing total immersion learning experiences, as in foreign language speaking skills; *other-culture experiences*—study or research in a community observatory situation, or in national and international study tours; *independent study*—individualized instruction, study, or research (in courses numbered 298, 498, and 798) under faculty supervision; *developmental or extra elementary level work*—especially in mathematics, English, and foreign languages, and particularly for freshmen and sophomores.

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.

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 in-service programs. Both undergraduate and graduate courses are offered during the summer.

Summer programs can meet 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." UWGB's faculty often develops special offerings for the summer session.

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

Students from other colleges and universities enroll in summer session to take courses available only under UWGB's academic plan. Others enroll in courses that help satisfy graduation requirements at their home institutions. Adult students, both local and summer residents, also take advantage of the summer programs.

Recent high school graduates will find credit courses and special programs available. Qualified high school students may enroll in appropriate courses and leave their college credits "in escrow" for later use. Recent high school graduates at marginal college entrance level may enroll in a "college try-out" program as special students and, if their work is of sufficient quality, be considered for regular admission.

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

During the summer also a number of non-credit camps and workshops, one to four weeks in length, are offered for junior high and high school students and include such activities as art, music, creative writing, basic college skills, computer science, basketball, soccer, and swimming. Sailing courses at the Bay Shore Outing Center are open to non-students and University students. Many students commute to these clinics and workshops, but the University Village Apartments are 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 may be obtained from the office of the Vice Chancellor for Academic Affairs. Publications and announcements about the coming summer's programs are available in advance.

Planning a Program

UWGB students build their academic programs by choosing from among several components and combining them in ways that best meet their needs. The components are: *concentrations*, which apply knowledge from several fields to a particular area of study (every student chooses a concentration); *interconcentration programs*, offered jointly by two or more concentrations, in which a student participates by enrolling in one of the cooperating concentrations; *disciplinary programs*, offering studies in the traditional disciplines; *professional programs*, providing career preparation in particular fields; and *preprofessional programs*, which help students to prepare for professional or graduate studies in many fields.

All students must satisfy certain requirements in addition to their major programs. Thirty credit hours of all-University requirements must be completed. This includes nine hours each in the humanities and fine arts, social sciences, and natural sciences, to meet liberal education and distribution requirements, and a three credit senior seminar. Students also must satisfy a writing proficiency requirement. In order to receive a degree from UWGB, students must complete at least one year (31 credits) in residence. All of these requirements are explained in more detail elsewhere in this section of the catalog.

Students have used the flexibility inherent in the academic plan to develop many ingenious study plans to meet their personal goals. However, most students will most likely follow one of the five basic plans described here:

Plan I: The Concentration

A student may choose to take a straight concentration. The concentration is like a major at other universities except that it provides more depth and breadth. Since the concentrations are interdisciplinary, applying knowledge from several subjects to a given area of study, the student learns to study a problem from many relevant points of view. Thus, students gain tools for solving problems creatively, acquire basic knowledge in the subjects involved, and gain skills that will be useful in diverse future applications.

UWGB's interdisciplinary concentrations are organized so that students can approach the study of all bodies of knowledge through them—the humanities and fine arts, social sciences, and natural sciences and mathematics, as well as business and management. Choosing a concentration by no means limits a student to courses in that area—taking courses in other programs is not only permitted, it is encouraged.

Most students select one of the 15 majors offered through the concentrations. Students who find that none of the formal concentrations meet their needs may develop a personal concentration. All of these programs are described in this section of the catalog.

The concentration requires 30 credits of junior-senior level courses selected from those identified by the concentration as constituting a major. Most concentrations offer a number of alternative plans of study. Only a few of the possibilities in each program can be described in this catalog. After reading the concentration descriptions in this book, students should seek additional information and help in planning their individual programs from concentration advisers.

Plan II: The Concentration/Discipline

While the concentration integrates several subject areas to focus on a particular program area, the discipline provides depth of knowledge in a specific field. Many students who want this kind of focus select a disciplinary program along with their concentrations.

Requirements are 12 credits in the concentration and an additional 24 in the discipline, all at the junior-senior level. Students usually plan their programs with advisers from both the concentration and the discipline.

Examples of this kind of program include the study of the geological aspects of land resource management (Science and Environmental Change concentration/earth science disciplinary program) or sociological aspects of urban planning (Urban Studies concentration/sociology disciplinary program) or the literary achievements of English-speaking peoples (Humanistic Studies concentration/literature and language disciplinary program).

Plan III: The Concentration/Professional Program

Another way to achieve depth and career preparation is with courses that provide professional competency and knowledge that can be applied directly to a particular career field. UWGB students do this by adding a professional program to their concentration. This is commonly done in the program in Education, which provides courses that meet requirements for certification to teach early childhood, elementary, or secondary education in nearly every subject matter area. Others prepare for careers in business, public administration, government, recreation resources, or social services through UWGB professional programs.

Most of the professional programs require 18 hours of coursework in addition to the 30-credit concentration requirement. Some additional coursework is required in education to meet state certification requirements.

Plan IV: The Concentration/Discipline/Professional Program

This plan combines all of the elements described above. It provides a basic interdisciplinary approach, gives a specific disciplinary focus, and adds professional-specialist expertise. The professional program requires 18 credits of coursework (except in education where more are required), which are added to 12 credits in the concentration and 24 in the discipline.

Plan V: The Preprofessional Program

"Preprofessional" describes a study plan that is begun at UWGB and completed elsewhere. There are three basic ways of doing this.

The first is for students who plan to attend graduate professional schools in such areas as law, medicine, dentistry, social work, the sciences, the humanities, or the social sciences. Most of these programs require such a degree for entry, so these students usually obtain a bachelor's degree from UWGB. Any UWGB major provides appropriate preparation for a related graduate or professional program. And because more and more graduate programs recognize the advantages of interdisciplinary preparation, UWGB students find they are particularly well prepared for advanced study in a variety of areas. Many have been accepted at leading graduate and professional schools throughout the country where they have maintained outstanding academic records.

The second type of preprofessional program provides two years of study in a specialized or technical area in which UWGB does not offer a degree, such as engineering. The student spends the first two years in a pre-engineering program developed by science and mathematics faculty members to meet requirements of most engineering schools, then transfers to the engineering school to complete degree requirements.

A third way of doing this provides both a liberal bachelor's degree from UWGB and a technical degree from the technical program university. The student normally spends three years at UWGB and two at the school with the technical program. Upon completion of the five years, the student receives a bachelor of arts or science degree from UWGB plus a bachelor of engineering (or another applied field) from the other institution.

Requirements

ALL-UNIVERSITY REQUIREMENTS

All-University requirements total 30 credit hours in a two-part program: liberal education and distribution (27 credits), and senior seminar (3 credits).

All-University 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 between 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 all-University 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 and will be expected to satisfy the 27 credit liberal arts and distribution requirements by transferring or completing nine credits each in the humanities and fine arts, social sciences, and natural sciences and mathematics.

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 exact standing in regard to fulfilling all-University requirements as soon as an evaluation of their completed credits is concluded.

Liberal Education and Distribution

The liberal education and distribution requirement provides an opportunity to learn the distinctive approaches or procedures of each broad area of knowledge—humanities and fine arts, social sciences, and natural sciences and mathematics—and to become more aware of the values which shape individual and social experience.

The 27 credits of liberal education and distribution 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 and mathematics.

Six of the required nine credits in each area of knowledge must be taken as part of a related two-course sequence. Students are able to choose courses from a wide variety of topics and course formats (lectures, small group discussions, and laboratory or studio work). Following are some samples of six credit sequences that may be taken to meet this requirement; descriptions of these courses can be found in course listings of their respective curriculum areas. These are not the only possibilities. The *Timetable* and other registration information can keep students abreast of all-University requirements courses.

Humanities and Fine Arts

242-261 Foundations of Aesthetic Experience
AND
736-211 The Arts and Human Existence
OR
242-380 The Arts: London

552-104 Introduction to Literature
AND
493-204 Humanistic Values Through Literature
OR
242-380 The Arts: London

944-240 The City in American Literature and Arts
AND
944-340 Urban Visions and Cultural Traditions
OR
242-380 The Arts: London

242-323 Language and Human Conflict
AND
493-376 Cultural Conflict

Social Sciences

255-102 The Social System
AND
875-203 Prejudice and the Human Condition
OR
875-204 Freedom and Social Control

302-201 Analysis of Learning Environments
OR
302-202 Change in American Education
AND
302-204 Values in Conflict: The School Experience of Minority Background Children
OR
302-207 Education in Another Culture: London

481-202 The Growing Years
OR
481-210 Introduction to Human Development
AND
481-215 Issues in Human Development

875-241 Women and Changing Values
AND
875-235 Sex and Society

944-230 Values in Black and White America I
AND
944-231 Values in Black and White America II

Natural Sciences and Mathematics

862-184 Patterns of Scientific and Technical Based Problem Solving I
AND
862-185 Problems of Scientific and Technical Based Problem Solving II

862-102 Introduction to Environmental Sciences
AND
862-162 Technology and Society
OR
862-303 Conservation of Natural Resources

478-102 Introduction to Human Biology
AND
799-204 Fertility, Reproduction and Family Planning

862-186 Man and Wildlife I
AND
862-187 Man and Wildlife II

The other three credits in each area of knowledge must be chosen from a list of courses approved for distribution. Courses marked with a dagger (†) in the course description listings in this catalog represent courses approved for distribution credit. Additional courses may be identified for distribution from time to time.

Senior Seminars

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 concentration courses to the broad fundamental concepts and issues that comprise 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 ecological, 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 alternatives of such concepts as freedom, progress, imagination, myth, ecological systems, various educational and intellectual concepts, and the like.

Faculty members who teach senior seminars, their interests, and brief descriptions of the seminars follow.

Professors: William Kaufman, human physiology, environmental physiology, temperature regulation; **James Murray,** regional and community economic development, quantitative methods of spatial analysis, environmental economics, poverty; **George O'Hearn,** physics, cultural impact of physics, computer simulations; **John Reed,** botany and biology, international scientific research and environmental programs; **Keith White,** ecology of vegetation, and issues in natural resource management.

Associate Professors: Thomas Churchill, creative writing, fiction, history and playwriting; **Kenneth Fleurant,** literature as a social force, normal and abnormal behavior from a humanistic perspective, surrealism, existentialism and "absurdism"; **Martin Greenberg,** social science fiction, Middle East politics, the study of the future; **Fritz Fischbach,** biophysics, environmental health, applied problem solving; **Hallett Harris,** wildlife management, environmental sciences; **Donald Harden,** the role of higher education in American society, theory and practice of administration in higher education; **Estella Lauter,** nature of images in poetry, myth, aesthetics, analytical and humanistic psychology, women's studies; **David Littig,** urban and transportation policy, humanistic psychology and politics; **Craig Lockard,** history, anthropology, East and Southeast Asian studies, Third World societies and development, American politics; **V. M. G. Nair,** plant pathology, international quarantine regulations executed through the United Nations and international agencies; **Clary Nelson-Cole,** humans and religion, African art and philosophy, rituals, masks, and masquerades; **Gilbert Null,** history of philosophy, philosophy of the sciences, phenomenology, existentialism; **Nikitas Petrakopoulos** (chairperson), mathematical modern culture, theoretical physics, applied mathematics; **Richard Presnell,** teaching-learning processes in human relations and other areas of environmental concern, and in ecological education; **Michael Troyer,** economics, and human services administration; **James Wiersma,** development of techniques to assist man's understanding of his impact on aquatic ecosystems.

Assistant Professors: Sidney Bremer, American cultural mythology dealing with urban places and stereotyped groups; **Harvey Kaye,** political economy, and historical studies; culture, ideology, and hegemony; Latin American, and British studies; **Joseph Mannino,** human variability, evolutionary theory, and physiological adaptation of human population; **Svata Louda,** linguistic codes and their social significance; English as an international language, political systems, and language; **Pat Samuels,** law, women's studies, law and society; **Daniel Stolper,** law, law and the quality of life.

Instructors and Lecturers: John Harris, management, organizational theory; **Dave Steffenson,** theology, ecological and social ethics, personal growth and social policy, science and social policy.

COURSES

867 SENIOR SEMINARS

867-401 The Role of International Organizations in Support of Cultural and Scientific Developments (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.

867-402 Images of Woman and Men (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.

867-403 Overcoming World Hunger (K. White)
Focuses on developing practical, and perhaps new, approaches to overcoming world hunger. Constructing these approaches will involve a better understanding of the present interdisciplinary nature of the problem; what has been done in the past to solve the problem; the state of our current knowledge; and the synthesis, through application of creative thinking, of policies and strategies for future action.

867-405 Transactional Analysis in Decisions Affecting Man's Environment (R. Presnell)
Investigates transactional analysis, environmental issues in society, and citizen roles in the decision-making process. This seminar is not designed as a therapeutic course; it is concerned with societal problems rather than personal problems. Transactional analysis is examined as a tool or technique useful in communication with others in efforts to effect solutions to environmental problems.

867-406 Science and the Quality of Life (G. O'Hearn)
Scientific developments are reshaping many of our basic beliefs and altering our style of living. This is not a new phenomenon but in recent years the rate of change has been greatly accelerating. Areas of concern include: analysis of selected scientific developments and their ethical and human value implications; social, political, economic, and cultural implications; and the problem of anticipating both beneficial and adverse consequences. Emphasis is on basic scientific propositions rather than on technological developments. Knowledge of science is not required; students examine the implications from their own perspective using tools and knowledge of their own majors.

867-407 The Improvement of Life and the Use of Law (D. Stolper)
Examines the subject of human rights as a philosophical, cultural, political, legal, and international phenomena. Six aspects of the human rights question are addressed: what is meant by human rights; how are rights integrated into political and social systems; how are rights defined and implemented in various settings; how have rights been codified and promoted on the international level; how can the average citizen use the domestic legal system to insure that the government does not neglect the practice of existing law; how can the average citizen challenge existing domestic laws and regulations so that new equitable and humane laws be created?

867-408 Culture, Life-Style, and Science in a No-Growth World (N. Petrakopoulos)
Implications of pressures of population growth coupled with limited resources, the possibility of steady-state economic systems, technological changes, and effects on everyday life. What would life be like in a steady-state, no-growth society? The course considers how education can come to terms with problems so that citizens can change values and social attitudes, invest new technologies, and create imaginative and highly responsive new democratic systems.

867-409 The Humanistic Movement: Its Philosophy, Principles, and Applications (D. Lillig)
Many have a pessimistic view of the future once the possibility of a steady-state society based on depleted nonrenewable resources is accepted, fearing that society may be plunged into a "dark ages," with disregard for human rights, increasing socio-political repression, and authoritarianism. This course explores an alternative view—the homo humanus vision of humanistic psychology and the human potentials movement through the works of authors like Abraham Maslow, Carl Rogers, Fritz Perls, Alan Watts, Sidney Jourard, Charles Hampden-Turner, Martin Buber, Baba Ram Dass, and others.

867-410 Biopolitics: The Potential Influence of Modern Biology on our Social, Economic, and Political Future (W. Kaufman)
Impact of current developments in genetics, behavior, and other biological studies on the future of humans, including genetic controls, determinant breeding in humans, professional motherhood, sperm banks, breeding for job category, and selecting leaders through genetics. Potential dangers to society through the improper use of biological knowledge will be starting points for class members to use in developing some theoretical protective devices for saving the future.

867-411 Contemporary Critical Views of the American Prospects: Closing Circle or Expanding Horizons? (C. Lockard)
Considers some of the major crises facing contemporary America through the eyes of social critics representing a variety of viewpoints and disciplines: the interrelated themes of political and social oppression, rampant technological and economic change, and the decline of contemporary values. Readings take a critical perspective towards contemporary attitudes and view problems at least in part as deriving from prevailing socio-political realities. Among concepts discussed are freedom, human progress, revolution, social change, ecology, individualism, democracy, governmental institutions, love, stability, alienation, and poverty. In addition to discussing dilemmas and views of social critics toward them, the course critically examines both the critics and their intellectual modes of thinking.

867-412 The Impact of Science and Technology on Society (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.

867-413 Imagination and Myth (E. Lauter)
The traditional myths of Western culture no longer have the power to organize our lives. The course posits that myths are inevitable and can just as well serve positive functions as negative ones. Several questions are explored: what kinds of imaginative activity lead to making satisfying personal or cultural myths; what models can be used from contemporary thought; who should assume responsibility for creating new myths? Students engage in the process of imagining, analyze and evaluate contemporary myths, and create a myth of their own.

867-414 International Aspects of Environmental Planning (J. Reed)
Readings in global ecology are required; then students select specific topics related to the theme; develop an appropriate reading list for the topics; formulate a thesis within the topic; and prepare a defense of the thesis for both oral and written presentation.

867-415 Applied Imagination (F. Fischbach, J. Harris)
Examines and uses various practical means of enhancing creative thinking in the environmental sciences, in the realm of leadership, and in the area of ethical concerns. Students develop attitudes and abilities that help them meet future challenges by creatively finding better solutions to problems. Emphasis is on developing personal creativity and using that talent to express decisions.

867-416 Social Consciousness and the Scientist (W. Kaufman)
Consideration of the motivation of scientists, their attitudes toward ethical practices in research, application of research findings, and the relation of political and national concerns to science and research. Relates mainly to human experimentation, the ethics that have been established to govern it, and how these have been supported and abused. Thinking can be extended to other areas of science and research where, in decision-making, conflicts with human values may arise.

867-417 Capitalism, Socialism, Democracy: Costs and Consequences for Social Development (C. Lockard)
Critically examines strengths and weaknesses of the major economic and political systems as vehicles for developing and transforming societies. Concerned in particular with various patterns of social order—authoritarian and pluralistic political structures, capitalistic and socialistic economies—and with the costs and consequences of each order for a society.

867-418 Science as Metaphor: The Application of Ecological Principles to Social Systems (H. Harris)
The relevance of knowledge of ecological stability to understanding the stability of industrial man's society is the focus. Attention is centered on four properties of ecosystems and sub-units of ecosystems: diversity and complexity of interactions; history and evolution; spatial attributes; and thresholds. Similarity or dissimilarity between ecological and social systems is examined in the context of the above properties.

867-420 The Organization in Modern Society (M. Troyer)
Analyzes the social, philosophical, and profit-oriented concerns which result from the relationship between institutions and modern society. Specific issues explored include: relationships of organizations and commercial spokesmen and political leaders to society; positive and negative economic effects of organizations on modern society; psychological effects of organizations upon individual behavior; socio-political effects of organizations on modern society; and considerations of organizational ethics and cultural norms which may serve as alternative values for organizational behavior in future society.

867-421 Science Fiction: The Social, Political, and Physical Future Through Literature (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.

867-422 Relativism, Society and New Politics (N. Petrakopoulos)
Examines scientific and political theories and their relationship to analyzing, evaluating and predicting social problems and alternatives for action. Contemporary problems will be examined to see limitations of contemporary liberal thought and new theoretical frameworks will be discussed through which possibilities and conflicts implicit in improving the quality of life might be approached.

867-423 Madness, Insight and Creativity (K. Fleurant)
Humans are not purely logical but have a non-rationality that reflects the non-rationality of much of what happens daily in the world around them. This is an attempt to understand this anti-logical tendency which, historically, has been on the increase in the last 150 years.

867-424 Stereotypes and Minority Groups (S. Bremer)
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.

867-425 Ages of Man: Images of Modern Morality (T. Churchill)
Focuses upon the lives of men and women who have shaped reality in this century, and others who have had that reality shaped for them. Points to the disparity between what the average American determines he or she needs as models for a style of living (politically and ethically), and the models that present themselves through the usual channels of church, government, and neighborhood.

867-426 The Search for an Ideal Community: Planned New Towns and Cities (J. Murray)
Begins with a brief explanation of early literature from the proponents of the Greek city-state, to the 19th century utopians, and the 20th century new towns movement; then the class will simulate a planned community incorporating their own values and expertise.

867-427 The Artist as Pioneer of Effective Communication: The Social, Environmental, Administrative, Cultural, and Scientific Uses of Art (C. Nelson-Cole)
Deals with problems confronting public life as governed by large administrative organizations whose languages follow traditional patterns and which are based on bureaucratic systems; tasks of the artist in simplifying the individual's contacts with the authorities; the democratic system, where the ordinary citizen must be able to understand political decisions; the artist and the scientist.

867-428 Beyond Survival: Visions of Meaning and Hope for the 21st Century (D. Steffenson)
The 21st Century is only 20 years away, and almost everyone agrees that life will be very different, if in fact we survive at all, due especially to energy-resource-environmental constraints closing in on all human systems and relationships. Assuming our survival, what will be meaningful and fulfilling to us as human beings as we live and cope in this new context? How shall we live and relate to each other as human beings? What values can inform and enrich our lives, our culture, and our social system? It has been said that one cannot plan for a meaningful future unless one has a vision of what that future might (or should) be like, however this provisional utopianism must be realistically grounded within the physical, social and cultural contexts we might expect. This seminar will deal with some of the key questions and issues related to constructing such a vision. It will be basically philosophical and exploratory, but it can and will touch specific questions relating to the disciplinary backgrounds and interests of the students. The central issue dealt with is the future of individualism, particularly in the American experience, and the individual's relationship to material/technological culture.

867-429 Comparative Perspectives on Race, Ethnicity, and Cultural Conflict in Modern Society (C. Lockard)
Recent headlines confirm that ethnic, racial, and cultural conflicts within nations constitute a problem of great magnitude in the contemporary world. Most societies contain some heterogeneity in their population based on racial, ethnic, caste, linguistic, or religious differences; most have faced some problems because of this diversity, and some have suffered from serious conflict, sometimes erupting into violence. Given the widespread nature of this problem in both industrialized and under-developed, capitalistic and socialist, societies, it is important for Americans to understand something about this phenomenon in an increasingly interdependent and ethnicity-conscious world. Among other things, we shall try to better understand American racial problems through analyzing conditions elsewhere and the theories arising from them. An interdisciplinary approach will be employed as we seek to understand the origins and nature of pluralistic societies, the dimensions of conflict, and possible ways in which such societies can maintain social cohesion. A number of countries which have experienced conflict will be studied, including Lebanon, Northern Ireland, Canada, Belgium, Malaysia, Nigeria, Yugoslavia, South Africa, Guyana, and the United States; we will also briefly examine several multi-cultural societies which some specialists believe to be relatively free of conflict, including Switzerland, Hawaii, and Brazil. After analyzing case studies, we shall try to determine how well the demands of national unity and social cohesion can be met in multi-cultural and multi-ethnic societies while at the same time guaranteeing as much as possible the integrity and rights of minority groups.

867-430 Value, Reason, and Action in Art & Society (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/her self 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.

867-431 Critical Views of Higher Education: Closing Circles or Expanding Horizons? (D. Harden)
Examines the history, social aspects, economics, and systems of higher education. Given the historical overview, the seminar will proceed with detailed discussions of the writings, and proposals of contemporary innovative leaders in higher education such as Louis Mayhew, Paul Dressel, Fred Harvey Harrington, Ernest Boyer, and Clark Kerr. A central concern of this seminar will be maintaining, protecting, and enhancing the quality of higher education in an uncertain future. Students will prepare and present an in-depth analysis of a current problem facing higher education.

867-432 Rebels and their Causes: Explorations in Biographies of Personal Rebellion and Social Change (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 Assissi, Albert Schweitzer, Henry David Thoreau, Bertrand Russell, Carl Gustav Jung, Albert Einstein, Wilhelm Reich, and Robert Oppenheimer are among possibilities.

ENGLISH PROFICIENCY REQUIREMENT

All students must demonstrate mastery of basic writing skills by either achieving a specified minimum score on an entrance examination or passing an approved credit course in basic composition.

Performance on the college achievement, English expression, and essay writing tests given as part of the freshman testing program place students in one of four categories.

A student ranked "in need of substantial development" must complete 553-093, Fundamentals of Writing, which is a non-credit course, and then successfully complete 552-100, Basic College Writing, a credit course.

A ranking of "in need of further development" results in the necessity to take 552-100, Basic College Writing, or 246-100, Writing Skills Laboratory, during one of the first two semesters at UWGB.

A student who receives an "adequate" ranking, is not required to take a writing course, but is encouraged to continue to develop writing ability, perhaps by taking 552-105, Introduction to Expository Writing.

No writing courses are required if a student is found to have "quite good" writing skills, but such students also are encouraged to continue developing their abilities by taking Introduction to Expository Writing or one of the more advanced writing courses.

Part-time students enrolled as special students and students transferring approved writing course credits into UWGB are exempted from taking the writing proficiency examination.

RESIDENCE REQUIREMENT

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

The residence requirement does not imply 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 his or her 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 office of the Vice Chancellor for Academic Affairs.

A transfer student must complete the 30 credit all-University requirements but the portion of that requirement that must be completed in-residence will be modified according to the number of degree credits accepted at the time of transfer. In situations where in-residence requirements are reduced, the student must have completed appropriate equivalent courses at his/her 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.

Programs of Study: a Summary

CONCENTRATIONS AND DISCIPLINES

HUMANITIES AND FINE ARTS

Concentrations:

Communication and the Arts
Roles and effects of all kinds of communications in the human environment, especially the backgrounds, practice and applications of language, music, mass media, theater, photography, design, graphics, interpersonal communications, and the visual arts.

Humanistic Studies
Concerned with history, philosophy, literature, creative writing, foreign language, cultural anthropology, psychology, women's studies, Native American studies, theater, music, and the visual arts.

Disciplinary Programs:

Art
Communication Processes
(including linguistics, media, photography, speech)
History
Literature and Language
(English, American, French, German, Spanish)
Music
Philosophy
Theater
(including dance)

SOCIAL SCIENCES

Concentrations:

Human Development
The process of human development over the life span —early childhood, adolescence, adulthood, and old age.

Regional Analysis
Land use planning, regional outdoor recreation planning, transportation, and regional economic development are among emphases.

Social Change and Development
Processes of social change are explored from social, political, economic, historical, and cultural perspectives.

Urban Studies
Applies knowledge from psychology, political science, architecture, literature, sociology, history, computer science, and city planning to the study of the nature of urban life.

Disciplinary Programs:

Anthropology
Economics
Geography
Political Science
Psychology
Sociology

NATURAL SCIENCES AND MATHEMATICS

Concentrations:

Human Biology
(offers majors in Human Adaptability, Nutritional Sciences, and Population Dynamics)
Human Adaptability: Human response to stress or pressure in three principal areas of study: physiology, psychology, anthropology.
Nutritional Sciences: Quality, quantity, and aesthetic value of the food supply with emphasis on either community nutrition or industrial nutrition.
Population Dynamics: Changes in composition, distribution, and size of human or animal populations; factors that influence these changes, and effects of these changes on the population's environment.

Science and Environmental Change
A fundamental background in the sciences which may be oriented toward an emphasis upon a particular discipline or toward one of several interdisciplinary tracks.

Disciplinary Programs:

Biology
Chemistry
Chemistry-Physics
Earth Science
Mathematics
Physics

PROFESSIONAL STUDIES

Concentration:

Managerial Systems
Two majors are offered: Business Administration, including finance, management, marketing, nonprofit organization management; and Managerial Accounting.

Professional Programs:

Education
Courses leading to certification for early childhood, elementary, and secondary teachers.

Environmental Planning
A major that develops skills in planning, design, protection, and management of the human environment.

Military Science
Can lead to an officer's commission in the Army, or serve as an introduction to basic aspects of military service and concepts of national defense.

Nursing
A bachelor's degree completion program for persons with R.N. diplomas.

Public and Environmental Administration
A major in public administration skills.

Recreation Resources
Leisure and its application to planning and management of outdoor recreation areas.

Social Services
Professional preparation in social work and community psychology. May lead to the degree, Bachelor of Social Work.

INTERCONCENTRATION PROGRAMS

The Arts in Society
Environmental Design
Environmental Health Sciences
International Studies
Women's Studies

PREPROFESSIONAL PROGRAMS

Agriculture
Architecture
City Planning and Community Development
College Teaching
Dentistry
Engineering
Journalism
Law
Medicine
Nursing
Pharmacy
Social Work
Theology
Veterinary Medicine
Water Resources and Hydrology

Programs of Study

The next section of the catalog contains descriptions of each academic program. The concentrations and disciplines are grouped in three broad areas: humanities and fine arts, social sciences, and natural sciences and mathematics. The personal concentration is described separately. Professional programs and preprofessional programs follow the concentrations and disciplines. Descriptions of the physical education and coaching certification programs, Academic Support Program, Associate of Arts degree, Extended Degree Program, University Without Walls, and the graduate program also are in this section.

Course Descriptions

Descriptions of courses follow each academic program. 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 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.

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 are essentially advisory. They indicate the level of proficiency required in order to carry on a course. The student who feels he or she has the level of proficiency necessary without taking the suggested prerequisites should consult the instructor before enrolling. While the instructor's opinion is advisory, it should be useful in assisting the student to make a decision.

Abbreviations commonly used in course descriptions are:

cr	credits
P	prerequisite(s)
fr	freshman
soph	sophomore
jr	junior
sr	senior
cons inst	consent of instructor

Instructional Unit Numbers

The instructional unit number listed with each group of course descriptions is used for identification and record keeping. The student 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 publish 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:

156 Anthropology
204 Biology
226 Chemistry-Physics
242 Communication and the Arts
246 Communication Processes
255 Community Sciences
296 Earth Science
298 Economics
302 Education
350 Public and Environmental Administration
416 Geography
481 Human Development
448 History
478 Human Adaptability major of Human Biology
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
575 Managerial Systems
600 Mathematics
601 Academic Support Program—Mathematics
644 Military Science
694 Nutritional Sciences major of Human Biology
705 Music
707 Music-Applied
709 Theater
736 Philosophy
742 Physical Education
778 Political Science
779 Population Dynamics major of Human Biology
820 Psychology
827 Recreation Resources
834 Regional Analysis
862 Science and Environmental Change
867 Senior Seminars
875 Social Change and Development
892 Social Services
900 Sociology
930 University Without Walls
944 Urban Studies
957 Art

Courses with Variable Content

Many academic divisions 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 four categories: selected topics, student-led courses, directed study and senior distinction 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 cr.
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 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 appear on student transcripts. Students may enroll for a maximum of six credits of student-led courses in any one semester. A maximum of 18 credits can be accumulated in 281 and 481 courses except by special permission. A complete set of guidelines for student-led courses is available for consultation in concentration and professional program offices.

283X, 483X Selected Topics 1-4 cr.
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.

When offered, the title and number of credits is announced in the *Timetable* under the heading of the unit which is sponsoring it. Further information can be obtained from the sponsoring unit or the instructor. Courses of an introductory nature 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 Directed Study 1-4 cr.
Offered on a tutorial 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 directed study.

484 Senior Distinction Project 3 cr.
Each concentration offers the qualified student the opportunity to undertake a project to qualify for graduation with distinction. Such a project—normally a thesis, research, or other creative activity—is carried out in the senior year with the consent of the concentration adviser. Specific details are available from concentration advisers and chairpersons. The student is encouraged to register for distinction in the first semester of the senior year.

Humanities and Fine Arts

CONCENTRATIONS:
Communication and the Arts
Humanistic Studies

DISCIPLINARY PROGRAMS:
Art
Communication Processes (including linguistics, media, photography, speech)
History
Literature and Language (English, American, French, German, Spanish)
Music
Philosophy
Theater (including dance)

Communication and the Arts

Professors: Robert Bauer (chairperson), director of bands, flute, music education; **Arthur Cohrs,** keyboard, music theory; **Bruce Grimes,** ceramics; **William Prevetti,** drawing, relief printing (on leave 1980-81); **Richard Sherrell,** theater history and criticism, aesthetic awareness.

Associate Professors: Jerome Abraham, low brass; **Trinidad Chavez,** director of choral activities, voice, choirs and vocal ensembles, conducting, music education; **Clary Nelson-Cole,** painting, printmaking; **David Damkoehler,** environmental design, drawing, graphics, sculpture; **Jack Frisch,** interpersonal communication, theater history, directing; **Lovell Ives,** jazz, arranging, trumpet; **Wayne Jaeckel,** jazz, music theory, woodwinds; **Donald Larmouth,** linguistics; **Estella Lauter,** aesthetic awareness, criticism, women and the arts; **Dean O'Brien,** journalism, mass media; **Robert Pum,** drawing, art metal and jewelry design, aesthetic awareness.

Assistant Professors: Clifford Abbott, linguistics; **Emil Bowers,** scene, lighting, and sound design, technical theater; **William Burnett,** acting, directing, voice and speech; **Margaret Charnon,** keyboard, piano pedagogy; **Thomas D. Daniels,** public address, organizational communication; **Jerry Dell,** photography, electronic media, graphics; **Curtis Heuer,** ceramics, drawing, design; **Princess Morris,** dance and movement, choreography; **Terence O'Grady,** music theory and history; **Patricia Ridge,** acting, directing, stage movement; **Marlys Trunkhill,** voice, vocal ensembles; **Karon Winzenz,** (art curator), textile arts, painting, drawing.

Lecturers: Caroline Beckett, visual arts; **Karen Cowan,** modern dance; **Robert Snider,** percussion, bands; **Harvey "Dan" Spaulding,** electronic media; **Evelyn Telkari,** graphic communication.

The Communication and the Arts concentration is concerned with the structure, roles, and social and aesthetic consequences of all forms of communication, particularly language, design, mass media, graphics, art, music, theater, and creative writing.

The concentration's curriculum is organized into several emphasis areas which can be pursued as interdisciplinary majors or as supportive programs combined with four-year disciplinary programs such as communication processes, music, theater, and art, among others.

An interdisciplinary major in Communication and the Arts consists of a set of tool courses coupled with a minimum of 30 credits of junior and senior level course work. Specific requirements will vary within each major program. A concentration program can also be combined with a disciplinary co-major, in which case the tool course requirements remain the same, with a minimum of 12 credits of junior and senior level course work in the concentration.

Some courses offered by the Communication and the Arts concentration can be used to fulfill all-University requirements in the humanities. However, students cannot count the same course or courses both for concentration credit and all-University requirements. Students who enroll in courses listed both as tool courses and all-University requirements courses, will be required to enroll an equivalent number of credits in other humanities courses outside their major field. This policy ensures that students develop breadth in the humanities and fine arts as well as developing strength in their particular area of interest.

AESTHETIC AWARENESS

One of the programs in Communication and the Arts is aesthetic awareness, which includes core courses in aesthetic perception, expression, and evaluation, and

related course work in art history, styles, popular culture, theater history, and other expressive modes. Many students have combined programs in aesthetic awareness with four-year disciplinary programs in the fine arts (music, theater, art, creative writing), often including professional studies in education or business administration in preparation for careers in public education, arts administration, music business, theater management, and the like. The program in aesthetic awareness is recommended by the Wisconsin Department of Public Instruction as a supportive curriculum for students seeking certification in art education, music education, or English-communication arts. It is also appropriate as preparation for graduate study or professional work in the fine arts.

Students in aesthetic awareness plan their programs of study around the following outline:

Tool Courses (9-12 credits minimum)
242-120 Understanding Music
242-121 Masters and Masterpieces of Music
242-200, 201 History of the Visual Arts I, II
242-210 Film and Society
242-241, 242 Introduction to Theater History I, II
242-243, 244 Native American Cultures: Film and Performance I, II
242-261 Foundations of Aesthetic Experience
242-272 Women in the Visual and Performing Arts

Core Courses (6 credits minimum)
242-361 Increasing Aesthetic Awareness
242-364 Aesthetic Awareness Through Artistic Creation
242-462 Senior Seminar in Aesthetic Awareness
242-463 Processes and Systems of Aesthetic Evaluation

Related Courses (6 credits minimum)
242-309 Criticism of the Visual Arts
242-310 Criticism of the Performing Arts
242-329 Cross-cultural Communication II: Expressive Traditions
242-340 Greek and Roman Art
242-341 17th Century Painting
242-342 Italian Renaissance Art
242-370 Modern American Culture
242-372 The Phenomenon of Style I: Traditional Styles
242-373 The Phenomenon of Style II: Avant-garde Styles
242-395 Images of Woman in Contemporary Arts
242-395 The Individual and His Culture: the Film-maker's View
493-332 Art and Social Thought
944-430 Urban Aesthetics

A program in aesthetic awareness combined with a disciplinary program in art, music, theater, or literature and language will usually involve 9-12 credits of tool courses, a minimum of 6 credits in aesthetics core courses, and a minimum of 6 credits in related courses. Students planning an interdisciplinary major in aesthetic awareness will typically enroll a minimum of 12 credits in tool courses, 9-15 credits in aesthetics core courses, and 15-21 credits in related courses.

ENVIRONMENTAL DESIGN

Design Processes and Environmental Problems is an interdisciplinary study program involving students and faculty in design, urban planning, social psychology, engineering, and public administration. It is co-sponsored by the concentrations in Urban Studies, Regional Analysis, Science and Environmental Change, and Communication and the Arts. While most students have chosen Environmental Design as an interdisciplinary major, often in association with a professional minor in Public and Environmental Administration, some students have pursued a more limited program combined with a four-year disciplinary program in art, psychology, or communication.

In Communication and the Arts, studies in Design Processes and Environmental Problems are structured in this way:

Tool Courses (6 credits minimum)
862-105 Elements of Descriptive Geometry
957-106 Design Methods

Advanced Courses (21 credits minimum)
242-401, 402 Designing the Environment I, II
242-405 Urban Technological Design
246-335 Organizational Communication
834-325, 326 Behavior in Designed Environments I, II
944-421, 422 Urban Planning I, II
944-430 Urban Aesthetics

Workshops (9 credits minimum)
944-401 Environmental Design Workshop I (individual scale)
242-471 Environmental Design Workshop II (small-group scale)
944-402 Environmental Design Workshop III (community scale)
242-472 Environmental Design Workshop IV (senior project)

An interdisciplinary major in Design Processes and Environmental Problems will include 6 credits in tool courses, 21 credits in advanced courses, and at least 9 credits in Environmental Design workshops. Students with an emphasis in planning are advised to enroll in an 18-credit professional minor in Public and Environmental Administration. A program in Environmental Design combined with a disciplinary program in art, communication, or psychology will usually include 6 credits in tool courses, 9 credits in advanced courses, and 3 credits in the Environmental Design workshops. Either program is excellent preparation for professional work and/or graduate study in planning and environmental design.

BROAD-FIELD COMMUNICATION

The program in broad-field communication is usually combined with four-year disciplinary programs in literature and language, art, or communication processes, but also has been associated with disciplinary programs in psychology, anthropology, and mathematics, among others. The broad-field communication program includes course work in graphics, mass media, linguistics, popular culture, cross-cultural communication, and design, and is structured as follows:

Tool Courses (9 credits minimum) Individually negotiated, but usually including:
242-160 Introduction to Language
242-210 Film and Society
242-231 Introduction to Graphic Communication
246-202 Introduction to Mass Communication
552-105 Introduction to Expository Writing
Two years of college-level study of a foreign language (required for students in linguistics, along with 242-160)

Advanced Courses
242-301 Communication and the Arts Projects in the Community: Oneida Language Project
242-320 Communications: Extensions of Consciousness
242-323 Language and Human Conflict
242-328 Cross-Cultural Communication I: Ideology and Values
242-483X Graphic Communication Studio I, II
242-370 Modern American Culture
242-395 Photographic Design for Print Media
242-483X Designing Multiple Media Applications of Photography
242-395 The Individual and His Culture: the Film-maker's View
242-483X Graphic Communication Workshop
246-430 Mass Media and Society

A broad-field communication program together with a four-year disciplinary program in literature and language or communication processes will usually include a minimum of 9 credits in tool courses (with additional study of a foreign language required for students in linguistics) and a minimum of 12 credits in advanced courses. An interdisciplinary major in broad-field communication requires a minimum of 9 credits in tool courses and a minimum of 30 credits in advanced courses, usually including some course work in other related areas, such as rhetoric, communication theory, mass communication, linguistics, graphics, or photography.

The combination of a broad-field communication program and a four-year disciplinary program in communication processes or literature and language, and a professional minor in Education leads to certification in English-communication arts —a curriculum which has been recognized for the past several years as a state model for English certification by the Wisconsin Department of Public Instruction, because it includes a broad range of course work in literature, composition, linguistics, reading, and mass media, as well as special-field studies included within the certification curriculum, such as mass communication, drama, public address/speech communication, or linguistics. A similar program of study, when combined with a professional minor in business administration or Public and Environmental Administration, can prepare students for careers and/or graduate study in public relations, mass communication, or graphic communication. Students in linguistics should plan on graduate study in such areas as linguistic theory, language variation, psycholinguistics, or English as a second language.

GRAPHIC COMMUNICATION

With the growth of the broad-field communication curriculum in the area of graphic arts, it is now possible for students to pursue an interdisciplinary specialization in graphic communication combined with four-year disciplinary programs in chemistry, communication processes, or art, or as a special area program within a four-year major in Managerial Systems—programs which lead to careers in graphic design, technology, and management, editorial and publications work, television graphics, and other areas related to print media. This program is actively supported by graphic communication industries in northeastern Wisconsin—the largest concentration of such industries in the country.

The program in graphic communication is structured in this way:

Tool Courses (9 credits minimum)

For art students:
242-200, 201 History of the Visual Arts I, II
242-231 Introduction to Graphic Communication
552-105 Introduction to Expository Writing (recommended)

For communication processes students:
242-231 Introduction to Graphic Communication
246-202 Introduction to Mass Communication
552-105 Introduction to Expository Writing

For chemistry and Managerial Systems students:
242-231 Introduction to Graphic Communication
246-202 Introduction to Mass Communication
246-243 Introduction to Photography
957-106 Design Methods

Supportive Courses
600-150 BASIC: a Time-Sharing Computer Language
OR
600-151 Introduction to COBOL: a Business Data-Processing Language
AND
600-152 An Overview of Computing for the Non-Scientist
OR
600-251 Introduction to Computer Science

226-111, 112 Principles of Chemistry I, II

Advanced Courses (12 credits minimum)
242-331 Graphic Communication Studio I
242-483X Graphic Communication Studio II
242-370 Modern American Culture
242-395 Photographic Design for Print Media
242-483X Designing Multiple Media Applications of Photography
242-483X Graphic Communication Workshop
246-430 Mass Media and Society

A program in graphic communication, in association with a disciplinary program in art, communication processes, or chemistry, will usually include a minimum of 9 credits in tool courses and a minimum of 12 credits in advanced courses. In addition, graphic communication students are strongly advised to enroll course work in basic chemistry and computer science, even if they are pursuing specializations in graphic design or management.

Chemistry majors are required to complete extensive tool courses in the basic sciences as part of their chemistry program. Majors in Managerial Systems are required to complete a minimum of 18 credits in the graphic communication program, including 6 credits in tool courses and 12 credits in advanced courses. Their major includes course work in computer science, but they should also take basic course work in chemistry. Students in art, communication processes, and chemistry are strongly advised to enroll an 18-credit professional minor in business administration as part of their overall program.

These combinations of four-year disciplinary studies and the graphic communication curriculum lead to careers in graphic design, editing and publications work, graphics technology (ink and paper chemistry, packaging materials research, etc.), and graphics management. The program includes numerous field trips to area graphic arts industries as well as visiting lectures presented by professional specialists, and it is supported by extensive new facilities to enable students to gain direct experience in designing and producing print graphics.

Course work within communication processes and art should be selected in such a way as to be most relevant to a graphic communication focus. For communication processes students, this means an emphasis in photography, electronic media, and journalism. For art students, this means an emphasis in design, photography, and studio graphics (intaglio, lithography, drawing, and screen printing).

SCIENCE COMMUNICATION

In cooperation with the concentration in Science and Environmental Change, Communication and the Arts has articulated a cooperative program in science communication which is designed to prepare students for careers in environmental journalism, scientific and technical communication, and environmental interpretation. This program combines a solid program in environmental sciences with preparation in graphics, photography, mass media, journalism, and public address. The description here emphasizes preparation in communication; an alternative science communication program with a greater emphasis on science is described under Science and Environmental Change. The basic outline of this program is:

Tool Courses

Requirements in communication courses (15 credits minimum):
242-231 Introduction to Graphic Communication
246-133 Fundamentals of Public Address
246-200 Introduction to Communication Processes
246-202 Introduction to Mass Communication
246-243 Introduction to Photography
552-105 Introduction to Expository Writing

Requirements in basic sciences (22-24 credits minimum), including at least three of the following sequences:
204-202, 203 Principles of Biology I, II
226-103, 104 Fundamentals of Physics I, II
226-111, 112 Principles of Chemistry I, II
296-202 Earth's Physical Environment, plus one of the following:
- 296-222 The Ocean of Air: an Introduction to Weather and Climate
- 296-302 Geologic Evolution of the Earth
- 296-350 Geologic Field Methods
- 862-320 Soil Environment
- 862-342 Environmental Geology

600-202, 203 Calculus and Analytic Geometry I, II
600-260 Introductory Statistics, plus one of the following:
- 600-150 BASIC: A Time-Sharing Computer Language
- 600-152 An Overview of Computer Concepts for the Non-Scientist
- 600-251 Introduction to Computer Science
- 600-364 Biometrics
- 600-460 Business and Industrial Statistics

Advanced Courses (30 credits minimum required)
Advanced communication courses (18 credits minimum required):
242-331 Graphic Communication Studio I
242-483X Graphic Communication Studio II
242-483X Graphic Communication Workshop
242-395 Photographic Design for Print Media
242-483X Designing Multiple Media Applications of Photography
246-303 Feature Writing
246-305 Elements of Electronic Media
246-306 Electronic Media II
246-333 Argumentation and Persuasion
246-335 Organizational Communication
246-343 Photography II
246-380 Communication Law
246-402 Radio-Television Internship
246-405 Professional Reporting Internship
246-430 Mass Media and Society
302-407 Development of Environmental Education Materials for the Schools
575-430 Promotional Strategy
008-777 Scientific and Technical Communication

Advanced environmental science courses (12 credits minimum required):

Ecology (3 credits minimum):
862-302 Principles of Ecology

Resource Management (3 credits minimum):
862-334 Solid Waste Management
862-335 Water and Waste Water Treatment
862-460 Resource Management Strategy
862-466 Vegetation Management
008-724 Hazardous and Toxic Materials

Field Specialty (2 courses minimum):
There are several possible field specializations, including aquatic studies, solid waste management, air quality, natural resources, and land use, among others. A typical example would be solid waste management, where students would select two courses from this group:
204-302 Principles of Microbiology
204-405 Microbial Physiology
226-311 Analytical Chemistry
862-320 The Soil Environment
862-330 Quantitative Hydrology
862-342 Environmental Geology
862-434 Water Chemistry

To summarize, students in the science communication program complete an interdisciplinary major in Communication and the Arts comprised of 37-39 credits in freshman- or sophomore-level tool courses and 30 credits of upper level course work, of which 18 credits are in advanced communication courses and 12 credits are in advanced environmental science courses. Course work in scientific and technical writing is a vital part of this curriculum and is being developed, projected for the 1981-82 academic year.

Students completing this program can choose from a variety of professional opportunities, including professional communication work within the scientific community and environmental journalism for more general audiences, in both the private and public sector, with a range of visual and verbal communications including scientific research reports, public information programs, reports from governmental agencies, documentaries, features, and the like.

WOMEN'S STUDIES

Communication and the Arts is one of four concentrations supporting an interconcentration program in women's studies which permits students either to focus their major program upon the accomplishments and capabilities of women or to complement disciplinary studies in several fields with a background in this important area—particularly important for professional work in teaching, community service, social action, or professional positions established to rectify past discrimination, or to prepare women for leadership roles in a variety of traditional and nontraditional fields.

Two program alternatives within women's studies are:

Women's Studies With Four-Year Disciplinary Program (21 credits in women's studies)

Tool Courses (9-12 credits minimum)
875-241 Women and Changing Values (required)
242-200, 201 History of the Visual Arts I, II
242-210 Film and Society
242-231 Introduction to Graphic Communication
242-241, 242 Introduction to Theater History I, II
242-243, 244 Native American Cultures: Film and Performance
242-261 Foundations of Aesthetic Experience
242-272 Women in Visual and Performing Arts
246-202 Introduction to Mass Communication

Advanced Courses (12 credits minimum)
Two of the first three required:
242-477 Women as Creative Agents
875-345 Women in Cross-Cultural Perspective
944-345 Women in American Perspective

242-361 Increasing Aesthetic Awareness
242-364 Aesthetic Awareness through Artistic Creation
242-372 The Phenomenon of Style I: Traditional Styles
242-373 The Phenomenon of Style II: Avant-garde Styles
242-395 Images of Woman in Contemporary Arts
242-463 Processes and Systems of Aesthetic Evaluation

In this design, students must complete a minimum of 9-12 credits in tool courses (depending upon disciplinary co-major) and a minimum of 12 credits in advanced courses. An additional elective in women's studies, along with an in-depth study project, will enable students to complete a minor in women's' studies. (Also see the description of women's studies in the catalog section on Interconcentration Programs.) This curriculum could be coupled with four-year disciplinary programs in communication processes, art, music, or theater, although several other possibilities might be productively combined with this program's emphasis.

Interdisciplinary Major in Women's Studies
(39 credits total)

Tool Courses (9 credits minimum)
242-272 Women in Visual and Performing Arts (required)
875-241 Women and Changing Values (required)
242-120 Understanding Music
242-121 Masters and Masterpieces of Music
242-200, 201 History of the Visual Arts I, II
242-210 Film and Society
242-231 Introduction to Graphic Communication
242-241, 242 Introduction to Theater History
242-243, 244 Native American Cultures: Film and Performance I, II
242-261 Foundations of Aesthetic Experience
246-202 Introduction to Mass Communication

Upper Level (15 credits minimum)
242-477 Women as Creative Agents (required)
875-345 Women in Cross-Cultural Perspective (required)
944-345 Women in American Perspective (required)
242-395 Images of Woman in Contemporary Arts
875-340 Woman as Worker
875-342 Women, Myth, and Identity
875-348 Women and the Law
875-440 Women in Religion
944-375 Women: Strategies for Change

Related Courses (12 credits minimum)
242-361 Increasing Aesthetic Awareness
242-364 Aesthetic Awareness through Artistic Creation
242-372 The Phenomenon of Style I: Traditional Styles
242-373 The Phenomenon of Style II: Avant-garde Styles
242-463 Processes and Systems of Aesthetic Evaluation

COURSES

242 COMMUNICATION AND THE ARTS

242-120 Understanding Music† 3 cr.
Techniques for intelligent listening to any music, but especially serious or "classical" music. From a solid background in such elements as melody, harmony, rhythm, and texture, the student is led into such topics as style, taste, and form in order to learn how to understand the language of music.

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.

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.

242-200 History of the Visual Arts I: 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.

242-201 History of the Visual Arts II: Renaissance to Contemporary† 3 cr.
A broad survey of the visual arts in the Western world beginning in the early Renaissance and ending in the contemporary period.

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 will be examined as to their social content, both explicit and implicit, and the social milieu of their creation. Emphasis will also be placed on the ways in which different cultures use films and on the cross-cultural influences which occur. See 493-210.

†Approved for Humanities and Fine Arts Distribution Credit.

242-231 Introduction to Graphic Communication 3 cr.
Introductory program relevant to students with vocational objectives or with interests in graphic communication, providing a basic background required for entry into advanced programs. Program 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.

242-241, 242 Introduction to Theater History I,† II,† 3, 3 cr.
The history and significance of theater; the origin and development of theater art and craft; functions and significance of theater in the different cultures in which theater has thrived.

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. There will also be some introduction to the creative group performance principles of the subsequent course for all-University requirements.

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, public performance of the work will be included. Previous "theater" experience or particular interest in theater is not necessary. P: 242-243.

242-261 Foundations of Aesthetic Experience† 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.

†Approved for Humanities and Fine Arts Distribution Credit.

242-272 Women in the Visual and Performing Arts 3 cr.
Surveys images of women in the visual and performing arts and compares them with information drawn from non-artistic 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. P: 493-206.

242-281 Student-Led Courses 1-4 cr.
See page 19.

242-283X Selected Topics in Communication and the Arts 1-4 cr.
See page 19.

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 or cons inst.

242-298 Directed Study 1-4 cr.
See page 19.

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.

309 Criticism of the Visual Arts 3 cr.
(See 493-309.)

242-310 Criticism of the Performing Arts 3 cr.
An approach to the principles and techniques of criticism of various performing arts, such as music, theater, and movies. Includes study of the aesthetic bases of criticism, analysis of the work of critics, the relationship of the critic to the community, and practice in writing critical reviews. Some degree of sophistication in at least one of the performing arts is desired. P: jr st or cons inst. See 493-310.

242-320 Communications: Extensions of Consciousness 3 cr.
Communicative systems as extensions of human consciousness; particular focus on people's image of themselves, others, and the world, as that image affects their communicative attitudes, behaviors, and uses of language.

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.

242-328 Cultural Cross-Communication I: Ideology and Values 3 cr.
Cultural conflict and cultural influence and enrichment that arise when differing ideologies and value systems come into contact. Course topics vary, and students should consult the *Timetable* for specific listings of topics each semester. Course may be repeated once with a different topic.

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 *Timetable* for specific listings of topics each semester. This course may be repeated once with a different topic.

242-331 Graphic Communication Studio I 3 cr.
Beginning problem solving using designers' tools, copy fitting and copy writing, selection of visual images, and learning to work within design restraints. A more in-depth study of design elements and their interrelationships. The work will cover problem solving in black and white, with the possible introduction of some color. The course will rely largely on drawing board activity, but there will be opportunities for tours and slide presentations. P: 242-231, 246-143, 957-102.

242-340 Greek and Roman Art 3 cr.
The classical tradition has been a persistent current in Western art and culture, bequeathing to civilization aesthetic norms and values as well as monuments of art and architecture. The legacy of Greece and Rome will be examined through history, archaeology, and art in order to gain insight into its role in shaping our present civilization. P: recommend course in art history survey or ancient history.

242-341 Seventeenth Century Painting 3 cr.
Painting in the 17th century displayed extreme contrasts, from elaborate mythological and historical allegories and scenes of religious ecstasy to the harsh realities of life depicted in genre landscape and still lifes. These varieties of visual forms reflect the environment of 17th century Europe, its economic, political, social, and literary contrasts. The course will survey these diverse elements through the art of the period. P: recommend 242-201, 448-306, or 448-203.

242-342 Italian Renaissance Art 3 cr.
The period of the Italian Renaissance covers several centuries, a diversity of styles and local schools, and incorporates many complex and conflicting currents and attitudes. The art of Renaissance men like Leonardo, Michelangelo, and Raphael will be used as a means to examine some of the cultural values and ideas which make up this fascinating period.
P: recommend 242-201, 448-203, or 448-306.

242-361 Increasing Aesthetic Awareness 3 cr.
One of a sequence of courses that examines 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 will be required to set up a contract with the instructor to establish appropriate goals and measurements.

242-362 Psychology of Aesthetic Perception 3 cr.
Students and instructor examine processes of discrimination and evaluation that occur when we claim that something is aesthetically good or bad. The course posits that we need to learn how to locate, express, develop, and insist on the validity of our aesthetic values. A final project requires each student to classify his/her personal aesthetic value system.

242-364 Aesthetic Awareness Through Artistic 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.

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.

242-372 The Phenomenon of Style I: Traditional 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.

242-373 The Phenomenon of Style II: Avant-garde Styles 3 cr.
Comparative study of common stylistic elements operating in different forms in the work of avant-garde artists, composers, playwrights, and novelists. Emphasis on the nature of innovative consciousness.

242-380 The Arts: London 3 cr.
The arts in and about London are always in a lively state of action. This program will attempt to taste and analyze as many forms of the arts as time, energy, and funds allow. The group will try to become involved in several events in the performing arts as well as investigate museum collections, neighborhood art groups, and, if possible, spend time with artists working in various art forms. Students will note the ways in which the British go about solving their needs for the arts in society. Students should plan to keep a journal during their stay in London, recording especially critical responses to events, persons, places, etc. Each student will negotiate in advance an individual project to be carried out in some area of the arts as they are to be experienced in London and Britain.

395 The Individual and His Culture: The Filmmaker's View 3 cr.
See 493-395.

242-395 Images of Woman in Contemporary Arts 3 cr.
Asks whether visual and verbal artists in post-World War II America are portraying archetypal images of woman. How do their images compare with other profiles of women in the same period? What significance do their creations have for us? After establishing a viable method of interpretation, the class concentrates on a few artists in depth. Each student is asked to do independent research on one artist not covered in class. Students with knowledge of the arts of painting, sculpture, poetry, fiction, or theater, or women's studies are particularly well-served by the course. Offered in January.

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. Offered in January.

242-395 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. Offered in January.
P: 246-343.

242-401 Designing the Environment I 3 cr.
Faculty and students from Urban Studies, Regional Analysis, Science and Environmental Change, and Communication and the Arts investigate the environment as a prime relationship between the human organism and physical and mental context that surround it, as well as principles of design and the design process as it relates to planning human environments. Major topical areas include philosophy and poetry of space; perception of space; physical and psychological human health and effects of space on the physical well-being of the organism; design and construction of space.

242-402 Designing the Environment II 3 cr.
A detailed introduction to the study and practice of environmental design process. the seminar focuses on the environment as a prime relationship between the human organism and physical, social, and psychological contexts surrounding it. Students design and propose independent research projects. Students also enrolled in Environmental Design Workshop II may integrate requirements of the courses. 242-401 or cons inst.

405 Urban Technological Design 3 cr.
(See 862-327.)

242-462 Senior Seminar in Aesthetic Awareness 3 cr.
A summative/integrative learning experience for students in the Aesthetic Awareness program and for those in Communication and the Arts who have put major emphasis there. A special theme each time the course is offered will be a center around which student research projects will be negotiated with the instructor. Students will participate in selection of the theme. Possible themes are: The Place of Aesthetics in American Society; Environmental Aesthetics and Public Policy; Teaching Aesthetic Awareness in the Schools; Aesthetic Awareness and Community Organizations, and others.

242-463 Processes and Systems of Aesthetic 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: 242-261 or equivalent; jr st or course in criticism.

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. The student can expect some major project of this sort in addition to readings, research, and design analyses. Draws support from 834/944-326, Human Living Spaces II, and 242-402, Designing the Environment II. Students are strongly advised to enroll in at least one of these parallel offerings. P: 944-401 and cons inst.

**Environmental Design Workshops I and III are offered as 944-401, 402. Academic Affairs Council approval is pending for those two courses.

242-472 Environmental Design Workshop IV 3 cr.
A culminating experience for students who have participated in the workshop sequence. Each student designs, proposes, and executes a design/research project on an elected topical area. 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 the following:
1. A written document covering the 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 term of the project and at its conclusion. P: nine workshop credits and cons inst.

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. We will examine 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. We will also explore the ways that great women and relatively unknown women artists may serve as role models for others. P: 875-241 or 242-364.

242-481 Student-Led Courses 1-4 cr.
See page 19.

242-483X Selected Topics in Communication and the Arts 1-4 cr.
See page 19.

242-484 Senior Distinction Project 3 cr.
See page 19.

242-498 Directed Study 1-4 cr.
See page 19.

Humanistic Studies

Professors: James Clifton, cultural anthropology, ethno-history, North American Indians, personality and culture, religion, myth, and folklore; **Elmer Havens,** American literature, English novel, religious studies; **Frederick Kersten,** humanities, phenomenology, value theory, ontology; **Irwin Sonenfield,** music theory, history, and composition, musical aesthetics, interdisciplinary approaches to the humanities: music, art, film, and literature; **Schafer Williams** (emeritus); **Louise Witherell,** French language, literature, and culture.

Associate Professors: Paul Abrahams, United States history: diplomatic, 20th century, economic; **Thomas Churchill,** creative writing: fiction, literature; **Orville Clark,** philosophy of art, aesthetics, American Indian art; **Kenneth Fleurant,** French language, literature, and culture, French-Canadian studies, comparative literature; **David Galaty,** history of science and technology, epistemology, African science, social services; **Norbert Gaworek,** modern European history, central and eastern Europe, Russia and the Soviet Union, Soviet-Western relations; **Gary Greif,** social and political philosophy; **Walter Herrscher,** American literature, expository writing, American short story, American nature writing; **Raquel Kersten,** Spanish and Latin American literature, language, and culture; **Michael Murphy,** modern English, Irish, and American literature; **Jerrold Rodesch** (chairperson), American history, intellectual and cultural history, history of Wisconsin, the arts and social thought; **Thomas Tasch,** visual arts, sculpture, drawing; **E. Michael Thron,** Shakespeare, 19th century English literature, the arts in society; **Martha Wallach,** German language, literature, and culture, Polish.

Assistant Professors: Gilbert Null, history of philosophy, philosophy of the sciences, phenomenology, existentialism; **Peter Stambler,** creative writing: poetry, English Renaissance literature, playwriting and theater literature.

Lecturer: Robert Guthrie, English composition.

The humanities have traditionally consisted of the disciplines of literature, philosophy, and history, with strong relationships to the fine arts and to several of the social sciences. The concentration in Humanistic Studies grows out of this tradition; however, it tries to see knowledge not so much in terms of separate disciplines, but as the result of essential connections and interrelationships. More than that, these interdisciplinary perspectives are applied to critical problems of society and individuals.

The concentration in Humanistic Studies provides the basis of a modern liberal education, emphasizing the importance of breadth of knowledge, depth of perspective, and the intellectual skills needed to analyze and articulate a point of view. These skills, especially in writing, speaking and analyzing verbal materials, are critical ones for a successful career in the modern world in almost any field of endeavor. They are particularly valuable and formally expected for students seeking careers in teaching, religion, many areas of government, business, human services, and the media. The combination of a liberal education grounded in Humanistic Studies with a selection of courses

oriented toward the professions provides an excellent preparation for pre-law, pre-theology, pre-library and other pre-professional students.

Students with disciplinary programs in creative writing, literature, foreign languages, history, or philosophy most often select a concentration in Humanistic Studies. However, students in these disciplines may choose other concentrations, and several other disciplines offer the possibility of a fruitful co-major with Humanistic Studies. For example, students in fine arts, and such social sciences as psychology and anthropology may have a special interest in historical, critical or theoretical approaches to those subjects which would make appropriate a concentration in Humanistic Studies.

PROGRAM OF STUDIES

Students who elect the concentration in Humanistic Studies are expected to complete background preparation in several areas during their freshman and sophomore years. While exact courses and emphases will vary among student programs, and individual students should consult with the concentration adviser as early as possible to develop a plan for their academic programs, the following is a general model for this background preparation:

Humanities Content Core

3-6 credits:
493-101, 102 Foundations of Western Culture I, II

3 credits chosen from:
448-203, 204 History of Europe
448-205, 206 History of the United States

3 credits chosen from:
552-104 Introduction to Literature
552-106 Great Books
552-214, 215, 216, 217 Introductions to English and American literature
554-227, 228 Introduction to French Literature
554-250 Masterpieces of French Literature
556-227, 228 Introduction to German Literature
558-227, 228 Introduction to Spanish Literature

3 credits chosen from:
736-101 Introduction to Philosophy
736-102 Problems in Ethics
736-104 Freedom and Individuality
736-106 Pacifism and Violence
736-111 Elementary Logic

3 credits chosen from:
156-100 Varieties of World Culture
156-210 Introduction to Cultural Anthropology
156-220 Myth, Ritual, and Religion
481-210 Introduction to Human Development
493-209 Folklore and Folkloristics
820-202 Introduction to Social Psychology
944-335 Aggressive Behavior: Biological and Psychological Roots

Tool Subjects

552-105 Introduction to Expository Writing, 3 credits
Foreign language study, 8-14 credits

(Foreign language study is strongly recommended. Students may gain retroactive credit in French, German, or Spanish for high school work by passing a foreign language course with a grade of "C" or better at a level one semester higher than the level of proficiency attained in high school work. This can result in credit for college language courses preceding the one in which the student is enrolled up to a maximum of 11 credits.)

Interdisciplinary Concepts in the Humanities

3 credits chosen from:
493-201 Introduction to Humanistic Ideas: Music and Art in Western Civilization
493-202 Introduction to Humanistic Ideas: Literature, Philosophy and History in Western Civilization

†Approved for Humanities and Fine Arts Distribution Credit

Junior and senior students choose at least 12 credits from the following concentration core courses:
493-311 Perspectives of Human Values: The Classical World
493-312 Perspectives of Human Values: Renaissance to Rationalism
493-313 Perspectives of Human Values: Romanticism to Naturalism
493-314 Perspectives of Human Values: The Modern World
493-329, 330 Utopia and Anti-Utopia I, II
493-402 Humanities Seminar: Defining the Quality of Life
493-404 Humanities Seminar: Alienation and Cultural Conflict
493-406 Humanities Seminar: Popular, Mass, and High Culture
493-495 Symposium on Structure and Order

To complete the major with a total of 30 upper level credits students consult with the concentration adviser to select additional concentration courses or courses from related disciplines. Courses constituting the concentration shall have as an integrating focus a problem area, such as: Continuity and Change in Values; Individuals and Cultures: Identity, Alienation and Cultural Conflict; Defining the Quality of Life; Women's Studies; Religious Studies; the Arts in Society.

Students may, alternatively, combine the 12 credit concentration core with a disciplinary co-major of 24 upper level credits.

It is to a student's advantage to meet with concentration and disciplinary advisers as early as possible to discuss programs of study and to learn of alternatives for attaining his or her educational objectives.

COURSES

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 is intended to serve as an important background course for all other students as well.

493-201 Introduction to Humanistic Ideas 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, appropriate for all students.

493-202 Introduction to Humanistic Ideas 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.

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.

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 will examine 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.

493-206 Women in Literature 3 cr.
A survey of women as writers and women as characters in literature. It will emphasize the wisdom, experiences, and insights of women writers and women in literature; it will look at the works from a variety of critical perspectives; and it will clarify the values inherent and/or envisioned in those works. The course will concern itself with literature from two or more cultures with emphasis on comparison and contrast of the social and human values reflected in the literature of those cultures.

493-207 Philosophy and Literature† 3 cr.
The relationship between philosophy and literature. Topics include scientific thought in the novels of the 18th century; philosophy in literature; tragedy and its forms in plays by Sophocles, Shakespeare, Strindberg, Miller; pornography, literature, and the law. See 736-207.

493-209 Folklore and Folkloristics† 3 cr.
Introduction to the forms and methods of studying oral literature, especially folk tales, poetry, myths, legends, epics, jokes, proverbs, riddles, curses, toasts, and blessings. Most attention is given to non-Western forms of oral literature, some to West European forms and styles. Methods of collecting, studying, and analyzing oral folklore are stressed.

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 will be examined as to their social content, both explicit and implicit, and the social milieu of their creation. Emphasis will also be placed on the ways in which different cultures use films and on the cross-cultural influences which occur. See 242-210.

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.

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 will be studied to achieve the goals of the course, and to permit a comparison of the development of the American economics tradition with the European tradition discussed in 493-250, European Economy and Society.

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 vision 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?

493-281 Student-Led Courses 1-4 cr.
See page 19.

493-283 Selected Topics in Humanistic Studies 1-4 cr.
See page 19.

493-298 Directed Study 1-4 cr.
See page 19.

493-301 Humanistic Studies 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.

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. P: 493-201, 202, jr st or cons inst.

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

†Approved for Humanities and Fine Arts Distribution Credit.

and claims of values of the environment and the humanities. Some of the topics to be considered will be 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. P: 493-201, 202.

493-309 Criticism of the Visual Arts 3 cr.
The history of art criticism is concerned with the ways in which perception influences artistic judgment. In addition to studying this influence, and by using contrasting views of artists, critics and thinkers from the past through the present, the course will study at the same time the influence of perception on styles, forms, techniques and materials of the visual arts. A chief purpose of this course will be to develop the ability of students to make intelligent critical evaluation of works of art. See 242-309.

493-310 Criticism of the Performing Arts 3 cr.
An approach to the principles and techniques of criticism of various performing arts, such as music, theater, and movies. Includes study of the aesthetic bases of criticism, analysis of the work of critics, the relationship of the critic to the community, and practice in writing critical reviews. Some degree of sophistication in at least one of the performing arts is desired. P: jr st or cons inst. See 242-310.

493-311 Perspectives of Human Values I: The Classical World 3 cr.
Focuses on the world of classical Greece and Rome as reflected in its literature. The course varies in its content from semester to semester and employs the following 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. P: 493-201, 202, jr st or cons inst.

493-312 Perspectives of Human Values II: 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 will study the major thinkers and artists of the era beginning with the Italian and ending with the introduction of western ideas onto the American continents. P: 493-201, 202 or cons inst.

493-313 Perspectives of Human Values III: 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. This course will study 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 with the term "naturalism" in Europe and America. P: 493-201, 202, or cons inst.

493-314 Perspectives of Human Values IV: The Modern World 3 cr.
In the modern world, no single set of values would seem to have sufficient authority to command belief and provide assurance. In such a skeptical situation, it becomes 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 fifty years of this century, this course will focus primarily, but not exclusively, on values associated with either tragic or comic perceptions found in works of literature, philosophy, history and the fine arts. P: 493-201, 202 or cons inst.

493-315 Theories of Creativity 3 cr.
The concept of "creativity" as seen from a variety of perspectives, (artistic, scientific, personal growth, personality development, etc.). The social setting of creativity and cross-cultural variables. "Traits of creativity" (a set of statistical concepts). The relationship between creativity and education.

493-320 Man, Machines, and the Environment* 3 cr.
The environmental effects of our attempts to exploit resources and to alter our surroundings throughout time. Ecological crises are put into historical perspective through the treatment of themes such as deforestation from prehistoric times until the present; the growth of air pollution with the adoption of fossil fuels; the effects of warfare upon the environment; the ecological effects of the industrial revolution; urbanization in response to agriculture and to industry. ; P: jr st or cons inst.

493-323 The Literature 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 will be approached with as much objectivity as possible, and they will be 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. P: jr st or cons inst.

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 will examine 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. P: jr st or cons inst.

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; and the features which make each a distinct and unique expression and system of belief in the God who is One.

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, which its belief in a multiplicity of gods and goddesses, and to examine Buddhism from the standpoints of its various sects and schools —Theravadic (Hinayana), Mayahana, Zen, and Tantric.

493-329, 330 Utopia and Anti-Utopia I, II 3, 3 cr.
The role of utopia and anti-utopia as to their origins, history, philosophical conceptualization, political representation, and literary expression in Western thought. Runs from Atlantis to America or from the New World to the Brave New World. May be repeated once for credit when content is different. P: 493-201, 202, jr st or cons inst.

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. P: 493-201, 202, jr st or cons inst.

*Academic Affairs Council Approval Pending.

493-354 France Today 3 cr.
Beginning with an examination of French history and traditional customs and values, 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. P: jr st or cons inst.

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. P: jr st or cons inst.

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. P: jr st or cons inst.

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. P: jr st or cons inst.

493-361 January Abroad: German Culture 3 cr.
Travel to one of the German speaking countries. German culture studied 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.

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 will be the city of London—its museums, galleries, palaces, cathedrals, theaters, and other places of literary and historical interest. The course will also include 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.

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 3 cr.
Studies the circumstances that have brought into political confrontation different cultural groups, such as English and French Canadians; British and Irish; or similar conflicts based on cultural nationalism or separatism. It examines consequences, both productive and disruptive, of such relationships between cultural groups. P: 493-202, or cons inst.

493-390 War, Violence, Revolution, and Society 3 cr.
Origins, development, and consequences of violent conflicts on the local, national, and international levels within the framework of social change. Focus on major forms of violence (revolts, revolution, wars, etc.) and on significant revolutionary ideologies and movements.

493-402 Humanities Seminar: Defining the Quality of Life 3 cr.
The quality of life for both individuals and societies consists of a mixture of traditional expectations, systematic ideas and institutional-environmental interaction. In this seminar humanistic approaches to the critical analysis of traditions and ideas are applied to contemporary problems of choice affecting the quality of human life. Specific topics to be considered will vary, and may include both theoretical and immediate social and political issues, e.g., the humanities and public policy; government support of the arts; the humanities and bureaucracy; the humanities and what it means to be human; traditional ideals and contemporary life. P: Humanistic Studies major or co-major, 6 upper level Humanities credits, or cons inst.

493-404 Humanities Seminar: Alienation and Cultural Conflict 3 cr.
Capstone seminar for the Humanistic Studies track: "Individuals and Cultures: Alienation and Cultural Conflict." In-depth case studies of some of the ways with which humanists have dealt with the subjects of alienation and cultural change. The case studies chosen will be used to integrate the material studied in other courses in the track. Each problem studied will be compared with similar problems in other cultures and other times with a particular concern for discerning differences in problem definition and theories and methods of resolution. P: Humanistic Studies major or co-major, 6 upper level Humanities credits, or cons inst.

493-406 Humanities Seminar: Popular, Mass, and High Culture 3 cr.
Explores relationships and conflicts among popular, mass, and high cultures, including some general historical overviews. But principally the course will investigate the special nature and problems of high culture in our time and its relation to the popular and mass cultures. The course will attempt to develop critical insights into the relationships between these cultures and contemporary values, both in reflecting and in helping to create or stabilize values. P: Humanistic Studies major or co-major, 6 upper level Humanities credits, or cons inst.

493-474 The Native Americans: Emergence of Pan-Indian Cultures 3 cr.
The consequences of cultural contacts between Native Americans and Euro-Americans. The several kinds of processes which have transformed, eroded, and revitalized Native American cultures, especially the emergence of Pan-Indianism. Key issues in acculturation and cultural change theory.

493-481 Student-Led Courses 1-4 cr.
See page 19.

493-483X Selected Topics in Humanistic Studies 3 cr.
See page 19.

493-484 Senior Distinction Project 3 cr.
See page 19.

493-495 Symposium on Structure and Order: The Human Form, Architecture, and Landscape 3 cr.
Makes use of the celebrated series of television films entitled "Civilisation" narrated and produced by Kenneth Clark, distinguished art historian and author. Filmed over a two year period in 117 European and American locations, the series presents a personal view of the ideas, arts, and achievements of Western humanity, and provides a cultural history of the Western world from the end of the Greece-Roman influence to the contemporary world. Taught by an interdisciplinary faculty team. Surveys the works and ideas of a number of sculptors, architects, musicians, philosophers, poets, and writers. Offered in January.

493-498 Directed Study 1-4 cr.
See page 19.

Art

Professors: Bruce Grimes, ceramics; **William Prevetti,** drawing, relief printing, life drawing and anatomy (on leave 1980-81).

Associate Professors: Ronald Baba, design methods, environmental design; **Clary Nelson-Cole,** painting, intaglio and lithography printing; **David Damkoehler,** design methods, screen printing, environmental design; **Robert Pum** (chairperson), art metal/jewelry, drawing, aesthetic awareness, art education; **Thomas Tasch,** sculpture, life drawing and anatomy, drawing.

Assistant Professors: Jerry Dell, photography; **Curtis Heuer,** ceramics, drawing, aesthetic awareness; **Karon Winzenz** (art curator), textile arts, painting, design.

Lecturers: Richard Glazer, painting; **Evelyn Teikari,** graphic communication.

The visual arts are important creative and expressive components of human experience. They provide a means of involvement with life by sensitizing individuals to the processes of seeing, feeling, making, and thinking in terms of visual systems.

As a creative activity, art begins with visual imagination and manifests itself in the production of aesthetic forms. Artistic vision and visual thinking involve seeing with sensitivity, developing heightened awareness of the systems we use to perceive and organize the environment, and producing new visual ideas through the creative reorganization of information. Thus, the artist explores, experiments, expresses, and invents, seeking new possibilities through his or her intellect and vision.

Course work in the art studios provides the opportunity to develop technical skills and knowledge about diverse art media as well as an understanding of the historical heritage of the contemporary artist. Emphasis is placed on both the conceptual and perceptual aspects of artistic activities in two and three dimensional media.

Students interested in a co-major in art have their choice of several programs of study leading to a degree at UWGB. A four year program in art combined with a major in any of a variety of concentrations will lead to professional work or graduate studies in studio art or design. Most students pursuing a disciplinary program in art choose concentrations in Communication and the Arts or Humanistic Studies, but other concentrations are equally appropriate depending on one's interests and needs. For example, some students interested in architecture and planning have combined programs in art with concentrations in Urban Studies, while students interested in architecture and alternate energy sources have co-majored in art and Science and Environmental Change. Still others planning careers in medical illustration have chosen concentrations in Human Biology.

A four year program in art, including all required lower division courses, includes a minimum of 54 credits, while the concentration requires a minimum of 12 additional credits.

Students pursuing programs in art are expected to distribute their course work across several areas including general liberal education, aesthetics and expressive traditions, and areas more specific to the visual arts such as art history, design and drawing, and the introductory and advanced studios.

Students seeking certification as public school teachers include a professional program in Education (21-26 credits), while students interested in careers in graphics or commercial art often enroll in professional programs in administration or management (18 credits).

Programs leading to teacher certification in art are designed to meet requirements established by the Wisconsin Department of Public Instruction and include K-12 art specialist certification, elementary art certification, and secondary art certification. The majority of art education students elect the K-12 art specialist program, because it is the most comprehensive and the most attractive for public school employment. Because an additional minor in aesthetic awareness and expressive traditions is available in the Communication and the Arts concentration, many art education students choose that concentration along with the disciplinary program in art and the professional program in Education. The aesthetic education minor has been approved and recommended by the Wisconsin Department of Public Instruction.

Since there are so many alternatives open to the student interested in art, it is important that an appropriate adviser is consulted early in the student's academic career. Visual arts faculty also recommend that students plan to produce a senior show or exhibition, either as a senior distinction project (for students with at least a 3.5 grade point average) or through directed study. Senior shows provide valuable experience and help in compiling portfolios for applications to graduate programs or prospective employers.

Sample Programs

The following is an outline of courses for a student working on a co-major in studio art:

Background Courses (9 credits)
957-100 Visual Arts in the Twentieth Century
242-200 History of the Visual Arts I: Ancient to Medieval
242-201 History of the Visual Arts II: Renaissance to Modern

Visual Arts Core (9 credits)
957-105 Drawing
957-106 Design Methods
957-107 Two-Dimensional Design

Introductory Studios (12 credits)
957-200 Drawing (in development)
957-210 Introduction to Painting
957-220 Introduction to Sculpture
957-230 Introduction to Ceramics
957-243 Introduction to Photography

Upper Division Studios
Preparatory courses listed above are followed by a minimum of 24 credits of upper division studio courses with an emphasis in sculpture, printmaking, ceramics, painting, art metals/jewelry, photography, or textiles.

Upper Division Concentration Courses
Although these courses are normally decided upon with the aid of a concentration adviser, the following outlines represent sample programs:

For students planning teacher certification (Communication and the Arts):
242-361 Increasing Aesthetic Awareness
242-370 Modern American Culture
242-372 Phenomenon of Style I: Traditional Styles
242-373 Phenomenon of Style II: Avant-garde Styles

Specific requirements for teaching certification in art vary with the type of certification sought. Sample programs are available from art faculty advisers. Students should plan their individual programs of study with the help of an adviser.

For students interested in environmental design (Communication and the Arts):
944-401 Environmental Design Workshop I
242-471 Environmental Design Workshop II
944-402 Environmental Design Workshop III
242-472 Environmental Design Workshop IV
242-401 Designing the Environment I
242-402 Designing the Environment II

For students interested in graphic design (Communication and the Arts):
242-331 Graphic Communication Studio I
242-483X Graphic Communication Studio II
242-370 Modern American Culture
242-395 Photographic Design for Print Media

COURSES

957 ART

957-100 Visual Arts in the Twentieth Century† 3 cr.
An examination of the major artists, movements and concepts of painting, sculpture, and related visual expressions. Designed to give the student an understanding of his/her recent artistic heritage taught from the perspective of the studio artist. Direct and indirect influences of historic and cultural circumstances, as well as parallel philosophical and scientific thought are presented to provide the context from which specific art concepts arise. A field trip to art museum(s) is normally included.

957-105 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.

957-106 Design Methods 3 cr.
This studio seminar is intended to serve as an introduction to design methods. Its central focus is the investigation of spatial design as a decision-making and problem-solving process bounded by various criteria which include human sensory systems, ergometrics, proxemics, basic structural systems, and materials. These investigations will be combined with experiences and creativity systems, graphic and workshop tools and techniques.

957-107 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.

957-210 Introduction to Painting 3 cr.
Investigation of painting media; oil, watercolor, and acrylics and their inherent expressive qualities and characteristics. P: 947-107.

957-220 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: 957-107.

957-230 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. P: 957-107.

957-243 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.

957-283X Selected Topics 1-4 cr.
See page 19.

957-298 Directed Study 1-4 cr.
See page 19.

957-301 Life Drawing and Anatomy 3 cr.
The skeletal structure and muscular articulation of human and animal forms as a basis for artistic interpretation. P: 957-105, 957-106, 957-107.

†Approved for Humanities and Fine Arts Distribution Credit.

957-311 Intermediate Painting 3 cr.
Cultivation of techniques for personal expression; composition and development of imaginative concepts in oil paint and allied media. P: 957-210.

957-314 Water Color Painting 3 cr.
Creative approach to watercolor techniques; cultivation of personal expression and development of imaginative concepts. P: 957-210.

957-321 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: 957-220.

957-331 Intermediate Ceramics 3 cr.
Intermediate work in ceramic media with emphasis on the potters wheel and the aesthetics of the vessel, surface decoration form and utility. P: 957-230.

957-332 Intermediate Ceramics: Moldwork 3 cr.
Studio work in the construction and use of molds for ceramic use. Explores multiple imagery, modular units, slip casting and the use of original and found forms in producing the ceramic object. P: 957-230.

957-343 Photography II 3 cr.
Emphasis upon black and white photography and darkroom printing techniques. P: 957-243 or equivalent experience. See 242-343.

957-344 Creative Photography III 3 cr.
A continuation of 957/246-343; investigation of black and white photography, allied media, and applications of photography.

957-353 Textiles: Fiber Construction 3 cr.
Investigation of the varied techniques of creating both two and three dimensional forms with fibers, yarns, and related materials. Areas include weaving (both on and off the loom), knotting and macrame, creative knitting and crochet. Techniques are introduced as a vehicle for creative expression. P: 957-105, 957-106, 957-107.

957-354 Textiles: Designing with Fabrics 3 cr.
Introduction to techniques in design on and with fabrics including batik and tie-dye, creative stitchery, fabric collage (applique) and soft sculpture. Students will use techniques to work toward highly personal expression. P: 957-105, 957-106, 957-107.

957-363 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. P: 957-105, 957-106, 957-107.

957-364 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: 957-105, 957-106, 957-107.

957-371 Relief Printing: Reductive 3 cr.
Aspects of relief printing: woodcut and linoleum printing in black and white or color. The medium is explored and developed as a medium of expression in which the artist communicates his or her personal statements reflecting the human condition of the environment. P: 957-210.

957-373 Intaglio Printing 3 cr.
Studio work in intaglio techniques including dry point, engraving and various etching procedures. P: 957-210.

957-375 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: 957-105 and 957-106; or 957-243 and 957-343; or 242-231 and 242-331.

957-377 Lithography 3 cr.
An introduction to the art of lithography employing fundamental techniques of planographic printing. The medium will be explored and developed as a medium of expression in which student communicates his or her personal statements reflecting the human condition of the environment. P: 957-105, 957-106, 957-107.

957-401 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: 957-301.

957-410 Advanced Painting 3 cr.
Provides an opportunity for the maturing painting student to explore specific problems which are relevant to his/her 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: 957-311.

957-414 Advanced Watercolor 3 cr.
An opportunity for the developing watercolorist to select and concentrate on those aspects which seem relevant to his/her artistic growth. A focus on specific problems, leading to the development of a unique and personal style of expression. May be repeated for a maximum of 9 credits. P: 957-314.

957-421 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: 957-321.

957-431 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: 957-331 or 957-332.

957-443 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: 246/957-343. See 246-443.

957-453 Advanced Textiles 3 cr.
In depth research in one area of textiles including but not limited to weaving, crochet, knotting, basketry, batik, stitchery, fabric collage, padded or trapunto work, and soft sculpture. Emphasis upon the synthesis of technical mastery and cohesive artistic statement. Portfolio preparation included. Can be repeated for a maximum of 9 credits. P: 957-353 or 957-354 or cons inst.

957-463 Advanced Art Metals: Jewelry 3 cr.
Study of advanced techniques in jewelry; creative research and investigation of metals and jewelry media. Specific 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: 957-363 and 957-364 or cons inst.

957-471 Advanced Relief Printing: Additive 3 cr.
This course in relief printing advances the student's knowledge and experience of the medium. Through experimentation with the printing surfaces the student discovers new means of creating imagery and textural effects. The student builds upon his/her previous expertise by combining the mechanics of cutting and removing surface with the construction and addition of materials to achieve desired effects. The student is expected to have a solid foundation in the more traditional and academic techniques, before enrolling. P: 957-371.

957-473 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: 957-373.

957-475 Advanced Screen Printing 3 cr.
This screen printing studio is intended to provide the student an opportunity for an advanced studio experience building upon the introductory courses 957-375, including printing on vacuum formed plastic, on glass, metal, and fabrics. Can be repeated for a maximum of 9 credits. P: 957-375

957-477 Advanced Lithography 3 cr.
Provides further investigation of specific problems relevant to the student's 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: 957-377.

957-483X Selected Topics 1-4 cr.
See page 19.

957-498 Directed Study in Art 1-4 cr.
See page 19.

Communication Processes

Associate Professors: Jack Frisch, interpersonal communication, theater history and directing; **Donald Larmouth** (chairperson), linguistics; **Dean O'Brien,** journalism.

Assistant Professors: Clifford Abbott, linguistics; **Tom D. Daniels,** speech communication; **Jerry Dell,** photography and electronic media; **Svata Louda,** English as a second language.

Lecturers: Dan Spaulding, electronic media; **Evelyn Teikari,** graphics.

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

Students make use of the coursework in this program for several needs:
—to satisfy requirements set by programs throughout the University in basic skill (tool subject) areas such as public speaking, writing, interpersonal communication, and visual communication;
—to satisfy requirements in combined program areas such as public relations (with Managerial Systems), science communication (with Science and Environmental Change or Communication and the Arts), broadfield communications (with Communication and the Arts), graphic communication (with Communication and the Arts), or language development (with Human Development) or teacher certification (with Literature and Language);
—to complete a co-major in communication processes.

The co-major requires successful completion of 24 junior and senior level credits. Many students take the co-major with a concentration in Communication and the Arts but other concentrations are possible when more appropriate to individual needs. Communication graduates have taken concentrations in Managerial Systems (business), Social Change and Development, Humanistic Studies, Regional Analysis, and Urban Studies.

Specific courses to meet the co-major requirements are chosen with the help of a faculty adviser. The core course for the discipline is 246-200, Communication Processes: an Introduction, and thus is part of nearly every program. A student may pursue a general program in communication processes but most prefer an emphasis in one of the following areas: linguistics, mass communications, photography, speech communication, or the combined programs—public relations, science communication, broadfield communication, graphic communication, and language development. Each area of emphasis requires a somewhat different set of junior-senior level courses.

Linguistics

The linguistics emphasis includes coursework in linguistics as well as related courses in mathematics, foreign languages, anthropology, logic, psychology, or other supportive areas. The program is intended to prepare students for graduate study in linguistics and to provide a linguistics component for teacher certification programs in English-communication arts and foreign languages.

Linguistics is a highly diversified, interdisciplinary field that seeks to understand the structure, use and history of language by drawing on the resources of many other disciplines. In a field with such diversity, undergraduates should develop competencies in supporting areas. The typical student enrolls in four upper level courses in linguistics (12 credits) and four courses in supporting areas (12 credits) to complete minimum requirements in communication processes. Students who elect the concentration in Communication and the Arts will include two years of a foreign language and courses which relate linguistics to other disciplines and to practical applications.

Foreign language proficiency is important and two years of study of at least one language (French, German, Spanish) is considered minimal. Language proficiency may be demonstrated through advanced

placement testing, by completing college level courses, or by standard tests such as the CLEP program.

Students preparing for graduate study should take advantage of opportunities for field research. UWGB graduates in linguistics have enjoyed excellent placement in graduate schools partly because they could cite specific examples of research work.

The role of linguistics in public school education has grown, both for English-language arts teachers and foreign language teachers. The broadfield English-communication arts program includes the possibility of a 22-credit specialization in linguistics.

Career opportunities depend upon developing specialties in graduate study. Linguists are on the faculties of colleges and universities, employed as consultants in language education, employed by information processing corporations such as IBM and Xerox, employed in behavior research laboratories, in TESOL (teaching English to speakers of other languages) programs, and many other areas. New specializations are developing.

Following is a sample program showing how students can develop studies in linguistics through communication processes.

Tool Courses
9 credits from among:
156-100 Varieties of World Culture
156-210 Introduction to Cultural Anthropology
242-160 Introduction to Language
246-200 Communication Processes: an Introduction
600-251 Introduction to Computer Science

And, foreign language training equivalent to two years' study of at least one foreign language (e.g., French, German, Spanish)

Communication Processes and Related Fields (24 credits)

Linguistics courses (12 credits):
246-320 History of the English Language
246-321 Sociolinguistics
246-322 Modern Linguistics
246-324 Psycholinguistics
246-325 Applied Linguistics
246-326 Modern Semantics

Related-field courses (12 credits):
156-301 Peoples and Cultures of a Selected Region
156-310 Culture and Personality
156-330 Aesthetic Anthropology
481-431 Cognitive Development
481-495 Language Acquisition in Childhood
478-413 Neurophysiology
493-374 Wisconsin's Indians: Historical and Cultural Perspectives

Communication and the Arts (12 credits)
242-301 Communication and the Arts Projects in the Community: Oneida Language
242-320 Communications: Extensions of Consciousness
242-323 Language and Human Conflict
242-395 Biological Aspects of Language
Or, courses from any other concentration appropriate to the student's program.

MASS COMMUNICATIONS

The mass communications program primarily offers work in the practice of print and broadcast journalism combined with study of mass media in relation to society. In addition some students can arrange programs in media production. More coursework in this area is planned.

This emphasis is appropriate for students who plan to take jobs in journalism, publications, or teaching. The mass communications emphasis requires less work in traditional journalism courses than conventional journalism programs and more in other areas. These other areas may consist of communications courses that fit the student's particular needs and intentions. It can include courses in electronic media, speech, linguistics, literature, language, composition, creative writing, public relations, and promotional strategies. All of the 24 upper level credits required for a communication processes program may be earned in courses about communication.

An alternative allows a student to take up to 9 of the 24 upper level credits for the major in an area he or she plans to communicate about: urban studies, for example, or political science, economics, education, the fine arts, or other newsworthy fields.

Practical experience is available to students in mass communications through a small television production facility supported by the academic program, the student newspaper, professional internships off campus, and other opportunities.

Experience, writing ability, the will and skill to "dig," a concern for people, knowledge of public affairs, and the fresh perception that can come from rigorous interdisciplinary studies—the qualifications of a good journalist—are the qualities developed in the mass communication emphasis.

Enrollment is not limited to students pursuing the emphasis. Students with other academic or vocational interests who recognize that few sectors of modern life are unaffected by mass communications regularly take courses in communications.

A majority of graduates with this emphasis is employed in communication. Most of the jobs are in journalism—newspapers, television, radio. Some are in public relations, publications, and the teaching of communication. A few are in media production and the book business. About 12 percent of the graduates have gone on to further education.

Following is a sample guide to planning programs in print journalism and publications:

Tool Courses From Among:
242-160 Introduction to Language
242-231 Introduction to Graphic Communication
246-100 Writing Skills Laboratory
246-166 Fundamentals of Interpersonal Communication
246-200 Communication Processes: an Introduction
246-202 Introduction to Mass Communications
246-303 Newswriting Laboratory
246-243 Introduction to Photography
246-253 Practicum in Print Journalism I
552-105 Introduction to Expository Writing

Communication Processes Courses
(24 credits)

15-18 credits from among:
246-303 Feature Writing
246-343 Photography II
246-353 Practicum in Print Journalism II
246-405 Professional Reporting Internship
246-380 Communication Law
246-483X Advanced Reporting (proposed)

6-9 credits in supporting areas from among upper level courses in: subject specialization (e.g., political science); photography; literature; linguistics; advanced composition or creative writing; communication theory; psychology; public relations or promotional strategies.

Communication and the Arts (12 credits)
242-301 Projects in the Community
242/493-310 Criticism of the Performing Arts
242-320 Communications: Extensions of Consciousness
242-323 Language and Human Conflict
242-328 Cultural Cross-Communication I: Ideology and Values
242-370 Modern American Culture
242-372, 373 The Phenomenon of Style I, II
242-395 Photographic Design for Print Media
242-331 Graphic Communication Studio I
242-483X Graphic Communication Workshop
246-430 Mass Media and Society
448-302, 303 History of American Thought and Culture

Or, courses from any other appropriate concentration.

PHOTOGRAPHY

The photography emphasis includes course work in photography and related studies preparing students for diverse applications of photographic skills. Graduates have entered Master of Fine Arts graduate programs; found positions in commercial studios, newspapers, television, film, and graphics; and have combined photography with other communication and administrative skills.

A photographer must control the craft of the medium and understand the meaning of the image. Contemporary photography students should gain proficiency in the craft of photography, including small and large format camera work, printing, lighting, and portfolio preparation, as well as experience in graphics, film and video. Visual communication, visual thinking, and visual perception are of increasing concern to the makers and users of images; and photography is one of the most vital forms of visual communication and visual expression. Many photographic educators believe photography programs, such as this one, which are centered in the arts and humanities and which encourage an interdisciplinary approach to photography are best equipped to meet these and other challenges in photography today.

Photography courses at UWGB are concerned with all the basic facts of the medium and recognize both the print for the offset press and the print for the gallery wall and actively seek new applications and forms of expression in the medium. Enrollment is not restricted to photographers. Students from many areas of the University find photography an important part of their education, and with faculty assistance, students may select diverse paths to coherent programs involving photography.

A changing market for photographic skills places new demands on photographers. Successful photographers provide not just photographs; they find photographic solutions to problems. The photography program's broadly based, flexible approach to photography is especially well suited to contemporary photography and is intended to be both highly theoretical and eminently practical.

Following is a guideline to planning an emphasis in photography:

Tool Courses From Among:
242-160 Introduction to Language
242-200, 201 History of the Visual Arts I, II
242-231 Introduction to Graphic Communication
246-133 Fundamentals of Public Address
246-200 Communication Processes: an Introduction
246-202 Introduction to Mass Communications
246-203 Newswriting Laboratory
246-243 Introduction to Photography
552-105 Expository Writing
552-104 Introduction to Literature
552-212, 213 Creative Writing: Fiction, Poetry
957-100 Visual Arts in the Twentieth Century
957-106 Design Methods
957-107 Two Dimensional Design

Communication Processes Courses
(24 credits)

9-18 credits from among photography courses:
242-395 Photographic Design for Print Media
246-343 Photography II
246-344 Creative Photography III

246-405 Professional Reporting Internship
246-443 Advanced Problems in Photography (repeatable)

6-15 credits in either a visual arts emphasis or a communications emphasis:

For the art emphasis, courses from among:
242-395 Photographic Design for Print Media
246-305 Elements of Electronic Media
Advanced courses in the art disciplinary program

For the communications emphasis, courses from among:
242-395 Photographic Design for Print Media
246-303 Feature Writing
246-305 Elements of Electronic Media
246-306 Electronic Media II
246-430 Mass Media and Society
575-325 Principles of Public Relations
575-425 Promotional Strategies

Communication and the Arts (12 credits)
242/493-310 Criticism of the Performing Arts
242-323 Language and Human Conflict
242-361 Increasing Aesthetic Awareness
242-370 Modern American Culture
242-373 The Phenomenon of Style II: Avant-garde Styles
242-331 Graphic Communication Studio I
242-483X Graphic Communication Workshop
448-302 History of American Thought and Culture
493-332 Art and Social Thought
Or, courses from any other concentration appropriate to the student's program

SPEECH COMMUNICATION

The emphasis in speech communication involves course work in communication concepts and skills along with courses from related areas in fields such as humanistic studies, philosophy, psychology, and management. The speech communication field reflects a high degree of interdisciplinary diversification. Major professional associations in the field (e.g., the Speech Communication Association) include divisions in areas such as organizational and applied communication, communication theory, interpersonal and small group communication, intercultural communication, rhetoric and public address, and others. The emphasis in speech communication is designed to provide students with a broad background in these areas and to provide a component for teacher certification in English-communication arts.

When combined with other appropriate course work, an emphasis in speech communication can lead to occupations ranging from promotion and fund-raising to delivery of human services. Holders of graduate degrees, especially in organizational and applied communication, often enter communication training and development careers with business and industry, private consulting firms, non-profit organizations, and government agencies. Career opportunities in other areas of the field are found in higher education and normally require a Ph.D.

The 24 upper division credits for an emphasis in speech communication would be comprised of four to five courses (12-15 credits) in speech communication and other relevant communication processes courses along with three to four (9-12 credits) in related fields.

The precise design for any student's program of study would depend upon the student's specific objectives. For example, interests in organizational or applied communication would warrant supporting courses in management. A student planning graduate study in rhetoric would include relevant courses from humanistic studies and philosophy, while one interested in communication theory would need a related background in psychology.

Some occupations in organizational communication and many of the research methods encountered in speech communication graduate study require a fundamental knowledge of statistics. An elementary understanding of computer science is also useful in these areas.

The following sample is a guide to program planning in speech communication:

Tool Courses From Among:
242-160 Introduction to Language
246-133 Fundamentals of Public Address
246-166 Fundamentals of Interpersonal Communications
246-200 Communication Processes: an Introduction
255-205 Social Science Statistics
552-105 Introduction to Expository Writing
892-255 Interviewing Skills

Communication Processes and Related Courses (24 credits)

Communication Processes (12-15 credits):
246-326 Modern Semantics
246-333 Persuasion and Argumentation
246-335 Organizational Communication
246-445 Human Communication Theory
246-483X Small Group Communication

Related courses (9-12 credits) drawn from areas such as:
Humanistic Studies (e.g., 493-376 Cultural Conflict)
Philosophy (e.g., 736-324 Contemporary Philosophical Movements)
Psychology (e.g., 820-309 Psychology of Motivation)
Managerial Systems (e.g., 575-425 Promotional Strategy)

Communication and the Arts (12 credits)
242-320 Communications: Extensions of Consciousness
242-323 Language and Human Conflict
242-328 Cross Cultural Communication I
242-370 Modern American Culture
242-395 Biological Aspects of Language
246-430 Mass Media and Society
Or, courses from any other concentration appropriate to the student's program.

COURSES

246 COMMUNICATION PROCESSES

246-100 Writing Skills Laboratory 3 cr.
A basic course in college-level expository writing, including conventional forms of argumentation, comparison/contrast, and research 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: passage of freshman entrance exam at level.

246-133 Fundamentals of Public Address 3 cr.
An examination of the principles of oral message preparation and presentation. Students will engage in the preparation and presentation of actual public communications.

246-161 ESL: Lecture Comprehension, Oral Presentation, and Specialized Vocabulary I 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 notetaking; 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.

246-162 ESL: Lecture Comprehension, Oral Presentation, and Specialized Vocabulary II 3 cr.
Elucidation of the finer points in the perceptual strategies which facilitate aural comprehension of American English; clarification of the psycholinguistic principles underlying the use of various sophisticated rhetorical devices and organizational schemes in oral presentation. P: ESL proficiency test.

246-163 ESL: Expository Writing I 3 cr.
Acquisition of basic principles of nonfiction writing in English, including work toward elimination of 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.

246-164 ESL: 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.

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.

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.

246-202 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.

246-203 Newswriting Laboratory 3 cr.
Assignments in gathering and writing news; copy editing; emphasis on developing an objective, clear, accurate, and forceful style.

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.

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: cons inst.

246-264 English as a Second Language: Culture, History, and Institutions of American English 3 cr.
Designed for students whose first language is not English and who wish to familiarize themselves with American English, especially international students. The course provides experience in lecture comprehension and college level reading comprehension, and also emphasizes understanding of American idioms, jargon, and styles within the milieu of American government, business, and the mass media. P: cons of inst. (ESL proficiency test required.)

246-283X Selected Topics 1-4 cr.
See page 19.

246-298 Directed Study 1-4 cr.
See page 19.

246-303 Feature Writing 3 cr.
Development of skills in translating and interpreting material from particular fields of expertise; feature article writing. P: cons inst.

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.

246-306 Electronic Media II 3 cr.
A practical and analytical course in production for television, radio, and alternate media. Students will work in teams or individually on a production relating to their interests and course expectations. Emphasis on the complete production process from development of an idea and script writing to the finished production. P: 246-305.

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.

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.

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.

†Approved for Humanities and Fine Arts Distribution Credit.

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.

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. P: at least one course in linguistics.

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. P: 246-200 or one course in linguistics.

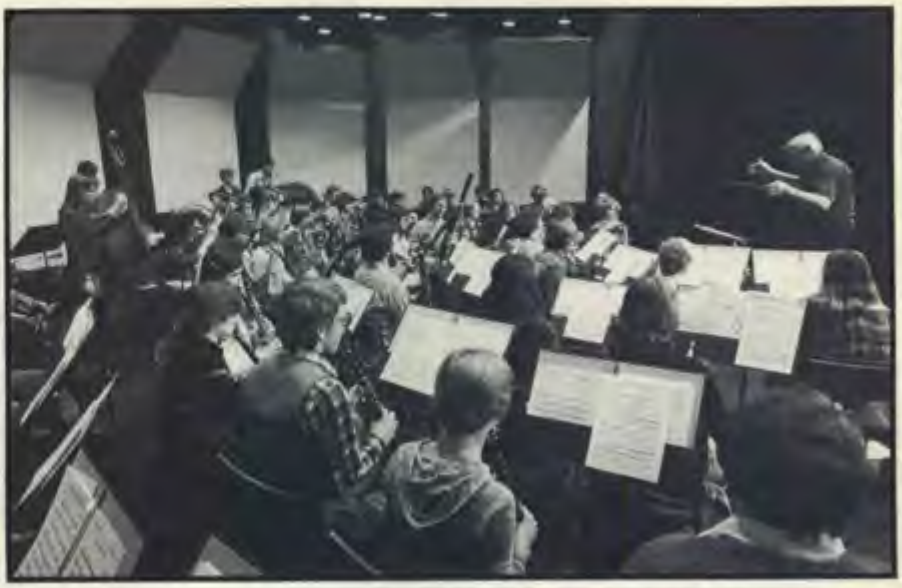
246-333 Persuasion and Argumentation 3 cr.
Designed to foster an awareness, appreciation and understanding of contemporary forms and methods of oral persuasion. The student will be exposed to theory and practice in an attempt to produce both better practitioners and more cautious consumers of persuasion. P: jr st or cons inst.

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.

246-343 Photography II 3 cr.
Emphasis upon black and white photography and darkroom printing techniques. P: 246-243 or equivalent experience. See 957-343.

246-344 Creative Photography III 3 cr.
A continuation of 957/246-343; investigation of black and white photography, allied media, and applications of photography.

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, 303, or 343, or successful experience on *The Fourth Estate* staff.

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.

246-402 Television and Radio Internship 3 cr.
Supervised assistance and practice in the production of radio programs and television programs at commercial stations in the Green Bay area. Individually arranged. P: cons inst.

246-405 Professional Reporting Internship 3 cr.
A field course with supervised instruction and practice reporting for a newspaper, periodical, or public information office in the Green Bay area. Individually arranged. P: cons inst.

246-430 Mass Media and Society 3 cr.
Analysis of the media as persuaders, informers, entertainers; public opinion, readership, and audience studies; communication theory; legal aspects; critical examination of mass communication in the changing social environment.

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 in progress and present the finished work to the class in a final portfolio. P: 246/957-344. May be repeated to a maximum of 9 credits. See 957-443.

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: cons inst.

246-483X Selected Topics 1-4 cr.
See page 19.

246-498 Directed Study 1-4 cr.
See page 19.

History

Professor: James Clifton, cultural anthropology, ethno-history.

Associate Professors: Paul Abrahams, U.S. economic, diplomatic, and political history; **David Galaty,** history of science and technology; **Norbert Gaworek** (chairperson), European social and political history; **Peter Kellogg,** U.S. social, Black history, political history; **Craig Lockard,** Asian and Third World history; **Jerrold Rodesch,** U.S. intellectual and cultural history, history of Wisconsin.

Assistant Professor: Harvey Kaye, Latin American and modern Britain.

History is a method of inquiry and a body of knowledge. It is concerned with problems, issues, and dilemmas which have inspired and confounded humanity since earliest times.

History systematically studies the cultural, social, and political aspirations, achievements, and failures of humanity. Through history we enhance our understanding of the changes that have occurred in peoples and societies, and in our relationship to the social and natural environments.

History helps us appreciate more keenly the commonality and diversity of cultures and societies and leads us to a greater awareness of the complexities of our heritage. Our judgments in the present and our plans for the future are invariably based on our understanding of past events and experiences. History examines the development and structure of contemporary societies, emphasizing those phenomena which shed light on present and future choices.

Thus, knowledge of history is not only an attribute of the educated individual, but is a practical necessity for most of the professions, particularly education, law, journalism, communications, theology, politics, government, business, social services, indeed in all areas in which research and analysis are essential. History provides the indispensable core for most areas of study.

The history faculty sponsors and supervises field work in museums and historical surveys for students who wish to engage in projects for credit or pay. Students with particular skills or interests are encouraged to inquire about these opportunities to gain practical and valuable experiences.

The history program consists of core courses and several areas of advanced studies, providing students several alternatives to fit their major to other academic interests, professional programs, and areas of concentration. Students should consult with a faculty adviser to work out an appropriate program of study in history and other fields.

Graduation Requirements in History. Each student must take a minimum of 36 credits in history, 12 credits from the freshman-sophomore core, and the remaining 24 credits from the junior-senior level courses. All history majors must enroll in the history seminar (448-480).

Distribution of Credits. History majors are required to take 3 credits in each of the area tracks and the thematic tracks.

THE CORE PROGRAM

The core program consists of these freshman-sophomore courses:

448-203, 204 History of Europe, I and II
448-205, 206 History of the United States, I and II
448-207 Roots of Black America
448-208 Development of Modern Science in Western Society
448-210 Rise of the International Economy
448-250 Traditional Asian Civilization
448-251 Modern Asian Civilization
493-101, 102 Foundations of Western Culture, I and II
242-200, 201 History of the Visual Arts, I and II
493-250 European Economy and Society (this course can fulfill all-University requirements)
493-251 Business and American Life (can fulfill all-University requirements)
493-274 Red Man in White America

Students must take 12 credits from this core. The mix of courses will depend on the academic program and professional preparation students wish to pursue and should be prepared in consultation with the adviser.

UPPER LEVEL PROGRAM

The upper level program contains traditional and interdisciplinary courses covering a broad range of periods, themes, and special studies to serve the academic needs and interests of majors and nonmajors.

COURSES

448 HISTORY

448-201 History of 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 will be 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.

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.

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.

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.

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.

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 will include political and institutional history and seek to understand the evolution of a culture and a people.

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.

448-210 Rise of the International Economy from 1400 to the Present 3 cr.
The development of technology and economic institutions in Europe and their interaction with the economies of other continents and regions; growth of international trade and its importance to regional and national economies; economic significance of colonial systems and patterns of their economic development. Emphasis on the pervasive influence of the international economy on peoples of the modern world.

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 the topics to be 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.

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 accorded social, political, economic, and cultural change under the impact of the West. Among topics considered are 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.

448-283X Selected Topics 1-4 cr.
See page 19.

448-298 Directed Study 1-4 cr.
See page 19.

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. P: jr st or cons inst. Can be taken out of sequence.

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. P: jr st or cons inst. Can be taken out of sequence.

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. P: jr st or cons inst.

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: an introductory course in history (preferably 448-205 or 206) or cons inst.

448-311 History of Wisconsin 3 cr.
A historical 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: 448-205 or 206, or cons inst.

†Approved for Humanities and Fine Arts Distribution Credit.

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 or cons inst.

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 or cons inst.

448-322 Economic 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 or cons inst.

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 or cons inst.

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 or cons inst.

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 or cons inst.

448-350 Social History of Europe Since the Industrial Revolution 3 cr.
The social manifestations and consequences of continuing and accelerating change. Origins, development, diffusion, and impact of the Industrial Revolution on European society; theoretical and institutional bases of liberalism, socialism, communism, and fascism within the framework of the evolving modern mass society. P: jr st or cons inst.

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 or cons inst.

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 or cons inst.

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, post-colonial politics and evolution of white domination in Southern Africa, and the contemporary African struggle against underdevelopment and neo-colonialism.

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 or cons inst.

448-402 Political and Social History of Modern Asia 3 cr.
Political and social change in 20th century Asia; the clash between colonialism and emerging nationalist movements; continued European and American involvement in Asia. P: sr st or cons inst.

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: sr st or cons inst.

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; post-war renaissance of the European community. P: sr st or cons inst.

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: sr st or cons inst.

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. P: sr st or cons inst.

448-483X Selected Topics 1-4 cr.
See page 19.

448-498 Directed Study 1-4 cr.
See page 19.

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 Art 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.
875-365 Dynamics of Revolutionary Change 3 cr.
944-313 The City Through Time and Space 3 cr.
944-345 Women in American Perspective 3 cr.

Literature and Language

Professors: Elmer Havens, American literature, English prose fiction; **Werner Prange,** German language and literature; **Louise Witherell,** French language and literature.

Associate Professors: Julie Brickley, mythology, contemporary novel, women writers; **Tom Churchill,** creative writing, fiction; **Ken Fleurant,** French language and literature, Canadian studies; **Walter Herrscher,** (chairperson), American literature, the short story; **Raquel Kersten,** Spanish literature and language, Latin American studies; **Estella Lauter,** literary theory, criticism, modern and contemporary poetry, women and the arts; **Michael Murphy,** English literature, Irish literature; **E. Michael Thron,** English literature, Shakespeare; **Martha Wallach,** German language and literature.

Assistant Professor: Peter Stambler, creative writing, poetry.

The literature and language disciplinary program has three major areas of emphasis: American and English literature; French, German and Spanish language and literature; and creative writing. Students may choose one of these areas or combine courses from several areas to serve their particular career needs or personal interests.

The program's purpose is to provide students with communication skills and with an understanding of—and appreciation for—our literary heritage. Although students frequently choose to study literature and language primarily for personal growth and enjoyment, the program is designed to prepare students for graduate work and professional training as well as for a variety of careers in business, industry, teaching, and government. A recently developed emphasis provides a supportive area of study in foreign language for students interested in international business.

Graduates in literature and language have found satisfying careers in personnel work, public relations, business management, advertising, journalism, politics, administration, free-lance writing, editing, social work, teaching, and other fields requiring communications skills combined with a humanities background.

The literature and language program may be combined with any concentration. Students interested in the humanities usually choose a concentration in Humanistic Studies; students interested in the fine arts or performing arts usually choose a concentration in Communication and the Arts. Depending on personal interests and goals, students might find other concentrations appropriate, such as Human Development, Urban Studies, Regional Analysis, or Social Change and Development.

Students with specific career interests frequently combine their work in literature and language with studies in other disciplinary or professional programs, such as psychology, theater, music, art, or business administration. Students desiring teaching certification combine literature and language programs with a professional program in Education.

All of the emphasis areas in literature and language have the same general requirements: 24 credits of junior/senior level courses, distributed to assure a balanced program of study. In preparation for these required courses, students are expected to complete an appropriate selection of freshman/sophomore level courses.

CLEP exams in English literature, American literature, English composition, and all other appropriate areas are accepted for credit in the literature and language program.

Following are descriptions of the areas of emphasis within literature and language. While this material can be helpful in planning programs, students should seek faculty advice in selecting courses to satisfy their own needs and interests.

AMERICAN AND ENGLISH LITERATURE

During their freshman and sophomore years, students choosing an emphasis in American and English literature will usually take 552-105, Introduction to Expository Writing (waived for qualified students), and 9 credits of introductory literature courses such as these:
552-104 Introduction to Literature
552-106 Great Books
552-214, 215 Introduction to English Literature I, II
552-216, 217 Introduction to American Literature I, II
552-250 Masterpieces of Literature

Study in a foreign language is also strongly recommended.

During their junior and senior years, students will take 24 credits of upper division literature courses distributed in this way:
552-323 Approaches to Literature
552-335 Literary Eras (Pre-1800)
552-350 or 351 or 352 Foreign Literature in Translation
552-431 Shakespeare
493-311 Perspectives of Human Values I: The Classical World

Elective courses in literature and language, 9 credits, such as:
552-310 Major English Drama
552-314 Major English Poetry
552-315 English Novel: 1700-1860
552-316 English Novel: 1850-present
552-330 Major American Drama
552-331 Major American Prose Fiction

552-332 Major American Poetry
552-333 Literary Themes (War; Alienation; Fantasy; Protest; etc.)
552-335 Literary Eras (Medieval; Renaissance; Romantic; Victorian; Modern; etc.)
552-490 Seminar in Literature

CREATIVE WRITING

During their freshman and sophomore years, students choosing an emphasis in creative writing are expected to take 552-105, Introduction to Expository Writing (waived for qualified students), as well as 552-212, Introduction to Creative Writing: Fiction and/or 552-213, Introduction to Creative Writing: Poetry. In addition, students usually take up to 6 credits of introductory literature courses such as these:
552-104 Introduction to Literature
552-106 Great Books
552-214/215 Introduction to English Literature I and II
552-216/217 Introduction to American Literature I and II

Study in a foreign language also is strongly recommended.

During their junior and senior years, students will take 24 credits of upper division courses divided between writing and literature courses. A maximum of 12 credits of writing courses may count towards the program, chosen from such courses as these:
552-302 Fiction Writing Workshop (3 or 6 credits)
552-303 Poetry Writing Workshop (3 or 6 credits)
552-304 Advanced Expository Writing, 3 cr.
552-361 Playwriting I, 3 cr.

The 12 credits of literature courses should include Shakespeare (552-431) and an appropriate selection of other courses. Students should consult with an adviser to draw up programs to meet their needs.

FRENCH/GERMAN/SPANISH LANGUAGE AND LITERATURE

Students can combine their study of a foreign language with literature courses to constitute a literature and language program with French, German, or Spanish emphasis. Language courses, however, are not necessarily tied to the study of literature and can also be combined with other fields such as education, linguistics, journalism, business administration, health sciences, nutritional sciences, or music. Courses dealing with the culture of the student's area of emphasis are particularly appropriate.

Language courses stress understanding of culture as well as communication and insight into the structure of language, and frequently result in improved abilities in English as well.

Students who begin their study of French, German, or Spanish at UWGB should enroll in introductory courses numbered 554-101 for French, 556-101 for German, and 558-101 for Spanish. Language courses offered are:
554/6/8-101 Introduction to French/German/Spanish I
554/6/8-102 Introduction to French/German/Spanish II
554/6/8-201 Intermediate French/German/Spanish I
554/6/8-202 Intermediate French/German/Spanish II
554/6/8-225 French/German/Spanish Composition and Conversation I
554/6/8-226 French/German/Spanish Composition II

Students who have studied another language in high school should count a year of high school work as roughly equivalent to a semester of college work. Retroactive credit for high school language study is available; see the description immediately before the course listings.

A literature and language program with French/German/Spanish emphasis should include the language courses listed above or proficiency comparable to the level reached in the 226 course. Concurrently with or following 225, students should take an introductory literature course such as these:
554/6/8-227 Introduction to French/German/Spanish Literature I
AND/OR
554/6/8-228 Introduction to French/German/Spanish Literature II

An introductory English or American literature course is highly recommended, and introductory courses in philosophy, history, and linguistics are encouraged.

For the 24 credits required at the upper division level, the following courses are suggested:

Culture of a French/German/Spanish speaking country, 3-6 credits (See adviser for specific courses).

French/German/Spanish literature, depending upon area of emphasis, 12-15 credits. Any of the following are appropriate:
554/6/8-350 Major French/German/Spanish Drama
554/6/8-351 Major French/German/Spanish Prose Fiction
554/6/8-352 Major French/German/Spanish Poetry
554/6/8-436/7/8 Major French/German/Spanish Writers
554/6/8-333 Literary Themes
554/6/8-335 Literary Eras
552-323 Approaches to Literature
493-311 Perspectives of Human Values I

Requirements for teaching certification in French/German/Spanish are similar to, but not identical with the program outlined here. An adviser can provide details about certification.

FOREIGN LANGUAGE AND BUSINESS

Foreign languages may be taken to fulfill the 18-credit supportive field of study requirement for majors in business administration offered through the Managerial Systems concentration. This is particularly appropriate for students interested in international aspects of business.

The 18-credit requirement may be met by taking Introductory, Intermediate, and Composition and Conversation courses in French, German, or Spanish for a total of 17 credits, and an additional 1-credit independent study on introduction to French/German/Spanish culture. Students may substitute one of several approved 3-credit courses for the 1-credit independent study, if they wish.

Special interdisciplinary readings for majors in business administration are available in language courses numbered 200 and above.

OTHER AREAS OF EMPHASIS

Qualified students may develop individual programs through literature and language to meet specific needs. For example, by combining courses in several literatures, it is possible to develop a program with strong emphasis on world literature. Students interested in individual programs should consult with a faculty adviser.

RETROACTIVE CREDIT

Students can earn up to 14 additional credits for previous language study if they pass a foreign language course with a grade of "C" or better. In that case credit will be given for UWGB language courses preceding the one in which the student is enrolled, to a maximum of 14 credits. For example, if a student has had four years of high school German and gets a "C" or better in German 225 (Composition and Conversation), he or she will receive 3 credits for the course plus 14 retroactive credits for UWGB language courses preceding 225.

COURSES

LITERATURE AND LANGUAGE**

552 ENGLISH-AMERICAN

554 FRENCH

556 GERMAN

558 SPANISH

100 Basic College Writing 3 cr.
Designed for students whose entrance test scores indicate a need to improve basic college-level writing skills. (Other students interested in improving their writing skills should enroll in 552-105.) Topics include sentence structure, paragraph development, grammar, spelling, punctuation, and an introduction to research paper techniques.

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.

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.

105 Introduction to Expository Writing 3 cr.
A course in standard American written English designed to improve college-level writing skills. Provides review of grammar, punctuation, usage, and other writing fundamentals, but emphasizes effective organization and development of ideas. P: 552-100 or satisfactory entrance test score.

**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.

†Approved for Humanities and Fine Arts Distribution Credit.

106 Great Books† 3 cr.
An introductory study of the heritage and traditions of world literature, with particular emphasis on non-English works in translation by authors such as Homer, Dante, Goethe, Cervantes, Moliere, and Dostoyevsky.

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† 3, 3 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. P: 554/556/557-102 or equivalent.

212 Introduction to Creative Writing: Fiction† 3 cr.
A first course in the writing, appreciation, understanding, and technique of fiction.

213 Introduction to Creative Writing: Poetry† 3 cr.
A first course in the writing, appreciation, understanding, and technique of poetry.

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 the writers studied are Chaucer, Shakespeare, Donne, Milton, Pope, Swift, and others whose works comprise the major literary heritage of all English-speaking people.

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.

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.

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.

225, 226 French, German, Spanish Composition and Conversation 3, 3 cr.
Intensive practice in conversation and writing. Emphasis on developing ease and correctness of expression through dialogues, oral presentations, and creative writing. Includes review of grammatical structures of the language. May be taken concurrently with French, German, Spanish 227, 226. See section on retroactive credit. P: 202 or equivalent.

283X Selected Topics 1-4 cr.
See page 19.

298 Directed Study 1-4 cr.
See page 19.

227, 228 Introduction to French, German, Spanish Literature 3,† 3† cr.
Introduction to the historical periods in French, German, Spanish literature from the literary beginning to the present. Reading and discussion of representative works. The rudiments of literary criticism. May be taken concurrently with French, German, Spanish 225, 226. P: French, German, Spanish 203 or equivalent.

250 Masterpieces of Foreign Literature 3 cr.
Introductory study in translation of some of the most popular novels, poems and plays of a foreign literature, such as French, German, Spanish, Russian, or Japanese. The works are studied both as individual masterpieces and as representative works of the major literary movements. (When the foreign literature is French, German or Spanish, foreign language credit is available for students who prefer to read the texts in the original language.) P: None for 552-250; cross listings under French, German, Spanish will carry prerequisite of 202 or equivalent in that language.

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. P: 212 or cons inst.

303 Poetry Writing Workshop 3 cr.
An advanced course in the practice of writing poetry. Group criticism of student work. May be repeated once for credit. P: 213 or cons inst.

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. P: 552-104 or equivalent or cons inst.

†Approved for Humanities and Fine Arts Distribution Credit.

310 Major English Drama 3 cr.
The study of significant English plays, exclusive of Shakespeare, from the Renaissance to the 20th century, including works by Marlowe, Webster, Congreve, Sheridan, Shaw, and Wilde.

314 Major English Poetry 3 cr.
The study of representative works by such poets as Chaucer, Milton, Donne, Dryden, Pope, Wordsworth, Tennyson, and Eliot.

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.

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.

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. P: Jr st or cons inst.

330 Major American Drama 3 cr.
A study of representative plays by such dramatists as O'Neill, Williams, Miller, and Albee.

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.

332 Major American Poetry 3 cr.
The study of representative works by such poets as Emerson, Poe, Dickinson, Whitman, Frost, Eliot, Stevens, and Williams.

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.

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.
P: jr st or cons inst.

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. P: 556-202 or equivalent. See 493-356.

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. P: 556-202. See 493-358.

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. P: 556-202. See 493-359.

361 Playwriting I
See 709-361.

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.

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.

436 Major French Writer 3 cr.
A study of an outstanding figure in French literature. Important themes, techniques, and influences are emphasized. See section on retroactive credit. May be taken in translation.

437 Major German Writer 3 cr.
A study of an outstanding figure in German literature. Important themes, techniques and influences are emphasized. See section on retroactive credit. May be taken in translation.

438 Major Spanish Writer 3 cr.
A study of an outstanding figure in Spanish literature. Important themes, techniques, and influences are emphasized. See section on retroactive credit. May be taken in translation.

483X Selected Topics 1-4 cr.
See page 19.

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. P: jr st.

498 Directed Study 1-4 cr.
See page 19.

Music

Professors: Robert Bauer, director of bands, flute, bands, music education; **Arthur Cohrs,** keyboard, music theory; **Irwin Sonenfield,** music theory/history, composition.

Associate Professors: Jerome Abraham, low brass; **Trinidad Chavez** (chairperson), director of choral activities, voice, choirs, vocal ensembles, conducting, music education; **Lovell Ives,** jazz, arranging, trumpet; **Wayne Jaeckel,** woodwinds, jazz, music theory.

Assistant Professors: Terence O'Grady, music theory/history; **Marlys Trunkhill,** voice; **Margaret Charnon,** piano.

Lecturers: Michael Arendt, horn; **John Cameron,** oboe, bassoon; **Mary Kay Easty,** organ; **Tom Kirchen,** trumpet; **Robert Snider,** percussion, band; **Ralph Holter,** strings; **William Wiederanders,** voice; **John Kolar,** guitar; **Sandra Pahl,** flute; **Nancy Stowe,** voice.

The four year program in music, which is accredited by the National Association of Schools of Music (NASM), offers specialization in applied performance, theory and composition, music business, and teacher certification in music education. The program emphasizes quality training in vocal and instrumental music along with a

broadly based general education and the opportunity for students to structure programs to meet their own needs through various combinations of UWGB's programs of study.

Applied instruction is available in four year sequences in piano, organ, voice, flute, oboe, clarinet, saxophone, bassoon, horn, trumpet, and cornet, trombone, baritone, tuba, percussion, guitar, violin, viola, cello and string bass. Junior and senior recitals are required of applied performance majors, while only junior recitals are required of students in teacher certification programs and the music business track. In addition, the music student has many opportunities for solo and group performance both on campus and in the larger community.

Ensembles providing performance opportunities include Marching Band, Concert Band, Wind Ensemble, Concert Choir, Oratorio Chorus, Jazz Ensemble, and University Singers, as well as woodwind, brass, percussion, string and vocal ensembles, Collegium Musicum, and others. Musical theater is an opportunity for students in music, drama or dance. UWGB students also receive credit for performing with the Green Bay Symphony Orchestra.

Students who wish to specialize in music take a placement examination in basic musicianship covering musical notation, fundamental skills of constructing and aurally identifying easy scales, intervals, and chords, and keyboard proficiency. Students who do not demonstrate the necessary prerequisite skills are advised to take 705-101, Basic Musicianship, before enrolling in the music theory/literature sequence. Students should give special attention to the core curriculum in theory/literature (705-151, 152, 251, 252, 351, 352) and applied music at the 100 and 200 levels to prepare for entrance into many upper-level courses.

PROGRAMS OF STUDY

There are three basic areas of teacher certification in music: elementary music specialist, instrumental music, and grade 7-12 vocal music. Students who want to pursue music education should plan their programs carefully to make sure they fulfill all requirements for certification. The *Teacher Certification Handbook* available from UWGB's Education program office is a necessary tool for planning.

All music education students take a basic core of courses from aesthetic awareness and expressive traditions (18-21 credits); music theory/history, and ear training and sight singing (24 credits minimum).

Other coursework will depend upon the student's choice of specialization in instrumental music, choral music (grades 7-12), or elementary music specialist.

Another opportunity is the emphasis in music business which can lead to careers in music merchandising, publication, manufacturing, management, and other aspects of the music industry. Students in this emphasis combine courses in music and aesthetic awareness with courses in business and administration through UWGB's professional program in Public and Environmental Administration. Such courses include accounting, management, finance, advertising, and some practicum courses.

In addition, the student with an interest in musical theater may combine course work in acting, dance and movement, and theater history in his or her program of study.

Music students choose interdisciplinary courses from among UWGB's concentrations to support their disciplinary study in music. Most students select the concentration in Communication and the Arts, which provides courses in aesthetic awareness and expressive traditions.

Since 1971, nearly 100 percent of UWGB's graduates in music have been placed in public education, music business, or graduate study. The music disciplinary program has the best placement record in the University.

SAMPLE PROGRAM

The following is an outline of a typical program plan for students pursuing an emphasis in applied performance in music. Sample programs for music education and music business emphases are available from program advisers. All students should plan their programs with the advice of music faculty.

Aesthetic Awareness and Expressive Traditions (concentration in Communication and the Arts)

Tool courses (6 credits minimum):
242-121 Masters and Masterpieces in Music
242-241 Introduction to Theater History I
242-242 Introduction to Theater History II
242-261 Foundations of Aesthetic Experience
(course work equivalent to two years' college level study in French or German may be used to meet part of the tool subject requirement)

Advanced courses (12 credits minimum):
242-310 Criticism of the Performing Arts
242-329 Cross-Cultural Communication II: Jazz History
242-329 Cross-Cultural Communication II: American Show Music
242-361 Increasing Aesthetic Awareness
242-370 Modern American Culture
242-372 The Phenomenon of Style I: Traditional Styles
242-373 The Phenomenon of Style II: Avant-garde Styles

Music Theory/History (22 credits minimum)
705-151 Materials and Values in Music I
705-152 Materials and Values in Music II

705-251 Literature and Styles in Music I
705-252 Literature and Styles in Music II
705-351 Literature and Styles in Music III
705-352 Literature and Styles in Music IV

Ear Training and Sight Singing (2 credits minimum concurrently with 705-151, 705-152)
705-115 Ear Training and Sight Singing
705-116 Ear Training and Sight Singing

Major Applied Instrument (20 credits minimum; 4 years)
2 credits per semester in first and second year
3 credits per semester in third year; half recital required
3 credits per semester in fourth year; full individual recital required

Minor Applied Instrument
If major instrument is percussion, wind, strings, guitar, or voice, elementary proficiency in piano (707-042) is required.

Conducting (3 credits minimum)
705-331 Choral Conducting
705-332 Instrumental Conducting

Music Electives (6 credits minimum)
705-316 Instrumental Arranging
705-411 Composition
705-412 Composition
705-417 Jazz Arranging
242-498 Directed Study:
Counterpoint
Pedagogy
Performance Practice of Major Applied
History of Major Applied Medium

Ensemble Performance (8 credits minimum; 8 semesters)
Participation in at least one major ensemble each of first six semesters of applied study. Participation in minor ensembles highly recommended with minimum requirement of two semesters during 400 level applied study (see list under item 2).

Major ensemble performance (6 credits minimum required; 6 semesters):
707-151, 351 Orchestra
707-241, 441 Concert Band, Wind Ensemble
707-242, 442 Marching Band
707-261, 461 Concert Choir
707-162, 362 Oratorio Choir

Minor ensemble performance (2 credits minimum recommended):
707-143, 343 Jazz Ensemble
707-144, 344 Woodwind Ensemble
707-145, 345 Brass Ensemble
707-146, 346 Percussion Ensemble
707-153, 353 String Ensemble
707-163, 363 Vocal Ensemble
707-164, 364 University Singers

Electives in Music (705) and/or Applied Music (707) (7 to 10 credits)

Students following the above pattern of enrollment will earn about 70-73 credits in music and 18 credits in broad-field course work in aesthetic and expressive traditions. In addition, all students complete all-University requirements. This totals 114-117 credits of minimum expectations, which means that students will have at least an additional 7-10 credits in elective courses to complete the minimum of 124 credits for graduation.

COURSES

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.

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.

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.

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: some previous background in music or 705-101. Must be taken in sequence.

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. P: basic background in music reading and playing.

705-251 Literature and Styles in Music I 4 cr.
Involves an 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.

705-252 Literature and Styles in Music II 4 cr.
Involves an 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.

705-253 Advanced Musicianship I 1 cr.
Provides further experience in the historical and theoretical analysis of music from antiquity to 1700 as well as extra drill in ear-training and sight-singing. Students will also present class projects in these areas. P: concurrent enrollment in 705-251.

705-254 Advanced Musicianship II 1 cr.
Provides further experience in the historical and theoretical analysis of music in the 18th century as well as extra drill in ear-training and sight-singing. Students will also present class projects in these areas. P: concurrent enrollment in 705-252.

705-283X Selected Topics 1-4 cr.
See page 19.

705-298 Directed Study 1-4 cr.
See page 19.

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.

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. P: jr st.

705-319 Literature and Diction for the Voice, I German, II French, III Italian 2-3 cr.
Course content includes language skills and their unique application to the sustained voice. Pronunciation, vocabulary and performance practices in German, French, and Italian literature for the voice as found in the art song and aria of the 18th, 19th, and 20th centuries. May be repeated with different language. P: jr st or cons inst.

705-331 Choral Conducting 3 cr.
Detailed study of conducting techniques; emphasis on practical application to choral organizations.
P: 705-315 or 316.

705-332 Instrumental Conducting 3 cr.
Detailed study of conducting techniques; emphasis on practical application to the full score and instrumental organizations. P: 705-316.

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. P: jr st.

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. P: jr st.

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. P: jr st.

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.

705-345 Percussion Techniques 2 cr.
Lecture and laboratory experience in the performance of percussion instruments including snare drum, bass drum, tympani, xylophone, marimba and all auxiliary equipment. Requirements are performance proficiencies on all instruments and completion of a reference syllabus. P: jr st.

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: 705-042.

705-351 Literature and Styles in Music III 4 cr.
Involves an 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 developed and students also do some "composing" in the Romantic style.
P: 705-252.

705-352 Literature and Styles in Music IV 4 cr.
Involves an 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.

705-353 Advanced Musicianship III 1 cr.
Provides further experience in the historical and theoretical analysis of music in the 19th century as well as extra drill in ear-training and sight-singing. Students will also present class projects in these areas. P: concurrent enrollment in 705-351.

705-354 Advanced Musicianship IV 1 cr.
Provides further experience in the historical and theoretical analysis of music in the 20th century as well as extra drill in ear-training and sight-singing. Students will also present class projects in these areas. P: concurrent enrollment in 705-352.

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.
P: 705-352.

705-417 Arranging for Jazz Ensemble 2-3 cr.
Acquaints the student with the musical knowledge necessary to write an artistic jazz arrangement.
P: four semesters of music theory or equivalent background.

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.

705-483X Selected Topics 1-4 cr.
See page 19.

705-498 Directed Study 1-4 cr.
See page 19.

707 APPLIED MUSIC

707-001-440 Class and Private Instruction in Instruments and Voice 1-2 or 3 cr.

Study of the solo literature of music through class or private instruction. Placement by audition 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.
707-151, 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 Directed Study 1-4 cr.

Philosophy

Professors: Frederick Kersten (chairperson), phenomenology, ontology, value theory, aesthetics, foundational problems in the social and natural sciences, the philosophy of Husserl.

Associate Professors: Orville Clark, aesthetics, philosophy of the arts, German 19th century philosophy, 20th century thought in relation to ecological crises, Native American culture, Indian view of nature; **Gary Greif,** foundations of value formation, general theory of culture, philosophical foundations of psychology.

Assistant Professors: Gilbert Null, history of western philosophy, science and reality in context of Husserlian phenomenology, contemporary epistemology, abstraction in theory construction, philosophy of science and mathematics.

The study of philosophy increases awareness and appreciation of the fundamental intellectual, aesthetic, and ethical values of the world in which we live. Students selecting a disciplinary program in philosophy have an opportunity to examine the basic ideas of the major thinkers in the history of Western thought from the early Greeks to the present, and are able to reflect on some of the most critical problems confronting society and culture.

They also may concentrate on particular areas of study within the discipline such as logic, ethics, metaphysics, aesthetics, philosophy of science, political and social philosophy, philosophy and literature, philosophical problems in psychology, phenomenology, and existentialism.

Courses in philosophy deal with a wide range of human problems and issues and may be combined with other disciplines and professional programs, such as mathematics, art, literature, history, psychology, social sciences, education, and others, in order to broaden educational and professional opportunities.

Several of the concentrations provide appropriate interdisciplinary support to a philosophy program. Students choose the concentration that permits them most closely to relate their studies to their own particular goals.

Philosophy is excellent preparation for many professional fields, including teaching, law, fine arts, physical and social sciences, diplomatic service, and the field of publications.

These courses are required for a philosophy disciplinary program:
736-302 History of Philosophy I
736-314 History of Philosophy II
736-324 Contemporary Philosophical Movements
736-404 Major Philosophical Figures

Students should take at least one of these courses:
736-405 Major Philosophical Issues
736-406 Philosophical Problems in the Sciences

Other courses are chosen with the help of the adviser.

COURSES

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.

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.

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.

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.

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.

736-201 Language and Consciousness 3 cr.
A philosophical and historical inquiry into the nature of language, its relation to consciousness and to the social world.

†Approved for Humanities and Fine Arts Distribution Credit.

736-207 Philosophy and Literature† 3 cr.
A study of issues shared between philosophy and literature as reflected in literary works. Emphasis will be on the nature and meaning of literature for an understanding of the world.

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.

736-210 Civilization and Culture 3 cr.
An examination of civilization and culture according to their relationship, the dynamics of their development, and their influence on various human activities.

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 will stress the significance of art for human existence.

736-283X Selected Topics 1-4 cr.
See page 19.

736-298 Directed Study 1-4 cr.
See page 19.

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 will be studied through examination and discussion of works by various traditional and contemporary authors. P: jr st and one course in philosophy.

736-302 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 will provide 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. P: 736-102.

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 views of Peirce, James, Royce, Dewey, and Santayana. The course will concentrate on those schools and movements that are distinctly American such as Transcendentalism, Naturalism, Pragmatism, and Instrumentalism. P: jr st and a course in philosophy.

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. P: 736-302.

736-315 Philosophy of Work and Leisure 3 cr.
The roles played by work and leisure in human existence from the standpoint of the human process in general. The relative value of each for human existence. P: a course in philosophy or a course in the social sciences.

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. P: a course in philosophy.

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, Intuitionalism, Pragmatism and Marxism). Variable content. P: 736-314.

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 will be examined in detail, such as alienation, class struggle, historical process, the relation of the individual to society. P: a course in philosophy.

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. P: a course in philosophy.

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.). P: cons inst. Variable content.

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. P: cons inst.

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 action, etc., in the light of the methods and results of the various sciences. Different sciences will be studied at different times (e.g. physics, mathematics, psychology, sociology, economics, political science). Variable content. P: two courses in philosophy.

736-483X Selected Topics 1-4 cr.
See page 19.

736-498 Directed Study 1-4 cr.
See page 19.

Theater

Professors: Richard Sherrell (chairperson), theater history, criticism.

Associate Professors: Jack Frisch, directing, history, criticism.

Assistant Professors: Emil Bowers, technical director and scenic design; **William Burnett,** acting, directing, voice and speech; **Patricia Ridge,** acting, directing, movement; **Princess Morris,** dance and movement.

Lecturer: Karen Cowan, dance.

Theater training at UWGB includes substantial involvement with other disciplines and a serious interest in traditional and experimental theatrical forms, community theater, and theater education.

Areas of emphasis include:
- Performance (acting and directing)
- Technical theater (design; stagecraft)
- Theater history, literature, and criticism
- Dance

The program tries to provide a congenial environment for both past and present forms of theater. By including plays and styles of past theatrical experiments one can keep in touch with the accumulated culture of the past and learn from this experience. The program also provides an environment that encourages experimen-

tation with new forms. This balance in the program is aimed at providing for theater a living future as well as to celebrate some of the greatness of the past.

UWGB's theater program generally schedules 10 shows per year—five theater faculty productions and five student alternate theater productions. Two new, well-equipped facilities are available. They are the Creative Communication Theater and Theater II, an experimental theater space. Generally, casting is open to both the University and the community, and previous experience is not required in order to be considered for roles. Many opportunities for backstage work also are available, and credit can be earned for participating in productions in any capacity. The best way to learn theater is to do theater, and the long hours that go into that creative process will enrich a student's understanding of theater.

Here are some of the things students can expect from the theater program at UWGB:

—a place to create theater and an opportunity for self-expression through the theater arts;

—a chance to work under varying degrees of guidance, from rigorous faculty direction and supervision to almost complete independence;

—involvement with the history and literature of the theater and an opportunity to appreciate them through various research activities;

—preparation for teaching theater arts;

—advance acquaintance with the discipline of a professional life in the performing arts;

—a production program which seeks to promote theater as a significant element in enriching the daily lives of persons in the community.

Students are encouraged to participate in community theater productions, summer stock, and other theater activities outside the University. Faculty members recognize that important learning experiences can and do occur in other theater environments. It is possible to earn degree credit for off campus theater activities, as long as a faculty member is willing to serve as an adviser.

Students at UWGB come into contact with several different kinds of teachers in theater: those who are primarily artists and craftspeople of the theater; those who are primarily scholars, and those who combine both interests. Students can learn from all, but should not expect the same things from all. They should concentrate on getting from each teacher the best he or she has to offer.

PROGRAM OF STUDY

The theater student must complete a minimum of 21 credits in course work from this list:

Performance
Acting/directing, 6 credits minimum:
709-131, 132 Acting I, II

Theater History/Criticism
6 credits minimum:
242-242 Introduction to Theater History II
709-309 or 310 Theater History I, II

Technical Theater
Design/stagecraft, 6 credits minimum:
709-221, 222 Theater Production Techniques I, II

Dance and Movement
3 credits minimum:
709-141 Awareness and Expression Through Movement
709-128 Elementary Jazz Dance
709-137 Elementary Ballet
709-145 Elementary Modern Dance

In addition, theater students must complete a minimum of 24 credits in junior-senior courses. Most students pursue a particular area of emphasis, in consultation with a faculty adviser. These areas are reflected in the following groups of courses:

Acting
709-231, 232 Acting III, IV
709-331, 332 Acting V, VI

Directing
709-351, 352 Directing I, II

Voice and Speech
709-233, 234 Voice and Speech I, II

Developmental Drama
709-375 Principles of Developmental Drama
709-376 Application of Developmental Drama

Technical Theater
709-321 Scene Design
709-322 Costume Design
709-323 Stage Lighting
709-324 Stage Properties
709-325 Stage Make-Up
709-405 Theater Management
709-423 Advanced Stage Lighting
709-424 Advanced Technical Practices

Theater History, Literature, Criticism
709-309, 310 Theater History
709-361, 362 Playwriting I, II
Dramatic literature courses in other disciplines by arrangement with adviser.

Dance
709-228 Intermediate Jazz Dance
709-237 Intermediate Ballet
709-245 Intermediate Modern Dance
709-328 Advanced Jazz Dance
709-337 Advanced Ballet
709-345 Advanced Modern Dance

Production/Performance
709-235, 335 Theater Performance in the Community

General
709-403, 404 Seminar in Theater Arts

Although there are several interdisciplinary programs or concentrations with which a program in theater might be combined, most students take supporting course work in aesthetics and expressive traditions through the concentration in Communication and the Arts. A minimum of 6 credits of freshman-sophomore level "tool" courses are required in these areas. Communication and the Arts offers flexibility and a number of courses relevant to theater including:

Tool Courses
(6 credits minimum)
242-120 Understanding Music
242-241, 242 Introduction to Theater History I, II
242-261 Foundations of Aesthetic Experience
957-100 Visual Arts in the Twentieth Century

Upper Level Courses
(12 credits minimum)
242-243, 244 Native American Cultures: Film and Performance I, II
242-310 Criticism of the Performing Arts
242-329 Cultural Cross-Communication II: American Show Music or Jazz History
242-361 Increasing Aesthetic Awareness
242-364 Aesthetic Awareness Through Artistic Creation
242-370 Modern American Culture
242-372 Phenomenon of Style I: Traditional
242-373 Phenomenon of Style II: Avant-garde
242-380 The Arts: London
242-462 Senior Seminar in Aesthetic Awareness

Some students in theater have emphasized course work in communications as well as aesthetic and expressive traditions. Students in dance have enrolled in more course work in musicology and music history, while technical theater students have chosen courses in art history and environmental design.

COURSES

709 THEATER

709-283X Selected Topics 1-4 cr.
See page 19.

709-298 Directed Study 1-4 cr.
See page 19.

709-483X Selected Topics 1-4 cr.
See page 19.

709-498 Directed Study 1-4 cr.
See page 19.

ACTING

709-131 Acting I† 3 cr.
Through theater 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.

709-132 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. P: 709-131.

709-141 Awareness and Expression Through Movement† 3 cr.
An experiential course in non-verbal communication especially designed for those interested in the performing arts. Course work is based on a number of mind/body techniques, e.g., modern dance, circus, mime, sensory awareness, voice/physical improvisation, bioenergetics, which the student will be able to apply to his/her subsequent work in a number of areas, including dance, theater, music. Learning experiences progress from free form movement expressions, to the development and utilization of a concrete technique, and finally to the application of that technique to the communicative experience.

709-231 Acting III 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.

†Approved for Humanities and Fine Arts Distribution Credit.

709-232 Acting IV 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: 709-132.

709-331 Acting V 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. Scenes are drawn from Restoration comedy and works by Shakespeare and Moliere. P: 709-132.

709-332 Acting VI 3 cr.
The actor's role in contemporary theater experiments is studied and experienced through research into avant-garde theater companies and development of a performance group. Works of such contemporary artists as Richard Schechner, Jerzy Grotowski, the Open Theatre and the Living Theatre provide the background for the evolution of a theater piece by the class as a whole. P: 709-132.

709-139, 140 Theater Dueling I, II 1, 1 cr.
Basic techniques of modern fencing are combined with the choreography of all theatrical period duels and the use of accompanying hand weapons and shields. The usage and practices involved in historic hand-to-hand combat familiarize the student with the weapons, crafts, and varied styles of sword-fighting and fencing of different historic eras. Male students learn the basic techniques of staging fights with broad-sword, sabre and sword, and dagger; all students learn the use of foil and the choreographing of duels and group swordfights for the stage. Group classes and individual coaching.

DEVELOPMENTAL DRAMA

709-375 Principles of Developmental Drama 3 cr.
Developmental drama is the application of dramatic play to the total personal development of the individual. This course offers definitions of developmental drama, examines its evolution, and suggests its relationship to other disciplines and various social institutions. Techniques in improvisation, game-playing, and impersonation are acquired, with demonstration of their application. P: 709-131, 709-132 or cons inst.

709-376 Application of Developmental Drama 3 cr.
Developmental drama techniques are practiced, and methods of organization are studied. Through work in the Green Bay community, experiments in applying developmental drama suggest methods of leadership, defining objectives, and using dramatic play as a basis for social interaction, education, and therapy. P: 709-375.

VOICE AND SPEECH

709-233 Voice and Speech 3 cr.
Introduction to principles of Lessac or Linklater systems, which are widely used in actor training and provides the student with a working knowledge of his/her vocal and physical capabilities. Work on breathing, posture, and development of warm-up procedures. Detailed work in the systems as appropriate.

709-234 Voice and Speech 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. P: 709-233.

DANCE

709-128 Elementary Jazz Dance 1 cr.
Introduction to the style and technique of jazz dance and its relation to the American musical theater. P: concurrent enrollment in 709-137 or 709-145.

709-137 Elementary Ballet 2 cr.
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.

709-145 Elementary 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.

709-228 Intermediate Jazz Dance 1 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 theater. May be repeated for credit once. P: concurrent enrollment in Ballet or Modern Dance.

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. P: cons inst and/or two semesters of Elementary Ballet.

709-245 Intermediate Modern Dance 2 cr.
Progression from elementary modern dance with increasingly more complex technical problems. Increasing emphasis on understanding and executing major modern dance styles. Importance of body size to technical development with the relationship of weight and diet emphasized. Repeatable for credit to a maximum of four semesters. P: cons inst and/or Elementary Modern Dance.

709-328 Advanced Jazz Dance 1 cr.
Advanced study and execution of the style and technique of jazz dance. A study of the styles of major choreographers in the American music theater. Competence in performance stressed. May be repeated for credit twice. P: concurrent enrollment in either Ballet or Modern Dance.

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: cons inst and/or Intermediate Ballet.

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: cons inst and/or Intermediate Modern Dance.

TECHNICAL THEATER

709-221 Theater Production Techniques I 3 cr.
Lectures and laboratories in the organization and operation of theater productions, with emphasis on beginning stagecraft, lighting, sound, and scene design. Participation in a theater production (minimum of 40 hours). Required of students with an emphasis in theater.

709-222 Theater Production Techniques II 3 cr.
Lectures and laboratories in the organization and operation of theater production with emphasis on costuming, make-up, and stage properties and an introduction to costume design. Participating in a theater production (minimum of 40 hours). Required of students with a co-major in theater. P: 709-221 or cons inst.

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 theater. Develops ability to create the visual and mechanical environment to support the presentation of theater pieces. Plays are studied and designed in class and individual projects are required.

709-322 Costume Design 3 cr.
History of costumes as they relate to the theater. 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 theater production (minimum of 40 hours). P: 709-221, 222 or cons inst.

709-323 Stage 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 theater production (minimum of 40 hours). P: 709-221, 222 or cons inst.

709-324 Stage Properties 3 cr.
Lectures and laboratories on the style, construction, and organization of stage properties for modern and period theatrical pieces. Participation in a theater production (minimum of 40 hours). P: 709-221, 222 or cons inst.

709-325 Stage Make-Up 2 cr.
Lectures and laboratories on the principles and application of stage make-up, with emphasis on materials, light and color, and character analysis. Participation in a theater production (minimum of 20 hours). P: 709-222 or cons inst.

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: 709-221, 222, & 323.

709-424 Advanced Technical Practices 3 cr.
Studies in modern theater technology, electronics, optics, and stage mechanics with an emphasis on the artistic potentialities presented by these developments. Individual projects and participation in a theater production is required. P: 709-222, 323 or cons inst.

THEATER HISTORY/LITERATURE/CRITICISM

709-235, 335 Theater Performance in the Community 1-3 cr. ea.
For students who wish the experience of participating in a theater 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 theater performances in high schools, for children, or for community groups. May be repeated for up to six credits of 235 and 3 credits of 335.

709-309, 310 Theater History I, II 3, 3 cr.
Theater art and craft, its functions in and significance to the different cultures in which it has thrived. May concentrate on any of several periods. May include "The Theater of Ancient Greece," "19th Century Developments in Theater Realism," "Avant Garde," "The Theater of the Renaissance," "The Theater of the Absurd," and "Black Theater in America." May be repeated for credit so long as content is not repeated.

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 theater chairperson.

709-361, 362 Playwriting I, II 3, 3 cr.
The craft of writing for the theater. Representative theories and playscripts are studied, but primary emphasis is upon the creation of original scripts. First developed improvisationally in relation to acting and directing work, student scripts are read and discussed; some are staged for fuller realization and evaluation.

709-403, 404 Seminar in Theater Arts 3, 3 cr.
Individual or small group study focused on a specific area or areas of theater interest and related to other disciplines whenever possible. Pertinent in the study of theater of various periods and cultures.

709-405 Theater Management 3 cr.
A course in theater management on both the professional and non-professional levels. Will include the organization and classes of professional theaters and types and organization of non-professional theaters. Financial or business management, box office procedures, and promotion and publicity units will pertain to both the professional and non-professional theaters. P: 6 credits of theater courses or consent for non-theater students.

See also relevant courses in other areas including 242-241, 242, Introduction to Theater History I, II and relevant courses in literature and language.

Social Sciences

CONCENTRATIONS:
Human Development
Regional Analysis
Social Change and Development
Urban Studies

DISCIPLINARY PROGRAMS:
Anthropology
Economics
Geography
Political Science
Psychology
Sociology

Three courses serve all of the social sciences, and therefore are listed separately from the individual programs of study. Some students in the humanities and fine arts, natural sciences, and professional studies may be required or recommended to take these courses also. The courses are:

255-102 The Social System† 3 cr.
Introduction to concepts and concerns of the community sciences through an inter-disciplinary focus on problems and opportunities of humans and their social environment.

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: soph st.

255-305 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. P: 600-260 or 255-205 and one course in social sciences.

Human Development

Associate Professors: Fergus Hughes, life-span human development, cognitive development, children's play, perceptual development; **Richard D. Logan** (chairperson), middle childhood and adolescence, personality theory, cross-cultural study of human development, psychology of adaptation, coping and survival.

Assistant Professors: Frederick L. Gove, infancy and early childhood development, parent-infant relations; **Andrea Lindstrom,** gerontology, personality, developmental deviations and guidance; **Paul Muhs,** adult development and aging, cognitive development, social functioning in later life.

†Approved for Social Sciences Distribution Credit.

The Human Development concentration is concerned with the interdisciplinary study of human development from conception to death. It provides basic understanding of changes, tasks, and crises that occur throughout the normal human life span, as well as examination of factors that promote both normal development and deviations from normal development.

Human Development is similar to a developmental psychology program, except that it is expanded to cover the whole life cycle—from infant psychology to gerontology—and broadened to include the biological, social, and cultural factors that influence the process of development. It is, therefore, an interdisciplinary program including human biology, anthropology, and sociology, as well as developmental psychology.

Students planning a career working with people major in Human Development in order to acquire broad background knowledge about human development and behavior. Students whose ultimate goals are to provide educational, guidance, 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.

Numerous areas can be emphasized within Human Development. These include: general child development, child development and family studies, adolescence and youth, adulthood and aging, language development, biological development, and cross-cultural comparative studies. In addition, Human Development may be combined with Education, with the Social Services professional program (or as a minor with the Social Work degree program), with communication processes (linguistics), with physical education and recreation, and with psychology, anthropology or sociology. Advisers can provide information on these programs, and will discuss other possibilities not covered here.

For students planning careers in early childhood, elementary, or secondary education, for example, Human Development provides a preprofessional program of courses that covers fundamentals of child development, cognitive development, play and creativity, observation of behavior, and developmental deviations. Students who desire Wisconsin certification in early childhood education will take in addition a sequence of methods and student teaching courses offered by the professional early childhood education program within Education. Students desiring elementary or secondary education certification will also fulfill professional course requirements through the Education professional program. All students desiring certification should obtain the *Handbook of Teacher Certification* through an adviser, which gives requirements of the State Department of Public Instruction for certification.

Students aiming for graduate study in psychology would typically take either a Human Development major with selected psychology courses included in the major, or would pursue a combined Human Development/psychology major. The content of their programs would vary depending on whether they were planning careers in developmental, clinical, or counseling psychology, or biopsychology. The Human Development/psychology combination has been proven to provide a strong background for graduate work in psychology. Students planning graduate work should consult with the concentration adviser, study graduate school requirements, and prepare for Graduate Record Examinations as early as possible.

SAMPLE PROGRAMS

Following are some examples showing how Human Development can be combined with elementary education and psychology. Sample programs for other combinations are available. The samples show only how programs *might* be organized to meet specific educational goals. They should not be substituted for direct academic counseling. The hand-out *About Human Development* contains many sample programs, available at the Human Development office.

Elementary Education

A typical program in Human Development for combination with the elementary education certification program would consist of approximately 39 credit hours structured like this:

Background and Tool Subjects (3 courses)
481-210 Introduction to Human Development
OR
820-102 Introduction to Psychology

478-102 Introduction to Human Biology

255-205 Social Science Statistics
OR
600-260 Introductory Statistics

Human Development Courses (total of 10)

Required:
481-331 Human Development I: Infancy and Early Childhood
481-332 Human Development II: Middle Childhood and Adolescence
481-431 Cognitive Development
481-433 Human Development III: Adulthood and Aging
481-435 Developmental Problems and Deviations

Five electives chosen from:

Strongly recommended:
481-436 Developmental Guidance with Children and Adolescents

To fulfill Education program human relations requirements:
481-336 Sex Role Development in Contemporary Society
481-432 Cultural Impacts on Human Relations
481-437 Developmental Guidance with Adults and the Aged

Additional electives including:
478-313 Brain Functions in Human Behavior
481-334 Play and Creative Activities in Childhood
481-429 Theories of Personality Development
481-441 History, Philosophy and Current Programs in Early Childhood Education
900-304 Deviant Behavior
Related junior and senior level courses in psychology
Related junior and senior level courses in anthropology

Psychology

The total number of credits in Human Development for combination with psychology is usually 24 or 27 credits. The combined credit requirement for the two programs is 36 credits of junior and senior level courses.

Human Development Courses

Core developmental sequence:
481-331 Human Development I: Infancy and Early Childhood
481-332 Human Development II: Middle Childhood and Adolescence
481-433 Human Development III: Adulthood and Aging

Clinical sequence:
481-435 Developmental Problems and Deviations

481-436 Developmental Guidance with Children and Adolescents
AND/OR
481-437 Developmental Guidance with Adults and the Aged

Desirable courses for graduate school preparation:

481-337 Developmental Tests and Measurements
481-429 Theories of Personality Development
481-431 Cognitive Development
481-432 Cultural Impacts on Human Development

Psychology Courses

820-300 Experimental Psychology
An advanced social psychology course
An advanced course in general psychology, such as Psychology of Motivation or Psychology of Perception
Additional advanced courses to make a total of 36 credits

Programs will vary according to individual needs and with changing requirements and course offerings. Programs frequently are written to satisfy other career interests for individual students.

Some courses in other academic programs may also be counted toward the Human Development major, depending on how those courses fit with the aims of the Human Development program and with the interests and career plans of students.

COURSES

481 HUMAN DEVELOPMENT

481-202 The Growing Years† 3 cr.
A general introduction to issues, theories and basic knowledge about normal physical, mental, and personality development. The objective is to examine how genetic, biological, environmental and sociocultural forces influence development from the earliest womb environment through early childhood into adolescence. Course presentations include 30 half-hour video-tape programs. Periodic meetings with class instructor also are scheduled. Designed for non-majors; prospective majors should enroll in 481-210.

481-210 Introduction to Human Development† 3 cr.
An interdisciplinary approach to the study of human development from conception through death. This survey course 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.

†Approved for Social Sciences Distribution Credit.

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 development are examined as values systems that help to shape the process of understanding people and particularly that influence 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 19.

481-283X Selected Topics in Human Development 1-4 cr.
See page 19.

481-298 Directed Study 1-4 cr.
See page 19.

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. P: 481-210 or equivalent.

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 that influence the developmental process. Emphasis on behavior, emotions, and thought 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: 481-331.

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.

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.

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. P: 481-331 and written cons inst.

**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: soph st and some course work in psychology, sociology, or anthropology.

481-337 Developmental 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.

481-429 Theories of Personality Development 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: 481-331 and jr st.

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.

481-432 Cultural Impacts on Human Development 3 cr.
Covers cultural differences in perception, cognition, language and thought, child development, child-rearing, and personality. Examines relationships be-

tween various aspects of culture (value, economy, ecology, political system) and psychological functioning within both non-Western cultures and American ethnic subcultures. P: 481-331, 332.

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: 481-331, 332.

481-435 Developmental Problems and Deviations 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: 481-331, 332.

481-436 Developmental Guidance 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: 481-331, 332, 435.

481-437 Developmental Guidance 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. P: 481-331, 332, 433, 435.

481-439 The Elderly: Social and Behavioral Implications for Health Care 3 cr.
An interdisciplinary overview of older Americans, with emphasis upon creating for them an optimum environment. Physiological change, problems of meeting health care needs, social status, and psychological change, with emphasis upon individual differences. Historical and anticipated future changes in the older population will be discussed.

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: 481-331, 333, 334 and 431.

481-442 Curriculum and Program Development in Early Childhood Education 3 cr.**
A developmental approach to curriculum and program, including the effective interweaving of various disciplines in a program for young children. Program priorities and planning will be considered within the context of developmental levels and the variety of populations to be served. (Also listed as 302-442.) P: 481-331, 333, 334, 431 and 441.

481-445 Early Childhood Center Administration and Community Resources 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: cons inst.

**Meets a requirement for certification in early childhood education in Wisconsin.

(See also 302-402, Section 7 [student teaching for Early Childhood Education].)

481-481 Student-Led Courses 1-4 cr.
See page 19.

481-483X Selected Topics in Human Development 1-4 cr.
See page 19.

481-484 Senior Distinction Project 3 cr.
See page 19.

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.

481-498 Directed Study 1-4 cr.
See page 19.

Regional Analysis

Professors: Donald Gandre, transportation systems, regional geography (United States and Great Lakes areas of the United States and Canada); **James Murray,** regional economics, economic development, quantitative methods; **William Smith,** environmental psychology, social psychology, northern lands.

Associate Professors: Martin Greenberg, political characteristics of the Middle East and Latin America, international politics; **Kumar Kangayappan,** economic development, economic theory, comparative economic systems (on leave 1980-81); **William Kuepper,** regional geography (Africa), climatology, settlements; **William Leatsch** (chairperson), cultural geography, northern lands, settlements; **Ismail Shariff,** economic theory, economic development, international trade.

Assistant Professors: Lyle Gorder, regional geography (Europe, the Soviet Union, and Wisconsin), coastal zones, economic geography; **William Niedzwiedz,** planning, remote sensing, environmental impact analysis.

The Regional Analysis concentration provides students with the opportunity to apply basic skills from several disciplines or subjects to understanding the human and physical characteristics of various regions of the earth. These characteristics are studied with particular regard to their interrelationships and arrangements within a given area. This focus is reflected in the several programs within Regional Analysis.

Each program requires a total of 30 credits of junior or senior level courses, plus 6 credits of tool subjects in addition to all-University requirements. Programs within Regional Analysis fall into three categories:

GENERAL PROGRAM

This leads to a broad-based liberal arts degree in Regional Analysis. It is designed for students with a variety of interests in the arts and sciences. The requirements of the general program are flexible to fit particular needs of each student.

AREA TRACKS

This category offers students the opportunity to focus majors on a particular area of the earth. Regions appropriate for an area emphasis vary in size and uniformity

but all allow course work in a variety of concentrations and disciplinary programs. While an interested student may suggest any region for a possible emphasis, several are particularly appropriate for study based on resources available in Regional Analysis and in other academic departments at the University. These include: the Northwestern Europe, and the tropical world.

THE APPLIED PROGRAMS

Geared to the student who may have a particular career orientation, these programs allow specialization in land use analysis and planning, transportation analysis, regional economic development, or regional outdoor recreational planning. Applied programs include:

Regional Planning. Students completing this program will have a basic knowledge of the components of land use and their relationships; land analysis and classification; research techniques, and presentation formats. Students also will be able to appreciate and understand land use and related problems at local, regional, national, and international scales. Land use planning is a likely career field. Graduate school is another possibility.

Transportation Analysis. This program is designed to provide the student with an understanding of the character of existing transportation systems, along with their development, change, and future prospects. In addition, the relationship and influence of transportation to or on other environmental components and economic activities will be considered in a number of courses. Students completing the program will have acquired some basic knowledge about employment opportunities in: transportation planning with governmental agencies at the regional, state, or federal level; transportation planning with private consulting firms; and transportation operations with industrial firms or carriers.

Regional Economic Development. This track provides a good background on how our economy works. It also includes courses which prepare students for some practical applications of this knowledge. In addition to offering insights into the system and all of its problems, it provides an intellectual and technical base for people who want to help improve the quality of life in the locales where most people function—communities and regions. Students pursuing this program would qualify for employment as economic development specialists for regional planning commissions; in federal, state, and local government departments of economic and industrial development; industrial development units of major transportation and manufacturing firms; economic development positions in government and business. It also would be suitable undergraduate preparation for a graduate degree in economics, regional science, or planning.

Regional Outdoor Recreation Planning. Students in this emphasis learn the interrelationships of the social, ecological, and spatial aspects of leisure and outdoor recreation phenomena in regional settings. A professional program in recreation resources is recommended. Employment possibilities include regional recreation planning in federal agencies; state, county, and municipal planning agencies; regional planning commissions; private planning consulting work; tourism development firms; and other related positions in government and business.

Students wishing to complement majors in Regional Analysis may do so by taking professional programs. Those in recreation resources, business administration, and public and environmental administration are most closely related to Regional Analysis. Usually with such a combination, an additional 18 credits are required over and above the requirements in Regional Analysis.

Applied and Analytical Techniques. The program on techniques provides an opportunity to gain quantitative and analytical capabilities in a broad spectrum of the social sciences, natural and physical sciences, and the arts. The emphasis of this track is on demonstrating and applying various theories and quantitative techniques in an empirical setting to real-world problems and issues. It is anticipated that by taking the appropriate combination of courses and undertaking research projects, students will be able to gain an in-depth understanding and knowledge in applying these techniques to the issues and problems of local, regional, national and international character.

This program would qualify graduates for positions in government, universities, community organizations, and industry as researchers and policy analysts. Examples of such positions include university extension assignments, neighborhood associations, community development corporations, marketing groups, planning agencies, and research organizations. The track would also serve as suitable preparation for graduate work in economics, regional science, environmental studies, and planning.

Human *Settlement.* This program is concerned with both the processes and forms of settlement. To these ends students will gain understanding of the "push" and "pull" of migrations and the nature of the "cultural baggage" carried by the migrants. The scale of these studies will vary. At times the earth will be viewed as if from a satellite and only the largest forms—such as urban areas, cultivated lands, wild areas, and the well defined linear features of communication and transportation—will be observed, described, and analyzed. At a more detailed level of investigation, students will continue to focus on forms and processes of settlement, but common elements of the landscape will take on new significance. These elements include economic activities, human spatial behavior, and elements of material culture. In addition to understanding the nature of human constructs on the earth's surface, students will learn about values, institutions, and technologies that influenced these forms.

While basically a part of a liberal arts sequence, a student completing this program could consider employment in land use planning, historic and ethnic preservation, museums, and community development.

CO-MAJORS

Students who wish to gain depth or expertise in a particular discipline may do so by combining the Regional Analysis concentration with a disciplinary program. This would involve selected courses from within Regional Analysis and from within a discipline (such as economics, geography, earth science, psychology, sociology, etc.) amounting to a total of 36 credits at the 300 and 400 level.

SAMPLE PROGRAMS

Following are sample programs for several of the emphases within Regional Analysis. Other sample programs are available. Keep in mind that these are examples. Each student will plan his or her own program with the help of a faculty adviser.

Included are samples for the general program, for one of the area tracks, and for two of the applied programs: land use analysis and planning, and regional outdoor recreation planning.

General Program

Background Courses:
298-202 Macro Economic Analysis
416-102 The Regions of Earth: An Introduction to Geography
416-202 Introduction to Cultural Geography
820-290 Environmental Psychology
834-222 The Ocean of Air: an Introduction to Weather and Climate
834-235 Wisconsin Landscapes and Regions

Core Courses (6 courses required):
834-320 Introduction to Regional Analysis
834-362 Analysis of Great Lakes Region of Africa
834-372 Analysis of Great Lakes Region of North America
834-325 Behavior in Designed Environments I
834-420 Regional Planning
834-472 Senior Seminar in Regional Analysis

Related Courses (4 courses required)

Great Lakes Region of North America

Lower Level Courses (several of the following should be taken):
416-102 The Regions of Earth: An Introduction to Geography
416-202 Introduction to Cultural Geography
416-215 Economic Geography
448-206 History of the United States from 1665 to the Present
862-286 Forest Vegetation of Wisconsin

Core Courses (6 courses required):
834-320 Introduction to Regional Analysis
834-372 Analysis of the Great Lakes Region of North America
One area course outside of the United States
834-335 Transportation Systems in the United States
834-401 Regional Economic Analysis
834-472 Senior Seminar in Regional Analysis (topic dealing with Great Lakes Area)

Related Courses (4 courses required)

Regional Planning

Lower Level Courses (several of the following should be taken):
296-202 The Earth's Physical Environment
298-202 Macro Economic Analysis
298-203 Micro Economic Analysis
416-202 Cultural Geography
416-215 Economic Geography
552-105 Introduction to Expository Writing
834-222 The Ocean of Air: an Introduction to Weather and Climate
862-284 Husbandry of the Land

Core Courses (the following are required):
834-320 Introduction to Regional Analysis
834-372 Analysis of the Great Lakes Region of North America
One area course outside of the U.S.
834-420 Regional Planning
834-421 Techniques and Methods of Planning Analysis
834-472 Senior Seminar in Regional Analysis

Related Courses (4 courses required)

Regional Outdoor Recreation Planning

Lower Level Courses (several of the following should be taken):
296-202 The Earth's Physical Environment
298-202 Macro Economic Analysis
416-202 Cultural Geography
820-290 Environmental Psychology
834-235 Wisconsin Landscapes and Regions
862-284 Husbandry of the Land
862-286 Forest Vegetation of Wisconsin
862-288 Man and Wildlife
900-202 Introduction to Sociology

Core Courses (6 courses are required)
834-320 Introduction to Regional Analysis
834-372 Analysis of the Great Lakes Region of North America
One area course outside of the U.S.
834-412 Regional Outdoor Recreation Planning I
834-413 Regional Outdoor Recreation Planning II
834-472 Senior Seminar in Regional Analysis

Related Courses (4 courses are required)

COURSES

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.

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.

834-235 Wisconsin Landscapes and Regions 3 cr.
Wisconsin's natural and cultural landscapes—specifically the characteristics and origins of land form and earth material regions and their associated cultural features. Field trips included. See 416-235.

834-281 Student-Led Courses 1-4 cr.
See page 19.

834-283X Selected Topics in Regional Analysis 1-4 cr.
See page 19.

834-298 Directed Study 1-4 cr.
See page 19.

834-320 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.

834-321 Land-Use Controls: Zoning and Subdivision Regulations 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, whereas, the "how" aspect, being applied in nature, is illustrated with reference to a "real world" situation. Students analyze the zoning and subdivision regulations of a selected community. P: soph st or cons inst.

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 environmental-behavior relationships. P: jr st. See 944-325.

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. P: jr st. See 944-326.

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.

834-340 Economics of Land Use 3 cr.
Study of the economic relationship between man 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 the 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 the management of public and private lands are studied intensively. P: jr st or cons inst.

834-342 Community Economic Development
Study of the various forces involved in the process of community economic development. Includes the resource potentials—human and non-human—the motivation, values and attitudes. The importance of education, and other institutional factors such as the 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 or cons inst.

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.

834-357 Field Methods in Regional Analysis 3 cr.
A summer field camp under faculty supervision in which the student is trained to inventory the uses humans make of the resources of a region. Techniques for evaluating the human resource of the region are developed. Each team of students is assigned to a specific research area. P: jr st.

834-362 Analysis of the Great Lakes Region of Africa 3 cr.
A systematic analysis of the areas surrounding the Great Lakes of Eastern Africa, with emphasis on the ecological and historical bases of cultural, economic, and political diversity; the resource base with respect to economic activities and regional development. P: soph st.

†Approved for *Social Sciences Distribution Credit.*

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.

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.

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.

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 Greenland. P: soph st. See 416-377.

834-382 Regional Analysis of Northwestern Europe 3 cr.
An analysis of the physical, economic, and cultural regions within the British Isles, France, the Germanies, Switzerland, Austria, and the Benelux and Scandinavian countries. Comparison of the region as a whole in its relationships with the rest of the world. Map work is emphasized. P: soph st.

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.

834-395 Seminar: Transportation Systems in Wisconsin 3 cr.
An analysis of the existing character of inter-city 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. (Offered in January only.) P: jr st or cons inst.

401 Regional Economic Analysis 3 cr.
See 298-401.

834-412 Regional Outdoor Recreation Planning I 3 cr.
Designed to provide for the combining of academic knowledge on outdoor recreation plans with the practical experience of producing an outdoor recreation plan. Emphasis will be placed upon the inventory, analysis, tabular, graphic and written materials necessary to provide a community, county or region with the document necessary to implement an outdoor recreation program. Involvement with community leaders, citizens and various governmental agency personnel may be included. The actual practice in producing an outdoor recreation plan will be the desired goal of the class. Lectures, readings, case studies, implementation devices, field trips and community lectures from recreation planning professionals will also be included. P: jr st.

834-413 Regional Outdoor Recreation Planning II 3 cr.
A link between the academic inputs of leisure science to recreation planning and "on the ground" considerations in the professional world of the regional planner; introduction to recreation resource analysis techniques and drafting; community-planner relations; inter-agency relations; on the ground process and politics of regional recreation and open space plan formulation and implementation; case studies; field trips and community lectures drawing on recreation planning professionals. P: jr st. See 827-413.

834-420 Regional Planning 3 cr.
The concept of planning, the history of its use in the development of regions, and the present status of planning in the United States with some international comparisons. P: jr st.

834-421 Techniques and Methods of Planning Analysis 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.

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 862-454.

834-472 Senior Seminar in Regional Analysis 4 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.

834-481 Student-Led Courses 1-4 cr.
See page 19.

834-483X Selected Topics in Regional Analysis 1-4 cr.
See page 19.

834-484 Senior Distinction Project 3 cr.
See page 19.

834-498 Directed Study 1-4 cr.
See page 19.

Social Change and Development

Associate Professors: Bela Baker, social psychology, social change, motivation, thinking; **Julie Brickley** (chairperson), mythology, women's studies, social change; **Tony Galt,** social anthropology, social change, Mediterranean society; **Craig Lockard,** social history, Southeast and East Asia, revolutionary change; **Carol Pollis,** sociology, families, sex roles, social change; **Larry Smith,** economics, social and economic development in U.S. and foreign third sector communities.

Assistant Professors: Harvey Kaye, political economy, historical sociology, Latin America, Britain, sociology of culture and ideology; **Lloyd Nesberg,** psychology, learning, social and cultural aspects of stress, role of punishment in social change; **Daniel Rosenberg,** anthropology, socio-political change, socialist societies, drugs and society, contemporary American culture; **Pat Samuel,** law and society, women and the law, social problems, community organizing; **Lynn Walter,** social

anthropology, socioeconomic organization and change, women in the third world.

Social change is a dominant feature of life in the 20th century. It is evident in the adjustments and conflicts which characterize both the developed and underdeveloped societies. The concentration in Social Change and Development is concerned with the processes of social change and social interaction in the modern world.

Concentration members feel strongly that many social, economic, and political problems remain unresolved both in this country and throughout a rapidly changing, highly interdependent world; therefore, the emphasis of the program is on identifying and analyzing social problems as well as developing practical and theoretical skills for approaching these problems.

Social Change and Development faculty members represent a variety of disciplines including anthropology, economics, history, literature, political science, psychology, and sociology. This diversity allows students to study social change from social, political, economic, historical, and cultural perspectives. The program has a dual focus, with some faculty specializing in contemporary America and others interested chiefly in non-North American societies, especially those of the third world—Asia, Africa, Latin America.

Concentration courses reflect these dual interests, which makes Social Change and Development an appropriate major for both students interested in international studies and those chiefly concerned with American-oriented fields such as pre-law, women's studies, social work, social activism, and American studies. Some courses deal with strategies for social change and individual adjustments, while others develop perspectives on, and understanding of, the nature of contemporary America or the modern world.

The major in Social Change and Development strives to fulfill personal objectives and to contribute to skills and perspectives for work in social change organizations, governmental institutions, private and public agencies, and the fields of law, journalism, social work, teaching, and business in the United States and abroad.

It also constitutes an appropriate interdisciplinary concentration for students specializing in any of several disciplinary programs (such as anthropology, economics, history, geography, political science, psychology, and sociology), professional programs (including Social Services, Education, and Public and Environmental Administration), and the Women's Studies interconcentration program. A Social Change and Development major can be usefully combined as a supportive field of study with Managerial Systems.

The curriculum is flexible, allowing each student considerable leeway to develop an integrated program stressing his or her major interests. Students are encouraged to develop their perspectives and skills through experiences outside of the classroom as well as within.

Students who plan to join the concentration in Social Change and Development as majors should discuss their ideas about a viable educational program as early as possible with faculty whose interests most closely relate to their own, or with the concentration adviser. Students who file academic plans early in their studies are most able to develop programs that fully meet their needs. Social Change and Development 360 and 361 are the only required components of these programs, but additional guidelines are outlined in a brochure available from the adviser.

SAMPLE PROGRAMS

Following are examples of some emphases that may be pursued through the Social Change and Development concentration.

Law and Social Change

Freshman and Sophomore Years:
575-206 Law and the Individual
736-111 Elementary Logic
736-100 Ethics
875-100 Contemporary Problems and Social Change

Junior and Senior Years:
875-360 Models and Social Change
875-361 Historical Perspectives on Social Change
875-320 Law, the Constitution and American Development
875-325 Law in Society
875-400 Environmental Law
875-348 Women and the Law
778-400 Intergovernmental Relations in the United States
448-403 Political and Social History of Modern America
448-404 Political and Social History of Modern Europe

Women's Studies

Freshman and Sophomore Years:
156-100 Varieties of World Culture
493-206 Women in Literature
875-100 Contemporary Problems and Social Change
875-235 Sex and Society
875-241 Women and Changing Values
900-208 Marriage and the Family

Junior and Senior Years:
156-304 Family, Kin, and Community
242-477 Women as Creative Agents
875-340 Woman as Worker
875-342 Women, Myth, and Identity
875-345 Women in Cross-Cultural Perspective
875-360 Models and Social Change
875-361 Historical Perspectives on Social Change
875-440 Women and Religion
875-450 Schooling, Education, and Social Change
944-345 Women in American Perspective

Development Studies

Freshman and Sophomore Years:
156-100 Varieties of World Culture
298-202 Macro Economic Analysis
298-203 Micro Economic Analysis
448-210 Rise of the International Economy from 1400 to the Present
416-215 Economic Geography
875-100 Contemporary Problems and Social Change

Junior and Senior Years:
298-402 Resource Economics Analysis
298-404 Economics of Developing Areas
448-350 Social History of Europe since the Industrial Revolution
448-356 History of Africa
875-301 Social Change and Development Field Studies
875-333 Social Change in a Selected Area
875-360 Models and Social Change
875-361 Historical Perspectives on Social Change
875-385 Dynamics of Revolutionary Change
875-460 Continuity and Change in Agrarian Society

COURSES

875 SOCIAL CHANGE AND DEVELOPMENT

875-100 Contemporary Problems and Social Change 3 cr.
Sensitizes students to major contemporary social problems and issues and their relationships to social change. Emphasis placed upon alienation, inequality, international political and economic imperialism, and ecological crisis. Cases and examples drawn primarily, but not exclusively, from the United States and its international experience.

875-201, 202 Fiction and Society I, II 3, 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 courses demonstrate that there is a need for both the imaginative and scientific approaches if we are to reach some kind of understanding of our values, both personal and societal, and of the impact those two sometimes very different sets of values have on us, on our society, and on other cultures. The two course sequence examines 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. Fiction studied in the first semester is primarily by American writers.

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: 255-102.

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 has become more subtle and powerful. The increasing infringement upon individual freedoms, and increasing institutional power and prerogative, has raised ever-important questions of ethics, morals, and values concerning freedom and social control which this course will explore. A significant portion of time will be spent on individuals' freedoms and institutional controls from other-culture perspectives. P: 255-102.

875-233 Youth Movements and Manias† 3 cr.
Seeks to understand American values, contradictions, and problems through an analysis of group behavior among members of youth cultures. The ability of conventional society to meet certain human needs is a focus of analysis. Phenomena studied may include the commune movement, Jesus freaks, the Manson family, the Weather Underground, the Hare Krishna movement, witches, gangs, rock concerts, drug users and abusers, female impersonators, athletic teams, the scouting movement, and alternative schools.

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.

†Approved for Social Sciences Distribution Credit.

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.

875-251 The Individual and Forces of Change in Human Societies 3 cr.
An introduction to forces of change in cross-cultural and evolutionary perspective, stressing their impact on the individual. Emphasis is on material forces of change, classic issues in the relation of the individual to society, the effects of modernization, and the interrelationships among political goals, economic power, and institutional structures.

875-281 Student-Led Courses 1-4 cr.
See page 19.

875-283X Selected Topics in Social Change and Development 1-4 cr.
See page 19.

875-290 Power and Change in America† 3 cr.
Who has power and what to do about it. Systematic analysis of where power in America and the community lies. How the holders of power got where they are, and how change occurs. How to gain power.

875-298 Directed Study 1-4 cr.
See page 19.

875-301 Social Change and Development Field Studies 6 cr.
Field course designed to be taken in conjunction with other Social Change and Development courses. Concentrates on aspects of social change in Northeastern Wisconsin and elsewhere.

875-311 The Role of Punishment in Society 3 cr.
Punishment and its many corporal and psychosocial variations has always been with us. Its effectiveness as an institutional and individual tool for social control and change is rarely questioned by the general public. This course challenges the effectiveness and values of punitive societies. Can a punitive society achieve and maintain constructive social control and change and sustain human values? If not, can we go beyond punishment and find an effective instrument for beneficial social control and change? P: 156-100 or 900-202.

875-320 Law, the Constitution, and American Development 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. P: 6 cr. in Social Change and Development, political science or history courses.

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. P: jr st or cons inst.

875-333 Social Change in a Selected Area 3 cr.
Processes and strategies of social change and development in a selected nation or set of nations. Course may be repeated for credit each time it focuses upon a different area.

875-340 Woman as Worker 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.

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.

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 world-wide. P: 875-241.

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.

875-350 Marx and Modern Social Science 3 cr.
An examination and critical analysis of the work of contemporary social scientists working within, or strongly influenced by, Marx and the Marxian tradition. Areas to be covered include social history, political economy, political sociology, work and industry, education, culture, race/ethnicity, women, and personal life and the family.

875-354 Comparative Communism 3 cr.
An examination of social institutions, political processes, and social values in selected communist-led nations. Human rights in communist states will also be discussed.

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: 875-100 or equivalent.

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. P: 875-360 or cons inst.

875-365 Human Resources and Economic Growth in Poor Countries 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 779-320; jr st. See 779-365.

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.

875-378 Drug and Alcohol Use in Society 3 cr.
The nature and use of mind-altering drugs, including alcohol, marijuana, heroin, amphetamines, barbiturates, LSD, mescaline, and cocaine, are examined. The social context of drug use and abuse in society are viewed in a cross-cultural perspective although the use of these drugs in American society will be the primary focus. Attention to the cultural context of drug consumption, drug traffic, the law and users, drug education and miseducation, and treatment approaches. The effects of drug use on the mind and body, and the reasons for using mind-altering substances are stressed. Guest speakers, lectures, group discussions, research projects and field observation are the principal means of exploring this subject. P: 3 cr social science coursework.

875-385 Dynamics of Revolutionary Change 3 cr.
A few political revolutions are examined, but emphasis is on the political, social, and psychological restructuring of societies brought about by social revolutions. The significance of this process as a method of change is contrasted to the slower-paced dynamics of evolutionary change.

875-390 Racism and Social Change 3 cr.
Modern biological thinking on race as a concept is discussed. Then the social history of racism in European and American popular and scientific thought is treated in light of major social change trends during the past several centuries. Insights from sociology, anthropology, and psychology are included. Case studies concerning racist and non-racist plural societies conclude the course. P: jr st, 875-360/361 recommended.

875-400 Environmental Law 3 cr.
Synthesis of the fragmented collection of court decisions on federal, state, and local levels, and examination of various legislative statutes and administrative units (AEC, Forest Service, National Park Service, etc.), problems of legal jurisdiction (including procedural questions), and substantive determinations by the courts.

875-410 Science Fiction: Alternative Social Futures 3 cr.
Inquiry into alternative futures emphasizing the element of choice in the design of tomorrow. Through the medium of speculative fiction novels, different social environments are explored and traced back to antecedents in the present social fabric, leading to a better understanding of present social change and its implications for the future.

875-415 Development, Technology and Environmental Quality 3 cr.
Interrelationships between people, technology, and environment in relation to social, political, and economic development and environmental quality. The cultural bases of and solutions to problems of environmental degradation in developing and especially in modern societies. P: 875-360/361 recommended.

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 will examine organized religions, principally those in the Judeo Christian tradition; we will explore the history of organized religions, theologies and religious traditions as they shape and enforce the "accepted" roles and rules for women and men.

875-450 Schooling, Education and Social Change 3 cr.
The school as an institution and its relationship with other institutions in society are examined from the perspectives of sociology, history, and political economy. Special attention is given to comparative analysis of the role of education in societal development and to reform movements within education. P: 875-360/361 or cons inst.

875-460 Continuity and Change in Agrarian Societies 3 cr.
A comparative study of the agrarian sectors within underdeveloped nations and within highly industrialized nations. Emphasizes the relationships between urban centers and rural society and the forms of adaptation and resistance created by agrarian peoples in such relationships. P: 875-360/361 recommended.

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.

875-481 Student-Led Courses 1-4 cr.
See page 19.

875-483X Selected Topics in Social Change and Development 1-4 cr.
See page 19.

875-484 Senior Distinction Project 3 cr.
Consult concentration adviser at the beginning of the senior year. See page 19.

875-490 Directed Study 1-4 cr.
See page 19.

Urban Studies

Professors: Eric Knowles, psychology, environment and behavior, human spatial behavior, research methods, social influence, personality research; **Nicholas Pollis,** social psychology, altruism and helping behavior, organizational behavior, urban stress.

Associate Professors: Ronald Baba, social ecology, decision-making systems relating to the quality of the urban environment, urban planning, environmental design, impact of the designed environment on human behavior and health, problem solving and creativity systems; **Per K. Johnsen,** psychology, environment and behavior, social and behavioral consequences of design, human spatial behavior, privacy and territorality; **Peter Kellogg,** urban life and history, ethnicity in the U.S., modern U.S. history, civil rights; **David M. Littig,** urban politics, public policy, urban transportation, Latin American politics; **Charles Matter** (chairperson), experimental/biological psychology, behavioral toxicology, perceptual processing, cognitive processes, evolution of behavior; **Robert Mendelsohn,** social and clinical psychology, community psychology, community mental health systems, the criminal justice system; **E. Nelson Swinerton,** political science (on leave); **C. Jarrell Yarbrough,** political science, constitutional law, public law, political theory, American government, urban and environmental public policy.

Assistant Professors: Sidney Bremer, literature and women's studies, the urban novel and artistic images of the city, fiction by and about women and ethnic figures, stereotypes and minority groups, American cultural and intellectual traditions, (on leave 1980-81).

Instructors: John Gould, sociology, deviant behavior, collective behavior, complex organizations.

From Green Bay to San Francisco, America is an urban nation and the key to understanding the dynamic forces behind its development is the study of cities. The major forces shaping our society, the central problems, and the prospects for the future are bound up with urban life. Thus, the Urban Studies concentration offers a most effective way of bringing interdisciplinary perspectives to bear in analyzing the chief issues of our time.

Urban Studies provides an integrated view of contemporary social problems and forces. It gives students a variety of disciplinary tools for analyzing modern society and devising solutions to social problems. The focus on urban life brings a broad range of disciplines to bear on a single area to provide a far richer, more sophisticated understanding of modern life than would otherwise be possible. Once this broad-based understanding of urban society is achieved, each student can select an individualized area of intellectual or professional specialization. Thus, a student could gain an interdisciplinary view of urban civilization and then specialize in a disciplinary emphasis such as psychology or political science or an area of study such as culture or ethnicity, or could move to a professional program such as city planning or human services. Urban Studies offers a creative way of integrating the major disciplines to achieve a liberal education with a concrete focus and several possible courses of study leading directly to professional careers.

Specifically, our location in Green Bay provides an excellent opportunity for fieldwork and hands-on, practical experience in a city of the size where there is the most rapidly accelerating market for urban professionals. It is mid-sized cities which are growing fastest in America and which are just beginning to develop their staffs in human services and urban planning. The Urban Studies faculty has a wide range of contacts with local agencies and institutions and can provide many opportunities for practical experience, placements and fieldwork. UWGB has one of the few urban programs in the nation which specializes in medium-sized cities. Thus, we offer students exceptional opportunities to prepare for careers where there is most likely to be a growing demand in coming years.

THE PROGRAM

The heart of the Urban Studies program is a group of five core courses carefully designed to give each student a solid foundation in understanding urban society. The core consists of the following five courses which each student will take:

944-305 Urban Politics and Policy
944-313 The City Through Time and Space
944-421 Urban Planning I
944-440 Social Dynamics of Urban Life
944-479 The Concept of Community in American Society

Using the core courses as a foundation, students can then select from among a variety of disciplinary, interdisciplinary, or professional areas of emphasis. With each area of emphasis, appropriate background courses are recommended and at least six hours of tool courses are required. An Urban Studies concentration thus requires at least 30 hours of urban or related courses and at least six hours of tool and background courses. Any student may devise an individual program in consultation with concentration advisers. To illustrate some of the most promising ways of planning a curriculum in Urban Studies, the concentration has prepared a series of sample tracks which students can follow, depending on their interests.

These illustrative tracks include emphases in the following disciplines, professional concerns, and problem or thematic foci.

Disciplinary Emphases (36 upper division credits and 6 credits of tool subjects required)
Political Science
Psychology
Sociology

Professional Emphases (30 upper division credits and 6 credits of tool subjects required)
Environmental Design
Human Services
Urban Planning

Thematic Emphases (30 upper division credits and 6 credits of tool subjects required)
Cultural Diversity
Social Justice and American Institutions
Women's Studies

Complete descriptions of these tracks are presented in the brochure, *UWGB Programs in Urban Studies*, which is available in the Urban Studies office.

These different courses of study allow students to prepare for a variety of professional careers or graduate study in a number of disciplines or professional fields. Obvious choices include careers in human services, education, city planning, urban administration, law, communications, journalism, and a number of business careers. In addition, the concentration offers excellent preparation for graduate study in political science, psychology, sociology, history, and many professional programs including human services, urban planning, urban administration, public administration, business administration, or women's studies.

A concentration in Urban Studies would include courses under these headings.

Interdisciplinary Background Courses
For each area of emphasis a selection of interdisciplinary background courses is recommended to strengthen the student's foundation for dealing with issues raised in that area.

Tool Subjects (at least 6 credits required)
At least six hours of tool subject courses are required for each area of emphasis selected from courses which will provide analytic skills important for work in that area.

Urban Core Courses
The City Through Time and Space
Urban Planning
Social Dynamics of Urban Life
The Concept of Community in American Society
Urban Politics and Policy

Area of Emphasis Courses (at least 15 credits required)
These courses will be selected by the student and an adviser to provide the desired area of focus on a particular discipline, an urban issue, or a professional career.

SAMPLE PROGRAM

Following is a sample program for one of the possible emphases available through the Urban Studies concentration. Keep in mind that this is only an example. Students' program will vary depending on the particular track and the specific interests they follow. This example shows the courses that could be taken by a student following the co-major track in psychology and Urban Studies.

Background Courses (3 credits required)

Required:
820-102 Introduction to Psychology

Recommended:
944-200 The City: An Introduction

Related:
820-202 Introduction to Social Psychology
820-205 Psychology of Human Adjustment
900-202 Introduction to Sociology

Tool Subjects (7 credits required)

Required:
255-205 Social Science Statistics
820-300 Experimental Psychology

Recommended:
600-251 Introduction to Computer Science

Urban Core (9 credits required)
944-305 Urban Politics and Policy
944-313 City Through Time and Space
944-421 Urban Planning I
944-440 Social Dynamics of Urban Life
944-479 Concept of Community in American Society

Psychology Core (9 credits required)

3 credits required from general psychology:
820-306 Psychology of Perception
820-309 Psychology of Motivation
820-338 Psychology of Learning
820-417 Thinking and Problem Solving
820-450 Psychological Stress and Adaptation

3 credits required from social behavior:
820-335 Psychology of Attitude and Public Opinion
820-337 Social Behavior Dynamics
820-415 Organizational Psychology
820-416 Psychology of Intergroup Relations
820-438 Group Dynamics

3 credits required from child psychology:
481-331 Human Development I: Infancy and Early Childhood
481-332 Human Development II: Middle Childhood and Adolescence

Psychological Specialization (9 credits required)
Nine credits from any advanced course dealing with psychological issues or methods. Depending on student's interests and specialization, 300 and 400 level courses may be selected from among all the psychology courses, many Human Development courses, and some courses taught by other program units (see a psychology adviser for a complete list).

Urban Psychology Problem Focus
(6 credits required)
944-325 Behavior in Designed Environments I
944-326 Behavior in Designed Environments II
944-435 Sociocultural Aspects of Urban Stress
944-312 Studies in Urban Behavior
820-416 Psychology of Intergroup Relations (if not used for the psychology core or specialization)

COURSES

944 URBAN STUDIES

944-200 The City: An Introduction† 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.

944-210 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 placed on the use of these drawing systems as aids in the design process. Projects ranging from working drawings to finished display renderings done for various methods of reproduction will be required.

944-230, 231 Values in Black and White America I, II 3, 3 cr.
Designed to increase student's self-knowledge, to help develop a considered, responsible set of personal values, and to promote understanding between black and white Americans. The courses will compare basic values and views of life in two cultures, beginning with a brief look at values in white America and moving to a detailed study of the history and culture of black America. In the second course, we will try to enrich our understanding of and appreciation for the range of possible expressions of the

†Approved for Social Sciences Distribution Credit.

aspirations of the human spirit and the social context of individual values.

944-240 Images of the City in American Literature and the Arts 3 cr.
Focusing on how American writers have dramatized and symbolized cities in novels, poems, and plays, this course also explores visual images of the city in paintings and photographs.

944-281 Student-Led Courses 1-4 cr.
See page 19.

944-283X Selected Topics in Urban Studies 1-4 cr.
See page 19.

944-298 Directed Study 1-4 cr.
See page 19.

944-305 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.

944-310 Studies in Urban Culture and Society 3 cr.
Cultural and social dimensions of urban life are explored through case studies within this topic area. Specific topics will vary from year to year. Examples of topics include: The Political Economy of Cities, The Culture of Poverty, Urban Values, and the Corporation and the City.

944-311 Studies in Urban Resources 3 cr.
The use of urban space and resources is explored through case studies within this topic area; specific topics will vary from year to year. Examples of topics to be considered include: Urban Environmental Policy, Housing, Land Use Policy.

944-312 Studies in Urban Behavior 3 cr.
The interrelation of human behavior and the biophysical and sociocultural environments of cities is examined through case studies. Specific topics will vary from year to year. Examples of topics are: Environmental Perception, Social Responses to Urban Renewal, Altruism, Helping Behavior in Urban Settings and Urban Behavior Patterns.

944-313 City Through Time and Space 3 cr.
Development and comparison of urban patterns in different cultural contexts. Major issues such as community, expansionism, imperialism, autonomy and participation, stratification systems, mobility, poverty, cityscape and aesthetic qualities of public space are examined in historical and cross-cultural settings.

944-325 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 843-325.

944-326 Behavior in Designed Environments II 3 cr.
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 a detailed study of a selected environment-behavior problem. See 834-326.

944-335 Aggressive Behavior: Biological and Psychological Roots 3 cr.
Examination of current views on sources of aggressive behavior. Data and theories from both ethological studies of animal behavior and psychological studies of the behavior of humans and other animals are considered. An attempt is made to synthesize these two major points of view, with a special emphasis on the implications for human behavior.

944-337 Urban Violence: Causation and Control 3 cr.
Analysis of collective violence in urban communities. Brings together several strains of scholarship—political science, psychology, sociology, and history—in an effort to probe the nature, causes, and consequences of collective urban violence. Special emphasis is placed on links between theories of causation and theories of control.

944-340 Urban Visions and Cultural Traditions 3 cr.
Ways in which creative individuals imagine what the city is and what it could be reflect in part the urban experience and cultural values of their nation's past. Conversely, the expressions of their visions contribute to shaping their nation's future cultural traditions. This course explores the interrelationships between creative works that express urban visions, on the one hand, the the experiences and values embodied in cultural traditions, on the other, by comparing examples of creative visions developed in different cultural contexts.

944-345 Women in American Perspective 3 cr.
Provides an 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.

944-351 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.

944-370 Police in Modern Society 3 cr.
The relationship of the police with the environment and what police actually do. Emphasis on organizational structure of police departments, personality and attitudinal characteristics of officers, psychology of becoming an officer, public attitudes toward police, police-minority relations, response to social unrest, and future roles for police.

944-375 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. It is intended for students with some background in women's studies and/or community activism. Differing theoretical approaches to social change for women will be contrasted, focusing on their concepts of power relations, methods of reform, and effectiveness. Student projects will 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.

944-400 The City as Idea 3 cr.
Attempts to define what a city is have been many and varied, reflecting political boundaries, population density, bricks and mortar, and the like; but it is equally important to understand how the city is perceived, which may well be different from what it is in concrete terms. The ways in which Americans have viewed the city over time—its life as a construct, an image, symbol, and myth—are examined and the implications of population perceptions on public policy are explored.

944-401 Environmental Design Workshop I 3 cr.**
Design problems at the individual's scale. Investigation of personal space, privacy considerations, and dimensional characteristics of the human body. Draws heavily on inputs from 834-325, 242-401, and guest lectures on such topics as ergonomics, ecological psychology, lighting, and acoustics. Projects aimed at elucidating interactions between individuals and physical and social situations in which these individuals behave. Investigations culminate in research and design analysis projects of specific individual environments selected by student design teams. Projects are presented in graphic and verbal form at public critiques. P: 242-271.

**Environmental Design Workshops II and IV are offered as 242-471, 472.

944-402 Environmental Design Workshop III 3 cr.**
Community environment. Investigation of such areas as urban neighborhoods, central business districts, and whole urban communities. Topics include residential quality, land-use analyses, the urban infrastructure, urban amenities, transportation, and urban stressors. Assignments and projects are drawn from the community surrounding the University. Students can expect to participate in a semester-long community design project involving one of the ongoing neighborhood planning and programs sponsored by Urban Studies. P: 944-401, 421, and cons inst; 862-327 and 944-430 are recommended.

944-421 Urban Planning I 3 cr.
Planning as a generic process—an examination of planning activities in the various delivery systems of the city, introduction to the basic methods and techniques of urban land use planning, contemporary issues in planning, implementation of plans, an overview of major federal programs for the delivery and improvement of the urban environment.

944-422 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. Topical areas 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.

944-430 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.

944-435 Sociocultural Aspects of Urban Stress 3 cr.
An examination of human adaptation to sociocultural stressors typically prevalent in present day communal life. Emphasis will be on planning and executing projects concerned with the impact of such stressors on individual experience and behavior and impact in turn of those adaptive responses upon the nature of the communal environment.

944-440 Social Dynamics of Urban Life 3 cr.
Aspects of culture and environment which impede or facilitate social interaction, solidarity and participation in urban America. The impact of values, images, physical qualities, size, homogeneity, mobility, social class, and ethnic group affiliation upon cooperation, neighborliness, friendliness, companionship, commitment, security, and power. Special attention is paid to changes in these patterns as America became increasingly industrialized and urbanized as well as to changes produced by counterculture movements.

944-444 National Issues and Community Reform 3 cr.
Focuses on two general areas: 1. the effect of national socioeconomic problems on urban concerns, and, 2. the effect of community reformist action on urban and national issues. As such the course explores the urban effects of corporate and national governmental policies towards the distribution of wealth and power in urban America. Also, it examines a variety of strategies employed by Americans who have attempted to use community action to cope with urban and national problems.

944-479 The Concept of Community in American Society 3 cr.
Analyzes changing concepts of community and consequent difficulties involved in American urbanization and industrialization. The term "community" is a complex concept encompassing a variety of both social structures and cultural paradigms. The course examines American tensions between community and individualism emerging from the interplay of agrarianism, urbanization, industrialization, nationalism, and the impact of mass culture on American life. Issues focused upon include the self and social interaction, naturalness and artificiality, freedom and order, and spontaneity and organization. Also, changing occupational patterns, family structures, ascribed sex roles and styles of pseudo-communities will be examined. In so doing, the course explores folklore and myth, law and art, social science and literature, and philosophy and political theory.

944-481 Student-Led Courses 1-4 cr.
See page 19.

944-483X Selected Topics in Urban Studies 1-4 cr.
See page 19.

944-484 Senior Distinction Project 3 cr.
See page 19.

944-498 Directed Study 1-4 cr.
See page 19.

Anthropology

Professor: James Clifton, applied anthropology, Native American studies, medical anthropology.

Associate Professors: Anthony Galt (chairperson/adviser), cultural anthropology, cultural ecology, prehistory, Italy, European Mediterranean; **Richard Logan,** culture and personality, psychological anthropology, Africa.

Assistant Professors: Joseph Mannino, physical anthropology, human variability, medical anthropology; **Daniel Rosenberg,** cultural anthropology, alcohol and drug studies, Mongolia, pastoralism, comparative communism; **Lynn Walter,** cultural anthropology, women's studies, Ecuador, South America.

Anthropology is the holistic study of humans. It encompasses both the biology of human populations past and present and the study of culture and cultural development. It is an area with much intrinsic fascination, a broad perspective on the nature of human life, and many applied uses.

Because of the broad scope of the field, which ranges from the study of aesthetic systems to the study of human genetics, a program in anthropology combines readily with most of the interdisciplinary concentrations; for example, Human Development,

Humanistic Studies, Human Biology, Communication and the Arts, Regional Analysis, or Social Change and Development.

Skills and special perceptions gained through the study of anthropology can be applied to a variety of vocational and professional interests, including government work, social service and health-related professions, museum and field work, education, and advanced graduate study. More than ever, anthropology is expanding its professional horizons in the direction of applied areas, and opportunities for graduate study in fields such as medical anthropology, cultural resource management, educational anthropology, and urban anthropology now exist. The adviser can offer suggestions about career oriented programs to combine with anthropology.

Students intending to study anthropology should see the chairperson/adviser early in their college careers. Generally an anthropology program should be preceded by at least two of the lower division courses:
156-100 Varieties of World Culture
156-210 Introduction to Cultural Anthropology
156-215 Introduction to Prehistoric Archaeology
156-220 Myth, Ritual and Religion

The 24 credits which make up the anthropology co-major are drawn from both anthropology listings and courses taught in other departments. Normally this program includes the following as a core:
156-303 Cultural Ecology
156-304 Family, Kin, and Community
156-342 Human Evolution or
156-364 Human Variability
246-322 Modern Linguistics

The remaining 12 credits are selected from upper level anthropology and related course offerings with the approval of an adviser.

Anthropology students are encouraged to take part in archaeological and ethnographic field schools offered during the summer by many colleges and universities both within the United States and abroad. Transfer credit will be granted for such activities. Independent study on a group or individual basis can be arranged for students whose interests fall outside the range of UWGB anthropology course offerings. Courses offered in other units of the University which are related to anthropological topics are often acceptable as part of the anthropology program.

COURSES

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.

156-210 Introduction to Cultural Anthropology† 3 cr.
A review of major concepts, methods, and approaches of cultural and social anthropology as applicable to comparative evaluation of contemporary problems of culture and communities. P: 156-100 or 255-102 recommended.

156-215 Introduction to Prehistoric Archaeology† 3 cr.
Human biological and cultural evolution, with special emphasis on prehistoric archaeology and prehistoric ecology. Offered in two versions: classroom and field. Both versions may be taken for credit. See *Timetable*. P: soph st.

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 or 255-102.

156-250 The Anthropology of Contemporary U.S. Culture 3 cr.
Anthropological perspectives and methods are applied to the study of contemporary American culture, focusing on values and symbols, enculturation, proxemics, language, work and leisure, domestic life, and political behavior. The lecture/discussion format is supplemented by collective study of specific ethnographic problems in the cultural setting of northeast Wisconsin. P: 156-100 or 210 or 900-202.

156-283X Selected Topics 1-4 cr.
See page 19.

156-298 Directed Study 1-4 cr.
See page 19.

156-301 Peoples and Cultures of a Selected Region 3 cr.
Description and analysis of a selected area with emphasis on cultures of that area, their development, contemporary variation, and relationship to significant social issues. Areas may include Africa, South Asia, Southeast Asia, Oceania, Northeast Great Lakes Region, and the cultures of American Indians, Afro-Americans, and European peasantries. Courses may be taken for credit each time a different region is presented. See *Timetable* for specific offerings. P: jr st.

156-303 Cultural Ecology 3 cr.
How people, nature, and culture interrelate. The approaches to hunting, agricultural, and industrial societies use in adapting to the physical environment are studied. P: jr st.

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.

156-310 Culture and Personality 3 cr.
A critical survey of the field of culture and personality of the principal concepts and methods used in studying the relationship of the individual to his/her culture. P: jr st or cons inst.

156-315 Prehistory of the New World 3 cr.
Survey of major events and cultural trends in the prehistory of the New World. Includes topics such as the peopling of the New World, the development of agriculture, the rise of civilization in Mesoamerica and South America, and the archaeological record of the Midwest with emphasis on the Great Lakes. P: 156-100, 210 or 215, or cons of inst.

†Approved for Social Sciences Distribution Credit.

156-330 Aesthetic Anthropology 3 cr.
A critical analysis of the meanings and functions of such aesthetic systems as primitive and folk art, oral literature, and primitive and folk music. Special emphasis is placed on why, what, and how these systems communicate within the context of human culture in general and in particular cultures. The generalizations derived from such analyses are applied to contemporary themes such as the problems of minority cultures within the United States and elsewhere. P: jr st.

242 Human Evolution 3 cr.
See 776-342.

364 Human Variability 3 cr.
See 779-364.

156-371 Museum Technology 3 cr.
Encompasses development, use and preservation of collections of artifacts and art objects. Stresses the conservation, display techniques, and educational values of museums. P: jr st.

156-402 Comparative Social Structures 3 cr.
Research procedures and theories in the cross-cultural examination of social categories, groups, and classes; their interrelationships with cultural and ecological factors. P: jr st and one course in anthropology or cons inst.

156-405 Anthropology of a Selected Institution 3 cr.
In-depth analysis of an institution in human society. Institutions may include political systems, economic systems, law and warfare, religion and kinship. Course may be taken for credit each time a different institution is studied. See *Timetable* for offerings. P: jr st and one course in anthropology or cons inst.

156-483X Selected Topics 1-4 cr.
See page 19.

156-498 Directed Study 1-4 cr.
See page 19.

Economics

Professors: James M. Murray (chairperson), regional economics, regional economic development, new planned communities, labor economics, minority economics, economic and social security.

Associate Professors: Kumar Kangayappan, economic theory, economic development, land economics, economics of poverty, monetary theory and policy (on leave 1980-81); **Ismail Shariff,** economic development and policy, business cycles, international trade, cooperative economic principles and descriptive methods of regional analysis; **Larry Smith,** population economics, agricultural economics, economic development, economic history and social change, resource economics, technological innovation and adaptation, discrimination and minority problems, monetary history and theory; **Michael D. Troyer,** health economics, management of nonprofit organizations, health planning, business ethics and social responsibility, labor economics, resource economics, and public finance.

Economics is the systematic study of the use of resources and the processes involved in producing, distributing, and consuming goods and services. It involves analyzing how an economy evolves, how it is organized, and how it functions. It also includes the study of institutions, including households, business firms, government, money, education, and human values.

When related to an appropriate concentration, the disciplinary program in economics is oriented to analyzing contemporary economic problems and determining alternative approaches to solving these problems. It prepares students for active roles in business, industry, governmental agencies, educational institutions, and a host of community organizations. It also provides appropriate preparation for graduate studies in economics or business and for law school.

Economics is frequently combined with social science or business concentrations, especially Regional Analysis, Social Change and Development, Urban Studies, and Managerial Systems. A program including courses in economics, mathematics, computer science, and/or natural and physical sciences within the concentration in Science and Environmental Change also is recommended.

The economics disciplinary program encourages self or cooperative education and rewards it through credit by examination. Any economics course can be challenged by examination. Those with prior experience in economics are encouraged to discuss gaining credit by examination for 298-203, Micro Economic Analysis, and 298-202, Macro Economic Analysis, with a faculty adviser. These two courses are recommended to precede upper-level work in economics.

Students planning a program in economics may take courses in other disciplines or concentrations for economics credit. The chairperson of the disciplinary program may approve such an arrangement. Particularly relevant courses may be found in history, the social sciences, or in several of the concentrations.

Some of the most common employers of persons with specialization in economics are banks and investment firms, government agencies, market research departments and firms, insurance companies, management consulting firms, advertising agencies and departments, labor unions, and business firms.

Students in economics often work in related fields such as insurance, real estate, market research and analysis, land use planning, financial planning, credit and collection agencies, advertising management, sales management, statistics, systems analysis, and administration at federal, state, county, and municipal levels.

It is generally recommended that students take Economics 202 and 203 before enrolling in upper level courses. See also courses listed under the appropriate concentrations and disciplines and the complete list of economics courses.

A sample program for an economics major is listed below. All-University requirements, the interdisciplinary concentration, and electives are not included.

Freshman Year
298-202 Macro Economic Analysis
298-203 Micro Economic Analysis

600-101 Intermediate Algebra
OR
600-104 Elementary Functions: Algebra and Trigonometry

Sophomore Year
298-302 Intermediate Macro Economic Theory
298-303 Intermediate Micro Economic Theory
298-330 Money and Banking
600-201 An Overview of Calculus Techniques
600-251 Introduction to Computer Science

298-304 Contemporary Labor Markets
OR
298-305 Natural Resources Economic Policy
OR
298-306 Public Finance and Fiscal Policy
OR
298-308 Business Cycles

Junior Year
298-307 Sources of Contemporary Economics Concepts
600-260 Introductory Statistics

298-401 Regional Economic Analysis
OR
298-402 Resource Economics Analysis
OR
298-404 Economics of Developing Areas

Senior Year
298-406 Comparative Economic Systems and Institutions
298-403 International Trade
298-498 Directed Study combining economics and interdisciplinary concentration

COURSES

298 ECONOMICS

298-102 Economics and the Modern World† 3 cr.
Economic problems and issues are basic elements of our everyday lives. The study of economics enables us to better recognize and understand these problems and issues and respond to them rationally. The course explores a variety of contemporary economic problems including the economic systems, economic institutions, economic growth, environmental issues, poverty, recent economic history, and the history of economic thought. Major emphasis is determined by the individual instructor and by student interest.

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.

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.

298-283X Selected Topics 1-4 cr.
See page 19.

298-298 Directed Study 1-4 cr.
See page 19.

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 or cons inst.

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 or cons inst.

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: jr st and 298-202 and 203, or cons inst.

298-305 Natural Resources Economic Policy 3 cr.
Acquaints the student with policies leading to arrangements for the development, management, and use of natural resources. Emphasizes the longer time horizon required for the conservation of resources and a general concern for the quality of the ecosystem. P: jr st.

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. P: jr st and 298-202 and 203, or cons inst.

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.

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: jr st and 298-202.

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.

298-401 Regional Economic Analysis 3 cr.
Basic concepts and problems in the economic study of subregions of an economy, in both an intraregional and interregional context; problems in regional analysis; economic concepts regarding location, spatial organization, and planning for regional development. P: 298-202. Same as 834-401.

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). P: jr st and 298-202 and 203.

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.

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.

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.

†Approved for Social Sciences Distribution Credit.

298-483X Selected Topics 1-4 cr.
See page 19.

298-498 Directed Study 1-4 cr.
See page 19.

Geography

Professors: Donald A. Gandre, economics, transportation, urban land use.

Associate Professors: William G. Kuepper (vice chancellor), climatology, low-latitude environments, migration, Africa; **William G. Laatsch** (chairperson), settlement, rural land use, northern lands.

Assistant Professors: Lyle D. Gorder, economics, coastal zones, Europe, Wisconsin.

Geography is the systematic study of the location, variations, and interrelations of natural and cultural features of the earth. Since UWGB has as its special mission an institution-wide focus emphasizing "interdisciplinary, problem-centered study of humans and their environment," the study of geography is particularly appropriate, for it is one of the disciplines that can effectively examine the world and its problems with a view to comprehensive understanding. An emphasis in geography enables a student to understand spatial variation and relationships in terms of particular topics, or to consider a number of physical and human phenomena within a particular region or regions.

Programs which emphasize geography normally fall into three clusters: physical geography; cultural geography; regional geography.

Students emphasizing physical geography would likely take the following courses: The Earth's Physical Environment, Geomorphic Processes, Landform Geography: Topics and Regions, Regional Climatology, and Soil Classification and Geography.

Courses appropriate to cultural geography majors include: Introduction to Cultural Geography, Economic Geography, Urban Geography, Social Demography, and Geography of Conflict Areas.

Students interested in regional geography would select a number of area courses such as: Introduction to Regional Analysis, Geography of Africa, Geography of the United States and Canada, etc. Students in this area also would undertake some study in a systematic or topical field such as climate, landform, or cultural geography.

All geography students are expected to be competent in a number of skill areas. Available courses include: Fundamentals of Public Address, Social Science Statistics or Elementary Statistics, Introduction to Expository Writing, BASIC: A Time-Sharing Computer Language or Introduction to COBOL: A Business Data Processing Language, An Overview of Computing for Non-Scientists, Elements of Cartography, Air Photo Interpretation, Field Methods in Regional Analysis, and Remote Sensing of the Environment by Satellite.

Geography students combine their geography studies with an interdisciplinary concentration. Integrating geography with an appropriate concentration provides the student with a strong disciplinary background with the additional opportunity to attack problems and seek creative solutions from other points of view.

For example, physical geography students would likely choose Science and Environmental Change as their concentration. Students emphasizing regional or cultural geography would probably choose a concentration in Regional Analysis, Urban Studies or Social Change and Development. Prospective geography students should refer also to the descriptions of those concentrations. Each student will plan a program of study appropriate to his or her needs with the help of faculty advisers.

COURSES

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.

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.

416-215 Economic Geography† 3 cr.
Patterns of economic activities, including agriculture, extractive industries, manufacturing, transportation and trade. Major theories and concepts essential to understanding the location of economic activities are discussed.

416-235 Wisconsin Landscapes and Regions 3 cr.
Wisconsin's natural and cultural landscapes—specifically the characteristics and origins of land form and earth material regions and their associated cultural features. Field trips included. See 804-235.

416-242 Contemporary Human Settlements 3 cr.
An examination of human settlement forms with an emphasis on geographical patterns. Topics include the evolution of early human settlements and communities, the development of the city, the arrangement of settlements in the landscape, and the relationships between settlement types, physical environment, and culture.

416-243 Field Experience in Contemporary Human Settlements 3 cr.
This course is a logical extension of Contemporary Human Settlements (416-242). As such, students and faculty members will spend time in the field examining human settlements, forms, and patterns. This examination involves applying skills, observation, identification, classification, analysis and synthesis of a variety of landscape components and their relationship to the resident's values, technology, and institutions. This course has been based in London, England, and Green Bay.

416-250 Maps and Air Photos 3 cr.
The appreciation, use, and evaluation of maps and air photos as informational sources.

416-263X Selected Topics 1-4 cr.
See page 19.

†Approved for Social Sciences Distribution Credit.

416-298 Directed Study 1-4 cr.
See page 19.

416-320 Landform Geography: Topics and Regions 3 cr.
Geographic methods of landform description and analysis with application to selected regions of the world. P: 296-202.

416-325 Regional Climatology 3 cr.
The elements, controls, and classification of climates; the distribution of climatic types over the earth; world patterns. P: 834-222.

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. P: jr st.

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. P: jr st.

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 the analysis of the human use of the earth and its resources. P: jr st.

416-355 Introduction to Quantitative Methods of Spatial Analysis 3 cr.
The scientific approach to geographic problems; basic techniques for the analysis of spatial distributions and spatial relationships. P: a course in statistics.

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.

416-362 Analysis of the Great Lakes Region of Africa 3 cr.
See 834-362.

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.

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.

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 Greenland. P: soph st. See 834-377.

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. P: jr st.

416-381 Geography of Eastern Europe and the USSR 3 cr.
A regional characterization and interpretation of a large segment of the second world is considered. Aspects of a planned economy that relate to that characterization are included along with the problems, accomplishments, and direction of development.

382 Regional Analysis of Northwestern Europe 3 cr.
See 834-382.

416-483X Selected Topics 1-4 cr.
See page 19.

416-498 Directed Study 1-4 cr.
See page 19.

Political Science

Professors: Arthur A. Atkisson, public administration, organizational behavior, local government, human ecology and public policy; **Edward W. Weidner** (chancellor), problem-oriented higher education, development administration.

Associate Professors: Daniel J. Alesch (adjuct), public planning, state and local government, program planning and evaluation; **Martin H. Greenberg,** international politics, foreign and military policies, comparative politics, Middle East; **Michael E. Kraft** (chairperson), American politics, Congress, public policy analysis, environmental politics; **David M. Littig,** urban politics, transportation policy, political behavior, Latin America; **C. Jarrell Yarbrough,** political theory, public law, American politics, environmental policy and administration.

Lecturers: Patrick J. Madden, public policy and administration, leadership in organizations, public law; **Michael Monfils,** local government, intergovernmental relations.

Political science is concerned with the systematic study of political behavior, political processes, governmental institutions, and public policies. The program at UWGB gives special attention to governmental activities directed at a wide range of contemporary public problems, from urban transportation to international conflict.

Courses deal with specific problems, public policy, or political processes and behavior affecting resolution of public problems. Some courses stress the structure, functions, and operation of governmental institutions, including forming and implementing public policies in local, state, national, and international political systems. Others examine the cultural, social, economic, and ideological contexts of political systems in an effort to understand political behavior and decisionmaking in government. One set of courses focuses on politics and political behavior, including the nature and role of public opinion, interest groups, political parties, and elections. Another is concerned primarily with the history of political ideas and how they relate to modern political issues. A third emphasizes methods of inquiry and analysis used in the study of government, politics, political behavior, and public policy.

The political science program is designed to complement a variety of concentrations and professional programs at UWGB, especially those in the social sciences and in administration: Urban Studies, Social Change and Development, Regional Analysis, Public and Environmental Administration, and Business Administration. With its emphasis on understanding public problems and the role of government and and politics, political science is particularly useful for students planning careers in journalism, law, planning, education, business, foreign service, politics, and public service positions with private and public agencies at the local, state, regional, and federal level.

A co-major in political science consists of 24 credits of upper-division courses (300 level or above), 6 credits of lower-division courses, and 12 credits of upper-division work in a concentration or professional program. A minor in political science requires 18 credits of upper-division courses in the discipline. Many courses are acceptable for political science credit, including those preceded by the disciplinary number (778) and others designated by the faculty as acceptable.

In satisfying the 30-credit minimum for a co-major, each student must complete at least one course in each of four subfields of the discipline: American government and politics (which includes public policy and public law); political theory; comparative government and politics; and international politics. Up to six credits of directed study may be applied toward the minimum requirements for the major. Transfer students completing a major in political science must take a minimum of 12 of the 24 upper-division credits at UWGB.

Most students begin work in the program with either Introduction to Political Science (100) or American Government and Politics (101). Those who wish to satisfy the social science all-University requirement may combine American Government and Politics (101) with Public Policy and Administration (350-102). Another sequence which meets that requirement combines Introduction to Political Science (100) with Freedom and Social Control (875-204). Other lower-division courses suitable for beginning students are Political Behavior (218) and Understanding Presidential Elections (215). Although there are no formal prerequisites for enrolling in most upper-division courses beyond junior standing or the consent of the instructor, one of the introductory 100 or 200 level courses is strongly recommended.

These courses are acceptable for political science credit:

Lower Division Courses
778-100 Introduction to Political Science
778-101 American Government and Politics
778-215 Understanding Presidential Elections
778-218 Political Behavior
778-298 Directed Study
350-102 Public Policy and Administration

Upper-Division Courses (by subfield)

American Government and Politics:
778-310 American Presidency
778-312 Community Politics
778-313 Elections and Voting Behavior
778-410 Intergovernmental Relations
778-412 Political Parties and Pressure Groups
778-416 American Legislative Process
944-305 Urban Politics and Policy
350-410 Administration of Local Government I

Public Policy:
350-301 Environmental Politics and Administration
350-305 Regulatory Policy and Administration
350-460 Public Policy Analysis
944-311 Studies in Urban Resources: Shoreline Management
944-351 Transportation and the City

Public Law:
778-320 Constitutional Law
778-330 Law and the Judicial Process

Comparative Government and Politics:
778-351 Comparative Political Systems
778-353 Politics of Developing Systems
778-450 Political Change
875-354 Comparative Communism
875-385 Dynamics of Revolutionary Change
448-352 History of Modern China
448-354 History of Modern Southeast Asia

Political Theory:
778-340 Political Theory

International Politics:
778-360 International Politics
778-368 Geopolitics of World Regions
778-460 American Foreign and Defense Policies
416-378 Geography of Conflict Areas

778-498 Directed Study (available for each of the above fields)

COURSES

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.

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; policymaking processes in the Congress, the presidency, the courts, the bureaucracy, and state and local government; and issues and controversies in politics and public policy.

778-215 Understanding Presidential Elections† 3 cr.
An examination of the relationships among the electoral system, the conduct of presidential cam-

†Approved for Social Sciences Distribution Credit.

paigns, and individual citizens. Students analyze their own socialization into politics, the ways campaigns seek to influence voters, and the effect the presidential selection process has on our ability to achieve our goals through politics.

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 will be introduced to empirical political analysis, both qualitative and quantitative.

778-283X Selected Topics 1-4 cr.
See page 19.

778-298 Directed Study 1-4 cr.
See page 19.

778-310 The American Presidency 3 cr.
An examination of the American presidency, with emphasis on recent presidents and public policymaking. 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 policymaking; 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: 778-100 or 778-101 or cons inst.

778-312 Community Politics 3 cr.
An examination of power and decisionmaking 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: 778-100 or 778-101 or cons inst.

778-313 Elections and Voting Behavior 3 cr.
An examination of the role of elections in the American political system, including the act of voting as one of a variety of ways that people can participate in politics. Topics include: voter rationality, psychological and social influences on voting behavior, campaign techniques, and trends and issues in recent national elections. P: 778-218 or cons inst.

†Approved for Social Sciences Distribution Credit.

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 will also be considered. P: jr st or cons inst. See 778-320.

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 to be examined include: the judiciary in the American system of government, the nature of the judicial process, judicial decisionmaking, judicial policymaking, compliance with judicial policies, and theories of law and jurisprudence. P: 778-101 or cons inst.

778-340 Political Theory 3 cr.
The foundations of Western political theory from the Greek polis to the 20th century. Leading political theorists will be 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. In order to help students gain such an understanding, the course will attach the study of politics to the history of Western political thought and practice. P: jr st or cons inst.

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 will be given to the politics and government of Great Britain, France, the Soviet Union, and selected other developed nations. P: 778-100 or 778-101 or cons inst.

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: 778-100 or 778-101 or cons inst.

778-360 International Politics 3 cr.
An overview of international politics, including an analysis of "the national interest," the nation-state system, nationalism, arms control and disarmament, international conflict, and conflict resolution. Examples are drawn from both the American and non-American perspective. P: 778-100 or cons inst.

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. P: 778-101 or cons inst. See 834-368.

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: 778-100 or 778-101 or cons inst.

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: 778-101 or cons inst.

778-416 American Legislative Process 3 cr.
An examination of legislative institutions and policymaking, 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 policymaking; 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: 778-100 or 778-101 or cons inst.

778-450 Political Change 3 cr.
Theories of political change and the relationship of political change to changes in economic and social systems, with emphasis on patterns of change, resistance to change, and change-producing agencies and processes. P: jr st or cons inst.

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 policymaking process in the United States and an assessment of its effectiveness. P: jr st or cons inst.

778-483X Selected Topics 1-4 cr.
See page 19.

778-498 Directed Study 1-4 cr.
See page 19.

Psychology

Professors: Eric Knowles (chairperson), experimental social, environmental, and personality psychology; **Nicholas Pollis,** social psychology, group processes, intergroup relations, organizational development, urban stress; **William Smith,** human-environment relations, group processes.

Associate Professors: Bela Baker, cognition, motivation, impact of change; **Fergus Hughes,** developmental psychology and aging; **Per Johnsen,** social, environmental, community, and architectural psychology; **Charles Matter,** biological psychology, perception, comparative ethology, cognitive processes; **Robert Mendelsohn,** community, clinical, social, and cognitive psychology.

Assistant Professors: Frederick Gove, developmental, infancy and early childhood; **Andrea Lindstrom,** personality, clinical, gerontology; **Paul Muhs,** cognitive development, adulthood and aging, infancy; **Deepa Narayan-Parker,** social, language, cross-cultural; **Lloyd Nesberg,** learning, stress, adjustment.

Psychology is the systematic and scientific study of behavior. It seeks to explain the physiological, personal, social, and environmental conditions that 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.

The psychology program provides solid undergraduate training in all areas of psychology. Graduates have found careers and have been admitted to post-graduate education in all branches of psychology.

The program at UWGB is particularly strong in social, developmental, community, and environmental psychology. Course offerings, facilities, and experiences in these areas allow advanced and specialized training. Students have opportunities for practical experiences in a variety of community agencies, computer facilities, an animal research laboratory, a human research laboratory, and various child care facilities.

The study of psychology can be combined with any of the interdisciplinary concentrations in the University, depending on the student's particular focus and areas of emphasis. Students should examine opportunities offered by each of the concentrations and should consult with a *faculty member in psychology. Often,* concentrations in the social sciences are selected by students interested in social, environmental, clinical, developmental, or general psychology; concentrations in the humanities are selected by students interested in philosophical and aesthetic psychology; concentrations in the life sciences are selected by students interested in physiological, population, and biological psychology; and concentrations in the physical sciences are selected by students interested in quantitative or mathematical psychology.

Combining psychology with one of the *professional and pre-professional programs,* such as Environmental Design, Managerial Systems, Education, Public and Environmental Administration, Recreation Resources, or Social Work, can strengthen knowledge or career orientation in that particular area.

REQUIREMENTS

Students electing a program in psychology develop programs of study that meet these minimum requirements:

3 credits introduction to the discipline, chosen from:
820-102 Introduction to Psychology
481-210 Introduction to Human Development

3 credits in statistics, chosen from:
255-205 Social Science Statistics
600-260 Introductory Statistics

4 credits in experimental methods:
820-300 Experimental Psychology

3 credits in general psychology, chosen from:
820-306 Psychology of Perception
820-309 Psychology of Motivation
820-338 Psychology of Learning
820-417 Thinking and Problem Solving
820-450 Psychological Stress and Adaption

3 credits in social behavior, chosen from:
820-335 Psychology of Attitude and Public Opinion
820-337 Social Behavior Dynamics
820-415 Organizational Psychology
820-416 Psychology of Intergroup Relations
820-438 *Group Dynamics*

3 credits in developmental psychology, chosen from:
481-331 Human Development I: Infancy and Early Childhood
481-332 Human Development II: Middle Childhood and Adolescence

11-12 credits in areas of specialization, chosen from:

Any 300 or 400 level psychology course
246-324 Psycholinguistics
302-406 Evaluation and Testing in Education
481-336 Sex Role Development in Contemporary Society
481-337 Developmental Tests and Measurements
481-429 Theories of Personality Development
481-431 Cognitive Development
481-432 Cultural Impacts on Human Development
481-433 Human Development III: Adulthood and Later Maturity
481-435 Developmental Problems and Deviations
481-436 Developmental Guidance with Children and Adolescents
481-437 Development Guidance with Adults and the Aged
478-313 Brain Functions in Human Behavior
478-413 Neurophysiology
493-302 Human Identity
493-315 Theories of Creativity
600-364 Biometrics
736-406 Philosophical Problems in the Sciences: Psychology
834-325 Behavior in Designed Environments I
834-326 Behavior in Designed Environments II
875-311 The Role of Punishment in Society
875-371 Motivation and Social Change
944-335 Aggressive Behavior: Biological and Psychological Roots
944-435 Socio-cultural Aspects of Urban Stress
Appropriate Selected Topics (438X) or Directed Studies (498) on approval of adviser

Psychology helps to deepen understanding of individual and social behavior and provides a strong general background for a variety of 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 post-graduate degree (master's or doctorate). Preparation for post-graduate education should combine a broad program in liberal arts with a sound background in general psychology and should emphasize research skills and experiences. Many graduates continue their professional training in such fields as social work, education, medicine, and business, as well as in psychology. Students considering post-graduate 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.

COURSES

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.

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. P: soph st.

820-205 Psychology of Human Adjustment† 3 cr.
Personality adjustment and maladjustment in normal persons; need, frustrations, and conflict; adjustive techniques; analysis and rehabilitation. P: soph st.

820-283X Selected Topics 1-4 cr.
See page 19.

820-290 Environmental Psychology 3 cr.
A basic introduction to man-environment relationships that examines ways in which the physical environment influences human behavior. It introduces students to a variety of man-environment 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.

820-298 Directed Study 1-4 cr.
See page 19.

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. P: soph st.

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. P: jr st.

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.

820-320 Personnel Psychology 3 cr.
Emphasis on selection, classification, and placement procedures; techniques of employment interviewing, rating methods, industrial tests (mechanical, clerical, trade, etc.), job analysis, and occupational description; lecture and lab work. P: jr st.

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.

320-337 Social Behavior Dynamics 3 cr.
Important factors in social behavior, roles, multiple group membership, cognitive processes, motivation, aggression, social prejudice. P: jr st and 820-202.

820-338 Psychology of Learning 3 cr.
Basic principles of conditioning and learning, functional relationships between salient variables related to rate of acquisition and degree of retention, transfer effects and related phenomenon. P: jr st and 820-102.

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: sr st.

†Approved for Social Sciences Distribution Credit.

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: sr st.

820-417 Thinking and Problem Solving 3 cr.
Methodological problems and experimental results in concept formation, language, thinking, and problem solving. P: sr st and 820-300.

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: sr st and 820-202.

820-450 Psychological Stress and Adaptation 3 cr.
An examination in depth of the nature of stress, its effects on fundamental aspects of human behavior, its interrelationships with emotion, learning, and cognition. Some emphasis will be placed on psychological methods of dealing effectively with stress, tension and anxiety. P: 156-100, 478-201, 820-102, 820-202 or 900-202.

820-483X Selected Topics 1-4 cr.
See page 19.

820-498 Directed Study 1-4 cr.
See page 19.

Sociology

Associate Professors: Carol Pollis, families and close relationships, social change, societal development.

Assistant Professors: Winston Chao, race relations, family and kinship, methods of social research, organizations, social planning; **Harvey J. Kaye** (acting chairperson), political economy and social stratification, historical and comparative social science, Latin American studies.

Instructors: John Gould, deviant behavior, general sociology.

The program in sociology is designed to provide understanding of the variety of sociological approaches used in studying both large scale and small scale patterns of social relationships and processes by which these patterns change over time.

On the one hand, sociology involves the scientific study of social behavior and social systems. But sociology is also a humanistic discipline concerned with values, social problems, social conflict, and planned change. It seeks to engage students in a critical analysis of ideas of current social concern from sociological perspectives.

Requirements for a co-major in sociology are consistent with those of many sociology programs throughout the country. These requirements recognize the need for breadth and specialization of knowledge and the need for understanding theoretical and empirical bases upon which sociological knowledge is built. Students are asked to take courses dealing with major theories and research methods of the discipline and to design a program that aims for some specialization or focus consistent with their interests and concentration program. Some examples of such areas of focus are population or demography, criminology and delinquency, social equality and inequality, urban sociology, organizations, and development sociology.

Additional breadth of knowledge, specialization, and problem focus are gained by combining sociology with one of the concentration or interconcentration programs.

Sociology is often seen as more of a liberal arts field than a specific vocational one. People with an undergraduate major in the field, therefore, have career opportunities among the many employers seeking people with liberal arts backgrounds.

Careers may be found in adoption and child care agencies, schools, community and service organizations, recreation programs, courts and correctional institutions, government agencies, hospitals, labor unions, personnel departments and many other organizations. The kinds of careers available to students with sociology majors might include working with programs dealing with housing, child care, or nutrition; working as counselors in the areas of guidance, rehabilitation, and vocational selection; working in research organizations as interviewers or statisticians; and teaching.

Students who want more specific career preparation may combine sociology with one of the professional programs in business administration, education, public and environmental administration, social services, or recreation resources or with a preprofessional program in pre-law, city planning, or community development.

PROGRAM OF STUDY

A co-major in sociology requires 24 credits of upper division courses—those at the 300 level or above—and 6 credits of lower division courses—those at the 200 level or below. These requirements are:

Lower Division Requirements, 6 Credits
900-202 Introduction to Sociology

255-205 Social Science Statistics
OR
600-260 Introductory Statistics

Upper Division Requirements, 24 Credits
900-307 Social Theory
255-305 Foundations of Social Research

A minimum of 9 credits from the following sociology courses:
900-302 Social Stratification
900-304 Deviant Behavior
900-311 Collective Behavior
900-312 Social Change
900-356 Social Demography
900-404 Criminology
900-405 Rural-Urban Interaction
900-406 Comparative Social Systems
900-407 Complex Organizations
900-484 Senior Distinction
900-498 Directed Study

A maximum of 9 credits from courses, such as the following, approved for credit toward a sociology major:

156-304 Family, Kin and Community
481-336 Sex Role Development in Contemporary Society
779-456 Demographic Methods
820-438 Group Dynamics
875-360 Models and Social Change
875-378 Drug and Alcohol Use in Society
944-440 Social Dynamics of Urban Life

Ways of combining the major in sociology with a specific concentration or inter-concentration program should be discussed with one of the faculty. Students are encouraged to take advantage of internships when they fit with a program and to seek learning experiences which will actively involve them in their own learning.

COURSES

900 SOCIOLOGY

900-202 Introduction to Sociology† 3 cr.
Introduction to major sociological concepts and ideas and their application to contemporary problems of societies.

900-203 Minority Groups† 3 cr.
Analysis of the structure and dynamics of majority-minority relationships in society; examination of diverse religious and ethnic minority groups.

900-208 Marriage and Family† 3 cr.
Nature of marriage and familial institutions; processes of premarital and marital interaction in a variety of contexts; alternative patterns of establishing close relationships.

900-283X Selected Topics 1-4 cr.
See page 19.

900-298 Directed Study 1-4 cr.
See page 19.

900-302 Social Stratification 3 cr.
Class, status and power as determinants of group interests, preferences, ideologies, and struggles; examination at the national and international level. P: 900-307 or cons inst.

†Approved for Social Sciences Distribution Credit.

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.

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 or cons inst.

900-311 Collective Behavior 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.

900-312 Social Change 3 cr.
Analysis of contemporary theories of social change in communities and societies; examination of processes, problems, planning and value perspectives in relation to change. P: 900-307 or cons inst.

900-356 Social Demography 3 cr.
Social and economic factors related to the size, growth, distribution, and dynamics of human populations. Theoretical approaches to human population growth. The impact of population policy upon demographic trends. See 779-356.

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.

900-405 Rural-Urban Interaction 3 cr.
Dynamic analysis of interaction patterns between countryside and city, their individual and social consequences in cross-national comparison. P: 900-307 or cons inst.

900-406 Comparative Social Systems 3 cr.
Contemporary social systems and institutions in cross-cultural and comparative perspectives. P: 900-307 or cons inst.

900-407 Complex Organization 3 cr.
A general analysis of large organizations, such as bureaucracies, military organizations and educational organizations, from sociological perspectives. P: 900-307 or cons inst.

900-483X Selected Topics 1-4 cr.
See page 19.

900-498 Directed Study 1-4 cr.
See page 19.

Natural Sciences and Mathematics

CONCENTRATIONS:
Human Biology
(majors in Human Adaptability, Nutritional Sciences, and Population Dynamics)
Science and Environmental Change

DISCIPLINARY PROGRAMS:
Biology
Chemistry
Chemistry-Physics
Earth Science
Mathematics
(including computer science and statistics)
Physics

Human Biology

(Majors in HUMAN ADAPTABILITY, NUTRITIONAL SCIENCES, POPULATION DYNAMICS)

Professors: Harry G. Guilford (chairperson), vertebrate anatomy, parasitology, entomology; **William C. Kaufman,** human physiology, evolution and the origin of life, interrelationships of science and society.

Associate Professors: Dawson C. Deese, food science, physiological aspects of nutrition, biochemistry, nutritional status and assessment; **Charles A. Ihrke,** genetics, plant breeding and agricultural genetics, human inherited disease syndrome, cellular biology; **Elaine N. McIntosh,** community nutrition, dietetics, nutrition education; **Richard J. Stevens,** neurophysiology, human pain perception, risks to fetal development from prenatal exposure to environmental chemicals, biomedical ethics, brain death, and visual processing in the brain.

Assistant Professors: Robert J. Hirsch, social demography, human ecology, population biology; **Joseph A. Mannino,** physical anthropology, ethology; **Dorothea B. Sager,** reproductive physiology, developmental biology, environmental contaminants and reproduction and development.

Instructor: Donna Z. Randall, general chemistry, chemistry for nursing, nonmajors.

Human Biology uses a dynamic scientific approach to gain understanding of oneself as well as of some of the major concerns of humans. Topics include development and aging, food and health, heredity, disease, body responses to physical stresses such as cold, heat, responses to psychological stresses, human numbers, and human distribution and living space. Human Biology offers an excellent general major to prepare responsible citizens and

future policy makers, and offers specific majors for those interested in preprofessional or professional training; for any student, knowledge of human biology can be of lifelong benefit.

The Human Biology concentration offers programs that emphasize human form and function, human nutrition or food science, and population dynamics. A student in this major selects courses for a general liberal arts degree or selects a program for specific career aims such as secondary teaching, premedicine, predentistry, dietetics, nutrition, food science or public health. Students with disciplinary co-majors such as biology, psychology or chemistry learn to apply their discipline to the human organism, to human nutrition, or to population.

Students who select a program in human biology choose courses to acquire a general background in human biology as well as courses in a specific major. They also fulfill general requirements expected of UWGB graduates. There is considerable flexibility in choices. The chart on the following page shows how a program is structured:

HUMAN BIOLOGY

Human Biology

Principles of Biology I & II

(or Anatomy & Physiology)

and

One course in three of these subject areas:
- Genetics
- Human organism (structure or function)
- Nutrition
- Population

AND

Statistics (600-260)

and

Introduction to Expository Writing (552-105)

and

One course in:

Oral communication

or

English literature

or

Foreign language

All-University Requirements

Natural Sciences, 9 cr.
Humanities, 9 cr.
Social Sciences, 9 cr.
Senior Seminar, 3 cr.

Remaining credits in Human Biology selected from one of these majors:

Human Adaptability **or** Nutritional Sciences **or** Population Dynamics

OR

Students may select 12 credits of Human Biology and 24 credits of 300/400 level courses in a disciplinary co-major:

Biology

OR

Chemistry

OR

Economics

OR

Mathematics

OR

Psychology

Other Discipline

Courses may be selected in one of these professional programs:

Education

Public and Environmental Administration

(A major consists of 30 credits of 300/400 level work.)

MAJORS WITHIN HUMAN BIOLOGY

A student in Human Biology selects courses from one of the following three majors, depending on his/her interests. Courses in **Human Adaptability** emphasize the ability of the individual to adapt physiologically or mentally to constant external or internal changes. Courses in ***Nutritional Sciences*** emphasize nutrition and food resources and their utilization by humans, and courses in **Population Dynamics** emphasize the stability or changes in human or animal and plant populations and their causes. Some courses in the different majors are interchangeable. Selected disciplinary courses may be included in each track.

Human Adaptability

Human Adaptability students study the physiological, psychological, anthropological, and biological bases of the individual human's ability to adapt to and survive in an ever-changing environment. Special emphasis is given to understanding the structure and functioning of the organs of the human body in responding to environmental stresses such as disease, exercise, chemical contaminants, climate, altitude, and psychological stress. Study of the physiology and behavior of various animals is included to aid this understanding of human beings.

Human success as a species results from the variety of adaptive capabilities humans possess—both physiologically and behaviorally—and, therefore, Human Adaptability is a multidisciplinary study area including anatomy, animal behavior, anthropology, biology, chemistry, physiology and psychology.

Human Adaptability is an appropriate major for students interested in health sciences, medicine, dentistry, environmental health, human biology, pharmacology, physiology, biology education and veterinary medicine. It is also a sound comajor for students with interests in business administration, biology, administration of health organizations, psychology, environmental administration, or chemistry.

Research and independent study projects are available to students who have demonstrated special abilities in human biology. These projects provide learning experiences in close working relationship with faculty scientists and opportunities for students to develop their creative abilities in health science areas such as: anatomy, cardio-respiratory physiology, nervous system, parasitology, protective clothing design, cold weather stress, effects of contaminants on fetal development, and childbirth.

Human Adaptability graduates have gone on to medical schools, dental schools, graduate programs in various health science fields, nursing, pharmacy, research labs, public health, environmental health, medical sciences, hospital department management, high school teaching, public health administration, medical sales, business management, and library sciences. Placement in medical and dental schools has been exceptionally good.

Students can choose from three subprograms in Human Adaptability: Laboratory Life Sciences, General Human Adaptation and Applied Human Biology.

LABORATORY LIFE SCIENCES

This sub-program emphasizes study of the fundamental physiological and chemical bases for the functioning of the human body and the related psychological influences. It is an appropriate course of study for students interested in preparing for medicine, dentistry, veterinary medicine, environmental health, or for graduate work in such fields as physiology, pharmacology, and public health.

GENERAL HUMAN ADAPTATION

This program explores major biological characteristics of the human species in relationship to other species. It explores the biological history and biological heritage of humans as a species (anthropology, genetics, and human evolution), ability as individuals and social groups to adapt to surroundings and to environmental stresses (physiology, behavior, and sociology) and the impact of the species upon the biosphere (food resources, fertility and population). This track is appropriate for students interested in secondary education, government agency employment, or graduate studies in biology, public health or social sciences. Students may choose to emphasize any of the four Human Adaptability core areas: physiology, psychology, anthropology, or sociology.

APPLIED HUMAN BIOLOGY

This emphasis considers the significance of human biology in contemporary societal problems. It provides a background in human biology to persons who will pursue other professions such as business, primary and secondary school teaching, health administration, or journalism. The student may emphasize human biology without a professional minor or the student may wish to arrange a human biology major with minor studies in Managerial Systems, Education, Human Development, Public and Environmental Administration, or Environmental Design. This track also is appropriate for students desiring a Human Biology minor.

Students in Human Adaptability may combine their major with business administration studies to prepare for specialized career areas.

This possibility combines the general adaptation emphasis in Human Adaptability with the human services administration track in Managerial Systems. The human services administration track offers course-

work in management, financial administration, marketing, and accounting appropriate to municipal, regional, state, and federal as well as private, nonprofit, human service organizations. This co-major provides knowledge and skills in human life sciences and the administration of nonprofit, human service organizations. It is appropriate for persons seeking careers or graduate education in health and human services such as hospital administration, clinic or nursing home administration, and public health services. Flexibility in this program allows for bachelor's degree completion for nurses and hospital technical personnel, and for professional updating and new career directions for persons now working in human services professions.

SAMPLE PROGRAMS

Following are sample programs in each of the three Human Adaptability tracks. All-University requirements and electives are not included. Flexible programs can be designed in consultation with an adviser.

Tool subject requirements include two semesters of mathematics and two semesters of communication skills (English or foreign language). Core requirements include a minimum of one junior-senior level course in each of the four principle areas of study of human adaptation: physiology, psychology, anthropology, and sociology.

Laboratory Life Sciences

Freshman Year:
204-202, 203 Principles of Biology I, II
226-111 Principles of Chemistry I
226-112 Principles of Chemistry II
600-202, 203 Calculus and Analytic Geometry I & II
600-260 Introductory Statistics
552-104 Introduction to Literature
481-210 Introduction to Human Development

Sophomore Year:
204-302 Microbiology
204-303 Genetics
204-340 Comparative Anatomy of Vertebrates
226-103 (or 201) Principles of Physics I
226-104 (or 202) Principles of Physics II
226-311 Analytic Chemistry
552-105 Introduction to Expository Writing
779-342 Human Evolution

Junior Year:
156-303 Cultural Ecology
204-347 Developmental Biology
226-302, 303 Organic Chemistry I, II
478-402 Human Physiology
478-404 Animal Physiology Lab
478-413 Neurophysiology
481-331 Human Development I: Infancy and Early Childhood
779-318 Mammalian Reproduction

Senior Year:
226-330 Biochemistry
Human Biology Electives
478-450 Psychological Factors in Human Adaptability
779-412 Principles of Parasitology

General Human Adaptation

Freshman Year:
204-202 Principles of Biology I
AND
204-203 Principles of Biology II
OR
478-203, 204 Anatomy and Physiology I, II

226-108 General Chemistry
481-210 Introduction to Human Development
552-105 Introduction to Expository Writing
600-104 Elementary Functions: Algebra and Trigonometry
600-251 Introduction to Computer Science

Sophomore Year:
204-302 Principles of Microbiology
350-102 Public Policy and Administration
478-313 Brain Functions in Human Behavior
552-104 Introduction to Literature
600-260 Introductory Statistics
694-232 Nutritional Significance of Food
779-312 Evolutionary Processes
779-320 Introduction to Population Dynamics

Junior Year:
204-303 Genetics
204-347 Developmental Biology
350-301 Environmental Politics and Administration
478-402 Human Physiology
694-302 Nutrition and Culture
779-318 Mammalian Reproduction
820-309 Psychology of Motivation
820-337 Social Behavior Dynamics

Senior Year:
350-315 Planning and Management of Public Systems
478-450 Psychological Factors in Human Adaptability
779-310 Human Genetics
779-342 Human Evolution
779-356 Social Demography
779-365 Human Resources and Economic Growth in Poor Countries
820-320 Personnel Psychology
820-415 Organizational Psychology
Human Biology Electives

Applied Human Biology

This sample shows a possible co-major in Human Adaptability and Managerial Systems (human biology and human services management).

Freshman Year:
204-202 Principles of Biology I
246-133 Fundamentals of Public Address
298-202 Macro Economic Analysis
478-102 Introduction to Human Biology
552-105 Introduction to Expository Writing
575-202 Business and Its Environment
600-150/152 Computer Science (BASIC and COBOL)
600-260 Introductory Statistics

Sophomore Year:
298-203 Micro Economic Analysis
478-201 Adaptation to the Environment
478-203, 204 Anatomy and Physiology I, II
481-210 Introduction to Human Development
575-204 Introductory Accounting
575-217 Quantitative Methods in Administration
694-232 Nutritional Significance of Food

Junior Year:
204-302 Principles of Microbiology
478-313 Brain Functions in Human Behavior
575-305 Business Law I
575-322 Basic Marketing
575-385 Management of the Nonprofit Organization
575-429 Marketing Strategies for Non-Business Institutions
779-310 Human Genetics
779-320 Introduction to Population Dynamics

Senior Year:
478-309 History of Physiology and Medicine
478-320 Human Growth, Development and Senescence
575-216 Accounting for Administrators
575-343 Corporation Finance
575-362 Principles of Personnel Management
575-382 Principles of Management
694-302 Nutrition and Culture
779-312 Evolutionary Processes

COURSES

478 HUMAN ADAPTABILITY

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 man, and human adaptability.

478-201 Adaptation to the Environment 3 cr.
The morphological and functional adaptations of animals to the aquatic, aerial, and terrestrial environments and a consideration of human adaptability to the stress brought about by technology and crowding. P: soph st.

478-203 Anatomy and Physiology I 2 cr.
The structure and function of the human body, its organs and organ systems: emphasis on cardiovascular system. Primarily for nursing and nutrition students. P: 204-202.

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 cardiovascular systems: respiratory, excretory, digestive, nervous, endocrine, skeletomuscular systems. Primarily for nursing and nutrition students. P: 478-203.

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.

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.

478-281 Student-Led Courses 1-4 cr.
See page 19.

478-283X Selected Topics in Human Adaptability 1-4 cr.
See page 19.

478-298 Directed Study 1-4 cr.
See page 19.

478-301 Adaptive Mechanisms 3 cr.
A study of the discrete biochemical, cellular, organismal, and morphological changes that are the bases for adaptation and acclimitization. P: 204-202 and 203 and 226-111, 112, or equivalent.

478-309 History of Physiology and Medicine 2 cr.
The development of the interrelated sciences of medicine and physiology, beginning with the Greeks, but concentrating on the processes and methods by which change and advancement have occurred in the 19th and 20th centuries. The relationship of these sciences to society will be examined, e.g., the problems associated with medical services delivery and the research funding. P: jr st.

478-311 The Scientific Perspective and Man's Self-Image 3 cr.
Examines the scientific method and its impact on humans' view of themselves and their social institutions. The course will study the fundamental assumptions, processes and limitations of science in understanding the complex nature of man. 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 scientistic 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: 204-203, or 226-111, 112, or two courses in physics (226-103, 104 or 201, 202).

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, rage and fear, hand-eye coordination, conditioning and learning; development of the human nervous system and behavior. P: jr st.

478-320 Human Growth, 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.

478-333 Biology of Outdoor Living† 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: jr st., one course in biology or cons inst.

478-370 Scientific Writing and Discourse 3 cr.
Prepares students to write and to present orally and graphically material, suitable to their training, in a polished and convincing manner. Students will learn general principles of writing, speaking, preparation of graphic materials and copy. Students will make brief oral presentations and write short excerpts. A final paper and presentation is required. P: jr, sr st.

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: 204-202, 203 and 226-111, 112 or equivalent.

478-404 Animal Physiology Laboratory 2 cr.
Students perform laboratory research in the study of major animal organ systems and are exposed to tech-

†Approved for Human Biology Distribution Credit.

niques 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 779-318, or concurrent registration.

478-405 Clinical Microbiology and its Relationship to Patient Care 2 cr.
Basic concepts of bacterial, viral, fungal and animal parasite infections will be stressed, with emphasis on the fundamental relationships that operate between microbe and host in health and disease. The course will provide practical and applicable current information related to preventing and controlling microbial disease. The course is intended especially for nurses involved with patient care but others involved in or interested in the health professions will find it useful. P: L.P.N., R.N., and Allied Health Degree, or a previous course in microbiology.

478-406 Laboratory in Clinical Microbiology 1 cr.
The role of the clinical microbiology lab in diagnosing infectious disease is emphasized. The importance of the clinical specimen submitted for diagnosis—its proper selection, timing, collection and handling is stressed especially as it relates to the nurse involved in patient care. P: previous course in clinical microbiology or concurrent reg. in 478-405.

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: 204-202, 203 and 226-111, 112, or equivalent, or cons inst.

478-425 Physiological Responses to Toxic Chemicals 3 cr.
This course examines physiological mechanisms which are affected by toxic chemicals at the biochemical, cell and organ levels. Major toxic processes including mechanisms of intake, dose-response, synergisms, detoxification, neurotoxicosis, cancer, metabolic disruption, mutagenesis, teratogenesis and causes of death will be considered in the context of significant organ systems affected such as cardiovascular, respiratory, nervous, and immune systems as well as the placenta and fetus. Representative toxins will include nitrates, nitrites, pesticides, tobacco, alcohol, heavy metals, and metabolic poisons. P: 478-402, or 204-346, or 226-300, or 226-302, or cons inst.

478-430 Environmental Physiology 2 cr.
The physiological responses to thermal stresses of the environment. Offered in January as a lecture-laboratory course in which students perform both as technicians and subjects. P: 204-202, 203 and 226-111, 112, or equivalent.

478-440 Seminar: Topics in Human Adaptability 2 cr.
Interdisciplinary and collaborative library research with student reports on selected phenomena and problems in human adaptability. Strongly recommended for majors. P: sr st or cons inst.

478-448 Human Histology 3 cr.
A lecture-laboratory course dealing with the microscopic structure and function of cells, tissues, and organs of vertebrates, with emphasis on the human. P: 204-202; 204-203 or 478-104; and one upper level vertebrate biology course, or cons inst.

478-450 Psychological Factors in Human Adaptability 3 cr.
Fundamental concepts and mechanisms of adaptation of the human being to psychological stress. P: jr st.

478-481 Student-Led Courses 1-4 cr.
See page 19.

478-483X Selected Topics in Human Adaptability 1-4 cr.
See page 19.

478-484 Senior Distinction Project 3 cr.
See page 19.

478-498 Directed Study 1-4 cr.
See page 19.

Nutritional Sciences

For a person to cope successfully with a changing environment, an adequate supply of food is a basic necessity. The food supply should be adequate not only in quantity, but in quality and aesthetic value. Communities need educational programs to ensure that the right kinds of foods are consumed in the right amounts to assure adequate nutrition and maintain health for each individual.

The University's focus on humans in the environment is interpreted by Nutritional Sciences as an important, interdisciplinary, problem-centered study of the internal environment of humans; that is, all of the factors which affect the nutritional quality of life. This major offers two emphases: community nutrition and food science.

COMMUNITY NUTRITION

This emphasis (which may include dietetics) provides appropriate training in natural and social science and in communication skills to prepare students for employment as nutritionists or dietitians in hospitals or other health agencies at local, state, federal, or international levels. This emphasis is appropriate also for preparation of teachers for secondary and elementary schools when it is combined with professional courses in education. Students who want to complete requirements for the special dietetics subprogram should seek faculty advice early in order to complete requirements. Combinations directed toward social work and communications also are possible.

FOOD SCIENCE

The program in Food Science emphasizes the fundamentals of food composition and analysis, food resources, utilization, distribution, and food safety. It prepares students to work as technicians or scientists in areas of food processing or research. When combined with professional courses in education, nutritional sciences is an appropriate major for students who are preparing to teach in primary or secondary schools.

A program may be developed to prepare students for industrial careers in consumer relations, food evaluation, and in product promotion when the nutrition major is combined with appropriate courses in communications and social sciences. This emphasis can fulfill requirements for entrance to graduate programs and also provide a valuable background for professional schools of medicine, dentistry, and pharmacy.

Nutritional Sciences can be combined with other academic programs to meet students' individual career goals. The relationship between nutritional sciences, health, and environmental studies becomes a viable reality by combining the nutrition major with the interconcentration program in Environmental Health Sciences described elsewhere in this catalog. Other appropriate combinations include chemistry, biology, business management, or communications.

The Nutritional Sciences major must take appropriate courses to develop skills in gathering and interpreting data and in effective communication. The requirement includes a course in statistics, possibly computer sciences, and one or more courses in communication processes. Candidates who wish to attend graduate school are advised to take calculus and a foreign language.

For all-University requirements, students should select relevant courses in sociology, economics, psychology, political science, and history.

SAMPLE PROGRAMS

A general sample program for each area is given below as a guideline. These programs are only examples; each student should develop an individualized program with the help of faculty advisers. All-University requirements, electives, and special emphases such as education or communication are not shown in these examples.

Community Nutrition

Freshman Year:
204-202, 203 Principles of Biology I and II
OR
478-203, 204 Anatomy and Physiology I and II

226-108 General Chemistry
226-300, 301 Bio-organic Chemistry with laboratory
246-133 Fundamentals of Public Address
OR
892-255 Interviewing Skills

600-101 Intermediate Algebra (or advanced placement)
694-232 Nutritional Significance of Food

Sophomore Year:
204-203 Genetics
204-302 Microbiology
600-260 Introductory Statistics
694-302 *Nutrition and Culture*
226-330, 331 Biochemistry with laboratory
A second communications course
Selected Nutritional Science course

Junior Year:
600-251 Introduction to Computer Science
694-485 Advanced Human Nutrition
820-102 Introduction to Psychology

900-202 Introduction to Sociology
OR
An anthropology course

900-302 Social Stratification

Senior Year:
478-402 Human Physiology
AND
478-404 Animal Physiology Laboratory
OR
779-320 Introduction to Population Dynamics

694-421, 422 Community Nutrition I, II
820-320 Personnel Psychology
575-362 Principles of Personnel Management

Food Science

Freshman Year:
204-202 Principles of Biology I
204-203 Principles of Biology II
226-111 Principles of *Chemistry* I
226-112 Principles of Chemistry II
600-104 (or 203) Algebra and Trigonometry

Sophomore Year:
226-103 (or 201) Physics I
226-104 (or 202) Physics II
226-302, 303, 304, 305 Organic Chemistry I and II with laboratories
226-311 Analytical Chemistry
694-232 Nutritional Significance of Food

Junior Year:
204-302 Principles of Microbiology
204-303 Genetics
600-260 Introductory Statistics
694-302 *Nutrition and Culture*
226-330, 331 Biochemistry with laboratory

779-320 Introduction to Population Dynamics
OR
478-402 Human Physiology

Selected Nutritional Sciences course

Senior Year:
226-320 Thermodynamics and Kinetics (recommended)
226-321 Structure of Matter (recommended)
226-413 Instrumental Analysis (recommended)
694-404 Food Science
694-485 Advanced Human Nutrition

COURSES

694 NUTRITIONAL SCIENCES

694-142 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: none.

694-212 Food Preparation 4 cr.
Principles of food selection and preparation with emphasis on methods which maximize the retention of nutritional value. P: cons inst.

694-232 Nutritional Significance of Food† 3 cr.
Fundamentals of human nutrition, including functions and requirements of essential nutrients; means of

†Approved for Human Biology Distribution Credit.

obtaining an adequate diet. Specific attention is given to the needs of infancy, adolescence, adulthood, pregnancy and lactation, and aging. P: one year of high school chemistry or 226-108 or 226-111.

694-251, 252 War Against Hunger I, II 3 cr.
This sequence seeks to describe the overall dimensions of the world food situation and its ramifications. Many topics arise for consideration: intermediate technology as a way out, the non-food costs of food, affluent status and waste, the storage and distribution of food world wide, morality and the national attitude towards the hunger of others. During the second course, more attention is given to the issues from the standpoint of third world citizens.

694-261 Student-Led Courses 1-4 cr.
See page 19.

694-283X Selected Topics in Nutritional Sciences 1-4 cr.
See page 19.

694-298 Directed Study 1-4 cr.
See page 19.

694-302 Nutrition and Culture 3 cr.
Effects of environment and culture on food habits in historical perspective. Role of food in health and disease as related to humans and the biosphere. P: 694-232 or cons inst.

694-312 Quantity Food Production and Service 3 cr.
Principles of quantity food preparation and service. Laboratory affords experience in quantity preparation, service, and costing of food. Field trips. P: 694-212 and/or cons inst.

694-404 Food Science 4 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: 226-303 or 226-330.

694-421 Community Nutrition I 2 cr.
Nutritional problems of the individual and family within a local ecological setting—county, city, nation, region, and state. P: 694-302.

694-422 Community Nutrition II 2 cr.
Nutritional problems of the individual and family within a local ecological setting—county, city, special population segments. Includes field work. P: 694-421.

694-461 Student-Led Courses 1-4 cr.
See page 19.

694-483X Selected Topics in Nutritional Sciences 1-4 cr.
See page 19.

694-484 Senior Distinction Project 3 cr.
See page 19.

694-485 Advanced Human Nutrition 3 cr.
Physiological and biochemical principles of nutrition; fundamental concepts of human nutrition and nutritional diseases. P: 204-202; 226-330, 331; 694-232 or equivalent.

694-488 Nutrition in Disease 3 cr.
Therapeutic applications of nutrition in treatment of human diseases. Emphasis placed upon familiarization of student with the medical terminology, etiology, biochemical and clinical manifestations of disease conditions. Students will determine changes in nutrient intake, food and eating patterns necessary for treating disease conditions and construct suitable meal plans. P: 694-485; 226-330 or equivalent.

694-498 Directed Study 1-4 cr.
See page 19.

Population Dynamics

Population dynamics is the study of change in the composition, distribution, and size of populations—human and animal. It is the study of the factors influencing these changes and their consequences. Population dynamics, therefore, is concerned with interrelated topics that combine expertise usually found separately in the biological, sociological and behavioral sciences.

The major in Population Dynamics aims to provide precisely this kind of background, a background which is daily in greater demand to fill a variety of positions with both governmental and private agencies.

Students of Population Dynamics study social, behavioral, and biological factors affecting the numbers and composition of populations of organisms in a region; and the processes and consequences of population distribution and change. They can give their programs biological emphasis, taking such courses as Genetics; Population Biology; Vertebrate Reproduction; and Human Variability; or a sociological emphasis, choosing subjects like Social Demography; Demographic Methods; and Sociobiology.

A major in Population Dynamics is often combined with a disciplinary program in biology. Other appropriate disciplinary emphases are anthropology, geography, psychology, and sociology. Such combinations provide depth in a specific discipline, and can be molded to individual academic and career goals.

Skills developed through Population Dynamics can be applied in a variety of ways to a variety of careers. Students in Population Dynamics develop competencies for solving problems related to population changes which can be utilized in a variety of ways. For example, policy making by governmental and private institutions is increasingly dependent on population trends, including changing birth and death rates, migrations, and population structures, providing expanding opportunities for qualified persons to develop and interpret population studies and predict future trends. Such studies are used by government agencies to anticipate need for more schools and hospitals, better transportation systems, increased agricultural output, and the like, and by private businesses to predict market trends, to avoid overproduction of products, and determine the most successful forms of advertising.

The study and control of non-human population is another field for graduates. Recreational area and wildlife management draws heavily on knowledge of Population Dynamics. Careers in agricultural genetics and population biology are especially appropriate.

In combination with the social services professional program, Population Dynamics can prepare students to work in public health education or other areas of public health.

A major in Population Dynamics and a professional program in education will prepare students for elementary or secondary teaching. It is a particularly good background for high school biology teachers.

Some of the best opportunities in the field *may require advanced* study. This program provides a solid background for graduate study in social work or biology, or for professional schools of dentistry or medicine.

SAMPLE PROGRAM

One of the first requirements is that for tool subjects which help to develop basic skills. Usually this includes basic math and elementary statistics. Students planning to go to graduate school are encouraged to take chemistry-physics, a foreign language, and mathematics courses through calculus.

In the freshman and sophomore years, students should take three basic courses which are prerequisites for many advanced courses in Population Dynamics: Principles of Biology I and II, and Introduction to Population Dynamics.

In the junior and senior years, students select the 30 credits of courses required for a major from relevant offerings in *Population Dynamics, in the other* concentrations, or in a disciplinary program. Thirty-six credits are required for a major combining Population Dynamics and a disciplinary program.

Following is a sample of a possible program for a Population Dynamics major, excluding all-University requirements and electives. Keep in mind that this is only an example. An adviser will help each student *design a program* to meet individual interests, needs, and goals.

Semester I
204-202 Principles of Biology I
600-104 Elementary Functions: Algebra and Trigonometry

Semester II
204-203 Principles of Biology II
600-150, 151 BASIC or COBOL (Computer Languages)

Semester III
600-260 Introductory Statistics
779-312 Evolutionary Processes
779-318 Mammalian Reproduction
779-320 Introduction to Population Dynamics

Semester IV
779-310 Human Genetics
900-202 Introduction to Sociology

Semesters V-VIII
Individualized Program

COURSES

779 POPULATION DYNAMICS

779-204 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 cons inst.

779-260 Human Sexuality: Emphasis Women 2 cr.
An introductory examination of the biological and psychological factors that are important in the development and function of human sexuality, particularly in the human female.

779-281 Student-Led Courses 1-4 cr.
See page 19.

779-283X Selected Topics in Population Dynamics 1-4 cr.
See page 19.

779-298 Directed Study 1-4 cr.
See page 19.

779-310 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.

779-312 Evolutionary Processes 3 cr.
The cytological, morphological, behavioral, and geographic factors involved in the origin of species and higher taxa. P: 204-203.

779-318 Mammalian Reproduction 3 cr.
Basic reproductive processes, with emphasis on the factors, both hormonal and environmental, that affect reproductive functions in mammals; how these processes can be modified to control reproduction. P: 204-203 or cons inst.

779-320 Introduction to Population Dynamics† 3 cr.
The factors that affect size, density, distribution and composition of populations. Examples are drawn from non-human and human populations and include elements of demography, socioeconomics and biology.

779-342 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. P: 779-312 or 204-303.

779-356 Social Demography 3 cr.
Examines social and economic factors related to the size, growth, distribution and dynamics of human populations. Considers theoretical approaches to human population growth as well as the impact of population policy upon demographic trends. See 900-356.

779-364 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 desert are examined. P: 779-342.

779-365 Human Resources and Economic Growth in Poor Countries 3 cr.
See 875-365.

†Approved for Human Biology Distribution Credit.

779-401 Agricultural Genetics and World Food Production 3 cr.
Inheritance as related to livestock and agronomic plants. Goals and techniques of selection, hybridization, and breeding for yield; pest and disease resistance; feed efficiency; and product quality. Emphasis on major food crops exploring the relationship among agricultural technology, population growth, and human nutritional requirements. P: 204-303 or 779-310.

779-402 Population Biology 4 cr.
An in-depth analysis of nonhuman populations. Emphasis on the growth, structure, and regulation of populations. Theoretical and applied aspects are considered. P: 862-302 and 500-260.

779-412 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.

779-450 Current Topics in Population Dynamics 2 cr.
Review and analysis of current literature in population dynamics. Students present seminars and prepare written reports on topics selected from current issues. P: sr st.

779-456 Demographic Methods 3 cr.
An introduction to the materials and techniques of demographic research. The collection, analysis and interpretation of demographic data. Exercises and term projects will provide experience with actual population data. P: 779-320 or 779-356 or 900-356.

779-460 Biogeography 3 cr.
The adaptation of biological populations to geographic regions. Considers their origins, migrations, and differentiation, and the complex of climatic and physiographic factors influencing their distribution, as well as the application of biogeographic principles for the appropriate utilization of biotic resources. P: 204-203 or cons inst.

779-481 Student-Led Courses 1-4 cr.
See page 19.

779-483X Selected Topics in Population Dynamics 1-4 cr.
See page 19.

779-484 Senior Distinction Project 3 cr.
See page 19.

779-485 Directed Study 1-4 cr.
See page 19.

ENVIRONMENTAL HEALTH SCIENCES

With urbanization and industrialization there has been a substantial increase in a variety of physical, chemical and biological factors which are recognized as health hazards. Examples are noise, air and water pollutants, increased use of food additives and increased sources of food contamination. One of today's pressing challenges is to find ways to cope effectively with these problems and to minimize the deleterious effects of these environmental hazards on human health.

The Environmental Science program provides training to prepare the student for an entry-level position in the environmental health field. This field has need for people with diverse backgrounds in the basic sciences. All students in this program, however, must take courses in the environmental and health sciences, management, and problem solving in addition to foundation courses in several natural science disciplines and mathematics. Students whose primary interest is in analyzing and monitoring environment-related health factors should plan their program within the Science and Environmental Change concentration. The program in Human Biology should be elected by students whose primary interest is in the effects of environmental factors on the health of human individuals and populations, including the role of these factors in nutrition, food safety, and human adaptation.

The student in Human Biology who elects a program in environmental health will choose a slightly modified major in Nutritional Sciences (Food Science) or Human Adaptability (Laboratory Life Sciences). To plan such a program, the student must seek the early help of an adviser.

Science and Environmental Change

Professors: H. J. Day, hydrology, resource management; **David Jowett,** biometrics, biomathematics, ecosystems modeling; **Thomas H. McIntosh** (chairperson), soils, agricultural land management, biogeochemistry; **Joseph M. Moran,** meteorology, air pollution; **V.M.G. Nair,** plant and forest pathology, mycology; **John F. Reed,** botany; **Paul E. Sager,** limnology, aquatic biology; **Keith L. White,** ecology and resource management.

Associate Professors: Fritz A. Fischbach, environmental health, aeroallergens, biophysics; **Dennis M. Girard,** statistics, mathematics; **Alice I. Goldsby,** microbiology; **Hallett J. Harris,** animal and wetland ecology; **Robert W. Lanz,** mechanical engineering, waste heat recovery methods, conventional and alternate technologies; **Allison P. Loomer,** mathematics; **Anjani K. Mehra,** solar and alternate energy technologies; **Bruce Mielke,** (visiting professor 1980-81 from Rhode Island College); **Michael D. Morgan,** ecology; **Jack C. Norman,** radiochemistry; **Nikitas L. Petrakopoulos,** applied mathematics, theoretical physics; **Charles Rhyner,** solid waste management; **Leander J. Schwartz,** microbiology, plant physiology; **Nancy J. Sell,** industrial resource recovery; **Roger A. Simons,** (visiting professor 1980-81 at Rhode Island College), mathematics and computer science; **Ronald H. Starkey,** organic chemistry and air chemistry; **Thomas E. Van Koevering,** high school science teaching; **Robert B. Wenger,** solid waste management and mathematical optimization; **James H. Wiersma,** water chemistry, analytical chemistry.

Assistant Professors: Steven I. Dutch, structural geology, mineral resources; **Daniel S. Kalman,** mathematics, mathematics education, and computer science; **Sterling P. Randall,** physical and inorganic chemistry; **William A. Shay,** mathematics and computer science; **Ronald D. Stieglitz,** geology and land use, sedimentary geology; **Richard B. Stiehl,** vertebrate zoology, ornithology, mammalogy.

Lecturer: Donn P. Quigley, geology of Wisconsin.

Science and Environmental Change (SEC) is a program of study in the natural sciences. A student who majors in SEC has an opportunity to acquire a sound understanding of the scientific principles that govern natural processes.

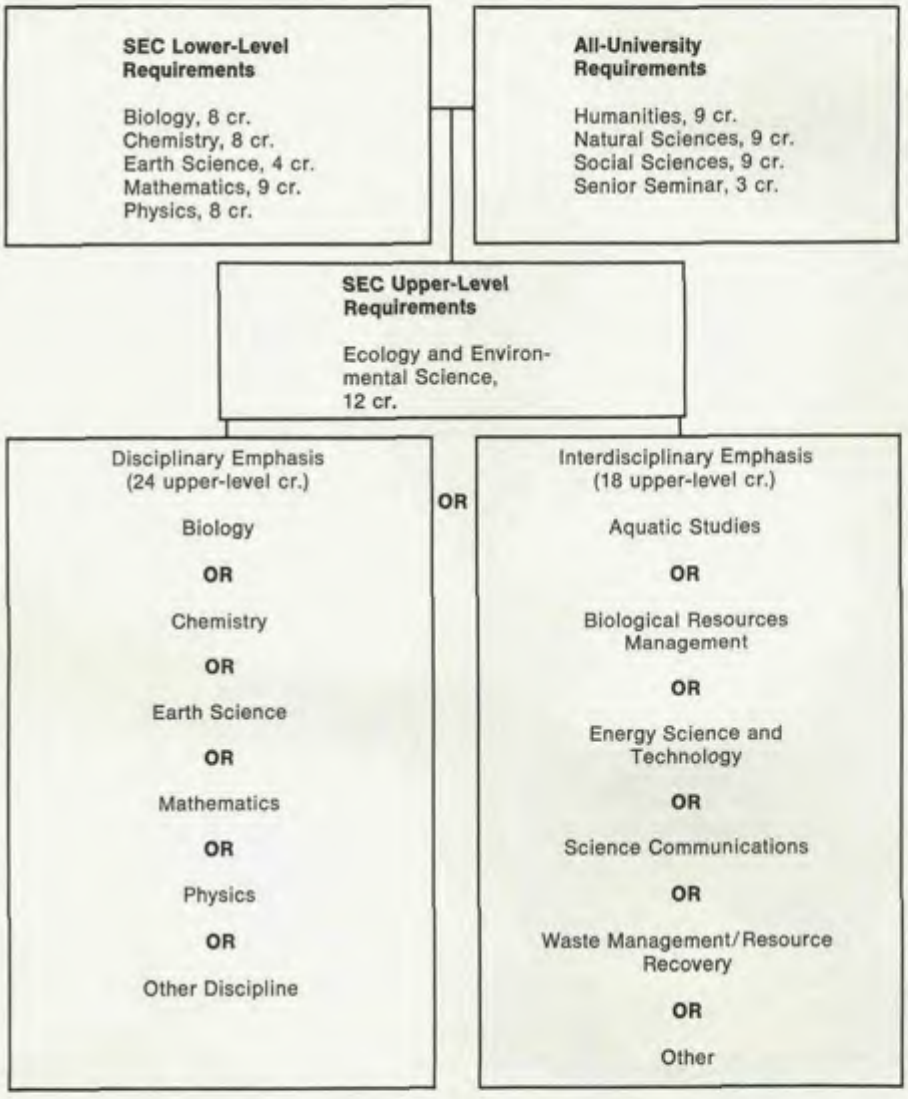
Through formal course work, independent study, and research activities, the SEC *major develops a realistic* awareness of the interdependency of the various components of the environment and of the nature of environmental change.

The SEC program is structured so that students acquire a broad base of knowledge in the biological, physical, and mathematical sciences. This basic grounding in science coupled with selected junior-senior level courses of a disciplinary and interdisciplinary nature permit the student to develop a major in either of two ways:

1. an academic program primarily interdisciplinary (drawing on resources from several subjects or disciplines) **or,**

2. a program which emphasizes a particular discipline (biology, chemistry or others), but also includes an important interdisciplinary component.

SCIENCE AND ENVIRONMENTAL CHANGE



Elective Courses to Total 124 Credits

REQUIREMENTS

Each SEC major prepares for either a disciplinary or an interdisciplinary program emphasis by completing introductory courses in science and mathematics along with courses in ecology and environmental science. All students also fulfill all-University requirements in the humanities, social sciences, natural sciences, and senior seminar.

As a base for the SEC major, students need to acquire certain analytical skills plus a broad understanding of the physical and biological sciences. This competency is gained through 37 credits of course work in introductory science and mathematics: earth science (4 credits), chemistry (8 credits), physics (8 credits), mathematics (9 credits), and biology (8 credits).

The ecology and environmental science aspect of the program is intended to help develop awareness and understanding of the interrelatedness of the components of the environment and their sensitivity to disturbance. Course work in ecology and environmental science with a focus on management, modeling, and problem solving is required for 12 credits total at the junior-senior level. These courses count toward the disciplinary or interdisciplinary major.

DISCIPLINARY EMPHASIS

Students selecting a disciplinary emphasis will complete 36 credits of course work at the junior-senior level, including 24 credits in a specific subject along with the 12 credit course requirement in ecology and environmental science. Normally, SEC majors select chemistry, physics, biology, earth science, or mathematics, but in some instances economics, anthropology, geography, communication processes or another disciplinary area may be appropriate. Faculty advisers from each discipline are available to help students tailor course selections to meet their objectives. Disciplinary programs are described elsewhere in this catalog. Individual brochures describing programs of study are available in the SEC advising office.

INTERDISCIPLINARY EMPHASIS

An interdisciplinary program of study (or track) requires 30 credits of course work at the junior-senior level: 12 credits in ecology and environmental science plus 18 credits related to a specific problem area. At present there are interdisciplinary tracks in:

—Aquatic Studies
—Biological Resources Management
—Energy Science and Technology
—Science Communications
—Waste Management/Resource Recovery

Additional interdisciplinary tracks are currently being developed. Also, students who have interests in other areas of the environmental sciences can design, in consultation with an SEC adviser, programs of study based upon those interests. All study programs have in common a fundamental grounding in the natural sciences and yet, each is designed to fulfill specific concerns that cross traditional disciplinary boundaries. Descriptive brochures containing more detailed information on interdisciplinary tracks are available in the SEC advising office.

The Aquatic Studies program provides students with the opportunity to study the natural functioning of aquatic systems (*lakes, rivers, groundwater*) along with the impact of human activities upon these systems. Scientific understanding and management of an aquatic system requires knowledge of its living communities and their environment and the potential impact that physical and chemical changes might have on these communities. These skills are developed through interdisciplinary courses in aquatic biology, water chemistry, and hydrology. Emphasis on any one of these three areas in the aquatic studies program is possible by completing other related courses. Students completing the aquatic studies program find employment as specialists in industrial and municipal *water treatment systems*, or as specialists in industrial and municipal water treatment systems, or as specialists who gather field and laboratory data for consulting engineering firms. State and federal agencies responsible for maintaining and improving water quality also employ persons with skills developed through the aquatic studies program. The program also serves as preparation for graduate study.

Biological Resources Management provides training in the ecological aspects of biological resources management and the interactions with economic and political institutions. Using the ecosystem approach, students become familiar with the problems and potential of biological resources protection, manipulation and use consistent with environmental quality needs. Graduates should be capable in employment areas such as biological resources management agencies, land use planning agencies, environmental impact analysis for agencies and industry, biological resources specialists with private environmental groups, or in recreational resource development. Graduates have an excellent background for advanced study of biological resources, regional planning, biological resources administration, or biological resources economic analysis.

Energy Science and Technology examines the crisis in energy supply through courses in alternate energy systems, energy conservation, and conventional energy systems. The goal of this track is to develop an understanding of the scientific principles underlying energy production and utilization. There are numerous opportunities for independent study and practical experience in solar energy systems. Interests of faculty members are in the areas of solar and wind energy, energy conservation, biofuels, and energy education. Resources are drawn from various disciplines including physics, chemistry, earth science and biology. There is a special emphasis on the economic and management aspects of energy problems and students should plan to take courses in these areas in addition to the SEC required courses. Opportunities for students majoring in this track include preparation for engineering schools, design and construction of alternate energy systems, energy education at the vocational and school level, state and federal government employment, and international opportunities especially in developing countries.

Science Communications provides students with the opportunity to develop a facility in the natural sciences along with skills in communications. Individuals so prepared are capable of bridging the communications gap that often separates scientists and society. In view of the wide range of occupations in science communications (public information officers, science journalists, environmental interpretation reporters, and television and radio weathercasters, for example), UWGB offers two programs in this area. For students wishing to emphasize the natural sciences, the SEC program is appropriate. Minimum requirements for this track are 18 upper-level credits in environmental sciences courses and 12 upper-level credits in communications. For students whose primary interest is communication, a science communication track is available through the concentration in Communication and the Arts.

Waste Management/Resource Recovery is designed for students interested in developing scientific and management skills necessary to deal with the problems of solid and liquid wastes. This study program considers methods of recovering useful materials or fuels from the waste stream generated by society and techniques of disposing the remainder in an environmentally acceptable and economically efficient manner. In pursuing this area of study, students likely will support their interdisciplinary courses with advanced courses in biology, chemistry, earth science, mathematics and resource management. The major may be strengthened by courses in Public and Environmental Administration or business administration. For students completing a program of study in this area, potential employment opportunities exist in the public sector in agencies concerned with managing and regulating waste disposal and resource recovery practices, and in the private sector in businesses and industries where waste must be dealt with in an acceptable manner. Opportunities are also available for further study at the graduate level.

In addition to disciplinary and interdisciplinary programs of study, SEC provides preprofessional training in engineering, medicine, dentistry, pharmacy, and veterinary studies. Further, SEC majors may fulfill requirements for teacher certification through the professional program in Education, or take course work in other professional areas such as Recreation Resources, Public and Environmental Administration, and business administration.

STUDENT ADVISING

SEC has a formal advising program to guide students in designing their academic programs and in making career choices. Faculty advisers represent the wide range of scientific and mathematical specialties housed within SEC and they are present in the concentration advising office on a regularly scheduled basis.

SAMPLE STUDY PLANS

Following are typical study plans for students who select areas of interdisciplinary emphasis. All-University requirements and electives are not included. Students should seek the advice of faculty advisers in developing programs to meet individual interests and needs.

Waste Management/Resource Recovery

Freshman Year:
204-202 Principles of Biology I
204-203 Principles of Biology II
226-111 Principles of Chemistry I
226-112 Principles of Chemistry II
600-104 Elementary Functions: Algebra and Trigonometry
600-202 Calculus and Analytic Geometry I
600-150 BASIC: A Time-Sharing Computer Language

Sophomore Year:
226-103 Fundamentals of Physics I
226-104 Fundamentals of Physics II
226-311 Analytical Chemistry
296-202 The Earth's Physical Environment
600-203 Calculus and Analytic Geometry II
600-251 Introduction to Computer Science

Junior Year:
350-301 Environmental Politics and Administration
350-415 Administrative Planning, Programming, and Budgeting Systems
862-302 Principles of Ecology
862-303 Conservation of Natural Resources
862-320 The Soil Environment
862-321 The Soil Environment Laboratory
862-334 Solid Waste Management
862-342 Environmental Geology

Senior Year:
204-302 Principles of Microbiology
862-330 Quantitative Hydrology
862-335 Water and Wastewater Treatment
862-434 Water Chemistry
862-460 Resource Management Strategy

Aquatic Studies

Freshman Year:
204-202 Principles of Biology I
204-203 Principles of Biology II
226-111 Principles of Chemistry I
226-112 Principles of Chemistry II
600-104 Elementary Functions: Algebra and Trigonometry
600-150 BASIC: A Time-Sharing Computer Language
600-202 Calculus and Analytic Geometry I

Sophomore Year:
226-103 Fundamentals of Physics I
226-104 Fundamentals of Physics II
226-311 Analytical Chemistry
296-202 The Earth's Physical Environment
600-203 Calculus and Analytic Geometry II
600-251 Introduction to Computer Science

Junior Year:
862-320 The Soil Environment
862-322 Ecosystems Analysis I
862-323 Ecosystems Analysis II
862-403 Limnology
862-434 Water Chemistry

Senior Year:
204-341 Ichthyology
226-413 Instrumental Analysis
862-405 Winter Conditions in Lakes
862-460 Resource Management Strategy
875-400 Environmental Law

Science Communications

Freshman Year:
204-202 Principles of Biology I
204-203 Principles of Biology II
226-111 Principles of Chemistry I
226-112 Principles of Chemistry II
246-133 Fundamentals of Public Address
552-105 Introduction to Expository Writing
600-150 BASIC: A Time-Sharing Computer Language
600-260 Introductory Statistics
600-251 Introduction to Computer Science

Sophomore Year:
226-103 Fundamentals of Physics I
226-104 Fundamentals of Physics II
242-202 Introduction to Mass Communication
242-231 Introduction to Graphic Communication
246-143 Introduction to Photography
246-200 Introduction to Communication Processes
296-202 The Earth's Physical Environment

Junior Year:
242-331 Graphic Communication Studio I
242-395 Photographic Design for Print Media
862-302 Principles of Ecology
862-330 Quantitative Hydrology
862-403 Limnology

Senior Year:
246-303 Specialized Writing
246-305 Elements of Electronic Media
600-465 Business and Industrial Statistics
862-331 Oceanography
862-405 Winter Conditions in Lakes
862-460 Resource Management Strategy

COURSES

862 SCIENCE AND ENVIRONMENTAL CHANGE

862-102 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 non-science majors.

862-105 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.

†Approved for Environmental Sciences Distribution Credit.

862-125 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.

862-141 Elementary Astronomy† 3 cr.
A study of the solar system, stars, galaxies, and universe.

862-162 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.

862-182 Environmental Aspects of Human Settlements I 3 cr.
Covers all facets of human settlement and resettlement as they apply to environmental impact and maintenance of a global steady state. The effects of initial settlements on the land, how the land and the people responded, as well as techniques for present day settlement and resettlement and future settlements will be covered.

862-183 Environmental Aspects of Human Settlement II 3 cr.
The second part of 862-182. Students will develop an on-site study of a proposed environmental change, a proposal for a new settlement or a study of an ongoing environmental change. They will develop the effect of the settlement change on the surrounding environment at a global level, and how the settlement would have developed if the change had not occurred. The site study area will be in northeast Wisconsin. P: 862-182.

862-184, 185 Patterns of Scientific and Technical Based Problem Solving I, II 3, 3 cr.
The role of the natural sciences in a variety of open ended scientific and technical based problems and issues will be examined. Value judgment and priority establishment among alternatives in such applied science areas as environmental health and energy will be examined.

862-186 Man and Wildlife I 3 cr.
This all-University requirements course examines the place of wildlife in the world shaped by humans. This part of the six-credit sequence is a survey of the positive and negative interactions of man and wildlife resources of the world. The concepts of ecosystem stability, habitat diversity, and the basic ecological principles of sound wildlife management will be examined. Identification, census techniques and current management strategies will be reviewed. Man's effects on wildlife, through hunting, trapping, habitat modification and intrusion will be studied. The values issues which set the context for the interaction between man and wildlife will act as the main theme of the course.

862-187 Man and Wildlife II 3 cr.
The second part of a six-credit all-University requirements sequence. In this portion, special consideration will be given to current wildlife resources, the principles of predator management, rare and endangered species, wilderness and primitive areas, changes in wildlife resources, environmental politics and environmental economics. The important value issues that set the context for the interaction between man and wildlife will continue as a main theme. P: 862-186.

862-190 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 will trace the history of this transition and examine some of the factors which may have contributed to it, as well as discuss the implications and future of technology. P: 296-200 or 296-202 or 226-111 or 226-103 or 226-108 or 862-102 or 862-141.

862-205 Wilderness Ways 2-3 cr.
Lecture-Discussion: 2 cr. A course covering various aspects of the North American wilderness; including historical, legal, management, protection, means of travel, equipment, camping techniques, food and cooking, wilderness medicine, and basic survival principles. Emphasis on backpacking and canoeing as methods of wilderness travel. Demonstrations of several techniques and types of equipment and short field trips are included.
Field Lab: 1 cr. The field lab consists of planning and undertaking a 5-day wilderness trip (dates to be specified). The cost of the field trip will be borne by the student. Equipment rental can be arranged at group rates. Contact instructor for further details.

862-207 Strength of Materials 1 cr.
A five-week module introducing topics in stress and strain of common building materials and deflections of rods, beams, columns, and structures. Specifically designed for the student interested in environmental design.

862-260 Energy and Society† 3 cr.
A course that concentrates 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: 862-102 or 226-103 or 226-111.

862-281 Student-Led Courses 1-4 cr.
See page 19.

862-283X Selected Topics 1-4 cr.
See page 19.

862-284 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.

862-286 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: 862-102 or 204-202.

862-295 Water Microbiology 2 cr.
A course designed to better acquaint 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.

862-298 Directed Study 1-4 cr.
See page 19.

862-302 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. P: 204-203. (Credit will not be granted for both 862-302 and 862-322, 323.)

862-303 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: 862-102 or 204-203 or 296-202.

862-306 Biophysics 3 cr.
The application of physical principles to understanding biological structure and phenomena; the physical-chemical basis of life and its origin. Applications to organisms, their subsystems and their relationship to physical factors in the environment. P: 204-203 and either 226-104 or 226-202.

862-307 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 condition. Case histories of prescribed burning, e.g., blueberry production, big game management and bird habitat preservation are analyzed.

862-308 Ecology of Invasions 2 cr.
An examination of invasions of plant and animal species into new areas. Case histories will be examined to explore how some species successfully invade a new region whereas others fail. Ramifications of invasions including species extinction, disruption of food webs, and establishment of new population equilibria, are considered. The role of people in initiation and control (management) of invasions are integral parts of this course. P: 204-203.

862-313 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: 800-202.

862-314 Mechanics II 3 cr.
Laws of friction and impending motion, moments of inertia, virtual work, stability, translation, solution and plane motion of rigid bodies, work and potential energy of particles and rigid bodies, linear and angular impulse and momentum, central force motion. P: 862-313.

315 Mechanics III 3 cr.
See 226-315.

862-316 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: 862-313.

862-318 Industrial Pollution Control Techniques 2 cr.
This course will first explain 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 . . .) will be 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: 226-112.

862-319 Industrial Pollution Control Field Trips 1 cr.
Optional field course to accompany 862-318. Field trips will be scheduled to a variety of local industries including a paper mill, foundry, MSD, etc. In addition, each student will be required to prepare a research paper. P: Concurrent registration in 862-318.

862-320 The Soil Environment 3 cr.
The physical, chemical, and biological properties of soil; formation, classification, and distribution of major soil orders; influence of soil on agricultural, engineering, urban, and water systems. Field trip. P: 226-108 or 112; 296-202 recommended.

862-321 The Soil Environment Laboratory 1 cr.
Laboratory and field study of physical, chemical, and biological properties of soils. P: credit or concurrent registration in 862-320.

†Approved for Environmental Sciences Distribution Credit.

862-322, 323 Ecosystems Analysis I, II 4, 4 cr.
The dynamics of ecosystems, emphasizing principles essential to analysis, understanding, and management. Description of major ecosystems, energy relationships, nutrient cycling, limiting factors, genetic adaptations and mechanisms of evolution, and management problems. Field trips, environmental data collection and laboratory analysis, and an introduction to systems analysis. To be taken in sequence. P: 204-203, 226-112, 226-104 or 202, 296-202, and 600-260.

862-326 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 862-316.

862-327 Urban Technological Design 3 cr.
Develops an awareness and understanding of systems which sustain urban areas and the environmental changes caused by these systems. Serves as a communication bridge among the natural sciences, social sciences, and humanities, and as a basic course in environmental design processes. P: jr st. See 242-405.

862-330 Hydrology 3 cr.
The principles of hydrology dealing with the waters of earth; the occurance, circulation, and distribution; the chemical and physical properties of water and its reaction with the environment, including the relation to living things. P: 296-202 or cons inst.

862-331 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 or cons inst.

862-335 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 226-111 or 204-202.

862-341 Intermediate Astronomy 3 cr.
The course will emphasize the modern developments in astronomy, stellar birth and death; white dwarf, neutron stars and black holes, origin and evolution of the universe; galaxies, quasars and radio sources; results of recent investigations of the solar system; search for extraterrestrial intelligence. P: Either 862-141 and 600-104 or 226-104, 202.

862-342 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.

862-350 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: 226-201 or cons inst.

862-351 Synoptic Meteorology Laboratory 1 cr.
Application of principles presented in 862-350 to actual synoptic-scale weather situations. Techniques of weather analysis and forecasting. P: 862-350 or concurrent registration.

862-363 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.

862-378 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 will be covered. The course is in basic lecture format and each student is asked to prepare a paper on an aspect of chemical ecology which is of interest to him or her. P: cons inst.

862-380 Radiobiology 2 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 will not be given for both this course and 226-418.

862-382 River Basins in Transition I—Origin, Nature, and Dynamics 3 cr.
Use of the river drainage basin as an important element in planning human activities compatible with existing local natural resources. A review of the natural and human history in two river basins including one in Northeastern Wisconsin and one in Central America or elsewhere in the U.S. will be presented with an emphasis on the interrelationship between 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 will be used as the foundation for considering value questions addressing future resource management alternatives. Occasional guest lecturers and field trips will supplement regular classroom activities. P: jr st.

862-383 River Basins in Transition II—World Perspective 3 cr.
Continued study of interaction between human activities and natural resources in river basins. An integrated global perspective will be provided by including land forms, human populations, land use, economic development, climate and other important features of selected river basins throughout the world. The need for and problems associated with timely uniform data collection, including satellite remote sensing, will be discussed. The case study approach will be used on a comparative basis to analyze and synthesize natural science and social science data available both domestically and in other countries. Value questions associated with basin resource utilization such as land ownership vs. land stewardship and upstream vs. downstream water rights in arid land will be included. Occasional field trips and guest lecturers will be used. P: 862-382.

862-403 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 226-111.

862-405 Winter Conditions in Lakes 3 cr.
Physical, chemical and biological characteristics of selected Wisconsin lakes will be examined. Emphasis will be placed on limnological parameters that demonstrate trophic status and the effects of metabolism of lake ecosystems imposed by winter conditions of low temperature and reduced light. Intensive sampling and analysis during a one week field trip to northern Wisconsin lakes will provide a data

base for specialized individual student projects. An interdisciplinary analysis of the data will be accomplished through student seminar presentations of specialized projects. P: Advanced course work in ecology and/or chemistry desired (analytical chemistry); also cons of inst; 1 week field trip to northern Wisconsin.

862-412 Bio-Energetics 3 cr.
Energy biology, a thermodynamic and information content view of energy and energy flow in biological systems. Results applied to biochemical, human, and ecological systems. P: 204-203 and either 226-104 or 226-202.

862-414 Conventional Energy Technology 3 cr.
An advanced course on conventional energy conversion equipment, electric power generation facilities, available fuels, energy related to transportation and energy policy. P: 600-203, 226-320.

862-415 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: 226-104 or 226-202 or equivalent.

862-421 Soils 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 1979 was $90. Deposit required. Enrollment is limited. See T. H. McIntosh for tour registration form. P: 296-202, credit or classification in 862-320 or 420 or cons inst.

862-422 Environmental Biogeochemistry 3 cr.
Microbial and chemical transformations of carbon, nitrogen, phosphorus, sulfur, and certain trace compounds in soil-water-atmosphere systems; fate of selected pesticides, fertilizers, natural and synthetic wastes in the ecosystem; beneficial and toxic effects on plants and animals, role in pollution of the environment; use of waste disposal systems for pollution abatement. Field trip. P: 204-202, 226-300, 296-202.

862-434 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: 226-311.

862-440 Practicum in Environmental Interpretation and Communication 3 cr.
A practicum for persons who intend to work as environmental interpretive naturalists or environmental educators with youth and adults in outdoor environmental centers, or as leaders in school or camp outdoor programs. Participants spend about one-third of their time teaching youth and/or adults. Lectures, seminars and field experiences at camp(s), schools and/or environmental centers emphasize developing, implementing, and evaluating programs and activities in environmental interpretation-communication. P: 862-302 or equivalent, jr st and cons of inst; course work in Earth Sciences is highly recommended.

862-441 Seminar in Environmental Interpretation and Communication 3 cr.
This seminar-practicum is designed primarily for seniors in environmental interpretation-communication and others who intend to become practicing outdoor environmental educators. Lectures, discussions, laboratories and field experiences will focus on bringing together students' training and experiences in environmental sciences and skills of interpretation and communication, so that they may gain competencies necessary to future employment in environmental interpretation-communication. P: 862-302 or equivalent, jr st and cons of inst; course work in Earth Sciences highly recommended.

862-450 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: 226-112.

862-454 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. P: 296-202 or 416-250. See 834-454.

862-460 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 and some background in economics or conservation.

862-466 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.

862-481 Student-Led Courses 1-4 cr.
See page 19.

862-483X Selected Topics in Science and Environmental Change 1-4 cr.
See page 19.

862-484 Senior Distinction Project 1-3 cr.
See page 19.

862-498 Directed Study 1-4 cr.
See page 19.

Biology

Professors: Harry Guilford, parasitology, anatomy; **William Kaufman,** human physiology; **V.M.G. Nair,** plant-forest pathology, mycology; **John F. Reed,** botany-plant anatomy; **Paul Sager,** limnology, aquatic biology; **Keith White,** plant ecology.

Associate Professors: Alice I. Goldsby, microbiology; parasitology; **Hallett J. Harris,** animal ecology; **Charles Ihrke,** (chairperson), genetics; **Elaine McIntosh,** nutrition, community health; **Michael Morgan,** plant ecology, plant physiology; **Leander Schwartz,** microbiology, plant physiology; **Richard Stevens,** human neurophysiology.

Assistant Professors: Dorothea Sager, zoology, reproductive biology, embryology; **Richard Stiehl,** vertebrate zoology, ornithology, mammology.

The biology program prepares students for careers in traditional areas such as ecology, field biology, genetics, microbiology and physiology. Students can select biology courses that will prepare them for medical, dental, veterinary, or other professional schools. Another alternative for students with an interest in biology is a program of study that prepares them for careers in applied areas including aquatic studies, biotic resource management, environmental health, human adaptability, nutritional sciences, population dynamics, solid waste management, and science communications (technical writing, journalism, and nature interpretation).

For students interested in education, teacher certification can be obtained by combining a program in professional education with the appropriate science courses. Students aiming for biology-related administrative positions may prepare by combining coursework in biology with a professional program either in Managerial Systems (business administration) or Public and Environmental Administration.

UWGB biology graduates are presently employed in industry, 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. Department of Agriculture, Wisconsin Department of Natural Resources, and others), by environmental consulting firms, and are teaching in primary and secondary schools and universities. Each year approximately 40 percent of the biology graduates are accepted by graduate and professional schools.

Entrance to the biology major program begins with two introductory courses: Principles of Biology I (204-202) and Principles of Biology II (204-203). Students who have a background equivalent to these courses, can, upon successful completion of a challenge exam, receive credit for them.

Beyond the introductory level, biology majors take a minimum of 24 credits in junior and senior level courses including at least one laboratory and one field course. Of the 24 credits, at least 3 credits must be taken in each of the following categories: ecology; genetics and evolution; anatomy and physiology; systematics and classification. The remaining 12 credits and more may be selected from the above categories or from the list of additional courses, as well as from appropriate January interim, independent study, and graduate courses.

Career goals and other interests will be major factors influencing what courses students select. It is strongly recommended that students also take basic courses in chemistry, mathematics, and physics.

PROGRAM OF STUDY

Following is the list of junior and senior level courses from which a biology student constructs his or her program of 24 credits.

Ecology (if 862-322 is selected, then 323 is also required and 302 cannot be taken for credit) (Minimum 3 credits).
779-402 Population Biology
779-480 Biogeography
862-302 Principles of Ecology
862-307 Ecology of Fire
862-308 Ecology of Invasions
862-322 Ecosystems Analysis I
862-323 Ecosystems Analysis II
862-403 Limnology

Genetics and Evolution (Minimum 3 credits)
204-303 Genetics
204-304 Genetics Laboratory
779-310 Human Genetics
779-312 Evolutionary Processes
779-342 Human Evolution
779-401 Agricultural Genetics and World Food Production

Anatomy and Physiology (Minimum 3 credits)
204-311 Plant Physiology
204-317 Structure of Seed Plants
204-340 Comparative Anatomy of Vertebrates
204-346 Comparative Physiology
204-347 Developmental Biology
204-405 Microbial Physiology
478-313 Brain Functions in Human Behavior
478-402 Human Physiology
478-404 Animal Physiology Lab
478-413 Neurophysiology
779-318 Mammalian Reproduction

Systematics and Classification (Minimum of 3 credits)
204-310 Plant Taxonomy
204-312 Mycology
204-315 Biology of Lower Green Plants
204-320 Field Botany
204-341 Ichthyology
204-342 Ornithology
204-343 Mammalogy
204-350 Field Zoology
204-355 Principles of Entomology
204-402 Advanced Microbiology

Additional Courses
204-302 Principles of Microbiology
204-345 Animal Behavior
204-305 Biological Microtechnique
779-412 Principles of Parasitology
862-363 Plants and Forest Pathology

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 also

are some opportunities for students to work in intern training programs with private, state, and national agencies and in industry. Credit for these experiences is often available by special arrangement.

A biology major is required to take at least 12 credits of junior and senior level courses in a concentration. Biology students interested in such areas as aquatic studies, biological resource management, solid waste management, or science communication will normally take a 12 credit program in Science and Environmental Change. Human Biology is usually the concentration selected by biology majors with an interest in human adaptability, nutritional sciences, or population dynamics. Biology students with an interest in land use planning frequently elect to take their 12 concentration credits in Regional Analysis.

As an alternative to a disciplinary major in biology, some students with an interest in biology choose to develop an interdisciplinary 30 credit concentration program at the junior-senior level.

These 30 credit programs focus on a problem area by drawing together coursework from several disciplines. For example, a student interested in aquatic studies can select a program that includes courses from biology, chemistry, hydrology, and resource management. For a description of available interdisciplinary programs of study, please see the track descriptions found in the Human Biology, Science and Environmental Change, and Regional Analysis concentrations.

Biology students may find it advantageous to take part in the national student exchange program in which UWGB participates. It allows students to study for a semester or a full year at another participating university while paying resident tuition at UWGB. This is an excellent opportunity for a student to broaden and deepen his or her academic program while still participating in the flexible program offered at UWGB.

Facilities in biology include well-equipped teaching laboratories and numerous small laboratories designed for student-faculty research projects. Some major equipment and facilities include: natural areas for teaching and research (Cofrin Arboretum, Toft Point, Lilly Lake, Fuller Tract, West Shore Wetlands, and others), Carl Richter Natural History Collection (emphasizing ornithology), herbarium, small animal facilities, computing facilities, fungal collection, fossil collection, plant growth chambers, greenhouse, environmental chamber, physiograph, spirometer, oxygen analyzers, oscilloscopes, high-speed centrifuges, radioisotopes equipment, chromatographic apparatus, auto-analyzer, total carbon analyzer, microclimatological equipment, UV-visible infrared spectrophotometry, boats, and other aquatic studies equipment.

COURSES

204 BIOLOGY

204-202 Principles of Biology II† 4 cr.
An introduction to biological principles; structure and function of organisms and their relationship to the environment. Includes laboratories.

204-203 Principles of Biology III† 4 cr.
An introduction to biological principles; structure and function of organisms and their relationship to the environment. Includes laboratories. P: 204-202.

204-205 Organism Diversity 2 cr.
Classroom and laboratory instruction in the diversity of plants and animals, their taxonomy, phylogeny and structural adaptations. Each major group of multicellular organisms will be considered. P: 204-202.

204-240 Plants and Civilization 2 cr.
The economic importance of plants in the development of civilization and in modern agriculture and industry. Emphasis is on historical and modern cultural aspects.

204-283X Selected Topics 1-4 cr.
See page 19.

204-298 Directed Study 1-4 cr.
See page 19.

†Approved for Human Biology Distribution Credit.

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 226-108 or 226-112.

204-303 Genetics 3 cr.
Mechanisms of heredity and variation, their cytological basis and their implications in biology. P: 204-202.

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 concurrent registration.

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.

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. P: 204-203.

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, 226-112.

204-312 Mycology 3 cr.
Morphology and taxonomy of lower and higher fungi; fungi in medicine and industries; laboratory techniques involved in collection, isolation, culture, and identification; field trips; mycological literature. P: 204-202.

204-315 Biology of Lower Green Plants 3 cr.
A survey of the photosynthetic non-vascular plants including the algae, lichens and bryophytes. Emphasis will be placed on morphological study of these groups, and will also include field collections and laboratory identification. P: 204-203/ jr st or cons inst.

204-317 Structure of Seed Plants 3 cr.
The anatomy of seed plants with special emphasis upon tissue differentiation and structure. P: 204-203.

204-320 Field Botany 3 cr.
Identification and natural history of plants indigenous to northeastern Wisconsin. P: 204-203.

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.

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 the fishes will be studied in relation to behavior, distribution, diversity and production in freshwater environments. P: 204-203 or equivalent.

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. P: 204-203.

204-343 Mammalogy 3 cr.
A comprehensive study of mammals including systematics, behavior and ecological relationships. Laboratory includes identification and preparation of skins and skulls and field techniques. P: 204-203.

204-345 Animal Behavior 3 cr.
The biology of animal behavior patterns; the behavioral interactions of animals with their environment. P: 204-203.

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 alternative years. P: 204-203, 226-112, or equivalent, or cons inst.

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.

204-350 Field Zoology 3 cr.
Field collection and laboratory identification of aquatic and terrestrial invertebrates and vertebrates of the region with analysis of their structure, behavior and habitats. A collection is required. P: 204-203.

204-355 Principles of Entomology 3 cr.
The biology and habits of insects and their interrelationships with humans. Includes general anatomy, physiology, embryology, and classification of insects. Field collection is required. P: 204-203.

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.

204-405 Microbial Physiology 3 cr.
A study of the physiological and biochemical mechanisms which are present in microorganisms in response to specific environments. Primary emphasis on the bacteria. P: 204-302 and 226-300 or 226-303.

204-483X Selected Topics 1-4 cr.
See page 19.

204-498 Directed Topics 1-4 cr.
See page 19.

Other courses that count toward a major or co-major in biology are:
478-313 Brain Functions and Human Behavior 3 cr.
478-402 Human Physiology 3 cr.
478-404 Animal Physiology Lab 1 cr.
478-413 Neurophysiology 3 cr.
779-310 Human Genetics 3 cr.
779-312 Evolutionary Processes 3 cr.
779-318 Mammalian Reproduction 3 cr.
779-342 Human Evolution 3 cr.
779-401 Agricultural Genetics and World Food Production 3 cr.
779-402 Population Biology 4 cr.
779-480 Biogeography 3 cr.
862-302 Principles of Ecology 3 cr.
862-307 Ecology of Fire 2 cr.
862-308 Ecology of Invasions 2 cr.
862-322, 323 Ecosystems Analysis I, II 4, 4 cr.
862-363 Plants and Forest Pathology 3 cr.
862-403 Limnology 3 cr.

Chemistry

Associate Professors: Dawson Deese, biochemistry; **Jack C. Norman,** radiochemistry; **Nancy J. Sell,** physical and solid state chemistry; **Ronald Starkey,** organic chemistry and air chemistry; **Thomas Van Koevering,** chemical education; **James H. Wiersma,** analytical chemistry and water chemistry.

Assistant Professor: Sterling Randall, physical and inorganic chemistry.

Instructor: Donna Randall, general chemistry.

Chemistry is a fundamental science important in studying and solving industrial, environmental, and social problems. Chemists play an important role in addressing many of the major problems facing the world today, such as the energy crisis, the world food shortage, or water and air pollution.

UWGB offers a chemistry major with all the strength of a traditional chemistry program plus added breadth which places chemistry in the context of solving today's and tomorrow's problems. The breadth is usually gained by combining a chemistry major with the interdisciplinary concentrations in Science and Environmental Change, Human Development, or the Human Adaptability, Population Dynamics, or Nutritional Sciences majors in Human Biology. A chemistry major can also be combined with a program of study in graphic communication. The chemistry program is accredited by the American Chemical Society.

UWGB's chemistry program is flexible. It may be designed as preparation for graduate study; could emphasize preparation for immediate employment in industry, government agencies, or secondary education; may serve as a base for professional study in medicine, dentistry,

pharmacy, or veterinary medicine; or as part of a broader program in nutritional sciences, environmental health, or the life sciences.

The professional program in education can prepare the chemistry student for teacher certification. Careers requiring administrative skills may be prepared for by enrolling in the program in Public and Environmental Administration along with studies in chemistry.

UWGB graduates with majors in chemistry are presently employed by industry (such as Nicolet and Charmin Paper Companies, RCA, General Aniline Film, and American Can Company), working in government agencies (such as the Wisconsin Department of Natural Resources), teaching high school chemistry, and attending graduate and professional schools (for example, UW–Madison and the Institute of Paper Chemistry).

Many new jobs requiring chemists, particularly in the areas of environmental monitoring and energy research, are becoming available. UWGB graduates are especially well qualified for these jobs.

In addition to regular classrooms and laboratories, chemistry facilities include numerous small laboratories especially designed for student research projects. Major equipment used both in regular classes and independent study include: infrared spectrophotometer, visible-ultraviolet spectrophotometer, atomic absorption spectrometers, nuclear magnetic resonance spectrometer, X-ray diffraction spectrometer, liquid scintillation counter, high pressure liquid chromatographs, gas chromatographs, X-ray fluorescence spectrometer, automatic analyzer, polarograph, gamma ray spectrometer, neutron source, electrophoresis apparatus, digital and analog computers.

REQUIREMENTS

Graduation requirements for chemistry are:

Completion of the following lower level courses:
226-111 Principles of Chemistry I, 4 cr.
226-112 Principles of Chemistry II, 4 cr.
226-113 Principles of Chemistry III, 2 cr.
226-201 Principles of Physics I, 5 cr.
226-202 Principles of Physics II, 5 cr.

A minimum of 24 credits from the following:

Required courses:
226-302, 303 Organic Chemistry I and II, 6 cr.
226-304, 305 Organic Chemistry Labs I and II, 2 cr.
226-311 Analytical Chemistry, 4 cr.
226-320 Thermodynamics and Kinetics, 3 cr.
226-321 Structure of Matter, 3 cr.
226-322 Thermodynamics and Kinetics Lab, 1 cr.
226-323 Structure of Matter Lab, 1 cr.

One or more courses from:
226-330 Biochemistry, 3 cr.
226-410 Inorganic Chemistry, 3 cr.
226-413 Instrumental Analysis, 4 cr.
226-417 Nuclear Physics and Radiochemistry, 3 cr.

Additional courses which may be taken to complete the minimum of 24 credits:
226-331 Biochemistry Lab, 1 cr.
226-418 Nuclear Physics and Radiochemistry Lab, 1 cr.
684-485 Advanced Human Nutrition, 3 cr.
862-318 Industrial Pollution Control Techniques, 2 cr.
862-422 Environmental Biogeochemistry, 3 cr.
862-434 Water Chemistry, 4 cr.
862-450 Air Pollution Chemistry and Meteorology, 3 cr.

The following mathematics courses are required as tool subjects:
600-202 Calculus and Analytic Geometry I, 4 cr.
600-203 Calculus and Analytic Geometry II, 4 cr.

SAMPLE PROGRAM

Freshman Year:
204-202 Principles of Biology I
204-203 Principles of Biology II
226-111 Principles of Chemistry I
226-112 Principles of Chemistry II
226-113 Principles of Chemistry III
600-202 Calculus and Analytic Geometry I
600-203 Calculus and Analytic Geometry II
600-255 FORTRAN: A Scientific Programming Language

Sophomore Year:
226-201 Principles of Physics I
226-202 Principles of Physics II
226-227 Principles of Chemistry-Physics: Qualitative Analysis
226-302 Organic Chemistry I
226-303 Organic Chemistry II
226-304 Organic Chemistry Lab I
226-305 Organic Chemistry Lab II
296-202 The Earth's Physical Environment

Junior Year:
226-311 Analytical Chemistry
226-320 Thermodynamics and Kinetics
226-321 Structure of Matter
226-322 Thermodynamics and Kinetics Lab
226-323 Structure of Matter Lab
862-322 Ecosystems Analysis I
862-323 Ecosystems Analysis II

Senior Year:
226-410 Inorganic Chemistry
226-413 Instrumental Analysis
226-417 Nuclear Physics and Radiochemistry
226-418 Nuclear Physics and Radiochemistry Lab
862-434 Water Chemistry

COURSES

Chemistry courses are listed under Chemistry-Physics (226). Students who wish to pursue a major in chemistry will find these courses relevant:
226-111 Principles of Chemistry I 4 cr.
226-112 Principles of Chemistry II 4 cr.
226-113 Principles of Chemistry III 2 cr.
226-227 Qualitative Analysis 2 cr.
226-302, 303 Organic Chemistry I, II 3, 3 cr.
226-304, 305 Organic Chemistry Laboratory I, II 1, 1 cr.
226-311 Analytical Chemistry 4 cr.
226-320, 322 Thermodynamics and Kinetics (with laboratory) 3-4 cr.
226-321, 323 Structure of Matter (with laboratory) 3-4 cr.
226-330, 331 Biochemistry (with laboratory) 3-4 cr.
226-410 Inorganic Chemistry 3 cr.
226-413 Instrumental Analysis 4 cr.
226-417, 418 Nuclear Physics and Radiochemistry (with laboratory) 3-4 cr.
694-485 Advanced Human Nutrition 3 cr.
862-422 Environmental Biogeochemistry 3 cr.
862-434 Water Chemistry 4 cr.
862-450 Air Pollution Chemistry and Meteorology 3 cr.

Chemistry-Physics

Professors: George O'Hearn, secondary education.

Associate Professors: James W. Busch, secondary education; **Dawson Deese,** biochemistry; **Fritz Fischbach,** biophysics, environmental health; **Robert Lanz** (chairperson), engineering, physics, energy technologies; **Anjani K. Mehra,** solid state physics, solar energy; **Jack C. Norman,** nuclear physics and radiochemistry; **Charles C. Rhyner,** radiological physics, electronics; **Nancy J. Sell,** solid state physics and industrial pollution control; **Ronald Starkey,** organic chemistry and air chemistry; **Thomas Van Koevering,** chemical education; **James H. Wiersma,** analytical chemistry and water chemistry.

Assistant Professors: Sterling Randall, physical and inorganic chemistry.

Instructors: Donna Randall, general chemistry.

Chemistry-physics is an interdisciplinary program providing the student with fundamental and advanced concepts of the physical-chemical world. Chemistry and physics, being complementary, help the student develop a more complete view of matter, energy, and their transformations as they pertain to the physical world and the human environment.

Students must precede their chemistry-physics co-major with the following freshman-sophomore courses:

Principles of Chemistry:
226-111 Principles of Chemistry I
226-112 Principles of Chemistry II
226-113 Principles of Chemistry III
226-227 Qualitative Analysis

Principles of Physics:
226-201 Principles of Physics I
226-202 Principles of Physics II

Upper division courses must include:
862-313 Mechanics I
226-320 Thermodynamics and Kinetics
226-321 Structure of Matter
226-417 Nuclear Physics and Radiochemistry

And at least 2 credits from the following laboratory courses:
226-322 Thermodynamics and Kinetics Laboratory
226-323 Structure of Matter Laboratory
226-324 Advanced Physical Laboratory
226-418 Nuclear Physics and Radiochemistry Laboratory

In addition, at least one course from each of the following groups must be selected:

Group I
226-300 Bio-Organic Chemistry
226-303 Organic Chemistry II
226-311 Analytical Chemistry
226-410 Inorganic Chemistry

Group II
226-315 Mechanics III
226-404 Electricity and Magnetism
226-317 Electromagnetic Radiation

Group III
226-405 Electronics for Scientists
226-413 Instrumental Analysis

Group IV
226-330 Biochemistry
862-306 Biophysics
862-412 Bio-Energetics
862-422 Environmental Biogeochemistry
862-434 Water Chemistry
862-450 Air Pollution Chemistry and Meteorology

Students interested in a program in chemistry or physics should see separate description under each heading.

COURSES

226 CHEMISTRY-PHYSICS

226-103 Fundamentals of Physics I† 4 cr.
A non-calculus 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 226-103 and 226-201.

226-104 Fundamentals of Physics II† 4 cr.
A non-calculus 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. P: 226-103.

226-108 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 226-108 and the courses in the following sequence: 226-111, 112 and 113. P: 601-094 or equivalent.

†Approved for Environmental Sciences Distribution Credit.

226-111 Principles of Chemistry I† 4 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 226-111 and 226-108 will not be awarded. P: 600-101 or equivalent.

226-112 Principles of Chemistry II† 4 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 226-112 and 226-108 will not be awarded. P: 226-111.

226-113 Principles of Chemistry III 2 cr.
The descriptive material in the Principles of Chemistry sequence; structure and reactions of inorganic and organic compounds, methods of separation, metallurgy. Production and structure of polymers, industrial chemicals and consumer materials. Three lectures per week. Full graduation credit for both 226-113 and 226-108 will not be awarded. P: 226-111.

226-201 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 226-201 and 226-103.

226-202 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: 226-201 and 600-203, or concurrent registration in 600-203 with cons inst. Graduation credit will not be awarded for both 226-202 and 226-104.

226-227 Principles of Chemistry-Physics: Qualitative Analysis 2 cr.
Chemical separation and identification schemes, discussion of selected chemical families. P: 226-112.

226-283X Selected Topics 1-4 cr.
See page 19.

226-298 Directed Study 1-4 cr.
See page 19.

226-300 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 226-300 and 226-302 or 226-303.) P: 226-112 or 226-108.

226-301 Bio-Organic Chemistry Laboratory 1 cr.
Optional laboratory course to accompany 226-300. P: credit or concurrent registration in 226-300.

226-302 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. P: 226-112.

226-303 Organic Chemistry II 3 cr.
A continuation of 226-302. P: 226-302.

226-304 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 226-302.

226-305 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 226-303.

226-311 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 titrations. Introduction to instrumental analysis, spectrophotometric and electroanalytical methods. P: 226-112.

226-315 Mechanics III 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. P: 226-202, 600-209 and 305.

226-317 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: 226-202.

226-320 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: 226-112 and either 226-202 or 226-104 and 600-203.

226-321 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: 226-112 and either 226-202 or 226-104 and 600-203.

226-322 Thermodynamics and Kinetics Laboratory 1 cr.
One three-hour laboratory per week. P: credit or concurrent registration in 226-320.

226-323 Structure of Matter Laboratory 1 cr.
One three-hour laboratory per week. P: credit or concurrent registration in 226-321.

226-324 Advanced Physical Laboratory 1 or 2 cr.
Experience with important research techniques and apparatus with emphasis on independent work; X-ray diffraction, nuclear magnetic resonance, multichannel analyzers, luminescence, noise and vibration measurements, atomic absorption, microwaves, and classical experiments for determining physical constants. P: cons inst.

226-330 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: 226-303 or 226-300, 301 and 203-202.

226-331 Biochemistry Laboratory 1 cr.
One three-hour laboratory per week. P: credit or concurrent registration in 226-330.

226-404 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: 226-202 and 600-209.

†Approved for Environmental Sciences Distribution Credit.

226-405 Electronics for Scientists 4 cr.
Fundamentals of electronics, electronic elements, basic circuits, combinations of these into measurement and control instruments. P: 226-104 or 226-202.

226-410 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: 226-321.

226-413 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, electroanalytic methods, chromatographic methods, and radiochemical methods. P: 226-311 and credit or concurrent registration in 226-321.

226-417 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: 226-112 and either 226-202 or 226-104 and 600-203.

226-418 Nuclear Physics and Radiochemistry Laboratory 1 cr.
One three-hour laboratory per week. P: credit or concurrent registration in 226-417.

226-483X Selected Topics 1-4 cr.
See page 19.

226-498 Directed Study 1-4 cr.
See page 19.

Other courses for chemistry-physics credit include:
862-141 Elementary Astronomy
862-309 Biophysics
862-313 Mechanics I
862-314 Mechanics II
862-350 Meteorology
862-412 Bio-Energetics
862-422 Environmental Biogeochemistry
862-434 Water Chemistry
862-450 Air Pollution Chemistry and Meteorology

Earth Science

Professors: H. J. Day, hydrology, watershed management, water supply, pollution control; **Thomas H. McIntosh,** soils, agricultural land management, remote sensing, biogeochemistry; **Joseph M. Moran** (chairperson), climatic change, Quaternary climatology and geology.

Assistant Professors: Steven I. Dutch, structural geology, pre-Cambrian geology, tectonics; **Ronald D. Stieglitz,** sedimentary geology, stratigraphy, applications of geology to land use problems.

Lecturer: Donn P. Quigley, chief curator, Neville Public Museum, geology of Wisconsin, rock and mineral identification.

Earth science is the study of the interactions among physical components of the environment—minerals, rock, soils, water, and air—and how these interactions are governed by natural laws. A student may focus his or her studies on geology, hydrology, soil science, or meterology/climatology. Alternatively, a student may select a broad range of courses and acquire a general background in earth science. Either way, earth science serves as a valuable component of a program in resource management, education or business.

There are many career opportunities for earth scientists. Emerging awareness of the need to use natural resources wisely is increasing 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 have recently increased their hiring of earth scientists. People who know something about the finiteness of earth's resources and who can convey the need for a new conservation ethic are needed at all levels of formal education. Similarly, resource conservation agencies need people who can bridge the gap between the scientific aspect of wise land use and public awareness and understanding of issues involved. The market is particularly strong for land use planners who have a thorough physical science background.

Earth science students interested in regional planning, resource management, or land management usually choose a concentration in Science and Environmental Change or Regional Analysis. Earth science and Regional Analysis recently inaugurated cooperative programs focusing on analysis of the land and its uses. Students who wish to pursue graduate study in geology, soil science, hydrology, or meteorology are advised to major in Science and Environmental Change.

For those interested in business, earth science may be combined with a concentration in Managerial Systems. A career in science communication may be pursued through a major that links earth science with Communication and the Arts.

Also, for those interested in education, a disciplinary program in earth science combined with a professional program in secondary education and a concentration program meets requirements for teacher certification designated by the Wisconsin Department of Public Instruction. Entry into some areas of agricultural science is possible through a major in earth science and a concentration in Science and Environmental Change, Regional Analysis, or Population Dynamics.

STUDY PROGRAM

All students in earth science must complete the introductory courses, Earth's Physical Environment (296-202) and Geologic Evolution of the Earth (296-302) plus lab (296-303). In addition, students select at least one course in three of the following four areas: geology, hydrology, land

and soil resources, or meteorology/climatology. The remaining 6 to 11 credits should focus on a specific area of earth science. Course credits should total 24 at the junior-senior level.

Courses appropriate for earth science disciplinary programs are listed by area:

General Earth Science
296-200 Basic Earth Science
296-202 Earth's Physical Environment
296-302 Geologic Evolution of the Earth
296-303 Geologic Evolution of the Earth Laboratory
296-306 Drifting Continents
862-141 Elementary Astronomy
862-303 Conservation of Natural Resources
862-422 Environmental Biogeochemistry

Geology
296-310 Paleobiology
296-340 Rock and Mineral Resources
296-350 Geologic Field Methods
296-366 Structural Geology
296-380 Geomorphic Processes
296-402 Glacial Environment and Chronology
862-342 Environmental Geology

Land and Soil Resources
296-420 Soil Classification and Geography
416-250 Maps and Air Photos
416-351 Elements of Cartography
416-353 Air Photo Interpretation
834-235 Wisconsin Landscapes and Regions
834-356 Environmental Impact Analysis
862-284 Husbandry of the Land
862-320 Soil Environment
862-321 Soil Environment Lab
862-460 Resource Management Strategy
008-761 Global Environmental Monitoring
008-773 Soil-Plant Relationships
009-741 Land Use, Institutions and Policy

Hydrology
862-330 Hydrology
862-331 Oceanography
862-403 Limnology
862-434 Water Chemistry
008-759 Coastal Zone Management

Meteorology/Climatology
296-222 The Ocean of Air: An Introduction to Weather and Climate
416-325 Regional Climatology
862-350 Meteorology
862-351 Synoptic Meteorology Laboratory
862-450 Air Pollution Chemistry and Meteorology
008-776 Bioclimatology

In addition, certain prerequisite courses are necessary depending upon the student's degree objectives. Usually these courses include biology, chemistry-physics, mathematics, social sciences, and communications. An earth science adviser will assist students in developing programs to meet specific interests and career objectives.

COURSES

296 EARTH SCIENCE

296-200 Basic Earth Science† 3 cr.
Introduction to the basic geological processes that modify the earth's landscapes. Includes segments on astronomy, weather and climate, soils, oceanography and the geologic history of Wisconsin. Note that a student does not receive credit for both 296-200 and 296-202. Field trips may be included.

296-202 The Earth's Physical Environment† 4 cr.
The materials and processes that have determined and are now modifying the physical features of the earth's environment are described and analyzed. Credit not granted for both 296-202 and 296-200. Field trips.

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.

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 will consitute the content of this course. An all-day field trip is required.

296-283X Selected Topics 1-4 cr.
See page 19.

296-298 Directed Study 1-4 cr.
See page 19.

296-302 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 or cons inst.

296-303 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.

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.

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, 296-303 or 204-203 or cons inst.

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.

296-350 Geologic Field Methods 4 cr.
Description and application of standard field techniques employed in assembling geologic data. Includes mapping, measuring sections, collection of rock and fossil specimens, and preparation and presentation of a report on a geologic problem. P: 296-202, 296-302.

†Approved for Environmental Sciences Distribution Credit.

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.

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 the creation and modification of the physical features of the earth's surface. P: 296-202.

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.

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. P: 296-320 or 202.

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: 226-112.

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.

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. P: 296-202.

296-483X Selected Topics 1-4 cr.
See page 19.

296-498 Directed Study 1-4 cr.
See page 19.

Other courses for upper division earth science credit include:

Land and Soil Resources
416-351 Elements of Cartography
416-353 Air Photo Interpretation
834-358 Environmental Impact Analysis
862-303 Conservation of Natural Resources
862-320 Soil Environment
862-321 Soil Environment Laboratory
862-342 Environmental Geology
862-460 Resource Management Strategy
008-761 Global Environmental Monitoring
009-741 Land Use, Institutions and Policy

Water Resources
862-330 Hydrology
862-331 Oceanography
862-403 Limnology
862-434 Water Chemistry
008-759 Coastal Zone Management

Meteorology-Climatology
416-325 Regional Climatology
862-350 Meteorology
862-351 Synoptic Meteorology Laboratory
862-450 Air Pollution Chemistry and Meteorology
008-776 Bioclimatology

Mathematics

COMPUTER SCIENCE
STATISTICS

Professors: David Jowett, statistical computing, experimental design, multivariate statistical analysis.

Associate Professors: Dennis M. Girard (chairperson), biometrics, multivariate statistical analysis, statistical computing, linear algebra, analysis, graph theory; **Allison P. Loomer,** algebra, analysis, history, geometry; **Bruce Mielke** (visiting professor 1980-81 from Rhode Island College); **Nikitas L. Petrakopoulos,** applied mathematics, analysis, mathematical modern culture, mathematical physics; **Roger A. Simons** (visiting professor 1980-81 at Rhode Island College), Boolean algebras, logic, computer science, geometry; **Robert B. Wenger,** mathematical optimization, linear algebra, analysis, operations research.

Assistant Professors: William Conley, computer science, algebra; **Dan Kalman,** algebra, topology, curriculum development, history, general mathematics, computer science, mathematics education; **William Shay,** computer science, numerical analysis, algebra, topology.

Mathematics is well known as one of the sciences. The natural scientist uses mathematical techniques to model scientific phenomena, to state theories, and to explore their consequences; the social scientist, the management scientist and the engineer find applications, also, in their own fields.

Mathematics is well known, likewise, as one of the humanities. For centuries it has been studied as one of the liberal arts, because of its logical beauty, and its boundaries are still constantly expanding into new mathematical fields.

Students enter the mathematics program for different reasons, for example:

—Those wishing to specialize in mathematics, statistics, or computer science. Many of these will be employed in a laboratory, in industry, or in government, teach in the secondary schools, or teach and do research in a university.

—Those wishing to use mathematics in a field of applied science. Many will need a thorough mathematical training for quantitative fields such as astronomy, biometrics, computer science, econometrics, chemistry, meteorology, physics, actuarial science, management science, operations research, and statistics; others will need

some mathematics for certain branches of the biological, geological, and social sciences, and for the legal profession.

—Those wishing to study mathematics for its logical and aesthetic virtues, as an element in their cultural education.

—Those wishing to prepare for a career applying quantitative tools to business and management. A major in mathematics, computer science or statistics is an excellent method of preparing for a highly competitive graduate program in business administration.

The programs in mathematics, computer science and statistics are supported by excellent facilities. The University main frame computer is a Xerox Sigma-6 configuration with 760,000 bytes of main memory, eight disk drives with a total of 400 megabytes of storage, tape drives and 40 terminal ports. In addition to having CRT, Decwriter and graphics terminals the main frame also interfaces with a Univac 1100 series computer and is well supported by software. In particular the BMDP, SPSS and MINITAB software packages are available for statistical analysis.

Computing equipment on campus also includes several microcomputers, microprocessor training units, table-top size digitizers, a plasma screen CRT and device couplers for the student interested in interfacing data acquisition equipment and computing hardware.

Enrolled students are provided with free access to computer facilities for projects and very well prepared students may qualify for internships in the computing center.

REQUIREMENTS

Requirements for a major are:
600-202, 203 Calculus and Analytic Geometry I, II
600-320 Linear Algebra I

And, at least 21 more hours of course work at the 300 level or higher, within the requirements listed for computer science, statistics, broad-field, or applied mathematics.

Computer Science

In addition to the first two requirements listed above, a program in computer science must fulfill the following requirements:
600-150 BASIC
(600-255 may replace or augment 150)
600-151 Introduction to COBOL
600-251 Introduction to Computer Science
600-260 Introductory Statistics
600-351 Data Structures
600-353 Computer Organization and Programming
600-453 Systems Programming

At least 3 courses chosen from:
600-350 Numerical Analysis
600-354 Compiler Theory
600-450 Theory of Algorithms
600-451 Data Base Management System
600-455 Microprocessors and Microcomputer Systems

And at least one additional course from the above or from this list:
600-309 Systems of Ordinary Differential Equations
600-321 Linear Algebra II
600-328 Introduction to Algebraic Structures
600-355 Applied Mathematical Optimization
600-360 Theory of Probability
600-361 Theoretical Statistics
600-364 Biometrics
600-395 Introduction to Applied Graph Theory and Combinatorics
600-416 Orthogonal Functions and Partial Differential Equations
600-456 Advanced Topics in Microcomputing
600-460 Business and Industrial Statistics
008-764 Mathematics of Operations Research and Management Science
008-767 Statistical Design and Analysis of Experiments
008-768 Multivariate Statistical Analysis
008-776 Discrete Multivariate Statistical Analysis

Statistics

In addition to the first two requirements for all programs listed above, a program in statistics must fulfill the following requirements:
600-209 Multivariate Calculus
600-321 Linear Algebra II
600-360 Theory of Probability
600-361 Theoretical Statistics

At least one of these:
600-364 Biometrics
600-460 Business and Industrial Statistics

And, at least one of the following:
008-767 Statistical Design and Analysis of Experiments
008-768 Multivariate Statistical Analysis
008-776 Discrete Multivariate Statistical Analysis

Students in the statistics program ordinarily begin their study with 600-260, *Introductory Statistics*, and take in addition to the required courses listed, one or more courses in computing. Students planning to continue graduate studies in statistics are encouraged to complement their programs with one or more of these courses: Advanced Calculus, Real Analysis, Algebraic Structures, and Complex Analysis.

Broad-Field Mathematics

The broad-field program in mathematics is designed for students wishing an overview of the field of mathematics at the undergraduate level. This would include prospective teachers at the secondary level, and those intending to continue mathematics study at the graduate level.

In addition to general requirements for a major listed above, students in the broad-field program must fulfill these requirements:
600-209 Multivariate Calculus
600-305 Ordinary Differential Equations
600-328 Introduction to Algebraic Structures
600-385 College Geometry
OR
A special topics course in geometry or convexity.

At least two of these:
600-311 Advanced Calculus
600-312 Real Analysis
600-410 Complex Analysis

At least two of the following:
600-309 Systems of Ordinary Differential Equations
600-350 Numerical Analysis
600-351 Data Structures, Storage and Retrieval
600-355 Applied Mathematical Optimization
600-360 Theory of Probability
600-361 Theoretical Statistics
600-364 Biometrics
600-460 Business and Industrial Statistics
008-764 Mathematics of Operations Research and Management Science

Applied Mathematics

Students, with the help of mathematics faculty, may construct coherent programs in applied mathematics in areas such as mathematical optimization, and mathematical applications to the physical or life science and to business and management.

In addition to the general requirements listed earlier, students in applied mathematics must fulfill these requirements:
600-321 Linear Algebra II
600-305 Ordinary Differential Equations

Depending upon their individual interests and goals, mathematics students might find any one of several concentrations appropriate for completing degree requirements, including Science and Environmental Change, Regional Analysis, Managerial Systems, the Population Dynamics major in Human Biology, and others.

Students desiring teaching certification would also enroll in the professional program in Education.

Students who demonstrate superior aptitude for mathematics may find many employment opportunities on campus: classroom assistant, paper checker, tutor, laboratory supervisor, computer programmer/consultant, research assistant, statistics assistant. Such part-time work reinforces ideas and techniques learned in courses, provides opportunity to discover new applications, and gives experience which will be helpful in obtaining full-time employment upon graduation.

PROGRAM OF STUDY

Following is a sample study program. Keep in mind that it is only a sample; each student plans an individual program with the help of an adviser. A typical sequence of courses that might be selected for a statistics program would be:

Freshman Year:
600-150 BASIC
600-202 Calculus and Analytic Geometry I
600-203 Calculus and Analytic Geometry II
600-251 Introduction to Computer Science
600-260 Introductory Statistics

Sophomore Year:
600-209 Multivariate Calculus
600-320 Linear Algebra I
600-321 Linear Algebra II
600-364 Biometrics

Junior Year:
600-351 Data Structures, Storage and Retrieval
600-353 Advanced Programming
600-360 Theory of Probability
600-361 Theoretical Statistics

Senior Year:
600-311 Advanced Calculus
600-350 Numerical Analysis
600-567 Statistical Design and Analysis of Experiments
008-768 Multivariate Statistical Analysis

Courses listed above are only mathematics courses. A student's program is completed with courses fulfilling concentration and all-University requirements and electives.

Mathematics placement examinations are used in advising entering freshmen about the level at which they should enter University courses. There are four levels:

Level 1. Assumes mastery of first year high school algebra; student enters 600-101; performance below this level results in recommendation to enter 601-094.

Level 2. Assumes mastery of first two years of high school algebra; student enters 600-150, 151, 152, 180, 201, 260; performance below this level results in recommendation to enter 600-101.

Level 3. Assumes mastery of first two years of high school algebra and grade 12 course, functions, or mathematical analysis, including trigonometry; student enters 600-202 or any course cited under level 2 except 600-104; performance below this level results in recommendation to enter 600-104.

Level 4. Assumes student has been accelerated and has mastery of high school calculus; placement exam not required; with this level and advice of faculty, student can enter 600-203 or any course cited under level 3; upon earning a "C" or better in 600-203, an additional 4 credits for 600-202 are granted.

COURSES

600 MATHEMATICS**

600-101 Intermediate Algebra 3 cr.
Preparation for 600-104, for the student 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 satisfactory placement score.

**A prerequisite implies a satisfactory performance. In most mathematics courses, a grade of "C" is sufficient; in some a grade of "B" is advisable.

600-104 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 satisfactory placement score.

600-150 BASIC: A Time-Sharing Computer Language† 1 cr.
Provides students in various fields with elements of the BASIC language necessary for effective use of computers in the solution of problems. P: 600-101 or two years of high school algebra and satisfactory placement score.

600-151 Introduction to COBOL: A Business Data Processing Language† 2 cr.
Introduction to COBOL, the predominant computer language for commercial applications. P: 600-101 or two years high school algebra and satisfactory placement score.

600-152 An Overview of Computing† 2 cr.
Concepts and elementary features of digital computers; hardware, software, and systems. No language is taught. P: 600-101 or two years of high school algebra and satisfactory placement score.

600-180 Fundamentals of Arithmetic 4 cr.
For the elementary teacher. Introduction to important practical, theoretical and philosophical aspects of mathematics. Topics include basic notation and operations in arithmetic such as: place notation; development of basic algorithms of arithmetic; prime, decimal, rational, and irrational numbers; divisibility; rational arithmetic. Other topics of general mathematical interest covered also. P: 600-101 or two years of high school algebra and satisfactory placement score.

600-181 Fundamentals of Elementary Geometry and Algebra 3 cr.
Provides the junior high school teacher with a foundation in mathematical concepts encountered in the modern curriculum. Topics include Euclidean geometry; real and complex numbers; equations and inequalities; formulas; relations and functions; measurement; mensuration; analytic geometry. P: 600-180.

†Approved for Environmental Sciences Distribution Credit.

600-201 An Overview of Calculus Techniques 2 cr.
Basic concepts and techniques of differential and integral calculus, and their applicability to the social and physical sciences and to business. P: 600-101; or, 2 years high school algebra and satisfactory placement score. (Full credit will not be given for 600-201 and 202. The student who has received credit for 600-201 may receive only 2 credits for 600-202.)

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 satisfactory placement score. (See note on credit in 600-201.)

600-203 Calculus and Analytic Geometry II 4 cr.
Transcendental functions; techniques of integration; applications sequences and series. P: 600-202.

600-209 Multivariate Calculus 3 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.

600-251 Introduction to Computer Science 3 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 (FORTRAN) using techniques of good programming style. Assignments include a number of applications in the physical, social, life, and management sciences. P: Programming language and 600-152, or programming language and 200 level math course.

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.

600-260 Introductory Statistics† 3 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 satisfactory placement score.

600-283X Selected Topics 1-4 cr.
See page 19.

600-298 Directed Study 1-4 cr.
See page 19.

600-305 Ordinary Differential Equations 3 cr.
Solutions and applications of first and higher-order linear differential equations; the meanings of existance and uniqueness theorems; non-linear differential equations; modeling physical and biological systems. P: 600-203.

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. Non-linear differential equations. P: 600-305 and 320.

600-311 Advanced Calculus 3 cr.
Jacobians; transformation of coordinates; functional dependence; constrained extrema and Lagrange multipliers; line, surface and volume integrals; scalar and vector fields; gradient, divergence, and curl; divergence theorem; Stokes' theorem. P: 600-209 and 320.

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.

600-320 Linear Algebra I 3 cr.
Matrices and vector space concepts. Systems of linear equations, matrices, determinants, vectors in 2- and 3-space, vector spaces, linear transformations, eigenvalues, and eigenvectors. P: 600-202.

600-321 Linear Algebra II 3 cr.
A continuation of 320. Positive-definite matrices, normal forms, the principal axis theorem, applications. P: 600-320 and 600-203.

600-326 Introduction to Algebraic Structures 3 cr.
Groups, rings, and fields as organizing ideas. Basic structure theorems. Applications. P: 600-203 and 320.

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: FORTRAN ability, 600-203, and 600-320 or concurrent registration in 600-320.

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: 600-251.

600-353 Computer Organization and Programming 3 cr.
An introduction to binary, octal and hexadecimal number systems, and conversions from one system to another. Data representation and computer arithmetic procedures. A thorough study of MIX assembly language programming, including actual programming exercises. *Also included is an overview of* computer software and hardware components and their roles in a complex computer system. Topics considered are assemblers, loaders, compilers, memory, microprogramming, monitoring, gates, adders, circuits, and applications of Boolean algebra to circuit analysis. P: 600-251 and a background in algebra.

600-354 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.

600-355 Applied Mathematical Optimization 3 cr.
Analytical and numerical optimization techniques; linear, non-linear, 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.

600-359 Analog Computer Simulation 1 cr.
Principles of operation, programming and applications of an electronic analog computer. Applications illustrate uses of computer in biology, chemistry, engineering, mathematics, and physics. P: 600-202, 226-202.

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.

600-361 Theoretical Statistics 3 cr.
Sample moments and their distributions; tests of hypotheses; point and interval estimation; regression and linear hypotheses; non-parametric methods; sequential methods. P: 600-320 and 360.

600-364 Biometrics 4 cr.
Emphasis on life science problems. Analysis of variance techniques, linear regression, correlation analysis and nonparametric techniques; introduction to statistical computation. P: 600-260.

600-385 College Geometry 3 cr.
Intuitive and deductive introductions to Euclidean, affine, hyperbolic, sperical, elliptic and projective geometries. P: 600-202.

600-395 Introduction to Applied Graph Theory and Combinatorics 2 cr.
Combinatorial mathematics and graph theory concepts and their applications. Counting processes; partitions; directed and undirected graphs; distances; planar graphs, matrix representations. Applications to economics, operations research, and the physical and social sciences. P: 600-320.

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.

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: 600-305 and 320.

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: 600-351 and 600-203.

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.

600-453 Systems Programming 3 cr.
An introduction to system configurations and meta symbol assembly language programming. Discussion of concepts and processes used between building a program and its execution. This includes file management, keyed, random, and sequential file organization, assembly process, symbol tables, linking and loading, object modules, load modules, function parameter tables, and data control blocks. The role of the monitor in the overall system, dumps, debugging aids, and job control language are discussed. Also included is an introduction to the IBM 360/370 family of computers, their configurations and assembly language elements. P: 600-353.

600-455 Microprocessors and Microcomputer Systems 3 cr.
An integrated lecture/laboratory approach to digital electronics, microcomputer interfacing, and microcomputer programming. P: 226-104 and course in computer programming.

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 or cons inst.

600-460 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.

*Academic Affairs Council Approval Pending.

600-483X Selected Topics 1-4 cr.
See page 19.

600-498 Directed Study 1-4 cr.
See page 19.

Other courses applicable to mathematics:
226-315 Mechanics III 3 cr.
008-776 Discrete Multivariate Statistical Analysis 2 cr.
008-767 Statistical Design and Analysis of Experiments 4 cr.
008-768 Multivariate Statistical Analysis 4 cr.

Physics

Professor: George T. O'Hearn, secondary education.

Associate Professors: James W. Busch, secondary education; **Fritz A. Fischbach,** biophysics, environmental health; **Robert W. Lanz,** engineering physics, energy technologies; **Anjani Mehra,** solid state physics, solar energy; **Jack C. Norman,** nuclear physics and radio-chemistry; **Charles R. Rhyner,** radiological physics, electronics; **Nancy J. Sell,** solid state physics and industrial pollution control.

Physics is concerned with the properties of matter and energy and the laws which describe their behavior. It is a science of measurement, experimentation, and systemization of the results of experiments.

Physicists contribute widely to understanding the basic properties of nature and apply their understandings to produce a vast variety of devices and processes for the modern age. Physicists work in such areas as nuclear, solid state, radiation, atmospheric, solar, electronic, and biophysics.

Undergraduate majors in physics choose interdisciplinary courses to support their programs from among UWGB's concentrations. Most physics students select the concentration in Science and Environmental Change.

The undergraduate study of physics is a general scientific base for many possible career opportunities. 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 good preparation for graduate study in other fields such as meteorology, mathematics, computer science, and some fields of engineering.

The physics student can gain additional career preparation through professional programs. Students who wish to work in administrative positions can prepare by enrolling in a professional program in either Public and Environmental Administration or Managerial Systems in addition to their studies in physics. The professional program in Education can prepare the student for teaching certification.

In addition to classrooms and laboratories, facilities include numerous laboratories designed for faculty-student research projects. The laboratories are served by a computer terminal linked to a Xerox Sigma 6 computer.

Major equipment available for classes and independent study include: EAI Miniac *Analog Computer, X-ray diffraction unit,* digital computer, multichannel analyzer, liquid scintillation counter, X-ray spectrometer, neutron source, storage oscilloscope, noise and vibration meters, microwave units, lasers, infra-red, ultra-violet, and visible spectrophotometers.

REQUIREMENTS

Graduation requirements for the major in physics are:

Completion of the following lower level courses:
226-201 Principles of Physics I, 5 cr.
226-202 Principles of Physics II, 5 cr.
226-111 Principles of Chemistry I, 4 cr.
226-112 Principles of Chemistry II, 4 cr.
226-113 Principles of Chemistry III, 2 cr.

A minimum of 24 credits at the 300-400 level:

Six required courses:
226-315 Mechanics III, 3 cr.
226-317 Electromagnetic Radiation, 3 cr.
226-321 Structure of Matter, 3 cr.
226-404 Electricity and Magnetism, 3 cr.
226-417 *Nuclear Physics and Radio*chemistry, 3 cr.

The remainder of the credits are selected from the following list:
226-320 Thermodynamics and Kinetics, 3 cr.
226-322 Thermodynamics and Kinetics Laboratory, 1 cr.
226-323 Structure of Matter Laboratory, 1 cr.
226-324 Advanced Physical Laboratory, 1 or 2 crs.
226-405 Electronics for Scientists, 4 cr.
226-418 Nuclear Physics and Radiochemistry Laboratory, 1 cr.
862-306 Biophysics, 3 cr.
862-341 Intermediate Astronomy, 3 cr.
862-350 Meteorology, 3 cr.
862-414 Conventional Energy Technology, 3 cr.
862-415 Solar and Alternate Energy Systems, 3 cr.

At least 15 credits in mathematics which must include:
600-202 Calculus and Analytic Geometry I, 4 cr.
600-203 *Calculus and Analytic* Geometry II, 4 cr.
600-305 Ordinary Differential Equations, 3 cr.

Each student is strongly encouraged to take additional courses in mathematics, computer science, and statistics.

SAMPLE PROGRAM

A sample program which a physics major might follow is given below. All-University requirements, the interdisciplinary concentration, and electives are not included.

Freshman Year:
204-202 Principles of Biology I
204-203 Principles of Biology II
226-111 Principles of Chemistry I
226-112 Principles of Chemistry II
226-113 Principles of Chemistry III
600-202 Calculus and Analytical Geometry I
600-203 Calculus and Analytical Geometry II

Sophomore Year:
226-201 Principles of Physics I
226-202 *Principles of Physics II*
296-202 The Earth's Physical Environment
600-209 Multivariate Calculus
600-320 Linear Algebra I
600-255 FORTRAN: A Scientific Programming Language

Junior Year:
226-315 Mechanics III
226-317 Electromagnetic Radiation
226-320 Thermodynamics and Kinetics
226-321, 323 Structure of Matter and Laboratory
226-322 Thermodynamics and Kinetics Laboratory
226-417, 418 Nuclear Physics and Radiochemistry and Laboratory
600-305 Ordinary Differential Equations
600-309 Systems of Ordinary Differential Equations
862-306 Biophysics

Senior Year:
226-324 Advanced Physical Laboratory
226-404 Electricity and Magnetism
226-405 Electronics for Scientists
862-350 Meteorology
862-414 Conventional Energy Technology

COURSES

Physics course descriptions are listed under Chemistry-Physics (226) and Science and Environmental Change (862). Students who wish to pursue a program in physics will find the following courses relevant.

226-201 Principles of Physics I 5 cr.
226-202 Principles of Physics II 5 cr.
226-111 Principles of Chemistry I 4 cr.
226-112 Principles of Chemistry II 4 cr.
226-113 Principles of Chemistry III 2 cr.
226-315 Mechanics III 3 cr.
226-317 Electromagnetic Radiation 3 cr.
226-320, 322 Thermodynamics and Kinetics (with laboratory) 3-4 cr.
226-321, 323 Structure of Matter (with laboratory) 3-4 cr.
226-324 Advanced Physical Laboratory 1 or 2 cr.
226-404 Electricity and Magnetism 3 cr.
226-405 Electronics for Scientists 4 cr.
226-417, 418 Nuclear Physics and Radiochemistry (with laboratory) 3-4 cr.
600-455 Microprocessors and Microcomputer Systems 3 cr.
862-306 Biophysics 3 cr.
862-313, 314 Mechanics I, II 3 cr. each
862-341 Intermediate Astronomy 3 cr.
862-350 Meteorology 3 cr.
862-414 Conventional Energy Technology 3 cr.
862-415 *Solar and Alternate Energy Systems* 3 cr.

Professional Studies

Managerial Systems

Associate Professors: Robert Obenberger, general marketing, promotion, and marketing for nonprofit organizations; **John Powers,** management, small business feasibility, and coordinator, Small Business and Outreach Program; **Michael Troyer,** (acting chairperson), nonprofit organization management, nonprofit finance, and economics; **Karl Zehms,** financial accounting theory, nonprofit accounting, and information systems.

Assistant Professors: Maurice Better, labor and economics; **William Conley,** quantitative methods and computer sciences; **Daniel Stolper,** law.

Instructor: John Harris, management and organization behavior.

Lecturers: Boyd Coleman, retailing, sales, and public relations; **Richard Fille,** finance and investments; **Larry Franke,** managerial accounting; **Larry Kostroski,** management, coordinator of Small Business Development Center; **Lee Larsen,** managerial accounting, cost accounting, and budgeting; **Marilyn Sagrillo,** auditing theory and practice and managerial accounting; **Sheldon Satter,** personnel management, compensation and benefits planning, employment practices; **Daniel Spielmann,** law and collective bargaining; **Dale Thomas,** industrial management and assistant coordinator, Small Business and Outreach program.

A professional career in business or administration offers a wide spectrum of challenging and rewarding opportunities for achieving financial success, self-fulfillment, creativity, and for improving the quality of life. In turn, few career pursuits require a broader perception of human needs and wants or levy a greater societal responsibility, and none demand higher ethics.

The student wishing to pursue a professional career in business or in administration who wishes to work in industry, government, or a nonprofit organization should select a major in business administration or in managerial accounting. The business administration major offers programs in finance, management (including personnel management and labor relations), marketing, and nonprofit organization management. Within each of these program areas a variety of career-directed professional programs may be pursued. Through the accounting major, the student can prepare for a career in public accounting or managerial accounting.

The business program is designed and taught to prepare the graduate for success as a business professional. Today's business professional is an analyst, decision maker, and organizer who must function effectively within changing economic, social, and political environments. Each student earning a degree will have the opportunity to acquire sound technical knowledge in his field of specialty plus broad preparation in the other functional business disciplines.

Analytical capabilities and superior skills in written and oral communications are especially beneficial for success in business. The program is structured to enhance and develop these skills and abilities.

The advancing business professional is characterized by breadth of perception, an ability to deal with people through understanding, and maturity of judgment. These attributes are fostered and developed through the University's interdisciplinary study program in the liberal arts and sciences. A major goal of the program is to prepare students to become business leaders of the future.

Business programs are offered and administered by the Managerial Systems concentration. A student may select a major in managerial accounting or a major in business administration. The business administration or managerial accounting graduate will earn either the Bachelor of Science or Bachelor of Arts degree. Degree recipients will be prepared for immediate entry into a variety of professional positions in business, human service, public or governmental organizations.

THE MAJOR

The program of study for the major totals 124 semester credit hours, including 36 credits specifically within the business program. It is comprised of four components:

Pre-Business and Foundation Program: This component provides breadth, perspective, and skills necessary to a sound professional background.

Business Core Courses: This group of six courses covers the broad functional areas in business providing the student a general business perspective and a firm basis for selecting and developing a field of emphasis.

Business Field of Emphasis: These courses enable the student to acquire substantial knowledge in a particular field of business or administration. In this component students may complete a major in managerial accounting, or a major in business administration with a field of specialty in marketing, finance, management (including personnel management and labor relations), or nonprofit organization management. Within each functional field there are a variety of career directions the student might pursue. For example, in marketing there are seven different career directed tracks including general marketing/brand management, retailing/wholesaling, and market research/market analysis.

Supportive Field of Study: Students complete a minimum of 18 credit hours in nonbusiness courses selected from a concentration other than Managerial Systems. This component exists to develop additional interdisciplinary perspective, judgment, and expertise in subject areas supportive of career objectives. The supportive field may be in the humanities, fine arts, social sciences, or natural sciences and math. Courses can be selected with the advice of a business program adviser and the approval of the respective concentration adviser. Accounting students complete this requirement by taking designated accounting courses and other designated coursework and need only the approval of an accounting adviser.

Students pursuing an outside supportive field of study (with the exception of the accounting students) should choose an area that interests them and supports their career objectives. For example, students interested in careers in the printing or art industries would select a field of specialty in management or marketing and an outside supportive field of study in graphic communication. Students interested in entry-level management positions in the paper industry might complete their supportive field of study in chemistry and physics. Students who seek entry into international business might appropriately take a supportive field of study that includes foreign languages. A supportive field of study including courses in money and banking, regional economics, geography, and regional studies would be appropriate for a student interested in finance and the banking industry. A student with an interest in health care or human services might combine nonprofit organization management with an outside field in human development or human biology.

A business adviser assists students in identifying courses supportive of their career objectives and consistent with their aptitudes. In addition, advisers in the student's outside field of study can be of help and must approve the courses chosen to fulfill this requirement.

STUDY PROGRAMS

Specific requirements of each component in the business student's program of study are described in the following section.

Pre-Business and Foundation Program
All-University requirements (30 credit hours):
All-University requirements are described near the beginning of this section of the catalog.

Foundation Subjects (26-30 credit hours)
575-202 Business and Its Environment
575-204 Introductory Accounting
575-217 Quantitative Methods for Administrative Decisions
600-150* Basic: A Time-Sharing Computer Language
600-152 An Overview of Computing for Non-scientists
600-260 Introductory Statistics
298-202 Macro Economics
298-203 Micro Economics

One course in written communication:
552-105 Introduction to Expository Writing
OR
575-101 Effective Business Communication

One course in oral communication:
246-133 Fundamentals of Public Address or equivalent course in speech delivery

*Students pursuing the accounting major should take instead:
600-151 Introduction to Cobol: A Business Data Processing Language
AND
600-201 An Overview of Calculus Techniques

Business Core Courses (18 credits)
575-216* Accounting for Administrators
575-305 Business Law I
575-322 Basic Marketing
575-343 Corporation Finance
575-362 Principles of Personnel Management
575-382 Principles of Management

*Accounting students should substitute 575-306, Business Law II

*Nonprofit organization students should substitute 575-316, Governmental and Institutional Accounting.

Business Fields of Specialty (Accounting or Business Administration)

Accounting Major (35 credits)

This program is designed for students who wish to pursue a professional career in accounting. Typical graduates attain entry level professional positions in business, industry, public accounting, and government. Graduates are qualified for the Certified Management Account (CMA) Examination and the Certified Public Accountant (CPA) Examination.

Coursework required includes:
575-215 Intermediate Accounting
575-312 Managerial Accounting I
575-313, 314 Financial Accounting: Theory and Practice I, II
575-316 Governmental and Institutional Accounting
575-410 Income Tax Theory and Practice
575-411 Financial Information Systems
575-412 Auditing Standards and Procedures
575-415 Managerial Accounting II
575-442 Problems of Investment
298-330 Money and Banking
Electives chosen in consultation with an accounting adviser.

Business Administration Major
(36 credits total)

Students select four upper level courses beyond the principles or introductory courses in their field of specialty and select one additional upper level course in each of the two areas not chosen as the field of specialty (excluding the nonprofit organizational management area). Thus a specialty in finance would lead to selecting 12 credits of finance, 3 credits of marketing, and 3 credits of management.

Students choosing nonprofit organization management take a designated course in each of the above three areas (575-385, Management of Nonprofit Organization; 575-429, Marketing Strategies for Nonbusiness Organizations; and 575-448, Financial Management of Nonprofit Organizations), and then select nine credits of additional upper-level coursework in consultation with an adviser.

Fields of specialty and tracks within each are:

Finance
Corporate Financial Management
Financial Institution Management

Marketing
Brand Management/General Marketing/ MBA Preparatory
Sales/Sales Management
Advertising/Advertising Management
Transportation/Logistics
Retailing/Wholesaling
Market Research/Market Analysis
Non-Business Marketing

Management
General Management
Production and Industrial Management
Labor Relations Management
Personnel Management
Nonprofit Management
Small Business Management

Nonprofit Organization Management
This field of specialty focuses on the unique administrative characteristics of nonprofit organizations and prepares graduates for further study or employment in health care, educational, social service, religious, charitable, philanthropic, planning, and other community and human service organizations of a public or private nature. The track can readily be linked through supportive field of study credits with a variety of other University programs that can provide future career preparation.

The nonprofit organization management specialty and the applied human biology track in the Human Adaptability major offer a joint major for persons seeking careers or graduate study in such fields as hospital administration, clinic or nursing home administration, and public health services. More information may be found in the description of the Human Adaptability major in this catalog, or from the appropriate business program adviser.

Supportive Field of Study (18 credits)
Non-business courses in a supportive field such as fine arts, humanities, social sciences, or natural sciences and mathematics. Courses selected must be approved by the respective concentration adviser.

The Minor

The minor in business administration consists of 21 credits. The concentration has offered a minor to non-business majors since 1971. Students pursuing the minor in business administration must complete a concentration *in an area of study other* than Managerial Systems, for example, Science and Environmental Change, Communication and the Arts, Humanistic Studies, Population Dynamics, Regional Analysis, or other programs.

The purpose of the business administration *minor* is to acquaint students with the basics of the administrative process so that, upon graduation, the student is more capable of applying his/her major area of expertise in any sort of organization. For example, a student with a background in biology might find employment in a laboratory at a local paper company. The student's knowledge of biology coupled with a fundamental awareness of business administration might enable him or her to function more effectively and be more promotable in a business organization such as a paper company. Almost all graduates in any field of study will eventually be either employed by or closely interact with business, and governmental and nonprofit *organizations. The minor is designed to* give the student a sufficient background in the administrative process to function and participate more effectively in such a behavioral setting.

Requirements
A total of 21 credits in the areas of business administration is required to complete this minor:

575-204 Introductory Accounting

575-305 Business Law I
OR
575-343 Corporation Finance

575-322 Basic Marketing

575-382 Principles of Management

Plus, three other upper division courses in business administration selected in conjunction with a business administration faculty member.

For additional information about the minor, prospective students may call the Man*agerial Systems concentration office.*

COURSES

575 MANAGERIAL SYSTEMS

GENERAL COURSES

575-101 Effective Business Communication 2 cr.
Basic concepts and principles for effective business communication; explains relationships between creative and logical thinking, and communicating facts and ideas. Covers letters, reports, memos, summaries, minutes, press releases. Although attention is paid to spelling, punctuation, and grammar, the main focus is on the fundamental principles of unity, coherence, and emphasis upon which effective business communication depends. Course assignments are directly related to the particular interests of the students, and class discussions are devoted primarily to analyzing and evaluating each student's work.

575-102 The Consumer Experience 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.

575-202 Business and its Environment 3 cr.
The major components of the business en*terprise* 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. Emphasis on issues that tend to enlarge the students' awareness of environmental issues that challenge the business leader.

575-204 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 recommended.

575-206 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.

575-217 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. Translation of typical business problems to obtain and examine numerical answers as to their relevancy is encouraged. Techniques are tied to practical business problems. P: credit or concurrent registration in 600-260.

575-281 Student-Led Courses 1-4 cr.
See page 19.

575-283X Selected Topics in Managerial Systems 1-4 cr.
See page 19.

575-298 Directed Study 1-4 cr.
See page 19.

575-305, 306 Business Law I, II 3, 3 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: jr st. Must be taken in sequence.*

575-335 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. P: 575-204 & 575-343 or cons inst.

575-405 Internship in Business Administration 1-4 cr.
Practical experience in individualized assignments with business, government, and social service organizations. Student may work on either a full-time or a part-time basis for compensation and academic credit according to arrangements tailored to the needs of the student and employer. NOTE: Enrollment subject to availability of internships. Students should contact program director. P: jr or sr st, 3.0 grade point average or better except by permission of program coordinator.

575-481 Student-Led Courses 1-4 cr.
See page 19.

575-483X Selected Topics in Managerial Systems 1-4 cr.
See page 19.

575-484 Senior Distinction Project 3 cr.
See page 19.

575-498 Directed Study 1-4 cr.
See page 19.

ACCOUNTING AND QUANTITATIVE METHODS

575-215 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: 575-204.

575-216 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: 575-204.

575-312 Managerial Accounting I 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: 575-204.

575-313 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: 575-215.

575-314 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: 575-313.

575-316 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: 575-204.

575-410 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: 575-204.

575-411 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: 575-314 or cons inst.

575-412 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: 575-411 or cons inst.

575-414 Managerial Accounting II 3 cr.
Cost concepts for decision making which include cost-profit analysis, breakeven 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: 575-312.

MARKETING

575-322 Basic 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: jr st.

575-324 Merchandise Management for Retail/Wholesale Operations 3 cr.
Treats the subject of merchandise management methods used by retail and wholesale organizations today. The course examines the philosophies, concepts, and techniques underlying the planning and control of the product mix in both retail and wholesale operations. P: 575-322 or cons inst.

575-325 Principles of 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.

575-326 Principles of Purchasing 3 cr.
Principles of procurement of materials and goods by business and government. Features purchasing function, organization for purchasing, personnel, E.D.P. in purchasing, standards of quality, inventory management, cost analysis, selection, and evaluation of suppliers, purchasing policies, and ethics of purchasing. P: jr st.

575-327 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 processes. P: 575-322 or cons inst.

575-331 Management of Transportation Systems and Their Interaction with the Environment 3 cr.
Problems and practices encountered in the management of transportation systems and their impact on the environment. Analysis of the costs of transportation systems and their effects on both economic development and the environment; location and marketing; relationships with price policies; rate theory; regulatory problems and public policy; current transportation developments and problems with particular emphasis on environmental impact. P: soph st.

575-334 Logistics Systems Management 3 cr.
The management of all activities governing the flow of both raw materials and finished goods through the stages of production to points of final consumption. Key areas considered include transportation, warehousing, packaging, materials handling and the basic design of logistics systems; location theory; inventory control; the use of mathematical techniques in solving problems of logistics management; development of integrated material flow systems as they pertain to the implementation of such common environmental projects as recycling, waste disposal, etc. P: jr st.

575-422 Principles of Retailing 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: 575-322.

575-423 Principles of Advertising 3 cr.
Types of advertising and their characteristics; planning, execution, and evaluation of advertising campaigns. P: 575-322.

575-424 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: 575-322 or cons inst.

575-425 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: 575-322 or cons inst.

575-426 Marketing Management 3 cr.
Contemporary environmental issues and managerial problems faced by marketing management. Develops analytical abilities. P: two marketing courses or cons inst.

575-427 International Distribution and Marketing 3 cr.
The structure of foreign trade; facilities available to exporters and importers; cross-cultural and economic analysis for marketing in foreign environments; contemporary trends in international economics affairs. P: 575-322.

575-428 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: 575-322.

575-429 Marketing Strategies for Non-Business Institutions 3 cr.
The applicability of marketing concepts, strategies and techniques to the problems faced by non-profit 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: 575-322.

FINANCE

575-343 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: 575-204.

575-345 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: jr st.

575-346 Public Finance and Fiscal Policy 3 cr.
The theory and practice of public finance: revenues, primarily taxes; budget, expenditures, public debt, fiscal policy. P: 298-202.

575-442 Problems 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: 575-343.

575-443 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: 575-343.

575-444 Financial Decisions and Federal Taxes 3 cr.
Aimed at recognizing federal tax problems to facilitate planning and financial decisions, and to acquaint the student with how substantially different tax liabilities can attach to nearly identical economic events. In addition to teaching tax research, the course will examine tax considerations in selecting a business form, solving capital gains and loss problems, buying and selling real estate, acquiring and disposing of fixed assets, reorganizing and dissolving corporations, and choosing accounting methods. This course is not aimed at preparing tax returns. P: 575-343.

575-445 International Finance 3 cr.
Theory and recent experience in currency standards, international banking, foreign exchange fluctuations and controls, international monetary cooperation and special topics. P: 298-403.

575-448 Financial Management of Nonprofit Organizations 3 cr.
Applies the theory and methodology of finance to a variety of financial problems of the human service/nonprofit organization and seeks to develop skills in and an understanding of decision making appropriate to securing financial resources for organizing and effectively allocating those resources among its programs. The course examines such topics as grantsmanship, fund raising, pricing of services, methods of reimbursement, managing endowments, financial planning and budgeting (including performance budgeting, zero-base budgeting and programming-planning-budgeting), program feasibility analysis, and program performance, measurement. Case studies will be used to provide experience in applying theory and concepts.

LABOR AND PERSONNEL MANAGEMENT

575-362 Principles of Personnel Management 3 cr.
Introduction to personnel management. Manpower planning, selection, recruitment, training, motivation, fringe benefits, salary and wages, and labor relations. P: jr st.

575-366 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: cons inst.

575-462 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.

575-463 Labor Legislation and Administration 3 cr.
Federal and state statutory and administrative regulation of social legislation and benefit programs; other regulations, including workmen's compensation, unemployment compensation, social security, and labor laws with respect to women and children. P: jr st or cons inst.

575-466 International Labor Relations 3 cr.
Comparative labor relations in industrialized foreign countries: government regulation, labor productivity, wage rates and labor costs; relationships between labor and organizations in the U.S. and the International Labor Organization and International Trade Secretariats. P: 575-364.

575-467 Fundamentals of 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.

MANAGEMENT

575-317 Computer Techniques for Business Decisions 3 cr.
A complete spectrum of quantitative decision making problems from the business field will be discussed. Solutions will be provided for all the case problems in the course, including many classical business optimization problems that were heretofore unsolvable. Fortran IV will be taught and used extensively. Lecture and computer lab.

575-382 Principles of 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: jr st.

575-384 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: jr st.

575-385 Management of the Nonprofit Organization 3 cr.
The operation and management of organizations that operate within our society for purposes other than the generation of 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: jr st or cons inst.

575-386 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: jr st or cons inst.

575-387 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: 575-382 or cons inst.

575-389 Behavioral Science Applications for Managers 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.

575-485 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 and sr st.

575-486 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: 575-424 and sr st or cons inst.

575-488 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: sr st and cons inst.

575-489 Problems of Business Management 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: 575-382.

Education

Professors: George O'Hearn, science education.

Associate Professors: Dennis Bryan, curriculum development and evaluation; **James Busch** (chairperson), science education; **Richard Presnell,** environmental education; **Philip Thompson,** English, language arts and aesthetic education; **Thomas Van Koevering,** science education and environmental education.

Assistant Professors: Lyle Bruss (adjunct) educational planning; **Margaret Laughlin,** curriculum and social studies education; **Michaleen Peck,** reading.

Lecturers: Robert Darula, counseling and human relations skills; **Eleanor Hall,** gifted and talented education; **Tom Hogan,** educational research and development, measurement and evaluation.

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

- Early childhood education (nursery and/or kindergarten)
- Elementary education (grades K-6, 1-6 and/or 4-8)
- Elementary art teacher
- Elementary music teacher
- Secondary education:
  - Anthropology
  - Art (secondary or K-12; includes special education-art opportunity)
  - Athletic coaching
  - Biology
  - Chemistry
  - Communication arts
  - Computer science
  - Conservation
  - Drama
  - Earth science
  - Economics
  - English
  - French (secondary or K-12)
  - Geography
  - German (secondary or K-12)
  - History
  - Journalism
  - Mathematics
  - Music: instrumental or vocal (secondary or K-12; includes specal education-music opportunity)
  - Native American languages: Oneida (secondary or K-12)
  - Physical science
  - Physics
  - Political science
  - Psychology
  - Science: broad field
  - Social studies: broad field
  - 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 programs will also 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 non-certification 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, business and industry education programs, educational media, social services agency educational programs, educational advocacy, parent education, education for the elderly, youth and adult community programs, leisure education. Non-certification programs like these also may be valuable components of an undergraduate program for students who plan to continue their educations in graduate or professional schools, such as law, medicine, and other fields.

The Education program emphasizes integration of theory and practice. As a part of many courses, students have opportunities to work in community schools and agencies to gain practical experience in their selected fields. A student teaching experience lasting from eight weeks to a full 14-week semester is required for certification. A limited number of paid, semester-long internships are available as alternatives to student teaching for selected students. Also, credit can be arranged for a variety of field experience assignments through independent study and/or the course entitled, Field Experience in Environmental Education (302-451).

Many recent news stories have given the impression that there are no jobs for teacher education graduates. In a follow-up study completed by the UWGB Placement Office, responses from 92 percent of the 1977-78 graduates with teacher certification reveal that 85 percent were employed in education and another 8 percent were employed in other fields.

Thus, while there is competition for jobs in teaching, one could hardly say that no jobs are available. Also, job opportunities have been better for graduates of some programs than for others. In several programs, 100 percent of the graduates have been employed in teaching and UWGB's Placement Office has had more requests than there were candidates available. Mathematics and the physical sciences are examples of fields in which the supply of qualified teachers is particularly short. Students are encouraged to consult an education adviser or the UWGB Placement Office early in their University studies to obtain up-to-date information about job opportunities in education.

Many job opportunities outside of education are open to persons with preparation in professional education because of the humanizing aspects of their professional preparation, their experience in working with people, and their training in organization and planning.

Teacher preparation is a cooperative responsibility of the Education faculty and various other departments of the University. While pursuing degree requirements in their chosen major, students also follow a program to meet requirements of the Wisconsin Department of Public Instruction for teacher certification as approved for UWGB. These include the academic requirements of the selected teaching major(s) and minor(s), the professional education requirements, and the required skills development subjects in human relations and reading.

ADMISSION TO TEACHER EDUCATION

Please note that admission and program requirements and procedures described below are those which are in effect at the time this catalog was prepared. Some changes are being considered, so students should contact the Education Office for current requirements which may affect their program requirements.

Tentative Admission: At the time of admission to the University, students may choose any program in which they expect to complete requirements. Students planning to complete a teacher certification program are urged to confer with the education program adviser before initial enrollment or during their first semester at UWGB. Any student in good standing may enroll in foundation courses in education.

Final Admission: Final admission into the teacher certification program should be completed prior to attaining junior status (54 credits). Final admission is based upon these criteria:

A. good standing as a UWGB student.

B. filing with the Registrar's Office completed General Academic Plan and Certification Plan forms which have been approved by an appropriate education adviser and the chairperson of the Education program.

C. freedom 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.

In the case of a student deciding to enter the teacher certification program later than the beginning of the junior year, as a transfer, or as a post graduate, the above criteria also must be met.

Continuation in Teacher Education: Students may continue in the education program as long as they continue to meet conditions for final admission specified above and maintain these grade point averages:

—2.0 overall

—2.0 in professional Education program

—2.0 in certification major(s) and minor(s) (for secondary and K-12 certification students)

Re-entry into Teacher Education: Students who drop out of UWGB or the teacher certification program, or who are dropped due to failure to meet requirements for continuation in the program, will be readmitted if they meet requirements for continuation at the time they apply for readmission. If more than one year elapses from the drop date to the date of readmission, such students will be required to have their certification program reapproved and will need to comply with any changes in certification program requirements which have occurred since initial approval of their program.

Special Students: Students holding a bachelor's degree from an accredited university or college can pursue a teacher certification program for initial certification or extension of existing certification to additional grade levels or subjects as a special student. Such students should consult the Education Office for specific requirements and procedures.

PROGRAMS OF STUDY

A student's program of study in education combines interdisciplinary and disciplinary coursework constituting a liberal arts major that is related through courses in education to the certification sought or to other educational and career goals.

To be eligible for recommendation for certification as a teacher in the State of Wisconsin, a fully matriculated student at the University of Wisconsin–Green Bay must:

A. be enrolled in the UWGB teacher certification program (see above for requirements and procedures for admission and continuation in the teacher education program),

B. meet competency levels in subject matter areas outlined in the approved certification program,

C. meet competency levels required in the tool areas of human relations and reading as required by Wisconsin Department of Public Instruction Administrative Code,

D. meet competency levels required in the professional education sequence,

E. complete requirements for the bachelor's degree,

F. receive the recommendation of appropriate faculty for the bachelor's degree, and

G. receive the recommendation of the faculty in Education for teacher certification.

Following is an outline that students may use to plan a program in education:

All-University Requirements (30 credits)
All students must fulfill the all-University requirements described elsewhere in this catalog.

Major (30-36 credits minimum)
(Some programs require substantially more than the minimum requirements. Refer to descriptions in this catalog of specific major areas in which you are interested, or contact the Education program office for specific requirements for certification programs listed.) Study in an interdisciplinary area or the combination of disciplinary and interdisciplinary areas which is appropriately related to the student's certification field. For students in secondary education, this major must meet subject area competency requirements of the Department of Public Instruction.

Human Relations Requirements (9 credits)
This is required in the State of Wisconsin for all persons receiving teacher certification. It normally consists of 9 credits which may be met by appropriate selection of all-University requirements, and/or the major. Contact the UWGB Education program office for the current list of courses which meet this requirement.

Specific Requirements for Education Specialties

Early childhood certification:

Required childhood development courses:
481-331 Human Development I: Infancy and Early Childhood
481-333 Observation and Interpretation of Child Behavior
481-334 Play and Creative Activities in Childhood
481-431 Cognitive Development

Required professional courses:
302-307 Elementary School Teaching Methods in Reading
302-402 Student Teaching (student teaching at both the preschool and kindergarten levels must be completed for certification at both levels.)
302-410 Introduction to the Education of Exceptional Children

302/481-441 History, Philosophy, and Current Programs in Early Childhood Education
302/481-442 Curriculum and Program Development in Early Childhood Education
481-335 Introduction to Experience with Young Children
OR
approved supervised experience with a group of young children
481-445 Early Childhood Center Administration and Community Resources

Related competencies:
742-116 First Aid and Emergency Care Procedures
OR
a standard first aid certificate is required

The concentration in Human Development will be a requirement for all undergraduate students seeking a degree and early childhood certification at UWGB.

Elementary education (grades K-6, 1-6, or 4-8):

Required subject competencies (may be partially met by appropriate selection of distribution courses):
600-180 Fundamentals of Arithmetic
600-181 Fundamentals of Elementary Geometry and Algebra (required for certification beyond grade 6)
Art: one studio art course
Science: one course each in two areas of biological, physical and earth/environmental sciences for grades 1-6; one course in each of these three for certification in grades 4-8.
Social Studies: a minimum of one course

Required professional courses (32 credits):
One course in cognitive development (3 credits) chosen from
481-210 Introduction to Human Development
OR
481-331 Human Development I: Infancy and Early Childhood
OR
481-431 Cognitive Development
OR
820-338 Psychology of Learning

302-302 Elementary School Teaching Methods in Social Studies
302-303 Elementary School Teaching Methods in Art
302-304 Elementary School Teaching Methods in Music
302-305 Elementary School Teaching Methods in Math and Science
302-306 Elementary School Teaching Methods in Physical Education
302-307 Elementary School Teaching Methods in Reading
302-309 Elementary School Teaching Methods in Language Arts
302-402 Student Teaching in the Elementary School
302-410 Introduction to the Education of Exceptional Children

Additional courses required for kindergarten:
481-331 Human Development I: Infancy and Early Childhood
302/481-441 History, Philosophy, and Current Programs in Early Childhood Education
302/481-442 Curriculum and Program Development in Early Childhood Education
302-402 Student teaching at the kindergarten level (a minimum of 8 weeks required.)

Secondary education (also elementary art or music certification):
302-318 Reading and Study Skills in the Secondary School (2 credits)
One course in cognitive development (3 credits)
Methods course in subject area (3 credits)
302-410 Introduction to the Education of Exceptional Children (3 credits)
Student teaching (8-12 credits)

Plus, a minimum of 1 to 2 credits (depending upon the specific certification program) from the following:
302-308 Children's Literature: Contemporary Practices in the Elementary Schools
302-404 Creative Learning
302-405 Individualizing Instruction
302-406 Evaluation and Testing in Education
302-407 Developing Environmental Education Materials for the Schools
302-408 Reading Disability: Diagnosis and Remediation of Reading Problems
302-411 Nature and Identification of Learning Disabilities
302-440 Practicum in Environmental Communication and Interpretation
302-451 Field Experience in Environmental Education
302-498 Directed Study in Education

Non-Certification Programs
As previously explained, non-certification programs can be individually planned to relate to a student's educational and career aspirations. A minimum of 18 credits as approved by an education adviser is required.

COURSES

302 EDUCATION

302-201 Analysis of Learning Environments 3 cr.
Provides tools, procedures, and experiences needed to analyze learning environments in the public schools. Helps examine potential and interest in relation to opportunities and demands in the teaching profession and helps determine if the student wishes to become a teacher. Course content focuses on variables affecting teaching and learning as well as forces in society affecting the schools. The teacher and teaching behavior, the school as a social institution, values shaping American education, the student, alternative school organizations, the curriculum, and instructional processes are major variables studied. Students spend approximately 30 hours in the schools.

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.

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: soph st.

302-204 Values in Conflict: The School Experience of Minority Background Children 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.

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. P: cons inst.

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.

302-281 Student-Led Courses 1-4 cr.
See page 19.

302-283X Selected Topics in Education 1-4 cr.
See page 19.

302-298 Directed Study 1-4 cr.
See page 19.

302-302 Elementary School Teaching in Social Studies 3 cr.**
Teaching methods in the social studies. P: jr st.

302-303 Elementary School Teaching Methods in Art 2 cr.**
Teaching methods in art. P: jr st.

302-304 Elementary School Teaching Methods in Music 2 cr.**
Teaching methods in music. P: jr st and required competency in music fundamentals.

302-305 Elementary School Teaching Methods in Mathematics and Science 4 cr.**
Teaching methods in mathematics and science. P: jr st, 600-180 recommended.

302-306 Elementary School Teaching Methods in Physical Education 2 cr.**
Teaching methods in physical education. P: jr st.

302-307 Elementary School Teaching Methods in Reading 3 cr.**
Teaching methods in developmental reading. P: jr st.

302-308 Children's Literature: Contemporary Practices in the Elementary School 3 cr.
Examines practices which produce an effective children's literature program. Analysis of current children's books; development of instruction units

and independent programs to foster positive attitudes toward reading; using books for personal development; using books for developing attitudes about social issues such as ecological concerns and social and minority group relations; and criteria of evaluation of content, methods, and effect on students.

302-309 Elementary School Teaching Methods in Language Arts 2-3 cr.**
Examines the nature of language arts, the impact of linguistics, the child and the language arts program, methods and materials, environmental concerns and language arts, and evaluation procedures. Participation in a field experience. P: jr st.

**These courses are required for an elementary school teacher's license in Wisconsin.

302-310 Secondary School Teaching Methods in Communication Arts 3 cr.
Examination of the nature of communication arts, how to teach them, environmental concerns in communication arts, methods and materials, the nature of the secondary school student, evaluation procedures, and professional responsibilities of the teacher. Required for a certification license to teach English plus drama, media (journalism), or speech. P: jr st and appropriate preparation in communication arts.

302-311 Teaching Methods for Foreign Languages: Secondary and FLES 3 cr.
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 a certification license to teach a foreign language. P: jr st and appropriate preparation in a foreign language.

302-312 Secondary School Teaching Methods in Social Studies 3 cr.
For students who wish to be licensed in Wisconsin to teach one or more of the social studies in secondary schools. Fields included are history, political science, economics, geography, psychology, sociology, social problems, civics (citizenship), and other social studies. P: jr st and appropriate preparation in social studies.

302-313 Secondary School Teaching Methods in Mathematics 3 cr.
For students who wish to be licensed to teach mathematics in Wisconsin secondary schools. P: jr st and appropriate preparation in mathematics.

302-314 Secondary School Teaching Methods in the Sciences 3 cr.
For students who wish to be licensed to teach one or more of the sciences in Wisconsin secondary schools. Fields included are biology, chemistry, earth science, environmental science, general science, and physics. Appropriate differentiations are provided for the teaching of the several disciplines. P: jr st and appropriate courses in science.

302-316 Secondary School Teaching Methods in Art 3 cr.
For students who wish to be licensed to teach art in Wisconsin secondary schools. Includes principles of art teaching methods, procedures, and strategies; motivation and evaluation of art learning experiences; creativity and visual perceptual awareness techniques; curriculum development in art; and the role of the art teacher in the secondary school. P: jr st and appropriate preparation in art.

302-317 Secondary School Teaching Methods in Music 2 cr.
For students who wish to be licensed to teach instrumental music, vocal music, or both in Wisconsin schools. P: jr st and the appropriate courses in music.

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: jr st.

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 evaluation of adolescent literature and literature program.

302-320 Teaching Methods in Aesthetic Education 3 cr.
Aesthetic curriculum design and program development for schools, the aesthetic process, aesthetics and pupil capabilities, aesthetic methods, aesthetic resources, and aesthetic evaluation. Projects and resources developed in the aesthetics lab will be introduced into elementary, middle or secondary schools. Designed for students who wish to complete a minor in aesthetic awareness with a professional application in the field of education.

302-321 Teaching and Leadership Strategies for Nurses 3 cr.
Teaching styles and leadership strategies for nurses as well as their relationships to psychology, communication theory, interpersonal relations, value clarification, the teaching-learning process, and environmental analysis of health organizations.

302-323 Education in Another Culture: London 3 cr.
Students compare educational problems and practices in a selected sample of schools in the greater London area and other selected locations in Great Britain with those in the United States. The relationship of school policies, procedures, curriculum and methodology to the culture and values of British society is examined. Included are visits to a formal grammar school in which students are selected on the basis of rigid examinations, and to a comprehensive modern school which more nearly resembles an American high school. Visits also are arranged with the University of London Center for Teaching, several infant schools, and adventure playgrounds. In addition to these visits and meetings with educators, the schedule includes lectures on major current problems and visits to Parliament, museums, and theaters. Students keep a log of their experiences and prepare a report comparing and contrasting their perceptions of aspects of the British system of education with that of the United States.

302-355 Theory and Practice of Human Relations Skills 3 cr.
See 892-355.

302-402 Student Teaching in the Elementary School 4-12 cr.
Supervised student teaching or internships in the elementary school. Required for a teacher's license. P: sr st, preregistration with faculty in Education, written cons inst, and assignment by the faculty in Education. Offered on a pass-no credit basis only.

302-403 Student Teaching in the Secondary School 4-12 cr.
Supervised student teaching or internships in the secondary school. Required for a teacher's license. P: sr st, preregistration with faculty in Education, written cons inst, and assignment by the faculty in Education. Offered on a pass-no credit basis only.

302-404 Creative Learning 3 cr.
Students define creativity, confront creative experiences in their lives, structure and evaluate creative programs, review research on creativity, and synthesize a creative program in their roles as student, teacher, or parent. P: jr st.

302-405 Individualizing Instruction 2-3 cr.
New and innovative learning programs in grades K-12 designed to individualize instruction. Development of specific performance objectives, diagnostic procedures, staff organizations, student monitoring systems, and choice-elective instructional programs. Students may participate in a task force student-initiated project for the third credit. P: jr st.

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 interpretating data from standardized tests. Students may participate in a task force student-initiated project for the third credit. P: jr st.

302-407 Developing Environmental Education Materials for the Schools 2-3 cr.
Focuses on developing instructional materials and strategies to integrate environmental concepts, environmental values clarification, problem identification and problem solving techniques into elementary and secondary programs both in and outside of the classroom. Environmental education materials and methods appropriate to a variety of areas of study are considered, including art, music, theater, social studies, mathematics, language arts, and conservation, as well as environmental sciences. Emphasis is on designing, using and evaluating instructional processes and materials. P: jr st.

302-408 Reading Disability: Diagnosis and Remediation of Reading Problems 3 cr.
Important causes of reading disability and appropriate corrective strategies and materials. Psychological, physiological, and sociological considerations affecting disabled readers. The student learns to administer related diagnostic instruments, interpret results, and prescribe instructional procedures. Designed to meet expectations of classroom teachers. Suitable for both elementary and secondary school teachers. P: 302-307 or 318.

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: jr st.

302-411 Nature and Identification of Learning Disabilities 3 cr.
An introduction to the nature and identification of learning disabilities and educational programs for their amelioration. Seeks to provide an understanding of the facets of learning disabilities and varying terminology in the field. Emphasis on contemporary theories concentrating on neurological organization and communication disorders as related to normal child development. Designed to provide an understanding of learning disabilities for those who intend to enter the general field of teaching. P: jr st.

302-412 Practicum with Exceptional Children—Art or Music 3 cr.
Includes a minimum of 90 hours of supervised experience in special education classrooms observing and teaching the area of specialization (art or music) together with seminar discussions related to this experience. Successful completion requires verification of competence in the area of specialization with exceptional children by the University supervisor and the special education teacher.

302-440 Practicum in Environmental Communication and Interpretation 3 cr.
See 882-440.

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: jr st and appropriate background for specific program.

302-481 Student-Led Courses 1-4 cr.
See page 19.

302-483X Selected Topics in Education 1-4 cr.
See page 19.

302-499 Directed Study 1-4 cr.
See page 19.

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.

Environmental Planning

Professors: Arthur Atkisson (chairperson), Public and Environmental Administration; **Donald Gandre,** Regional Analysis.

Associate Professors: Daniel Alesch (adjunct), (adviser) Public and Environmental Administration; **Ronald Baba,** Urban Studies; **Per Johnsen,** Urban Studies; **Michael Kraft,** Public and Environmental Administration; **Robert Wenger,** Science and Environmental Change.

Assistant Professor: William Niedzwiedz, Regional Analysis.

Environmental Planning is a professional major for students who desire to develop knowledge and skills in environmental planning, typically in preparation for employment in public and private organizations concerned with improved planning, design, protection, and management of the human environment. It prepares students to deal with complex problems involving interrelationships among natural, social and economic, and political environments.

Environmental Planning is a cooperative program offered through the Regional Analysis, Urban Studies, and Science and Environmental Change concentrations and the Public and Environmental Administration professional program. Students gain access to the major by enrolling in one of the participating units. The Environmental Planning program at UWGB began in the fall of 1980.

In addition to the regular requirements of the University, students majoring in Environmental Planning must complete an 18 credit set of core studies and a 30 credit field specialization. The Environmental Planning core consists of studies in planning theory and methods, political and economic systems, and the natural environment.

The field specialization provides the opportunity to develop in-depth knowledge and skills in a specific facet of environmental planning. Field specializations will be added from time to time to meet the needs of a changing society. Initially, field specializations are offered in environmental design, regional planning, urban planning, and policy and program planning. Students majoring in Environmental Planning are encouraged to pursue a double major in connection with their individual field specializations.

CORE COURSES

Planning Theory and Methods (2 courses):
350-421 Planning Theory and Methods

At least one of the following:
350-422 Advanced Program and Policy Planning
834-420 Regional Planning
944-421 Urban Planning I

Political and Economic Institutions
(2 courses):
298-202 Intermediate Macro-Economic Analysis
OR
298-203 Intermediate Micro-Economic Analysis
AND
778-312 Community Politics
OR
944-305 Urban Politics and Policy
OR
778-304 Comparative Political Systems
OR
778-400 Intergovernmental Relations
OR
350-301 Environmental Politics and Administration
OR
350-460 Public Policy Analysis

Natural Environmental Systems
(2 courses):
862-302 Principles of Ecology
862-303 Conservation of Natural Resources
862-320 The Soil Environment
862-322 Ecosystems Analysis I
862-323 Ecosystems Analysis II
862-330 Hydrology
862-331 Oceanography
862-342 Environmental Geology
862-403 Limnology
862-450 Air Pollution Chemistry and Meteorology
862-466 Vegetation Management

NOTE: Courses taken for core program requirements may not also be used to meet 30 credit Field Specialization requirements.

FIELD SPECIALIZATIONS

Regional Planning Field Specialization

Regional Planning Core (3 courses):
834-320 Introduction to Regional Analysis
834-420 Regional Planning
834-421 Techniques and Methods of Planning Analysis

Tool Courses (2 courses):
416-351 Elements of Cartography
416-353 Air Photo Interpretation
834-355 Introduction to Quantitative Methods of Spatial Analysis
834-454 Remote Sensing of the Environment

Planning Related Courses (3 courses):
834-321 Land Use Controls
834-325 Behavior in Designed Environments I
834-335 Transportation Systems in the United States
834-340 Economics of Land Use
834-342 Community Economic Development
834-356 Environmental Impact Analysis
834-401 Regional Economic Analysis

Area Courses (2 courses):
416-371 Geography of the U.S. and Canada
834-372 Analysis of the Great Lakes Region of North America
834-377 Analysis of Northern Lands
834-382 Analysis of Northwestern Europe

Suggested Electives:
298-305 Natural Resources Economic Policy
298-402 Resource Economics Analysis
350-315 Planning and Management of Public Systems
350-470 Capital Projects Planning and Programming
778-400 Intergovernmental Relations
779-456 Demographic Methods
827-303 Recreation Supply and Demand Analysis
827-380 Tourism Planning
827-412 Regional Outdoor Recreation Planning I
827-413 Regional Outdoor Recreation Planning II
944-351 Transportation and the City

Urban Planning Field Specialization

Required Tool Subjects (6 credits):
255-305 Foundations for Social Research
600-251 Introduction to Computer Science
600-150 BASIC
AND
600-152 An Overview of Computing

Required Urban Studies and Planning Courses (10 courses):
350-315 Planning and Management of Public Systems
350-460 Public Policy Analysis
350-470 Capital Projects Planning and Programming
834-321 Land Use Controls
834-340 Economics of Land Use
944-305 Urban Politics and Policy
944-313 The City Through Time and Space
944-421 Urban Planning I
944-440 Social Dynamics of Urban Life
944-479 Concept of Community in American Society

Suggested Electives:
242-401, 402 Designing the Environment I, II
416-341 Urban Geography
778-312 Community Politics
779-356 Social Demography
834-325, 326 Behavior in Designed Environments I, II
834-342 Community Economic Development
862-327 Urban Technological Design
875-400 Environmental Law
944-351 Transportation and the City
944-430 Urban Aesthetics
944-444 National Issues and Community Reform

Program and Policy Planning Field Specialization

Policy Planning and Analysis (5 courses):
298-402 Resource Economics Analysis
350-315 Planning and Management of Public Systems
350-422 Advanced Program and Policy Planning (may not be used also to satisfy core requirements)
350-460 Public Policy Analysis
350-470 Capital Projects Planning and Programming
600-355 Applied Mathematical Optimization
834-356 Environmental Impact Analysis

Finance and Budgeting (2 courses):
298-306 Public Finance and Fiscal Policy
350-415 Administrative Planning, Programming, and Budgeting Systems

Management and Administration (2 courses):
350-301 Environmental Politics and Administration
350-305 Regulatory Policy and Administration
862-460 Resource Management Strategy

Select one of these:
350-484 Senior Distinction Project
350-498 Directed Study

Suggested Electives:
255-305 Foundations for Social Research
298-305 Natural Resources Economic Analysis
298-401 Regional Economic Analysis
298-402 Resource Economics Analysis
350-310 Administrative Leadership
350-410 Administration of Local Government I
350-411 Administration of Local Government II
778-400 Intergovernmental Relations
778-416 American Legislative Process
779-356 Social Demography
820-415 Organizational Psychology
834-342 Community Economic Development
862-460 Resource Management Strategy
875-320 Law, the Constitution, and American Development
875-400 Environmental Law
944-305 Urban Politics and Policy

Environmental Design Field Specialization

Urban Studies Core (5 courses required):
944-305 Urban Politics and Policy
944-313 The City Through Time and Space
944-421 Urban Planning I
944-440 Social Dynamics of Urban Life
944-479 Concept of Community in American Society

Environmental Design Core (5 courses required):
944-401 Environmental Design Workshop I
242-471 Environmental Design Workshop II
944-402 Environmental Design Workshop III
242-472 Environmental Design Workshop IV
944-325 Behavior in Designed Environments I

Suggested Electives:
242-401 Designing the Environment I
242-402 Designing the Environment II
448-343 America's Urban Past
862-327 Urban Technological Design
944-312 Studies of Urban Behavior
944-326 Behavior in Designed Environments II
944-400 The City as Idea
944-422 Urban Planning II
944-430 Urban Aesthetics

Military Science

Associate Professor: R. Bruce Logan, Major, U.S. Army

Assistant Professors: John H. Hannah III, Captain, U.S. Army; **Robert D. Bachmann,** Captain, U.S. Army.

Military Science is concerned with exploring and developing topical areas contributing to competence in leadership and management. While its ultimate purpose is to produce commissioned officers for the Army, Military Science offers both a pre-professional program for students interested in examining its courses without obligation and a professional program leading to a commission in the Army. Programs of study are conducted under the auspices of the Reserve Officer Training Corps (ROTC) whose objective is to develop junior officers who, by virtue of education, training, attitude, and inherent leadership qualities, are suitable for continued development in the Army or its reserve components: the Army Reserve and Army National Guard.

Pre-Professional Program: A UWGB student may register for any lower division Military Science course without incurring military obligation. The courses introduce students to the United States concept of national defense and to basic aspects of military service. Students attend class two hours every week and may participate in a variety of extracurricular activities ranging from social events to rigorous, confidence-building physical activities.

Professional Courses: Satisfactory performance in the pre-professional program or courses in other academic subjects, demonstrated leadership potential, and recommendations from program instructors provide eligibility for the professional program.

Participants attend class two hours every week and take part in leadership laboratories approximately four hours each month. Opportunities for extracurricular professional development, including field training at Army installations throughout the United States, are available to upper division Military Science students. Professional program students enter a contract with the Army and incur a military obligation.

A cash allowance of $100 a month is paid each student in the professional course. After completing the ROTC program and the baccalaureate degree, the student is commissioned a second lieutenant in the United States Army Reserve and may serve either on active duty or in the reserve components. Selected cadets are offered commissions in the Regular Army.

ROTC Scholarship Program: The United States Army offers one-, two-, and three-year scholarships to selected individuals. In addition to the $100 monthly cash allowance, scholarships cover tuition, fees, books, and other classroom supplies. Interested students are encouraged to consult with Military Science faculty members.

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 summer camp prior to their junior year of college. This summer training takes the place of the basic pre-professional courses of the four-year program and qualifies students to enter the professional courses. Qualified veterans with prior military service are eligible to enroll in the professional course without participating in the pre-professional courses.

Distinguished Military Student Program: Each year a few senior ROTC students are selected as Distinguished Military Students. This distinction enables them to apply for a Regular Army commission. A Distinguished Military Student will be considered for appointment as Distinguished Military Graduate upon graduation, provided he or she fulfills requirements prescribed by Army regulations.

COURSES

644 MILITARY SCIENCE

644-283X Introduction to Military Science (MS 11)
(Pre-Professional Course) Designed to introduce 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 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.

644-283X Introduction to Military Science (MS 12)
(Pre-Professional Course) Designed to expand upon experiences in MSH 11, this course provides a foundation in exploring and understanding formal leadership and management theory and how they apply in military and civilian environments. A continuation of fundamental knowledge and skill in first aid, basic marksmanship training, and customs and courtesies provide 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.

644-283X Introduction to Military Science (MS 21)
(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.

644-283X Applied Leadership and Management (MS 22)
(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 non-military situations.

644-483X Applied Leadership and Management: Decision Making, Briefings, Management Simulation (MS 31)
(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. The student learns organizational theory and staff procedures and participates in a series of practical exercises designed to provide an opportunity to apply the techniques of organizational decision making and communication.

644-483X Squad Tactics and Unit Level Training Management (MS 32)
(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 pre-camp preparation. Continued professional development of leadership skills at the squad and platoon level through the use of unit level training techniques.

644-483X Company and Battalion Level Field Operations (MS 41)
(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 organizations.

644-483X Practicum in Managerial Activities of the Commissioned Officer (MS 42)
(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.

Recommended Supporting Courses

Professional Course Military Science students are strongly encouraged to take one or more of the following courses commensurate with the distribution requirements of their concentrations:

350-201 Problem Analysis and Decision Making I
350-202 Problem Analysis and Decision Making II
350-310 Leadership in Organizations
416-378 Geography of Conflict Areas
448-315 The Soviet Union From 1917 to the Present
448-324 History of American Foreign Relations: 1865 to the Present
448-367 World Wars I and II
448-483X Great Decisions: Issues and Options in International Affairs
552-304 Advanced Expository Writing
575-362 Principles of Personnel Management
736-106 Pacifism and Violence
778-101 American Government and Politics
778-368 Geopolitics of World Regions
778-460 American Foreign and Defense Policies
820-438 Group Dynamics
867-412 The Impact of Science and Technology on Society
900-203 Minority Groups
900-311 Collective Behavior
900-407 Complex Organization

Nursing

A new program leading to the Bachelor of Science in Nursing began admitting students in fall, 1980. This is a degree completion program for registered nurses, designed to:

—provide the opportunity for registered nurses in Wisconsin to broaden their nursing capabilities and thus increase the quality of nursing care in the region;

—prepare R.N.'s that not only possess the skills to meet the nursing needs of today, but also have the flexibility to adapt to new roles and different functions with changing needs in health care; and

—provide R.N.'s with the professional degree that facilitates career mobility.

One of the increasing concerns facing health providers today aside from caring for humans in illness, is dealing with the problem of effective programming for health promotion and disease prevention. In order to develop effective programming for health promotion and disease prevention, there must be examination from several perspectives—biological, sociological, psychological—of the effect that interaction with the environment has on the health and well-being of humans; and how adaptation to such an environment can be facilitated by the health care professions. Nurses, as the largest category of health care providers, must be included in this effort. The academic plan at UWGB, with its emphasis on an interdisciplinary approach to problem solving, provides the opportunity for nursing students to be exposed to perspectives from various disciplines as they focus on these problems. Equally important, it provides the opportunity for nursing students as well as faculty in the BSN program to interact readily with students and faculty from other disciplines, rather than being isolated. Thus students are prepared for the future endeavor of a collaborative approach to solving problems related to health care.

The program of study includes a foundation of natural and behavioral sciences and liberal arts; specific preparation for nursing in the areas of community health, research, critical care, and management; and the opportunity to integrate an area related to nursing into the program. The main academic focus of the program will be the role of the nurse in facilitating the adaptation of humans to the external and internal stresses in their environment. An important objective of the program will be to provide solid academic *and* practical components of health care, with students being exposed to perspectives from a variety of disciplines including psychology, humanities, sociology, economics, and biology.

Specific requirements of each component of the program are:

All-University Requirements, 30 credits
Humanities, 3 cr. distribution; 6 credit sequence
Natural Sciences, 3 cr. distribution, 6 credit sequence
Social Science, 3 cr. distribution; 6 credit sequence
Senior Seminar, 3 cr., The American Health Care System

English and Prerequisites for Nursing, 26 credits
All of the courses necessary for the English requirement (proficiency or basic college writing) at the University, and the prerequisites for the nursing program are currently being offered on campus in various concentrations. A course in communications is strongly recommended.

Pre-Licensure Nursing Course Work, 30 credits
Assessment of course work in areas of medical-surgical, pediatric, maternal and psychiatric nursing will be accomplished on an individual basis. A minimum of 30 credits is necessary for acceptance in the nursing major.

Nursing Major, 32 credits
A student must take 32 credits of upper division courses (300-400 level) in order to complete a major in nursing for the BSN completion program. At least 24 of these upper division credits will consist of a nursing core curriculum. The remaining credits will be chosen from areas related to the major.

Students must meet the following requirements to be admitted to the nursing major:

1. Graduation from an NLN accredited program.

2. Current license to practice as an R.N. in the state of Wisconsin.

3. Minimum cumulative grade-point of 2.25 (overall) and a GPA of at least 2.25 in the natural sciences and nursing.

4. Be in satisfactory physical health in compliance with the Wisconsin State Administrative Code for Nursing.

5. Completed the nursing major prerequisites and the English requirement.

6. Received at least 30 credits for pre-licensure nursing course work.

Persons who have been inactive in nursing for five or more years may be expected to satisfy some additional requirements.

Public and Environmental Administration

Professors: Arthur A. Atkisson (chairperson), public policy and management for local government, environmental quality control, health care enterprises, chemical pollution of the environment, mitigation of natural hazards, U.S. settlement and migration patterns, relationship between urban environmental variables and health.

Associate Professors: Daniel J. Alesch (adjunct), government housing allowance impact, local government planning and management, statistical and economic modeling of public service systems, organizational behavior and decision-making, public problems and policymaking in urban communities; **Michael E. Kraft,** American government and politics, legislative processes, public policy analysis, environmental politics, policy-making processes; **David M. Littig,** urban politics, transportation policy, political behavior, Latin America; **C. Jarrell Yarbrough,** political theory, public law, American politics, environmental policy and administration.

Lecturers: Michael R. Monfils, former mayor of Green Bay, policy and management systems for local government; **Patrick J. Madden,** public policy and administration, leadership in organizations, public law.

During the current century, the forces of population growth, urbanization, rising human aspirations, environmental change, industrialization, resource depletion, and rapid changes in technology have escalated public demands for problem-solving activities and services from governmental and non-profit institutions. Partly as a result of these forces, annual expenditures by all federal, state, and local governmental agencies in the United States have risen to equal 42 percent of all U.S. personal family income, and approximately two persons out of ten in the employed labor force are employed by government. Public regulatory policies touch almost every sector of our economy, and each citizen is the recipient of a complex mix of governmental services.

These changes in society have produced rising demands for greater effectiveness, efficiency, productivity, and responsiveness in governmental operations. As a result, there is an increasing need for public policy makers and public administration professionals who are able to engage in sophisticated processes of leadership and decisionmaking, public problems identification and analysis, public policy evaluation and development, and public systems planning and management. This need is the central focus of the major in public administration which emphasizes developing skills in problem identification, analytic techniques, decisionmaking, planning and management, and leadership for social change.

The organizing themes for public administration education at UWGB are the human environment, local government, urban management, and public policy processes. Solid preparation is provided for the several major specialties in the field.

Students may earn either a B.S. or B.A. in public administration, or may develop a professional minor in either public administration or environmental administration. As a major in public administration, students choose one of six *academic tracks:* public management studies, public policy studies, public institutional studies, administration of local government, environmental administration, and health and human services administration. In addition to specific courses within each track, students select a field specialization and/or develop a co-major or minor in one of the disciplinary, interdisciplinary, or professional programs of study at UWGB. The faculty advises each student on the most appropriate track and field specialization, depending on academic interests and career needs. The most frequently chosen complementary fields of study are political science, business administration, Science and Environmental Change, Social Services, Urban Studies, Regional Analysis, environmental planning, and environmental health.

MINOR IN PUBLIC AND ENVIRONMENTAL ADMINISTRATION

Students may develop professional minors in Public and Environmental Administration by completing an appropriate six course (18 credit) sequence. Fifteen of these credits must be junior or senior level courses. Coursework must be approved by the Public and Environmental Administration program adviser or chairperson, but all of the credits need not be selected from courses offered by faculty in that program.

In this way, students can develop specializations targeted to their career goals or major fields of study. For example, a major in Regional Analysis or Urban Studies combined with this professional minor would be good preparation for a variety of careers in planning, management and administration of natural, human, or other resources. Public and Environmental Administration combined with Human Biology would provide a strong background for administrative positions in the health sciences and social services. Many other applications are possible.

It is recommended that students taking the minor complete these freshman and sophomore courses:

350-102 Public Policy and Administration
350-201, 202 Problem Analysis and Decision Making I, II
552-105 Introduction to Expository Writing

600-260 Introductory Statistics
OR
255-205 Social Science Statistics

778-101 American Government and Politics

Other courses to complete the minor are planned by the student with the help of an adviser.

MAJOR IN PUBLIC ADMINISTRATION

Lower Division Program and Tool Subject Requirements

Required (15 credits total):
298-202 Macro Economic Analysis
350-102 Public Policy and Administration
350-201 Problem Analysis and Decision Making I
350-202 Problem Analysis and Decision Making II
778-101 American Government and Politics

One course from this group (3 credits):
255-205 Social Science Statistics
575-217 Quantitative Methods in Administration
600-260 Introductory Statistics

One course from this group (3 credits):
255-305 Foundations for Social Research
481-435 Developmental Tests and Measurements
575-204 Introductory Accounting
600-101 Intermediate Algebra
600-150 BASIC: A Time Sharing Computer Language
600-151 Introduction to COBOL: A Business Data Processing Language
600-201 An Overview of Calculus Techniques
600-202 *Calculus and* Analytic Geometry I
600-251 Introduction to Computer Science
600-255 FORTRAN: A Scientific Programming Language
736-111 Elementary Logic

One course from this group (3 credits):
246-101 Writing Skills Laboratory
246-133 Fundamentals of Public Address
246-333 Public Speaking and Speech Composition
552-105 Introduction to Expository Writing
552-100 Basic College Writing

Core Program in Public Administration
To qualify for a major in public administration each student must complete an eight course (24 credits) program of core study which involves four courses (12 credits) within the general field of public administration and four courses (12 credits) within one of the established academic tracks in Public and Environmental Administration.

Required (9 credits):
298-306 Public Finance and Fiscal Policy
350-315 Planning and Management of Public Systems
350-460 Public Policy Analysis

One course from this group (3 credits):
350-484 Senior Distinction Project
350-496 Directed Study
Alternatively, students may complete a team research project or a supervised internship.

The balance of the core program requirement is satisfied by completing four courses (12 credits) chosen from the following list in consultation with a faculty adviser.
350-301 *Environmental* Politics and Administration

350-305 Regulatory Policy and Administration
350-310 Administrative Leadership
350-410 Administration of Local Government I
350-415 Administrative Planning, Programming, and Budgeting Systems
350-421 Planning Theory and Methods
350-422 Advanced Program and Policy Analysis
778-310 American Presidency
778-320 Constitutional Law
778-416 American Legislative Process
820-415 Organizational Psychology

The tracks are:
Public Management Studies
Administration of Local Government
Environmental Administration
Health and Human Services
Public Policy Studies
Public Institutional Studies

Field Specialization and Academic Track Requirements
In addition to meeting the core requirement, each student seeking a major also must complete an eight course (24 credit) program of study in one of the program's six academic tracks. Consisting of an appropriate mix of freshman-sophomore and junior-senior courses from the all-University curriculum, this program of study may be constructed so as to qualify a student for a specific field of specialization, co-major, or minor. Alternatively, the courses may be chosen to expand the student's understanding of a relevant set of public problems, public service delivery systems, public policies, and/or public management and planning methods.

Flexibility in meeting this eight course requirement is offered through these alternatives: 1. complete all requirements for a co-major or minor in a relevant disciplinary program, concentration, or professional field; 2. complete a personally relevant eight course sequence which has been approved by an adviser in public administration; 3. complete all requirements for one of the faculty-designed field specializations.

Existing faculty-designed field specializations in each track include those listed below. Specific courses useful in constructing field specializations are listed in brochures describing each track which are available in the Public and Environmental Administration office.

Public Management Studies Track:
Administrative Information Systems
Public Budgetary Systems
Public Management Operations
Public Personnel Management
Quantitative Public Management Methods

Public Policy Studies Track:
Public Policy Processes
Public Policy Analysis and Development
Public Regulatory Systems
Public Affairs and Community Relations

Public Institutional Studies Track:
Designed for each student

Administration of Local Government Track:
Designed for each student

Environmental Administration Track:
Environmental Planning
Environmental Policy Analysis
Environmental Quality Management
Recreational Resource Management

Health and Human Services Administration Track:
Health Systems Planning and Management
Human Services Management
Social Services Administration

COURSES

350 PUBLIC AND ENVIRONMENTAL ADMINISTRATION

350-102 Public Policy and Administration 3 cr.
An examination of major ideas, issues, problems, and value conflicts associated with implementing public policy in governmental institutions. The course covers theories of public administration, formal and informal aspects of public bureaucracies, decision-making processes, management of personnel in public organizations, the power of bureaucracies, bureaucratic responsibility and public control of government, ethics and public service, contemporary trends and alternative futures for public bureaucracies.

350-201 Problem Analysis and Decision-Making I 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.

350-202 Problem Analysis and Decision-Making II 3 cr.
Examines major theories and methods of decision-making and the role of facts and values in decision-making operations. Develops skills in use of major techniques appropriate to developing, assessing, and selecting strategies for problem-solving and goal-attainment. P: 350-201 or cons inst.

350-281 Student-Led Courses 1-4 cr.
See page 19.

350-283X Selected Topics in Public and Environmental Administration 1-4 cr.
See page 19.

350-298 Directed Study 1-4 cr.
See page 19.

350-301 Environmental Politics and Administration 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. P: 778-101 or 350-102 or cons inst.

350-305 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. P: 778-101 or 350-102 or cons inst.

350-310 Administrative Leadership 3 cr.
Covers roles, functions, and environments of organizational supervisors, project leaders, executives, managers, administrators, and other administrative agents, especially in public enterprises; the relationships between the behavior of administrative agents and work group performance in a variety of organizational and program settings. P: jr st or cons inst.

350-315 Planning and Management of Public Systems 3 cr.
Examines principal tools and methods for planning, designing, analyzing, and managing public systems. It 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: 350-102.

350-320 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 the 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, 350-102, and cons inst.

350-321 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: 350-320.

350-322 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: 350-321.

350-410 Administration of Local Government I 3 cr.
Covers the contemporary mechanisms in local government management and policy implementation focusing on the basic authority, limitations, financing, and rights of local government. Introduces the participant to the authority structure of local governments and their limitations, with emphasis on comparison of national models and opportunities to analyze those models against specific local government systems and functions.

350-411 Administration of Local Government II 3 cr.
Continuation of 350-410. Focuses on problem solving at the local level and implementing national policies at the local level. Opportunities include small team research in developing model programs and workable alternatives to the critical problems of local government. P: 350-410 or cons inst.

350-415 Administrative Planning, Programming, and Budgeting Systems 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: 350-102, or another course in American government, or cons inst.

350-421 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.

350-422 Advanced Program and Policy Analysis 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. Relevant for those interested in government, business, or nonprofit organizations. P: 350-421 or cons inst.

350-460 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 decisionmaking. 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. P: 778-101 or 350-102 or cons inst.

350-470 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. P: 350-102 or cons inst.

350-481 Student-Led Courses 1-4 cr.
See page 19.

350-483X Selected Topics in Public and Environmental Administration 1-4 cr.
See page 19.

350-498 Directed Study 1-4 cr.
See page 19.

Recreation Resources

Associate Professor: S. Harold Smith (chairperson), therapeutic recreation, adapted physical education, philosophy of recreation and leisure; leisure education.

Recreation Resources provides both an intellectual focus on recreation and leisure related issues and a preparation for professional work in recreation related professions including planning and therapy.

The program is structured about two principal themes, recreation planning and therapeutic recreation. The therapy theme is being developed and will focus on an understanding of recreation and leisure in relation to human adjustments to illness, disability, or handicap problems.

The recreation planning theme focuses on acquisition, development, and management of recreation resources, blending studies in outdoor recreation planning, and tourism planning.

*Academic Affairs Council Approval Pending.

Core courses in Recreation Resources vary according to the track selected, but each track has 827-201, Foundations of Recreation and Parks, as one of its core courses.

Professional program emphasis is in five different tracks. Each corresponds with one or more of the concentrations or other programs. Tracks, or areas of specialization, and corresponding programs are:
Therapeutic Recreation:
- Physical Education
- Human Development
- Human Adaptability

Regional Outdoor Recreation Planning:
- Human Development
- Regional Analysis
- Urban Studies

Tourism Planning:
- Managerial Systems
- Regional Analysis
- Urban Studies

Park Planning and Design:
- Environmental Design
- Human Development
- Science and Environmental Change

What recreation resources does is to add career emphasis to a student's major or concentration. Thus, students with a variety of backgrounds who share a common interest in a given recreation problem may combine their major studies with professional studies in recreation resources: the student in environmental design with a special interest in parks; the Human Development student who wants to work with people in outdoor settings, and the student in Science and Environmental Change interested in recreational use of natural areas, might all choose the park planning and design track of recreational resources to give professional emphasis to their programs. Similiarly, students in Human Development, Education, Urban Studies, Social Work, or a variety of other human service majors might choose the therapeutic option to strengthen their programs as they relate to special populations and individuals.

Students in recreation resources are encouraged to develop tools: a foreign language, graphics, computer mapping, photography, cartography, accounting, and the like.

Students must work in field projects that apply and sharpen future professional skills. Examples of some actual professional planning situations in which recreation resources students have been involved are: conceptual master plan for Green Bay's Beach Wildlife Sanctuary; master plan for the Brown County Reforestation Camp; and the master plan for the Oneida Indian Reservation.

All recreation resources students plan their individual programs with the help of an adviser.

COURSES

827 RECREATION RESOURCES

827-201 Foundations of Recreation and Parks 3 cr.
Development of theoretical foundations of recreation and leisure, with emphasis on professional philosophy, present status, prospects for the future, and the role of parks and recreation in modern society.

827-281 Student-Led Courses 1-4 cr.
See page 19.

827-283X Selected Topics in Recreation Resources 1-4 cr.
See page 19.

827-298 Directed Study 1-4 cr.
See page 19.

827-303 Recreation Supply and Demand Analysis 3 cr.
Actual case problems in analyzing supply and demand for recreation with an emphasis on demand projection; theoretical concepts, and determinants of demand; advanced analysis of recreation fad prediction and effect of supply on demand; project in an actual regional outdoor recreation and open space plan. P: jr st.

827-310 Formulating and Administering Recreation Programs 3 cr.
Practice in designing programs and establishing effective organizations for their administration; applying valid conclusions from the philosophical, sociological, and physiological characteristics of leisure usage; theories, principles, and practices of program development in public and private recreation operations.

827-320 Field Practicum 3 cr.
Group projects involving real world planning experiences and problems in the field of outdoor recreation. Students should have previous coursework that will enable them to develop a plan element or a recreation plan associated with the project. Fieldwork is an integral part of the coursework. P: 6 cr in recreation resources.

827-375 Contemporary Issues in Outdoor Recreation 2 cr.
This course examines contemporary problems facing individuals who plan, design, or attempt to manage outdoor recreation areas. P: sr st.

827-380 Tourism Planning 3 cr.
Study of tourism planning, including concepts, methods, techniques, and tools. The method of instruction is a simulation game involving real and contrived data from the Green Bay region. There will be at least one field trip. Emphasis is on the nature of those elements essential to the health and vitality of the tourism industry. P: jr st.

827-405 Outdoor Recreation Site Planning 3 cr.
Interdisciplinary sociological and ecological basis for outdoor recreation area site planning and management; social site analysis; biophysical site analysis, site plan formulation; facility design; project for a community in the region involving ecological and social site analysis and site plan formulation. 827-303, 255-305, and jr st highly recommended.

827-407 Environmental Impacts of Recreation 3 cr.
Examines the environmental impacts that specific recreational activities have on land and water resources. An overview of general recreation trends, distribution of park resources and user groups, carrying capacity, and ecological changes are discussed. A field trip is required. P: 862-302 or cons inst.

827-412 Regional Outdoor Recreation Planning I 3 cr.
Designed to provide for the combining of academic knowledge on outdoor recreation plans with the practical experience of producing an outdoor recreation

plan. Emphasis will be placed upon the inventory, analysis, tabular, graphic and written materials necessary to provide a community, county or region with the document necessary to implement an outdoor recreation program. Involvement with community leaders, citizens and various governmental agency personnel may be included. The actual practice in producing an outdoor recreation plan will be the desired goal of the class. Lectures, readings, case studies, implementation devices, field trips and community lectures from recreation planning professionals will also be included. P: 827-303 and jr st.

827-413 Regional Outdoor Recreation Planning II 3 cr.
A link between the academic inputs of leisure science to recreation planning and "on the ground" considerations in the professional world of the regional planner; introduction to recreation resource analysis techniques and drafting; community-planner relations; inter-agency relations; on the ground process and politics of regional recreation and open space plan formulation and implementation; case studies; field trips and community lectures drawing on recreation planning professionals. P: jr st and 827-303 recommended. See 834-413.

827-481 Student-Led Courses 1-4 cr.
See page 19.

827-483X Selected Topics in Recreation Resources 1-4 cr.
See page 19.

827-498 Directed Study 1-4 cr.
See page 19.

Social Services

Associate Professors: Robert Mendelsohn, (chairperson), social psychology, community psychology, community mental health systems, planning, social and organizational psychology of human service delivery, police; **David Galaty,** social service theories and applications, history and philosophy of scientific ideas, epistemology, environmental problems.

Assistant Professors: Winston Chao, community organization, social service administration, sociology; **Rolfe White,** group work, organizational change, evaluation of services, counseling and therapy.

Lecturer: Richard Jansen, casework, human relations training, communication skills, behavioral dynamics of human systems, humanistic psychology, human resource development.

The University of Wisconsin–Green Bay offers two alternatives which prepare students for the human service professions; one is the professional program in Social Services, the other is the Bachelor of Social Work Degree. The Social Services program is a professional minor for students who are majoring in a concentration who want to explore an application of their major before graduation. The Bachelor of Social Work is a separate degree for students who want to major in social work.

Both opportunities offer training applicable to a wide range of careers in the human services. Graduates have been employed in positions such as social worker, welfare worker, employment counselor, group worker, street worker, equal opportunity counselor, personnel specialist, social advocate, administrator and consultant. There are, of course, other possibilities. The social work major places additional and specific emphasis on preparing graduates for careers which require the Bachelor of Social Work degree.

Core courses for both the major and the minor offer a field experience in a social service agency, with theory and methods courses supporting the field training. Both alternatives are concerned with how individuals, groups, and organizations can be assisted toward more effective, satisfying, and productive behavior. The emphasis is on creating social and institutional settings which foster individual growth. Many of the theories and skills learned will focus on methods of changing organizations. This means we do not believe that there is something wrong with people but rather that behavior is either functional or dysfunctional as it interacts with particular social settings. Students can expect increased self-understanding and communication skills regardless of their specific vocational application or choice of option.

SOCIAL SERVICES PROFESSIONAL MINOR

The Social Services minor must be combined with a concentration. Any concentration program may be combined with the professional program in Social Services. In practice, however, most Social Services students have majored in Human Development, Humanistic Studies, Social Change and Development, Urban Studies, or Managerial Systems, or in a combination of one of these concentrations with disciplinary programs in psychology or sociology. Some Social Services students might also choose a second professional program in Public and Environmental Administration, and Education. Each of these majors has particular strengths, depending upon the student's projected emphasis within the social services field. A Social Services adviser can be helpful in selecting a major.

The program is organized as a two-semester "package" in order to maintain interrelationships between the basic concepts, methods, and field experience, permitting integration of theory with experience. Social Service core courses are recommended for students in their junior and senior years who have most of the concentration credits completed.

Prerequisites to the core program are: 892-202, Introduction to the Social Services, and 892-250, Principles of Counseling and Psychotherapy.

Core courses for the Social Services professional program are:

Select one of these courses (Junior Year):
875-483X Community Organization (or equivalent course in the concentration)
944-440 Social Dynamics of Urban Life

Senior Year, Semester I:
892-330 Basic Concepts in the Social Services I
892-402 Field Experience in a Social Service Agency I
892-410 Principles of Social Services Methods I

Senior Year, Semester II:
892-331 Basic Concepts in the Social Services II
892-403 Field Experience in a Social Service Agency II
892-411 Principles of Social Service Methods II

BACHELOR OF SOCIAL WORK DEGREE (B.S.W.)

The Bachelor of Social Work is a separate degree for students who major in social work. The primary purpose of the degree is to promote and encourage the development of competent social workers for entry into a wide variety of careers for which the Bachelor of Social Work is an initial requirement.

The social work major at Green Bay is being developed in accordance with guidelines established by The Council on Social Work Education. UWGB will seek accreditation from this organization.

A decision to formally enter the social work major should be based on experience in the introductory and prerequisite courses in social services and field experience. These courses are designed to help acquaint students with social work as a career, and to determine the potential the student has for developing the necessary levels of social work competencies by graduation. A determination of successful levels of competency will occur in the last semester of undergraduate work by Social Services faculty and community social workers.

PROGRAM OF STUDY

Students should expect the requirements for this major to change slightly over the years to keep pace with national standards for undergraduate social work curriculum. The courses of study listed below are for the 1980-81 academic year. Consult the social work adviser for changes expected in future years. The following program is offered as a guide for planning: substitution of some courses can be made after consultation with the social work adviser.

All-University Requirements (30 credits):
Humanities, 9 cr.
Social Sciences, 9 cr. (automatically completed by B.S.W. requirements.)
Natural Sciences, 9 cr.
Senior Seminar, 3 cr.

Prerequisite Background Requirements (21 credits):
298-283X Welfare and Economics (or equivalent)
461-210 Introduction to Human Development
493-205 Personal Values and Social Reform
875-203 Prejudice and the Human Condition (or equivalent)
875-241 Women and Changing Values
892-202 Introduction to Social Services
900-208 Marriage and Family

Tool Subject Requirements (12 credits):
255-205 Social Science Statistics
552-105 Expository Writing
892-250 Concepts of Counseling and Psychotherapy

One course from one of the following areas:
255-305 Foundations for Social Research
892-483X Field Methods in Social Research
892-483X The Evaluation of Practice
OR
One course in a modern foreign language at a conversational level which is spoken by an intended client group.

Social Work Core Courses (31 credits):
892-300 Introduction to Field Experience
892-302 Social Service Issues
892-483X The Social Work Profession

944-440 Social Dynamics of Urban Life
OR
875-483X Community Organization

892-330, 331 Basic Concepts in the Social Services I and II
892-402, 403 Field Experience in a Social Service Agency I and II
892-410, 411 Principles of Social Service Methods I and II
892-360 Social Service Delivery Systems and Cultural Differences
892-483X Social Work Competency Seminar

Concentration Emphasis (9 credits):
A minimum of 9 upper level credits must be selected from a concentration relevant to social work. Typical concentration emphasis courses might be Human Development, Social Change and Development, Urban Studies, Humanistic Studies, and Managerial Systems.

Elective Courses (21 credits)

The B.S.W. degree requires a total of 124 credits.

Additional elective courses in the Social Services program are:
892-255 Interviewing Skills: The Art and Practice of Social Communication
892-257 Training in Social Service Skills and Techniques
892-350 Concepts of Group Therapy and Group Counseling
892-355 Theory and Practice of Human Relations Skills

New courses planned for the Social Services curriculum include:
The Social Work Profession
The Community Context of Social Services
Evaluation of Practice
Social Work Competency Seminar

COURSES

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.
P: soph st.

205 Personal Values and Social Reform 3 cr.
(See 493-205.)

892-250 Concepts of Counseling and Psychotherapy 3 cr.
Defines conditions which must be met to separate therapeutic from pseudo-therapeutic activities. The fundamental scientific and social concepts underlying all therapeutic activities are presented discussed as to their strengths and weaknesses. In general, the course attempts to de-mystify counseling and psychotherapy interventions without, at the same time, destroying their usefulness as benign social means of controlling individual behavior. Not a "how to do course." It is an introduction to the understanding of the social-psychological cultural matrix which underlie all forms of psychological helping.
P: background in psychology or sociology.

892-255 Interviewing Skills: The Art and Practice of Social Communication 3 cr.
The objective is to enable the student to become an effective communicator/interviewer. The program emphasizes three basic components involved in being a communicator: (1) knowledge of communication/interviewing skills, (2) experience in applying communication skills, and (3) an understanding of oneself as a receiver and sender of messages. This course is oriented toward people interested in improving their abilities to relate to others. It will be particularly valuable for persons who plan vocations which involve considerable interaction with other people, such as public relations work, advice giving, personnel, administration, counseling, and social services.

892-257 Training in Social Service Skills and Techniques 3 cr.
The training lab consists of a number of learning experiences intended to assist the student in developing and/or increasing skills and awareness required for competent behavior as a helping person. Some areas of focus are: (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. In addition, students will learn about and share information on various helping agencies in the community.

892-281 Student-Led Courses 1-4 cr.
See page 19.

892-283X Selected Topics in Social Services 1-4 cr.
See page 19.

892-298 Directed Study 1-4 cr.
See page 19.

892-300 Introduction to Field Experience in a Social Service Agency 1-3 cr.
Designed to offer an introductory exposure to working in a social services agency. A supervised program of observation and assistance to the agency will be provided by a professional staff member of the agency. This course is necessary for students seeking career preparation in social work or human development. The student will be expected to contract for placement with an approved social services agency for 40 hours of time per credit. A written assignment discussing the experience will be required.

892-302 Social Service Issues: Public Welfare, Aged and Infirm, Drug Abuse, Probation and Parole, Child Welfare 3 cr.
May be repeated for credit each time a different issue is studied. P: 892-202.

892-330 Basic Concepts of the Social Services I 3 cr.
Generic social service practices. Concepts focus on individuals, groups, and organizations as subjects of change; understanding the techniques of interviewing, group management, and organizational change, with an emphasis on the mental health, social work, and community psychology sector. Relationships between values and strategies of social intervention. Concurrent registration in 892-402 and 892-410. P: 892-202 or equivalent.

892-331 Basic Concepts of the Social Services II 3 cr.
The second part of a two-semester sequence which introduces the student to the analysis of generic social service practices. The course sequence focuses on individuals, groups and organizations as subjects of change. The second semester course emphasizes concepts and techniques relevant to organizational and community change. Students are introduced to the different conceptual frameworks within which models of planned social change may be developed. Concurrent registration in 892-403 and 892-411. P: 892-330.

892-350 Concepts of Group Therapy and Group Counseling 3 cr.
Group work is an activity based on concepts distinctly different from those of individual intervention. The concepts particular to group work are presented and, whenever possible, demonstrated in the laboratory. The relationship between group concepts and group counseling and group therapy is critically examined. This course will not prepare an individual to function as a group counselor therapist; it will enable him/her to be more critical and evaluative of counseling and therapy activities. P: jr st.

892-355 Theory and Practice of Human Relations Skills 3 cr.
Utilizes theories of human relations skills as developed in the behavioral sciences and tests the meaning and the application of these theories through small group participation.

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.

892-402, 403 Field Experience in a Social Service Agency I, II 3, 3 cr.
Actual social service work through placement in a social service agency; weekly seminar meetings and written reports. Concurrent registration in 892-410, 411 and 892-330, 331. P: 892-202.

892-404 Field Experience in a Social Service Agency III 1-3 cr.
The opportunity to develop professional skills and knowledge in greater depth than that provided in the earlier field experience. An individualized contract for learning is to be arranged between the student, the field supervisor, and the course instructor. The student must work 40 hours for each credit earned in the field experience setting. A paper discussing the experience and relating it to relevant social services literature will be required. P: 892-402, 403.

892-410 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 the application of 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 on an abstract level of what it is they want to do and which methods they will use to achieve their goals. Skills in influence individuals, groups, and organizations refined through the field experience. Concurrent registration in 892-330, 892-402. P: 892-202.

892-411 Principles of Social Service Methods II 3 cr.
Students apply various social service methods to simulate 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. Concurrent registration in 892-331 and 892-403. P: 892-410.

892-481 Student-Led Courses 1-4 cr.
See page 19.

892-483X Selected Topics in Social Services 1-4 cr.
See page 19.

892-498 Directed Study 1-4 cr.
See page 19.

Interconcentration Programs

The Arts in Society
Environmental Design
Environmental Health Sciences
International Studies
Women's Studies

The Arts in Society

Three concentrations are cooperating to develop a new interconcentration program called The Arts in Society, which involves resources from the arts, humanities, and social sciences. Cooperating concentrations are Communication and the Arts, Humanistic Studies, and Social Change and Development.

The program takes for its focus the fact that artists—painters, writers, film makers, composers, musicians, actors, poets—affect and are affected by the society in which they live. For the past two centuries, the world has been turbulent with rapid social change and competing political systems. All of these changes and systems explicitly or implicitly define a place and function for the arts in society.

The developing program studies the relationships between artists and society and addresses these questions:

—How do economic and political systems of production affect content and style of the arts?

—Are the various arts prophecies of social changes or do they reflect changes in a society?

—What is the social role of the artist in society?

—What are the functions of the arts and artists in different societies in different historical eras?

—Do artists shape and control our social vision or do they reflect it?

—How do different social and political theories and ideologies define, evaluate, and use the arts?

One of the program's underlying premises is that artists, the work they produce, the art audience, and the nature of the social order itself interact and must be seen as related elements rather than separate and autonomous parts.

Students interested in The Arts in Society should contact a faculty adviser from one of the concentrations: Terence O'Grady in Communication and the Arts, Jerrold Rodesch in Humanistic Studies, and Harvey Kaye in Social Change and Development.

Environmental Design

Coordinators: Associate Professors: **Ronald Baba,** social ecology, environmental design; **David Damkoehler,** environmental design, drawing, sculpture, graphics.

Environmental design deals with the shaping of settings for human behavior and the relationships between those settings and human functions. The design of the built environment and the interaction between humans and the vast variety of behavior settings found in this environment are the foci of the program in environmental design. Environmental design is available as a program of study in either the Communication and the Arts or Urban Studies concentrations.

The basic concept of the program is that of the interdisciplinary design team. Students participating in the program are challenged by a series of complex problems ranging in scale from the wheelchair to design projects in urban central business districts. All design projects occur in the community which surrounds the University. Environmental design program students have produced designs which include: a master development plan for a YMCA facility; an open space and park plan for an older Green Bay neighborhood;

a proposal for a developmental pre-school; and two full scale studies of the rehabilitation of Green Bay's central business district.

Because of a basic commitment to creative problem-solving methodologies, the environmental design program provides a valuable dimension to a modern liberal education. Students receive intensive training in the processes of environmental design by combining core courses specific to this program and selected other concentration courses.

Study covers such areas as urban planning, urban technological design, three dimensional design methods, properties of building materials, environmental psychology, and design theory and history. The workshops, offered at four levels of analysis, investigate the design of spaces for the individual, small groups, and communities, and culminate in an elective project. The student interested in environmental design should consult with the adviser.

The program prepares students for the emerging fields that relate the built environment to human behavior. Potential employment would be in design, architecture, and urban or regional planning. The training also prepares students for graduate work in these areas.

SAMPLE STUDY PLAN

There are a number of ways for a student to formulate an interconcentration program in environmental design. Each student plans a program to meet his or her needs with the help of concentration and environmental design program advisers. A student whose major interests are in the concentration in Communication and the Arts might take a program something like the following:

Foundation Courses
862-102 Elements of Descriptive Geometry
944-210 Drawing Systems for the Designer
957-105 Drawing

Upper-Level Courses
944-401 Environmental Design Workshop I
242-471 Environmental Design Workshop II
944-402 Environmental Design Workshop III
242-472 Environmental Design Workshop IV
242-401 Designing the Environment I
242-402 Designing the Environment II
944-325 Behavior in Designed Environments I
944-325 Behavior in Designed Environments II
862-327 Urban Technological Design
944-421 Urban Planning I
944-422 Urban Planning II
944-430 Urban Aesthetics

Environmental Health Sciences

Coordinators: Associate Professors: **Alice Goldsby,** biology, environmental microbiology; **Elaine N. McIntosh,** community nutrition, dietetics, nutrition education.

Environmental Health Sciences offers students an opportunity to gain an education in one or more of the basic sciences while preparing for careers which deal with relationships between environmental factors and human health.

Students can acquire a science background equivalent to a major in chemistry, physics, biology, or sociology and integrate this science knowledge directly with one or more health-related fields, depending on their interests. These could include air or water quality, noise, population studies, biophysics, radiation, sanitation, or solid waste management.

Students who complete the program develop experience in both analytical skills and management techniques and are prepared for analyzing health related problems and for effecting community solutions. The program of study is available in either the Science and Environmental Change or the Human Biology concentrations. Each provides a somewhat different emphasis, as described below.

Through Science and Environmental Change, students can study fundamental factors affecting pollutants in the air, water, and on land and their relationships to ecological processes. They can also learn responsible decision making in natural resources management and waste disposal and environmental pollution control. Problem areas include studies on distribution of chemical and physical health factors, engineering oriented analysis of production and control of biophysical environmental factors, and system analysis of resource allocation in rural and urban areas.

The Human Adaptability major in Human Biology is concerned with human response to an environmental stress or pressure. Knowledge of individual and group capabilities to adapt to a variety of health factors related to the environment are studied and systematized. Students may emphasize either the physiological or socio-physiological aspects of human adaptability.

In the Nutritional Sciences major in Human Biology, students emphasize the relationship of food and sanitation, especially from the chemical and microbial point of view. Problems both on the industrial and community level are studied.

The Population Dynamics major in Human Biology emphasizes population density, location, and structure; its biological and sociological factors; and its impact on human health. Particularly the contributions of population changes to problems of pollution, crowding, mental and physical stress, and the general deterioration of the environment are studied.

No matter which concentration or health related interest the student chooses, all programs have some features in common. The first year or two involve orientation in the basic sciences and social sciences. These are prerequisite to intermediate year science courses which include analytical chemistry, microbiology, and others. Social science courses facilitate a better understanding of ecological crises facing humans and the society or world in which science must function to meet these crises.

Career opportunities for graduates in environmental health include environmental monitoring and control, toxicology, solid waste management, radiation physics and chemistry, sanitation, and many others. It also provides a solid basis for graduate and professional studies in several areas, particularly medicine.

Students interested in pursuing the environmental health area should seek advice from the program coordinators in planning their individual academic programs.

International Studies

Coordinator: Associate Professor: **Craig Lockard,** history, Third World Societies, Asian and African Studies.

Americans live in an increasingly interdependent, complex, and rapidly changing world in which developments in various societies affect the lives of people in other societies. The world is composed of interlinked units and no country—including the United States—is a self-sufficient island. The extent of mutual interdependence and its consequences for the daily lives of all the world's people in the twentieth century, as well as the changing structure of world politics, are not as widely appreciated as they ought to be. It is necessary for students in the United States to gain some familiarity with international developments and with other cultures so as to better comprehend the nature of global change, the aspirations of societies different from our own, the American role in the world, and the strengths and weaknesses of American society.

To meet this need, several concentrations are cooperating to develop an undergraduate program in International Studies, through which students will be able to elect a minor field or sub-major in conjunction with a major in one of the participating concentrations. The program in International Studies draws upon courses and faculty from a variety of fields, particularly from the social sciences and humanities. UWGB possesses extensive faculty expertise and library resources on the various regions of the world. It is expected that students in the program will gain an understanding of at least one area of the world outside of the United States, develop a familiarity with several disciplinary approaches, exhibit competency in at least one foreign language, and, if possible, take advantage of one of the available study abroad opportunities. Students working in a variety of fields should find the International Studies program relevant to their needs; some of these fields include education, business, public service, comparative cultural studies, foreign languages, area studies, political science, history, anthropology, sociology, development economics, comparative environmental studies, international relations and diplomacy.

At present students majoring in any of three concentrations—Social Change and Development, Regional Analysis, and Humanistic Studies—will be able to develop a sub-major in International Studies while fulfilling the normal requirements of their concentration program. In addition, an interconcentration sub-major in international business is under development for students in Managerial Systems. Students from other concentrations in the social sciences, humanities, and natural sciences may also be able to develop an emphasis in international or comparative studies.

Requirements for the sub-major will include the following: 9 credits of lower division prerequisite courses, normally including History 100, Anthropology 100, and Geography 102; competency in one foreign language, generally defined as the equivalent of 14 credits; and 18 credits of upper division courses recognized for credit by the International Studies program. Six of these must be defined as area studies and focus on a particular region or country of the world, such as China, Africa, the Soviet Union, or Western Europe.

Several possible emphases within the program are available, such as international relations, world history, international business, and comparative cultural studies. The International Studies program is expected to have official approval in the fall of 1980. Interested students should contact one of the following faculty advisers for information on the program: Craig Lockard, Social Change and Development (third world history, Asian and African studies); Anthony Galt, Social Change and Development (anthropology, Mediterranean societies); Harvey Kaye, (sociology development studies, Latin American studies); Norbert Gaworek, Humanistic Studies (European history, Russian studies); Kenneth Fleurant, foreign languages (Canadian studies, western European studies); Martin Greenberg, Regional Analysis (Middle Eastern studies, political science, international relations); William Conley, Managerial Systems (international business).

Women's Studies

Women's studies is an interconcentration program that focuses on the common denominators affecting women's lives, on the cultural, racial and economic diversity of their experience, and on their past and present contributions to societies as persons, creators and thinkers.

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 appreciation of their accomplishments and capabilities, and by enabling both women and men to widen their sphere of development beyond the limits of traditional sex-differentiated roles.

Women's studies courses provide preparation for any job in which the people served or the co-workers are women. The program is particularly effective for individuals pursuing careers in teaching, community service, social action, or affirmative action. Women seeking leadership roles or professions in fields not traditionally open to women may also gain much from the study of women's lives and contributions.

Students majoring in any of four concentrations—Communication and the Arts, Humanistic Studies, Social Change and Development or Urban Studies—would meet concentration and women's studies requirements in a combined program. Students should develop an academic plan in consultation with the women's studies adviser in one of the participating concentrations.

Women's studies requirements include the introductory course, 875-241, Women and Changing Values, and two of the three core courses: 875-345, Women in Cross-Cultural Perspective; 944-345, Women in American Perspective; or 242-477, Women as Creative Agents. In addition, the student would take four upper-level women's studies courses, including three credits of advanced research or theoretic studies for a 21 credit minor to be listed on the academic transcript.

Women's studies courses are emphatically interdisciplinary. The introductory course explicitly addresses current issues relating to social and personal values. Upper division core courses establish other cultural and historical contexts for studying women, and introduce creative models and skills for meeting human needs.

The following permanent upper-level courses have been approved by the Women's Studies committee as electives: 242-395, Images of Woman in Contemporary Arts; 875-340, Woman as Worker; 875-342, Women, Myth and Identity; 875-348, Women and the Law; 875-440, Women in Religion; 944-346, Women: Strategies for Change. Other experimental courses may be substituted for one of the above at the discretion of the Women's Studies advisers.

Lower division courses (other than 875-241) do not count toward the 21 credit minor, but several, including 493-206, Women in Literature, and 242-272, Women in Visual and Performing Arts, fulfill the all-University requirement. Students are encouraged to take other appropriate lower level courses, such as 779-260, Human Sexuality: Emphasis Women, for enrichment.

STUDY PROGRAM

There are a number of ways in which a student can develop an interconcentration minor in women's studies. A 30 credit concentration might include most of the requirements for the minor, depending upon the concentration. A 36 credit co-major might consist of a 24 credit disciplinary program and a 12 credit concentration composed of women's studies courses with two additional upper level women's studies electives. For example, a co-major in Communication and the Arts with an emphasis in women's studies might look like this:

Lower Division
875-241 Women and Changing Values (core)
6 credits concentration tool subjects

Upper Division
242-395 Images of Women in Contemporary Arts (elective)
242-477 Women as Creative Agents (taken as elective)
242-498 Directed Study focused on women
875-342 Women, Myth and Identity (elective)
875-345 Women in Cross-Cultural Perspective (core)
944-345 Women in American Perspective (core)

More information on Women's Studies is available from one of the program advisers. Their names can be found in the current *Timetable*.

Personal Concentration

A personal concentration is a self-designed program for students who find that their educational objectives and interests do not fit into any one of the existing concentrations. It is an alternative which may be planned around any theme consistent with the University's commitment to an education based upon the interrelatedness of knowledge and which focuses on human beings and their various environments.

Students have carried out personal concentrations with titles such as Social Environmentalism, Humanistic Outdoor Education, Cross Cultural Studies in Folk Traditions, Paleoecology, Creative Interpretation of the Environment, Creativity Development and Human Potential, The Ecology and Economics of Food Production, Social Aspects of Health Care, and many others.

In planning a personal concentration, the student determines what it is he or she wants to do and how the educational opportunities at UWGB can help attain this; *designs a personal program* which can best enhance these objectives; and then formulates a proposal stating those objectives. This plan may consist of any combination of regular courses, experimental courses, independent study, internships, off-campus projects, credit for verified off-campus learning, and special programs, as long as the combination is a coherent program centered around an individual theme and contains a minimum of 30 credits at the junior-senior level. Essentially, the personal concentration can be organized in any way that makes sense and meets graduation requirements, as long as it clearly shows the interrelatedness of the student's proposal.

In writing their concentrations, students must define the problem area, point out related problems, show how their personal *concentration might* effect solutions, and state the particular areas in which they see opportunities to integrate their abilities and needs with social or organizational goals.

Student proposals include the practical, and often also the ideal and altruistic.

One recent proposal said, ". . . To affect society so that it will become environmentally literate is a noble and necessary *undertaking and it is* to this end which I'd like to devote my life energies."

Another, in her justification, said, "A holistic study of humanity has great potential for helping to create a holistic human being."

A third student wrote, "There is a delicate balance in our relationship with one another and our environment. My own fulfillment comes in reaching for an understanding of my role in society and nature and helping others to find and carry out what they see as theirs."

An adviser in the Individualized Learning Program Office helps students organize details of their programs and can suggest faculty members to be consulted for their expertise in the students' interest areas.

Students' final proposals must be approved by a personal concentration committee. The personal concentration process generally begins during the end of the sophomore year or at the beginning of the junior year.

Preprofessional Programs

There are three ways to approach preparation for professional studies at UWGB:

1. Many professional schools exist on the graduate level and require a bachelor's degree from an accredited school for entrance. This is true of such field as law, medicine, dentistry, library science, social work, some journalism and business administration programs, and others. Students can receive excellent preparation through the bachelor's degree program at UWGB for these programs.

2. Another plan provides two years of basic, foundation studies at UWGB in preparation for a technical program such as engineering. After two years at UWGB, the student transfers to the technical school.

3. The last possibility is similar, except that it provides two degrees—one from UWGB and one from an applied technical school—and usually takes about five years to complete. Under this plan, students most often spend three years at UWGB and two at the other institution.

Students planning to enter a professional program should get all the information possible about the professional school or schools they are interested in early in their college careers and they should locate the appropriate adviser at UWGB for the professional area they want to pursue.

Here are some of the preprofessional programs available. This list by no means represents all of the professional programs which may be prepared for at UWGB. Students may be able to develop programs in many other areas to meet their own needs.

Students seeking preprofessional studies should contact the office of Academic Advising for information and referral to appropriate faculty advisers.

HEALTH PROFESSIONS

Medicine: Almost all medical schools require a bachelor's degree for entrance and specify certain subjects that a candidate must have taken. These requirements may be met at UWGB. Exceptional ability, high aptitude in science, and outstanding achievement in premedical college education are all important for admission to medical school. The premedical student should learn requirements for the medical school of his or her choice early on, as well as take advantage of advising to plan a premedical program at UWGB to meet these requirements.

The most logical major at UWGB for students interested in pre-medicine and human life science is the Human Adaptability major in Human Biology. Other majors for students with interests in nutrition, field biology, chemistry, or physics would be the Nutritional Sciences and Population Dynamics majors in Human Biology, or the Science and Environmental Change concentration.

The pre-medical program at UWGB is successful from several perspectives. One is that students who achieve a high enough grade point average (3.5 or better) and who also have good medical entrance exam scores have virtually all been accepted into medical schools. Another reason is that UWGB's emphasis on a multi-disciplinary program, in addition to being excellent preparation for medicine, also prepares students for other professional activities besides medicine or allows them more than one choice of graduate education opportunities after their bachelor's degrees.

An interesting aspect of UWGB is the opportunity for qualified undergraduates to participate in professional research—a privilege usually reserved for graduate students. Research experience improves the graduate's chances of entrance into medical and graduate schools and of obtaining job situations.

Dentistry: All dental colleges also specify certain subjects and most of them require completion of at least 90 credits of college work and good scores in the Dental Admissions Test before admission to the dental school. Entrance into these programs, too, requires early planning.

As for medicine, the most logical major for the pre-dental student is Human Adaptability. The benefits of UWGB's program for pre-dental students are similar to those for medical students, including the multidisciplinarity and opportunities for actual research experience.

Also, those students whose grade point averages are about 3.0 or better and who achieve good dental entrance exam scores have all been accepted into dental schools.

Information on courses necessary for premedical and predental programs may be obtained from the UWGB premedical adviser.

Nursing: Nursing students have a choice between two programs. The first, conducted in collaboration with the Bellin Memorial Hospital School of Nursing in Green Bay, leads to the R.N. diploma. The other, conducted in cooperation with the schools of nursing at the Madison, Milwaukee, Eau Claire, and Oshkosh campuses of the University of Wisconsin, leads to the B.S. degree in nursing.

In the first program, the student must be admitted both to the Bellin School of Nursing and to UWGB and takes courses at both places. The second program normally permits students to take one year of courses at UWGB and the remainder of their studies at schools of nursing on the Madison, Milwaukee, Eau Claire, or Oshkosh campuses.

Nurses who have R.N. diplomas and who want to complete bachelor's degrees should inquire about UWGB's new degree completion program for nurses.

Pharmacy: The University of Wisconsin–Madison pharmacy program offers the bachelor's degree after completion of five years of work. Two years of prepharmacy may be undertaken at UWGB, with the remaining three years in the School of Pharmacy on the Madison campus.

Veterinary Medicine: While admission requirements for veterinary schools vary, typically a minimum of two years of preprofessional college work is required, including specific courses. Since entrance is highly competitive, high grade point averages are essential. Students desiring entrance to schools of veterinary medicine should learn the requirements early and plan their programs with the help of an adviser.

LAW

Preparation for law school can be carried out through the regular majors and disciplinary programs at UWGB. Nearly every law school requires a B.A. or B.S. degree from an approved college or university.

Entrance requirements for law school do not entail a precise course of study. According to the Association of American Law Schools, the prospective lawyer must be able to communicate effectively in written and spoken expression and have good grades at the undergraduate level. Courses in the social sciences, history, physical sciences, philosophy, and accounting are recommended. Grade point average and score on the Law School Admissions Test (LSAT), which all applicants to law schools must take, are major factors in law schools' admission criteria. There is stiff competition for gaining admission to law schools in the United States.

UWGB graduates are currently attending law schools in several states. The University is an especially appropriate place to prepare for the emerging field of environmental law.

ENGINEERING

UWGB offers two alternatives for students interested in engineering.

First, for students interested in attending UWGB for two years and then transferring to an engineering program at another university, UWGB offers courses in mathematics, physics, chemistry, engineering drawing, engineering mechanics, and other related courses which provide adequate preparation for the first two years of study.

UWGB also has sample programs of study which integrate its courses with all the engineering fields offered at UW–Madison and UW–Milwaukee. All of the courses listed in the sample programs taken at UWGB are transferable to any engineering school in Wisconsin. After two years of study at the engineering college, students may receive an engineering degree from that school.

Second, UWGB has a dual degree program in engineering under which students may attend the University for three years, earning the necessary credits to transfer to the engineering school. After they have completed two years at the engineering school, students will receive a bachelor's degree from UWGB as well as an engineering degree from the professional school, providing all requirements have been met.

AGRICULTURE

Good basic preparation for the prospective student in agricultural science is available through UWGB's courses in the physical and life sciences, the social sciences and humanities. Faculty advisers for agricultural studies will assist students in contacting one of the three UW system agricultural colleges and in developing an appropriate program of study. Sample programs of study with UWGB course equivalents to courses at the three UW system agricultural colleges are available.

Pre-agriculture students ordinarily would take two years at UWGB, transferring to a school or college of agriculture at the beginning of the junior year. Students desiring a degree in the field of agriculture should see the adviser early in order to arrange the completion of sequence course requirements prior to transfer.

ARCHITECTURE

Architecture curricula have become more and more flexible in the last decade. It is now possible for students who wish to enter this field to transfer into professional programs of study in architecture in their upper division years. This flexibility makes it possible for the pre-architectural student to gain a broad-based interdisciplinary education prior to his or her entry into an architectural curriculum. Preparation should be guided by the requirements and recommendations set forth in the catalog of the architectural school of the student's choice.

Architecture combines the study of science, engineering, mathematics, and art. Thus, a strong pre-architectural program can be designed from the offerings of the several concentrations, professional programs, and disciplines at UWGB. Much of this integration has been accomplished in the interconcentration program in environmental design. The pre-architectural student is strongly advised to consult with the faculty in this special program of study.

CITY PLANNING AND COMMUNITY DEVELOPMENT

Professional instruction in city planning and community development is available at the graduate level at many universities. UWGB offers undergraduate programs through Urban Studies, environmental design, and other programs that are particularly appropriate for entry into such programs. Students who are interested should learn about entry requirements for the professional schools early in their undergraduate years.

COLLEGE AND UNIVERSITY TEACHING

Teaching at the college and university level is pursued through a program of graduate study at the master's and doctor's degree levels. A student who wants to enter graduate school after graduation from UWGB should select a disciplinary or professional program at UWGB in the area he or she wants to pursue after graduation. Excellent grades are especially important.

The student who wants to pursue an academic career should write to the Educational Testing Service, Princeton, N.J. 08540, to obtain a copy of the handbook describing the nature and components of the Graduate Record Examination. Nearly all graduate schools in the United States require applicants to take this examination. The tests are given throughout the country; UWGB's Placement Office announces dates and times in the region. Students who wish to teach at the college level should seek advice from faculty members in the field they wish to pursue.

SOCIAL WORK

Accredited schools of social work offer a one or two year program of graduate study leading to the degree of master of social work. Admission to such programs is based upon scholarship and personal qualifications for the profession. Preference for admissions is given to students who have a Bachelor of Social Work Degree and experience in a social service agency. A student at UWGB can prepare for this graduate course of study through the Bachelor of Social Work Degree or the professional program in social services with one of the following concentrations: Human Development, Urban Studies, or Social Change and Development.

WATER RESOURCES AND HYDROLOGY

The basic background for entry into graduate programs in water resources and hydrology is available through the Science and Environmental Change concentration at UWGB. Courses in geology, engineering, soils, meteorology, economics, or administration at the undergraduate level can provide preparation.

Physical Education

Associate Professor: S. Harold Smith (chairperson), therapeutic recreation, adapted physical education, philosophy of recreation and leisure, leisure education.

Assistant Professor: Robert Goemans, coaching certification and physical education activity courses.

Lecturers: Janis Pum, physical education activity courses, women's tennis coach and cheerleader adviser; **Bernard Starks,** coaching certification coordinator, physical education activity courses and cross country coach.

Athletic Specialists: Carol Hammerle, coaching certification and physical education activity courses, women's field hockey and basketball coach, coordinator for women's athletics; **Roger Harriman,** physical education activity courses, swimming and diving coach, aquatics coordinator.

The physical education program leads students to the understanding of their physical as well as their intellectual and social selves, thereby contributing to their development as whole persons. Refining and developing motor skills and understanding physiological and kinesiological principles related to movement are stressed.

Students are encouraged to enroll in physical education courses in order to understand and improve their personal fitness and prepare for better use of leisure time.

Physical education addresses itself to the seriousness of the human ecological situation; understanding oneself physically can improve one's relationships with the social, cultural, biological, and aesthetic environments. Physical education is, therefore, related to all other units and programs on campus.

Physical education students must demonstrate evidence of personal fitness for selected courses by submitting the required University medical examination forms to the Student Health Services office.

CREDIT INFORMATION

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 form as a requirement for a concentration, disciplinary program co-major, or a professional program, or as a part of the tool subject and/or background requirements, but only if that program is completed before graduation.

Credits in physical education courses taken in addition to the above provisions will not count toward graduation. Consult the *Timetable* for further regulations and procedures about physical education credits.

COACHING CERTIFICATION

The coaching certification program consists of a minimum of 16 credits designed to prepare students for the responsibilities of coaching. The program is approved by the Wisconsin Department of Public Instruction for certification as an athletic coach in the public schools of Wisconsin.

Students are encouraged to initiate coaching certification early in their course of teacher preparation to assure normal matriculation. However, students desiring certification may 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 and Recreation.

Required Courses (15 credits listed below)
478-102 Introduction to Human Biology, 3 credits

742-401 Philosophy of Athletics and Coaching, 2 credits
OR
742-402 Psychology and Sociology of Sport, 2 credits

742-403 Organization and Administration of Athletics, 2 credits
742-405 Scientific Conditioning of the Athlete, 2 credits (Prerequisite 478-102 or equivalent)
742-406 Prevention and Treatment of Athletic Injuries, 2 credits (Prerequisite 478-102 or equivalent)
742-410 to 434 Principles of Coaching, 2 credits, select from courses listed below:
410 Baseball/Softball
411 Basketball
412 Bowling
413 Crew
414 Curling
415 Fencing
416 Field Hockey
417 Football
418 Golf
419 Gymnastics
420 Handball Team
421 Ice Hockey
422 Lacrosse
424 Skiing
425 Soccer
426 Swimming and Diving
427 Tennis
428 Track and Field
429 Volleyball
430 Wrestling
431 Cheerleading
433 Pom-Pon Team
434 Drill Team

742-435 to 459 Field Experiences in Coaching, 2 credits, see courses listed under Principles of Coaching

Electives (1 credit minimum)
742-401 Philosophy of Athletics and Coaching (2 credits)
742-116 First Aid and Emergency Care Procedures (2 credits)
742-117 Cardiopulmonary Resuscitation (1 credit)
742-171 to 184 Athletic Officiating (1 credit)
171 Basketball
173 Football
174 Gymnastics
179 Baseball/Softball
183 Volleyball

COURSES

742 PHYSICAL EDUCATION

742-101 Basic Swimming 1 cr.
Fundamental swimming, basic water survival skills, and safety taught to students with minimum swimming ability. American Red Cross certification available.

742-116 First Aid and Emergency Care Procedures 2 cr.
Designed to provide information and practical training in Red Cross, Medical Self Help, and emergency medical procedures. American Red Cross certification available.

742-117 Cardiopulmonary Resuscitation 1 cr.
Causes and effects of respiratory, cardiac and circulatory insufficiencies and arrests are explored as well as the appropriate emergency care responses for such crises. In addition to readings and classroom interaction, the student develops 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.

742-118 Relaxation Through Yoga 1 cr.
An experimental class that offers: 1) Yoga techniques for relaxation, general health, and self awareness; 2) A theory of the relaxation response and its importance to physical, emotional, mental well-being. Each session will provide the experience of deep relaxation through yoga postures and relaxation techniques, and the material will be presented thoroughly so to leave the student with meaningful tools with which to improve his/her life for years to come.

742-119 Yoga for Active People 1 cr.
Designed to explore Yoga techniques to increase vitality and energy through awareness. The factors of breathing, stretching, relaxation and powers of the mind will be explored as Yoga techniques.

742-121 Personal Conditioning 1 cr.
The principles of exercise physiology are introduced as they relate to muscular and organic stress developed from participation in calisthenics and exercise with light apparatus. Conditioning programs such as circuit and internal training, isotonic and isometric exercise, etc., are explained, the student selects a specific program and goal, designs a personal exercise program within that context and then plots progress during the duration of the program. Such insights and experiences seek to motivate the student toward life-long fitness.

742-122 Training with Weights 1 cr.
The theory of heavy resistance training and its effects upon the musculature are presented along with the basic principles of the several styles of training with weights. Student selects a specific training style, designs a personal exercise program and plots progress during the implementation of the program. Safety considerations are stressed.

742-124 Conditioning Through Running 1 cr.
Conditioning through running is designed for the individual who prefers a program of vigorous exercise to one of primarily recreational nature. Emphasis will be on cardiovascular benefits of running and the practical application of various types of running to improve physical fitness.

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.

742-133 Beginning Folk Dance* 1 cr.
Covers a broad range of traditional dances related to specific cultures. Emphasis is on basic step and rhythmical patterns, fundamental dance positions and styling.

742-135 Social Dance 1 cr.
Instruction in selected types of social dance with emphasis on the development of competence in the basic movements, coordination, poise, grace, rhythmic patterns, self confidence and self expres-

*Academic Affairs Council Approval Pending.

sion. The relationship between social dancing and the American culture will be considered. Specific styles of social dance included in each offering will be indicated by subtitle or narrative description (Social Dance: Disco).

742-145 Beginning Golf 1 cr.
The fundamental skills of grip, stance and stroking with the irons and woods are taught with emphasis upon efficient mechanics and control. The knowledges related to rules, etiquette, safety and strategy necessary to initiate responsible play are also included with additional information on history, equipment, etc. Individuals are critiqued on their practice on the range and play upon the campus course.

742-147 Beginning Judo 1 cr.
Instruction in the basic judo techniques, including falling, throwing, holding, joint locks, and choke techniques, and an introduction to self defense. The history, philosophy and traditions of judo are stressed.

742-148 Beginning Karate 1 cr.
Instruction in the 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.

742-153 Badminton 1 cr.
Instruction in the basic skills and understandings necessary to engage in badminton as a competitive recreational activity. The service, forehand and backhand strokes, and the clear shots are stressed. The drop shot and smash are introduced. Information pertaining to the historical aspects, the equipment, the rules and courtesies, and the common strategies of the game are also included.

742-154 Beginning Tennis 1 cr.
Designed to develop basic skills and techniques so the student will 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.

742-159 Beginning Racquetball 1 cr.
Instruction in the basic skills and understandings necessary to engage in racquetball as a competitive recreational activity. The service, service returns, and rallying skills are taught. Information pertaining to the historical aspects, the rules and courtesies, equipment, and the common strategies of the game are included.

742-161 Basketball Team Play 1 cr.
Intended for the student who wishes to improve his or her knowledge of or insight into the game of basketball as a player or as a spectator. It is not geared for the coach or the varsity player. It provides instruction and practice on the offensive and defensive fundamentals of team play and individual basic skills. In this respect offensive and defensive formations are presented along with the strategies that are commonly employed to exploit or counter them.

742-166 Beginning Soccer 1 cr.
Instruction and practice in the basic skills of kicking, heading, dribbling, volleying, shooting, marking and tackling. The history, rules, conditioning and elements of team offense to defense are included. The class will help one become more knowledgeable as a spectator as well as more proficient as a participant. Course is designed for both men and women.

742-170 Volleyball Team Play 1 cr.
The proper execution of passing, setting, spiking and saving are emphasized. Information relative to the development of the game, its rules and etiquette, and the equipment used is also included.

742-171 to 184 Officiating (sport) 1 cr.
Designed to provide interpretation of the rules and officiating mechanics of a specific sport in preparation for students to become officials. Class members are encouraged to register with the Wisconsin Interscholastic Athletic Association and may become eligible to officiate interscholastic, recreation, or other league contests.

Approved courses are:
- 171 Officiating Basketball
- 173 Officiating Football
- 174 Officiating Women's Gymnastics
- 179 Officiating Softball/Baseball
- 183 Officiating Volleyball

742-197 Beginning Cross Country Skiing 1 cr.
Designed to introduce basic techniques of waxing, safety, skiing, conditioning, clothing, and equipment selection to the novice cross country skier.

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.

742-201 Intermediate Swimming 1 cr.
Designed to emphasize improvement of basic swimming techniques to the extent that satisfactory completion would enable students to enroll in subsequent aquatic courses. American Red Cross certification available. P: 742-101 or equivalent.

742-203 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.

742-206 Springboard-Platform Diving 1 cr.
Introduces the basic concepts of approach, hurdle, take-off, flight, entry, degree of difficulty, scoring and judging. Each person will proceed according to his or her ability and this will influence the dives learned. P: 742-201 or equivalent.

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 included are on the physiological aspects of respiration, the physics of diving, the physiological and environmental hazards of diving, and the proper first aid procedures to use in case of emergency. Certification by PADI may be earned. P: 742-201 or equivalent.

742-214 Seamanship and Navigation for the Recreational Boat Operator 2 cr.
A comprehensive introductory course for the recreational boat operator (sail or power) which will include: terminology, laws and regulations, equipment, rules of the road, aids to navigation, practical navigation, weather, boat handling, Marlin Spike seamanship, electronic equipment, safety, and an optional charter yacht field trip. Successful completion will give the student the knowledge required to operate boats in inland and coastal waters including the Great Lakes.

742-215 Applied Celestial Navigation 2 cr.
Instruction in the fundamentals of celestial navigation. Emphasis will be on the practical application for the recreational boat operator rather than on the theory. P: Knowledge of piloting fundamentals, 742-214 or equivalent.

742-219 Intermediate Yoga 1 cr.
Builds on the physical and mental skills taught in Relaxation Through Yoga (742-118) and Yoga for Active People (742-119). Instruction in these advanced yoga techniques will be included: exercise, breathing, cleansing techniques, relaxation, concentration, chanting and meditation. P: 742-118 or 742-119 or equivalent.

742-221 Slimnastics 1 cr.
Introduces the student to a variety of conditioning programs, including diet and exercise techniques that can be used to attain desired weight and figure goals for improving and maintaining a positive body image.

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.

742-247 Intermediate Judo 1 cr.
Builds upon the basic skills and the physical and mental development of beginning judo. Randori, Shiai, Gokyo No Waza, and Nage No Kata styles are introduced. The Uchi Komi and the continuation of grappling and self-defense into the more advanced techniques are also included. P: 742-147 or equivalent.

742-248 Tae Kwan Do Karate 1 cr.
Tae Kwan Do Karate builds upon the basic skills and the physical and mental development of beginning karate. The opportunity to improve one's karate rank is provided by continuing instruction in offensive and defensive techniques in conjunction with voluntary competitive situations. P: 742-148 or equivalent.

742-254 Intermediate Tennis 1 cr.
Designed to improve on the basic skills and to develop more 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.

742-297 Intermediate Cross Country Skiing 1 cr.
Emphasis is placed upon mastery of cross country skiing techniques which would enable students to participate in long distance ski touring. P: 742-197 or equivalent.

742-305 Water Safety Instruction 2 cr.
Designed to train instructors to conduct swimming programs sponsored by the American Red Cross. Swimming skills are perfected in order to serve as a good model 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.

742-401 Philosophy of Athletics and Coaching 2 cr.
Designed to enable students to develop their philosophies of coaching. A thorough examination of the role of athletics in education and/or society is integral. An attempt is made to assure that the prospective coach has objectives that are consistent with our educational systems. P: jr st.

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 the athlete. Individual differences relating to motivation, personality, and social factors are analyzed to provide a basis of meaningful study for the prospective coach. P: 820-102, 820-202, or 900-202.

742-403 Organization and Administration of Athletics 2 cr.
A functional course in various phases of organizing and administering an interscholastic athletic program with applications to athletics in non-academic environments as well (e.g. boy's clubs, tennis clubs). P: jr st and either 742-401 or 742-402.

742-405 Scientific Conditioning of the Athlete 2 cr.
Interrelationships between growth and development and athletic participation of pre-adolescent, the principles of physiology of exercise, and the general and specific techniques of physical and psychological conditioning are studied. P: 478-102 or equivalent.

742-406 Prevention and Treatment of Athletic Injuries 2 cr.
Provides the prospective coach 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 competitive site, the conduct of practices and the respect of existing injuries. Treatment considerations include estimating the nature and extent of the injury, the feasibility of moving the victim, immediate care at the scene, modes of required transport, side-line care, training room modalities, referrals for more definitive diagnosis, and the treatment of simple follow-up rehabilitation. P: 478-102 or equivalent competency in gross human anatomy and jr st.

742-410-434 Principles of Coaching 2 cr.
Designed to foster an 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 accumulate information and material for selected aspects of chosen sport and organize it appropriately for future use in coaching. P: jr st, permission of instructor/coaching certification adviser.

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, 742-402, 742-403, 742-405, 742-406, 742-410 to 434 (Principles of Coaching) or equivalents and/or permission of instructor/coaching certification adviser.

Academic Support Program

Staff: Joan E. Thron, acting coordinator; **Greg Brecht,** lab supervisor; **Robert Davies,** mathematics; **Ann Deprey,** reading; **Nancy Goodman,** writing; **Monroe Lerner,** writing; **Michaleen Peck,** reading; **Stan Rickert,** assistant to coordinator and Special Services Project supervisor.

Effective writing, efficient reading, good studying techniques, and an understanding of basic mathematics are essential in college. The Academic Support Program can assist students to develop these skills in a variety of ways.

The Academic Support Program offers non-degree credit courses in reading, composition, and basic mathematics. Students may be referred to these courses on the *basis of* entrance exams or by members of the faculty. The Academic Support Program also offers one credit workshops in college study skills, spelling, sentence structure, grammar, efficient reading, the research paper, and journal writing, which students are encouraged to take if they are aware of needs in these areas.

In addition, individual and small group tutoring is available in all the areas mentioned, as well as in most courses offered at UWGB. Tutoring is scheduled at the convenience of the student. Questions about course work or proficiencies in basic academic skills can be answered at the Academic Support Program Office.

COURSES

553 ACADEMIC SUPPORT PROGRAM

553-093 Fundamentals of Writing 3 non-degree cr.
Helps students master skills necessary for writing clear sentences and paragraphs. Students will write often and gain the skills to revise what they have written. No prerequisites. P-NC basis.

553-092 College Reading Skills 3 non-degree cr.
Incorporates college level study skills with general reading improvement techniques. Emphasis is given to 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.

553-097 Efficient Reading 1 non-degree 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.

553-090 Spelling Workshop 2 non-degree cr.
An intensive short term workshop designed for students who feel a need for review on strengthening of spelling skills. The workshop functions on an individualized basis to diagnose spelling errors, provide systematic instruction in specific spelling rules, suggest techniques for countering spelling problems, and provide practice in proofreading techniques. No prerequisites. P-NC basis.

553-091 Sentence Structure Workshop 1 non-degree cr.
Intended for students who desire to improve sentence structure *patterns*, to increase the accuracy of sentence structures in their writing, and to enrich the variety of sentence patterns produced in their writing. No prerequisites. P-NC basis.

553-094 The Paragraph 1 non-degree cr.
This workshop is intended for the student who needs to gain or review skills in paragraph development, unity, and coherence. Practice will be provided in creating and developing paragraphs. Students will examine various paragraph patterns and practice these patterns. Attention will also be given to methods of controlling paragraph coherence and unity: transitional devices, repetition, and pronoun substitution. Students will be expected to write on a daily basis. No prerequisites. P-NC basis.

553-095 Journal Writing Workshop 1 non-degree cr.
This course will prepare students in the art of keeping a journal for personal use, as an aid to invention in the writing process, or as practice for courses which require a journal as part of the class assignment. Students will read and discuss samples of professional and student written journals. A substantial portion of the course will be guided, daily writing practice in a variety of journal formats and on a variety of topics. No prerequisites. P-NC basis.

553-098 Fundamentals of Grammar 1 non-degree cr.
This course is designed to review the basic principles of traditional grammar and to see how the application of these principles can strengthen and clarify written discourse. No prerequisites. P-NC basis.

553-099 The Research Paper 1 non-degree cr.
The ability to use library resources comfortably, to focus research questions effectively, and to write documented papers persuasively is essential to every college student. This course is designed to introduce students to research techniques and to provide them with the opportunity to practice the essential steps behind good research papers. No prerequisites. P-NC basis.

553-096 College Study Skills 1 non-degree cr.
A five-week course consisting of instruction in: mastery of textbooks through a system of reading and note-taking, an efficient method of taking and studying lecture notes; techniques for studying and taking exams. Also, one-fourth of the time is spent in the UWGB library, learning about and using its facilities. No prerequisites. P-NC basis.

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.

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 they have or plan 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 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 minimum of nine credits in each of the following three areas (six credits of liberal education in the form of two paired 3-credit courses and one 3-credit distribution course):
- humanities and fine arts
- social sciences
- natural sciences and mathematics

—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 writing

—tool subjects as may be required by the individual program

—additional elective credits to total 62 or more earned degree credits

A summary shows these requirements:

27	credits of liberal education and distribution
12	credits emphasis
3	credits writing (if required)
20–23	credits electives and/or tool subjects
62	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, all-University requirements, and descriptions of the academic programs which they may wish to emphasize. More information is available from the office of Admissions and Orientation.

Bachelor of Arts: General Studies Degree

A General Studies degree enhances the ability to communicate effectively, to make more thoughtful decisions, and to cope with our changing society.

With this in mind, the Extended Degree in General Studies at UWGB was designed by the faculty for Wisconsin adults who want to complete a bachelor's degree, but have been hampered because of job schedules, family responsibilities, or distance from a four-year campus. It is an excellent opportunity for adults who wish to continue their education without being limited to on-campus courses.

To succeed in a program of this nature, students are expected to be highly motivated, have already completed about two years of accredited college coursework, and be willing to work independently on assignments.

Students achieve basic competencies in each of six areas of the liberal arts: business and economics, communications, humanities and fine arts, natural sciences, problem solving, and social sciences. In addition, each student designs an area of emphasis with faculty approval of about 15 credits of work beyond the general requirements, which enables the student to focus on a problem or theme related to personal or professional interests.

When students enter the program, their learning activities are structured; however, as they progress, they are encouraged to develop unique and highly individualized learning activities.

In this program, classroom learning is replaced with independent learning contracts, self-paced learning modules, field experiences, radio/television courses, internships, and research projects. Contracts cover a 12-month period rather than the traditional semester schedule.

Because of the unique nature of the Extended Degree, a two credit entrance seminar has been designed to help students understand competency education, contract learning, adult development, and the Extended Degree Program. This required seminar combines three or four days of intensive time spent on campus with independent study preparing adults for entry into the program. Students who have successfully completed the seminar find it "a rich learning experience," "a good way to get started back to school," and "a good investment of time."

Extended Degree students use study guides specifically designed for program requirements, have personalized academic advising, and may take advantage of optional weekend seminars and workshops held periodically on campus. Students in the program work directly with the same UWGB professors who teach the on-campus courses.

Students who need an extended degree but have fewer than 62 credits can contact an Extended Degree adviser to discuss alternative ways to earn credits. The current options available include credit for prior learning (CPL), College Level Examination Program exams (CLEP), correspondence courses, media courses, and evening courses at UWGB or a campus near the student. Extended Degree advisers are familiar with these alternative methods of earning credits, and assist students in selecting appropriate learning activities.

Persons who want more information should contact an Extended Degree adviser in the Individualized Learning Programs Office.

University Without Walls

University Without Walls is an external degree program which offers Wisconsin residents the opportunity to earn a UWGB undergraduate degree through an off-campus format. The program is designed for persons who are unable to attend on-campus courses as well as for those who want to participate in an alternative educational process.

Upon acceptance to the program, UWW students do the majority of their study through individualized learning contracts. A learning contract is designed by the student in collaboration with a UWGB professor with expertise in the area of interest. It outlines what will be learned, the method of study employed, resources used, the number of credits received, and means of evaluation for the work students will complete on their own. This is an exciting and demanding process which requires dedication from the students involved because they take considerable responsibility for developing and initiating their own contracts.

Persons who are attending on-campus courses but find the UWW format exciting should inquire into independent study courses. Independent study enables on-campus students to expand their curriculum beyond the classroom.

Though the method of study is different, UWW students may earn a degree, with approval of the instructional unit chairperson, in any of the majors offered to on-campus students. Graduate requirements are the same as for on-campus students.

Due to the individualized nature of University Without Walls, the admissions process is selective. Over the years of the program's existence, it has been found that graduates usually possess high levels of independent learning skills. Therefore, rigorous application procedures have been developed to ascertain beforehand an aplicant's ability to attain a degree through UWW. Eligibility for acceptance into the program is based on:

—inability to attend on-campus courses or expressed preference for an alternative learning process,

—approximately two years of college credits,

—excellent writing skills (which will be assessed during the application process),

—evidence of the ability to set objectives and follow through to completion as demonstrated by previous experiences,

—evidence of self-direction and motivation as indicated in the design of an initial learning contract.

Students who are interested in UWW but have fewer than 62 credits can contact the UWW adviser to discuss eligibility. Candidates may earn credits in a number of alternative ways. Available options include credit for prior learning (CPL), the College Level Examination Program (CLEP), correspondence courses, media courses, and evening courses at UWGB or a campus near students' residences. The UWW adviser is knowledgeable in these alternative methods of earning credits, and will assist students in selecting appropriate learning activities.

For more information, students may contact the Individualized Learning Programs Office.

Graduate Program

The University of Wisconsin–Green Bay offers an interdisciplinary graduate program which leads to the Master of Environmental Arts and Sciences degree. Principal goals of the program are to study and to contribute toward understanding and solving issues related to humans and their quality of life, and to develop related professional and career skills. At UWGB "environment" is defined in the broadest terms as the bio-physical, social, cultural, and aesthetic spheres.

Since few environmental questions of any scope can be solved within the framework of a single discipline, UWGB's graduate program emphasizes interdisciplinary approaches. The program offers opportunities for students with undergraduate training in almost all traditional disciplines. Each student, working with a graduate committee of three faculty members, designs an individualized program of study consisting of a minimum of 30 semester credits. Credits may be acquired in the form of formal courses, tutorials, seminars, internships in business or government, and thesis work. Several broad interdisciplinary tracks serve as foci for student studies and research. The tracks are:

Community Human Services: Community Human Services is concerned with human service systems and the interplay between these systems, other implicated systems, and the human beings who comprise, respond to, and influence them. Health agencies, human service planning agencies, mental health organizations, police departments, school systems, welfare agencies, and community organizations receive special attention.

Environmental Administration: This track develops knowledge and skills necessary to effective planning, management, and evaluation of public policies, organizations, inter-organizational networks, and public service delivery systems. It provides students with an opportunity to develop a specialization in one of the component fields of public administrative practice.

Environmental Management: The Environmental Management track provides students with a broad understanding of planning and management issues of both natural and manmade environments. Areas of specialization include policy and management systems, environmental problem assessment, quantitative decision-making, environmental planning, environmental health, and waste management/resource recovery.

Environmental Stressors: The program in Environmental Stressors concentrates on studying agents which have a deleterious effect on behavioral, developmental or physiological responses. These agents may be of a chemical (for example, food additives, PCB's, heavy metals, other organic compounds), physical (such as, radiation, sound), or social (crowding, for example) nature.

Global Ecology: Global Ecology provides students with an opportunity to further develop their abilities in the natural and social sciences and to investigate ecological constraints and interrelationships among human and non-human systems.

In addition, students may design their own personalized tracks (which may include programs for educators and those interested in the humanities) providing that the requisite faculty and courses are available. Prospective students must be prepared to take a large measure of responsibility for defining their objectives and planning their own programs. For this reason, the MEAS is particularly suitable for mature students as well as new students.

UWGB has a cooperative agreement with UW–Milwaukee which allows students to earn master's degrees in administrative leadership and supervision in education or in educational psychology from UW–Milwaukee through classes at UWGB. Information on this program is available from the Education Office or Graduate Office.

COSTS AND FINANCIAL AIDS

Tuition and fees are about $577 per semester for Wisconsin residents and $1,684.50 for non-residents (1980-81). Part-time students pay on a per credit hour basis. Fees are subject to change by the University of Wisconsin Board of Regents and the Wisconsin Legislature. Minnesota residents are eligible for in-state tuition.

Graduate assistantships and some project assistant stipends are available on a competitive basis. *Applications should be filed before March 15.* Out-of-state recipients are eligible for waiver of out-of-state tuition. Other forms of financial aid such as work/study or student loans are also available to graduate students.

APPLICATION DEADLINES

Applications, undergraduate transcripts, and letters of recommendation should be submitted no later than August 1 for fall semester and January 1 for the spring semester.

Special Learning Opportunities

THE PERSONAL CONCENTRATION

Karen Greenler came to UWGB because she knew about the possibility of individualizing her academic program. Her personal concentration, The Performing Arts as a Unifying Process, evolved as she took courses that interested her.

"My original thought was to study 'interdisciplinarity,' but I realized that was too broad," she explains. "I needed a focus or perspective from which to deal with interdisciplinarity. I am interested in using the arts as a tool for exploring the connections between things."

Karen began formally developing her personal major in her junior year and found the process of writing the program useful in clarifying her objectives. Her core courses are in theater, music, and dance and movement, and the structure of her program permits her to take many introductory courses in other academic areas, particularly the sciences, social sciences, and philosophy. Then she applies knowledge from these diverse disciplines to her primary focus on the performing arts.

She makes these connections in a variety of ways. For example, Karen has used models from biology (such as the cell) and applied them as models for performance. She has applied political and social analysis to the arts, which is appropriate for her interest in women's studies and women's theater.

"Performing arts degrees tend to be binocular. I wanted to incorporate more into my program than just the technical aspects of performance," she explains.

Karen is not particularly concerned about vocational applications of her program and has confidence in her ability to earn a living. Her immediate goal is to apprentice with a feminist theater group during her final semester at UWGB. She feels her options for the future are open. "Eventually, I would like to establish a small performing group," she says.

Karen's program is an example of some of the possibilities available through the personal concentration. The personal concentration is described in more detail in the section of this book on academic programs; further information is available from advisers in the Individualized Learning Programs Office.

INDEPENDENT STUDY

Independent study permits a student to get credit for a special project or research. To arrange for independent study, a student prepares a proposal that includes a statement of objectives and a list of readings and/or projects that will help to meet these objectives. Then the student must find an instructor who will agree to supervise the study. Once the instructor approves the proposal, the student may register for independent study.

Some recent independent studies include:

—Several students received independent credit for a "Meeting of the Minds" featuring such distinguished people of the past as Sir Thomas More, Queen Elizabeth I, Alfred the Great, and the Wife of Bath. The students each studied a character and his/her context, and wrote the role. Then they rented costumes, produced the program, and videotaped its presentation.

—One student did a project on "Women as Creators." She chose six women, including Eleanor Roosevelt, Georgia O'Keeffe, and others, and did an in-depth study on them and their efforts to achieve. She presented the material, illustrated with supportive slides, to the Women, Myth, and Identity class.

—Another student received credit for participating in off-campus workshop training in therapeutic skills.

—A science student gained independent study credit for work at the Argonne National Laboratories near Chicago. The project involved collecting information for an air quality inventory.

—A student who had counseled husbands of battered wives wrote a substantial report on the experience for independent study credit.

—A photography student received credit for designing and constructing a professional lighting studio and darkroom in his home.

These examples indicate the energy, resourcefulness, and initiative that students often devote to independent studies. Persons desiring more information about independent study should read the description of courses with variable content in the section of this catalog on academic programs, and request further information from the office of Academic Advising.

CREDIT BY EXAMINATION

A student will be interested in credit by examination if he or she has studied at a non-accredited institution, pursued special interests independently, or gained experience in the community, in the armed forces, or in paid or unpaid employment that has helped achieve learning equivalent to that which would be gained in a college course.

One way to gain credit by examination is through the College Level Examination Program (CLEP) sponsored by the College Entrance Examination Board. UWGB accepts three of the general tests—humanities, natural science, and social science—for degree credits. Six credits will be granted for acceptable scores on each of these, so it is possible to earn up to 18 credits by performing well on all three tests. The general tests must be taken before a student has earned 15 college credits.

UWGB accepts for credit nearly 40 of the CLEP subject exams. Subject exams correspond to comprehensive end-of-course tests in particular college courses. Students may take the subject exams at any time as long as they have not taken the equivalent course.

Some courses at UWGB permit students to "test out" if they feel they have an adequate grasp of the subject matter covered in that course. If the student performs satisfactorily on a comprehensive examination, credit is granted for the course.

More information on credit by exam is available from the Educational Testing Center.

CREDIT FOR PRIOR LEARNING

Students may receive credit for prior learning if they meet four criteria:
—they must be final registered UWGB students;

—the learning must be related to courses, disciplines, academic areas, and/or academic programs at UWGB;
—the learning must be articulated;
—the learning must be verified and documented.

Meeting these criteria is not easy, but students who can prove that their career and life experiences are equivalent to college-level learning may be rewarded. A full-time police officer admitted to UWGB at the age of 51 received 78 credits for his combination of professional and community service experiences. He completed a degree in Urban Studies and is a student in the graduate program. A woman who had been intensively involved for 10 years as a volunteer in a number of community service organizations and in community music groups received 34 credits toward a bachelor's degree in business administration applied to human service agencies. A physician's assistant earned 24 credits for prior learning and went on to complete a bachelor's degree at UWGB and a master of science degree at the University of Michigan. These are examples of some successful applicants for credit for prior learning at UWGB.

Students requesting credit for prior learning usually attend a workshop to learn how to prepare acceptable prior learning documents. Workshops are held on campus periodically.

Most students find that it takes several months to adequately prepare the essays describing what was learned, gather documentation, and submit it to the faculty for assessment. During this time, they can be involved in new learning activities to fulfill degree requirements that are not related to their prior learning submissions.

More information about the prior learning process is available in the Individualized Learning Programs Office.

STUDENT LED COURSES

Students have the opportunity to develop and lead courses on their own. These are generally on topics of contemporary concern not covered in regular UWGB courses.

David Kicklighter was co-organizer of such a course in the 1979-80 academic year. Entitled Ecophilosophy and Ecopolitics, the course was a direct result of a January course he had taken earlier from a visiting professor who was an editor of the periodical, *Ecologist*. "That course explored value systems and it enabled me to place my value system in relation to other value systems," explained David. "We thought it was important to continue a course on the subject because many students weren't here in January to take advantage of it."

David, an undergraduate, and the graduate student who co-taught the discussion course, focused on the relationships between human beings and the environment and how these affect the relationships between humans and vice versa.

"Part of the learning experience for me was in listening to other people with other perspectives," he adds.

The experience led David to organize a second student-led course, Introduction to Ecophilosophy, in the 1980-81 academic year. "This course will begin at a more basic level," he explains. "It will begin by identifying the necessities of life and how each can be met through different scenarios. Then we will go to the different scenarios or value schemes."

Both courses are logical extensions of the reasons David chose to attend UWGB: for the Science and Environmental Change program and because of the special mission of the University to focus upon various aspects of the human environment.

Student led courses are listed in the *Timetable* along with regular UWGB courses. More information can be found in the description of courses with variable content in the section of this catalog on academic programs. Guidelines for starting courses are available in the concentration offices and the office of Academic Advising.

STUDENT INITIATED COURSES

It also is possible for students to start courses. Students who want to do this must first determine that the topic is not covered in any existing UWGB course.

Then the student writes a description of the course and makes a search for a faculty member willing to teach it. If an instructor is located, the student must try to find enough interested students to make it worthwhile to offer the course.

If the course is approved, it will be offered as an experimental course. Such courses are offered once; after that time, they are subject to review and may become part of the permanent curriculum. New courses frequently are offered during the January interim period.

More information on student initiated courses can be found in the description of courses with variable content in the section on the academic program of this catalog and at the office of Academic Advising.

UNIVERSITY WITHOUT WALLS (UWW)

University Without Walls is an external degree program designed for persons who are unable to attend on-campus courses and for those who want to participate in an alternative educational process. It allows students to earn degrees in any of the regular majors at the University in an off-campus format through a series of learning contracts. University Without Walls is described in greater detail in the section of this catalog on academic programs.

RESEARCH

Students at UWGB have frequent opportunities to participate in research—opportunities that can greatly enhance their qualifications for graduate and professional schools. Undergraduates do not often have research experience opportunities such as those that exist at UWGB.

Some of the typical ways in which students may gain this experience are by working with faculty who are engaged in research through work/study or regular employment, taking research-oriented courses, or engaging in research through independent study or as a senior distinction project.

Laurie Parsons, a recent graduate, concluded that the value of the experience she gained in working on a research project was as great as the benefit she gained from some classes. She helped to prepare baseline data on the bay of Green Bay—a project led by one of her professors. Laurie participated in collecting samples of water and sediments, and analyzed them in the laboratory.

"I was fortunate to get the job," she says, and adds, "A friend at a larger school says an undergraduate there is lucky to get a lab job washing dishes." The best aspects of the experience were the opportunities to work directly with faculty and the level of responsibility that she had. Laurie majored in environmental sciences with an emphasis on water quality control and feels the experience will be useful, whatever she decides to do in the future.

"This experience would be a good transition to graduate school, but it would also be very helpful in getting a job," she explains.

Nancy Senn and Bill Meindl, both juniors in the 1980-81 academic year, are gaining valuable experience on the same project, although their individual orientations are different. Nancy, a major in Urban Studies and environmental design, and Bill, a major in Humanistic Studies with emphases in history and literature, are working on a federally funded State Historical Society project to identify older industrial buildings with architectural and historical significance. Research for a five-county area is coordinated by a UWGB faculty member.

The students glean through old business directories and other materials in libraries and museums to locate industries before 1945; then they go into the field to locate the buildings. If the buildings still exist in a reasonably good state of preservation, they survey the architecture, photograph the building, and try to find persons who can provide historical information on the building.

The information will go into a permanent Historical Society file and will be used to nominate candidates for the national register of historic buildings.

"This is ideal experience for me," says Nancy. "I am leaning toward a career in historic preservation. Among other things, it gives me an opportunity to see what the possibilities are."

Bill adds, "This is putting my academic background to work in the 'real world'. For me, it has the obvious connection with my interest in history. I find it interesting. I suspect it will have something to do with my future."

TRAVEL

A student at UWGB has the opportunity to travel abroad or to other parts of this country with faculty and other students as part of his or her educational experience. Trips are offered as a way to fulfill part of the all-University requirements and provide opportunities for exciting and unusual learning experiences as well.

Trips usually are offered during the January interim, although some have been available during the summer months. In the past, trips have been organized to London, Berlin, Norway, India, Mexico, Quebec, the American southwest, Appalachia, the Virgin Islands, and other places.

Joe Hilke, a recent graduate with a major in Human Development and psychology and a minor in business administration, evaluated his January in London as a "superb experience." Hilke who had worked in the public schools as a social worker through a class field placement, was able to meet social workers, students, and psychologists in British schools. "Comparing the British and American systems, which are very different, was an excellent way to see the strengths and weaknesses of our system," he explains.

The travel experience stimulated personal and intellectual growth as well, Hilke feels. "Learning that everybody in the world is not the same has helped in learning to get along with people here, too," he says. Hilke plans to return to England within a few years on a family vacation.

Jeanette Jacqmin, a part time student who is employed in a public library system, finds that her January trip to Hamburg and Berlin stimulated her desire for more enriching experiences. "I want to travel more now and I want to learn more languages." One of the richest rewards of the experience was the variety and texture, she says. Meeting people from a variety of countries and language groups is a common experience in Europe, while living in such a large country as the United States—particularly in the middle of it—makes such experiences uncommon, she explains.

Students had opportunities to meet people that the average tourist would not meet through formal lectures and meetings and informal visits to the homes of German people. "I think that this kind of trip puts you in closer touch with the culture than the normal traveler," Jacqmin adds.

When taken as part of all-University requirements, the trips usually comprise the second half of one of the required two-course sequences and offer a way to apply or investigate in the field what has been learned in the first course. All-University requirements are explained in detail in the section of this catalog on academic programs.

STUDENT EXCHANGE PROGRAM

The exchange program gives students an opportunity to incorporate in their undergraduate education a semester or a year of study at another university.

The advantages of exchange and the reasons that students exchange are many and varied. Some do it to experience another location while continuing their education. Others 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.

Students from other universities come to UWGB for similar reasons.

In the 1980-81 academic year, UWGB students attended classes in many locations: New Mexico State, the University of Massachusetts–Boston, Northeast Missouri State, California State University–Chico, University of South Carolina, Montana State, and others. Students from Chico, Illinois State–Normal, University of Maine–Ft. Kent, State University College–Buffalo, Northern Iowa, and other universities attended UWGB.

To participate in an exchange program, a student should be a sophomore or junior in good academic standing, and have a cumulative grade point average of at least 2.5. An exchange student pays normal fees at the "home" campus and is responsible for transmitting transcripts back to the "home" campus at the end of the exchange. Exchange students may not accept college work/study awards, but all other financial aids are not affected by participation in exchange.

The names of available exchange institutions, more information about the process, and applications are available in the Individualized Learning Programs Office.

SENIOR DISTINCTION

Eligible students can individualize their academic experiences by choosing an in-depth, significant, senior distinction project that can serve as the culmination of their educational programs.

Senior distinction projects can be as varied as the imagination, energy, and expertise of the students who complete them.

Students of the arts can work for distinction by giving musical 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 and in oral or electronic media presentations.

A few recent senior distinction projects completed include:

—teaching poetry to a paraplegic who was confined to a convalescent home. The project resulted in a written report of the experience which included copies of the completed poems.

—a study of the behavior modification method in treatment of overweight. The student applied the information to develop

a physical fitness program for overweight employees at a hospital in Green Bay.

—a substantial research paper on "Germany and the Development of Physiology in Nineteenth Century England" culminating a series of independent courses.

—detailed documentation of a two-year experience in designing and implementing a children's church choir.

—a study of migration patterns in Newfoundland. This student traveled to Newfoundland for several weeks one summer where he interviewed people, made photographs, and did library research, resulting in a substantial paper with supportive photographs.

—a study of the nutrition education component of the Women, Infants and Children program at the Green Bay Free Clinic which resulted in a paper and a set of educational slides for continuous showing in the waiting room for W.I.C. recipients.

—organizing, indexing, and arranging in appropriate storage the records of a township near Green Bay. This project made the townships' archives accessible for the first time.

—initiating a discussion group of elderly men at a city drop-in center for the elderly. This project increased the use of the center and resulted in a worthwhile oral history collection. Tapes of the discussions are part of the University's special collections and abstracts of them are on file in libraries in the region.

Graduating with distinction is explained in more detail in the section of this catalog on academic programs.

ACADEMIC CALENDAR

UWGB's academic calendar offers opportunities for students to individualize their educations. The four-week January interim period provides opportunities to travel, devote a concentrated period to a specialized interest, complete an independent research project, carry out a community project, take an experimental course, or choose from a variety of other experiences that will support and enhance an individual academic program.

Summer session also offers opportunities to take intensive courses and have other experiences that are not available during the regular semesters.

In addition, by taking advantage of January interims and summer sessions, students who wish to graduate in less than four years may do so. For continuing full-time students or for new full-time second semester registrants, no additional fees are charged for coursework in January.

Resources and Services

DEAN OF STUDENTS

Conciliator, mediator, ombudsperson, counselor, friend. Any of these might describe the function of the Dean of Students as a student resource person. He is concerned with all aspects of student life and with a student's adjustment to the University. He is particularly interested in how the various student service offices function to help students. These include Admissions and Orientation, Financial Aids and Student Employment, the Counseling and Student Development Center, Placement and Career Development, University Health Services, the International Student Center, the Ethnic Heritage Center, the Child Care Center, the Lucy Stone Center (Women's Center), and University Housing.

The Dean of Students tries to help students accomplish personal goals and solve problems through a variety of means, most often by providing advice, counsel, referral, and support to aid students in using their own personal resources and those of the University to resolve problems and make changes.

The Dean's Office provides some special services including coordinating a free legal consultation service for students. A student who has a problem he or she feels requires legal advice may discuss it with personnel in the Dean of Students Office, Counseling and Student Development Center, or Student Life Office. If a legal adviser is required, a free consultation is arranged with a Green Bay law firm. After the first visit, consultations are the student's financial responsibility. Often, one visit can solve the matter.

The Dean of Students serves as a campus resource for academic and non-academic student disciplinary procedures. He gives advice and opinions on individual cases involving the U.W. System's student disciplinary guidelines. The Dean is concerned with student rights and due process, but his primary goal is appropriate counseling if a student needs and requests it.

Copies of UWGB's *Disciplinary Guidelines and Procedures* are available at the Dean of Students Office and at these locations: Student Government Association Office, Student Life Office, Secretary of the Faculty Office, Vice Chancellor for Academic Affairs Office, and the Reserve Desk in the Library.

The Dean of Students is interested in all concerns or problems students may have relative to the total learning environment at UWGB. Students are encouraged to provide appropriate responses at any time.

ACADEMIC ADVICE

It is the student's responsibility to become informed about UWGB's programs—both the traditional and non-traditional ones—and to learn about the policies and requirements of the University. Assistance in these academic areas is available from the Academic Advising Office. This is one of the first offices a student will come into contact with after going through the admissions process.

Some of the services provided by Academic Advising include: assistance in selecting courses and overall program planning; assistance in declaring a major or career goal (in conjunction with the Counseling and Student Development Center and Placement and Career Development); interpretation and advice on all-University requirements; interpretation of the credit evaluation for transfer students; interpretation of University policies; and assistance in solving general academic problems.

Often, the Academic Advising Office serves as a referral agent. Students are referred to faculty advisers in their major area once a major has been declared. If the Advising Office cannot answer a question, the student is referred to the office or faculty or staff member who can answer the question. When a student is in doubt about where to go for assistance, the Academic Advising Office is a good starting point.

COUNSELING AND STUDENT DEVELOPMENT CENTER

The Counseling and Student Development Center provides three basic services: counseling for students experiencing emotional crisis in their lives and/or wanting to use their personality resources more effectively; growth group experiences for students, including para-professional training; and consultation to student groups, faculty, and other administrative units toward better use of human resources.

Individual counseling helps students in making decisions which affect their educational, vocational, and personal-social development and adjustment. Vocational interest and personality tests are available.

Students using the center are provided with a confidential setting where they can freely explore their concerns. Students requiring long-term counseling or those with severe emotional problems are helped to find appropriate community resources and services.

Various short term, structured growth groups are offered to students wanting to improve their self-awareness, communication, and relationship skills. Such topics as tension or anxiety reduction, assertiveness, transactional analysis, parent effectiveness, cooperation, career life planning, and para-professional training are examined and developed in small, experientially oriented groups.

The center's staff is committed to the belief that various social environments can influence behavior positively or negatively. Consequently, it provides consultation, occasional workshops, and media resources on humanizing work groups and work environments. Groups of students doing joint independent studies or leading their own courses may consult with center staff on enhancing their own processes of interaction.

An informal atmosphere is maintained in the Counseling and Student Development Center and everyone is encouraged to drop in for coffee and to meet the staff.

PLACEMENT AND CAREER DEVELOPMENT

The Placement and Career Development Office provides comprehensive career advising and placement services for UWGB students and alumni.

Employers from business, industry, government, and education come to the campus to interview students for career opportunities. Additional services offered to career seekers include help in preparing resumes and in developing good interviewing skills.

Vacancy notices listing current job openings in business, industry, government, and education are published and distributed weekly. A video taping laboratory is maintained to help students prepare for interviewing. Video taped interviews are sent to prospective employers who request them and who are located at a distance which would make in-person interviews difficult and expensive to arrange.

The office maintains individual placement (credential) files for graduating seniors and alumni who are seeking admittance into graduate or professional schools and/or are seeking employment.

In conjunction with the Counseling and Student Development Center, a student can take advantage of individual or group counseling sessions for help in reaching a career decision based on a full appreciation of his or her potential and the reality of the times. The office provides information about employment needs and current trends so that students can come to realistic career decisions based on sound information plus self-knowledge about individual abilities and preferences.

The office maintains a current resource library containing catalogs and materials on graduate and professional schools and on undergraduate and two-year technical schools. Examination applications and study guides for graduate and professional school entrance exams and scholarship/fellowship information are available.

Career information and career descriptions also housed in the career library are of special value to undergraduates who are investigating the wide range of career opportunities which exist but which may be unfamiliar to them.

UNIVERSITY HEALTH SERVICE

The University Health Service exists to care for illness and injury on campus and to help students develop physical and mental health care patterns that will equip them for productive lives.

Free medical service is available on a walk-in basis. Three key concepts are integral to the physical and philosophical operations of the Health Service: preventive medicine, student-oriented service, and a referral system to area doctors. The nurses and support staff approach the often unique needs of students with personal and confidential service.

In addition to treating minor illness or injury, the Health Service dispenses commonly used medications approved by the medical consulting staff; provides information on nutrition, dieting, and other health topics; and assists handicapped students with reserved parking and other services.

All UWGB students are urged to obtain health insurance to cover emergencies that may arise throughout the year. Students not covered under a family policy may get information on student health insurance through the Health Service. Insurance coverage is mandatory for intramural sports participation.

A medical history form is required of all students before enrolling at any University of Wisconsin System campus. A medical report form is mailed to students after they are accepted. The personal health history section of this form must be completed and on file in the health office in order to receive health services.

HANDICAPPED STUDENT FACILITIES

Students with physical disabilities will find that efforts are made to accommodate their special needs.

There are reserved parking areas near the buildings for persons with handicaps. The academic buildings and the University Commons are connected by concourses so that once inside, students can move from building to building without going outdoors.

Ramps, elevators, and special toilet facilities are provided throughout the University for the benefit of wheelchair students. There are telephones and drinking fountains at convenient levels. Wheelchair students also have easy access and seating space in the Creative Communication Theater. Two science laboratories—one for chemistry-physics and one for microbiology—have been constructed so that students in wheelchairs can use the facilities.

The Phoenix Sports Center is built on one level and has special shower and dressing facilities. Also, the pool has a lift for persons with physical disabilities and has depths as shallow as 30 inches.

A Resource Center is located in the Library Learning Center. There, students with hearing, visual, and orthopedic impairments are offered academic support services. Notetaking, test reading, research assistance, and textbook recording are some of the services offered. The center is equipped with tape recorders, a braille writer, automatic page turner, talking calculator, and typewriter. The center also provides referral services for additional needs.

The Health Services Office provides special help, such as arranging for special parking spaces. The office of Academic Advising, counseling staff in the Counseling and Student Development Center, and other offices are ready to assist students with disabilities.

CHILDREN'S CENTER

The University student who is the parent of children aged 2 to 6 may use the facilities of the Children's Center while attending class, studying, or working. The center, located on campus, is open from 7:30 a.m. to 5:45 p.m. Licensed nursery kindergarten teachers plan a balanced early childhood program with the assistance of fathers and mothers who participate in center activities each week. Space is limited, so applications should be in early. Further information can be obtained from the center or the Dean of Students Office.

EDUCATIONAL OPPORTUNITY PROGRAM

Many students have the potential to succeed in college even though their educational background may not have prepared them for the rigors of the university experience. As a result, the Educational Opportunity program admits and assists students who do not meet the normal requirements for admission to UWGB (see section on admissions).

Applicants who qualify for the Educational Opportunity Program are identified through the normal application procedure and are asked to come in for a comprehensive assessment of their academic potential. If accepted, students are given a wide range of assistance during their freshman year that is geared toward improving their basic skills and preparing them for successful sophomore, junior, and senior years. This assistance includes a complete orientation, prescribed placement in courses, including coursework in basic writing, reading, study skills, meetings with a counselor/adviser. This is to assure that the academic efforts of the students are as fruitful as possible, and that they are aware of all the resources and academic alternatives available at the University. Students are asked to sign a contract agreeing to the terms of their admission to UWGB through this program. When students in the Educational Opportunity Program have completed 30 credits with a 2.00 grade point average, they are allowed to continue as regular University students with advanced standing.

ACADEMIC SUPPORT PROGRAM

The Academic Support Program is designed for students who need to strengthen their reading, composition, study, and mathematics skills. The Academic Support Program Office is always open to students who wish assistance in their areas on a walk-in basis.

Students also may be referred to the program and its courses through freshman placement tests or by faculty members. Individual and small group tutoring is available in the areas mentioned above as well as in most courses offered at UWGB. Tutoring is scheduled at the convenience of the student.

Additional information and descriptions of Academic Support courses can be found in the section of this catalog on academic programs.

LIBRARY

Located at the hub of the campus, the architectural award-winning Library Learning Center building is the intellectual as well as the geographical heart of the University. Its first seven floors house a modern library learning facility, with 270,000 books, 1,700 current periodical subscriptions, 120,000 maps, 2,500 sound recordings, and over 1,200 reader stations, including carrels, study tables, and small private and group study rooms. A host of other materials and services make up a fully appointed academic library.

A trained and versatile library staff is on hand to help students and others use and interpret this wealth of materials.

Besides the customary books and journals, the library makes available through playback carrels in the reserve room films, videotapes, and other media materials, and has a growing collection of phonograph records and tapes, including a basic music collection, drama and other spoken word recordings, listening equipment and music scores. There are 500,000 microprint cards and over 20,000 reels of microfilm plus thousands of other microforms, making retrospective or out-of-print information available in a small space.

Media Services furnishes audio-visual materials and equipment for playback and projection. Media equipment is available on a checkout basis to faculty and students.

The library is a depository for United States government publications and for Wisconsin documents. Selected Canadian and British materials are included. Many retrospective United Nations documents are available on microprint as well as a good selection of current U.S. materials. The map collection is substantial. The library is a depository for Wisconsin and Michigan maps of the U.S. Geological Survey and for the Department of Defense, Defense Mapping Agency.

The Area Research Center is active in the network established by the State Historical Society to make municipal and county manuscript records more accessible to people of the area. These records are a rich source of original information for students of history, genealogy, and local culture, and the network also makes possible easy use of the records maintained in other parts of the state. A Bicentennial study of the Belgian-American culture, which attracted national and international interest, is one example of the kind of research project which is housed in the Area Research Center.

Throughout the library, the open stack arrangement, on comfortably carpeted floors, brings together books and readers quickly and pleasantly. Copy machines (including copying from microforms) and free and rental typewriters ease the task of the student and there are special facilities for blind and other physically handicapped students.

An active interlibrary loan department obtains materials not available here by tapping the resources of other libraries. The UWGB Library is an active member of NEWIL, an organization of Northeast Wisconsin libraries sharing resources, and WILS (Wisconsin Interlibrary Loan Service), an office headquartered in Madison to expedite interlibrary lending from the substantial collections there. A microfilm copy of the UW–Madison card catalog (as of 1969) and an unusually full and varied collection of periodical indexes and abstracts facilitate such borrowing.

ECUMENICAL CENTER

The religious ministry on campus is focused in the Ecumenical Center sponsored by 12 Protestant denominations, the Roman Catholic church, and Cnesses Israel synagogue. Through its program and two full-time campus ministers, Father Dick Mauthe and the Rev. Dave Steffenson, the center ministers to the personal, intellectual, and spiritual needs of the UWGB community.

Traditional religious needs are met through regular worship, counseling, study of the Bible and other topics, and personal growth weekends. The center also brings nationally known speakers to the campus, provides programs and forums in current topics, develops credit courses in religion and values, and provides other group opportunities such as a marriage insight course, a world hunger task group, special courses and seminars on career and life planning, and other events.

The Ecumenical Center takes seriously UWGB's commitment to quality of life and human survival in the midst of the environmental crisis, and has been actively developing the religious, ethical, and value dimensions of ecology through conferences, programs, and courses.

The center is located in the comfortable Shorewood building near the main entrance to the campus, and worship and other large-group meetings are held at the Hartung Center near downtown Green Bay. A free church bus is provided every Sunday for University Village Apartments residents.

ETHNIC HERITAGE CENTER

The Ethnic Heritage Center serves students at the University of Wisconsin–Green Bay, emphasizing the needs of minority students. As a student-oriented center, it is our obligation to provide help for all students: Black, Native American, or White, as well as to offer services to visitors.

The number of minority students at UWGB is small and the problems and adjustments that they may encounter can be facilitated through the Ethnic Heritage Center. Academic, social, emotional, and financial counseling are a part of the center's daily activities. The center serves as a liaison among faculty, administration, and students. It plays an important role in providing services and outlets which enable students to reach their full potential as productive, intelligent, and well-rounded persons.

The Black Student Union and the Native American Club are housed in the center. Through the efforts of the center's staff and officers of the two organizations, student input into the educational process is promoted and ensured. Both the Native American Club and the Black Sudent Union take active parts in the planning of the Black History Month program (February) and the Native American Week program (April).

The Ethnic Heritage Center is located on the third floor of the Library Learning Center.

LUCY STONE CENTER

The Lucy Stone Center, named for the first woman who kept her own name after marriage, is the campus women's center. The center's program is not for women exclusively, but is a program about women for both women and men.

The center depends upon student participation to carry out its programs. Students and the staff coordinator have planned and carried out a variety of programs including an annual Women's Week which has a varied schedule of activities, and a Women in Business conference, which brings several hundred persons to campus for its meetings.

The Lucy Stone Center also teaches special skills, sponsors speakers, films, discussions, and provides support to individuals and groups who feel they are being discriminated against on the basis of sex.

The center is located on the seventh floor of the Library Learning Center.

INTERNATIONAL STUDENT CENTER

The International Center serves students from more than 20 countries who attend UWGB.

In addition to being a meeting place and resource center for all interested students, the center sponsors frequent events to promote awareness of different cultures throughout the campus. These include films, lectures, displays of arts and crafts, and entertainment. In addition, international students sponsor an annual international dinner for which participating students from various nations prepare foods from their countries. The International Newsletter is published each semester.

The International Center is located on the seventh floor of the Library Learning Center.

INFORMATION CENTER

UWGB's Information Center provides services to the campus community, to visitors, and to the community at large.

The center can provide information about times and locations of events on campus; maintains a list of names, addresses, and telephone numbers of students; and can help visitors locate faculty, staff, and other offices. It offers campus tours and serves as a lost and found department. The University switchboard is located at the center.

In addition, it can provide emergency message service, provides an on-campus postal service for students, has information on the bus service, and can sell student rate bus tickets.

It also distributes informational materials, maintains campus bulletin boards, and compiles a weekly list of events, "This Week on Campus."

The Alumni Association Office is housed in the center.

The Information Center is located on the concourse level of the Library Learning Center just inside from the main circle entrance, which is convenient from the visitor parking lot. The center's hours usually coincide with those of the Library. It is open seven days a week.

LIFELONG LEARNING

In 1979-80, 37 percent of UWGB's total student body was 25 years of age and older.

All courses at UWGB are open to adult students. Many courses are scheduled during the late afternoon and evening hours to meet the needs of those unable to attend during the day. Also, some courses are scheduled in off-campus locations including Door, Manitowoc, Marinette, Menominee, and Outagamie counties to provide opportunities for persons in those areas to continue their education.

Credit courses on television and radio, a newspaper credit course printed in area papers, independent study, credit for experience, and the opportunity to gain credit by examination are unique ways for older students to work toward a degree even though they may have other major responsibilities.

A variety of noncredit courses is offered for those not interested in pursuing a degree.

Students may audit (take courses without credit) courses at approximately half the usual cost. Persons 62 years of age and older may audit courses free of charge.

Students taking at least six credits may apply for financial aid. Some scholarships are available for persons with financial need who want to take only one credit course at a time.

Adults interested in taking advantage of the University's resources should also read the sections in this catalog describing the University Without Walls program and the Bachelor of Arts: General Studies degree; explanations of credit by examination, credit for experience, and auditing; and general descriptions of the University's program and philosophy found in the introduction, as well as the section on admission.

Through the Speaker's Bureau maintained by the office of Outreach, University speakers and performers appear in the community, also.

CONFERENCES, SEMINARS, WORKSHOPS

UWGB regularly conducts conferences, seminars, and workshops and is host to such events sponsored by other organizations in an effort to serve the community's need for educationally oriented programs. Students, faculty, and area citizens participate in these events.

Such events enrich both campus and community, as well as meeting UWGB's goal of community involvement.

Recent conferences on campus have included topics such as women in business, grantsmanship, inflation and presidential politics, gifted and talented students, learning disabilities, and many others.

COMPUTING AND DATA SERVICES

UWGB's computer system serves instructional, research, and administrative needs. Use by faculty and students of the batch processing capabilities and time sharing terminals for instructional purposes is encouraged. Computer accounts can be opened by any student. The system supports 40 time sharing terminals. The staff provides consulting services in all service areas.

The computer system consists of a Xerox Sigma 6 computer with 800K bytes of memory, tape, and disk drives. It also functions as a remote job entry system to the Univac 1110, the computer at the Madison Academic Computing Center.

Software capabilities include an Extended Data Management System (EDMS), the Statistical Programs for Social Sciences (SPSS), the Biomedical Computer Programs (BMDP), MINITAB, and a variety of computing languages such as: BASIC, FORTRAN, COBOL, APL and others.

A micro computer system with floppy disk, terminal, and printer is also available. The micro system supports BASIC and has a full business package.

Keypunching and test-grading equipment are available. In a separate workroom, eight DECWRITER II terminals, one graphics terminal, two cathode ray tubes (CRT's), and one keypunch are available to students. The Computer Center is open until midnight daily and during the day on weekends.

EDUCATIONAL COMMUNICATIONS

UWGB's Educational Communications Office provides a variety of media-related services for faculty and students. The visual design staff provides graphics, layout and artwork for signs, displays, and exhibits; laminating services; overhead transparencies; artwork for slides; photostat enlargements and reductions; limited typesetting; and consulting services. Still photography personnel work both in the studio and on location, process black and white prints and color slides, provide dry-mounting and copy stand services, and assist with production of slide/tape shows. The Educational Communications audio staff provides on-location and studio recording services, tape duplication, production of radio credit courses, and sound tracks for slide/tape presentations.

CENTER FOR TELEVISION PRODUCTION

The UWGB Center for Television Production is a nationally recognized production facility which produces college television credit courses and children's instructional television series, as well as documentary and public service programs. These programs are distributed and telecast by the Wisconsin Educational Television Network, the twelve-state Central Educational Network, the Agency for Instructional Television, the Public Broadcasting Service, and a variety of public and commercial stations, as well as cable systems throughout the country. UWGB programs have won numerous national awards for production excellence.

The Center for Television Production also operates control facilities for public TV Channel 38, WPNE-TV, and produces the station's local programming under agreements with the Wisconsin Educational Communications Board.

Campus Life

This section of the catalog will give some idea of what life can be like for a student on the UWGB campus. It describes practical matters such as housing, food, and transportation, and some of the opportunities for activities, recreation, and involvement at UWGB.

A number of the possibilities for extracurricular activities at UWGB provide students opportunities to influence University policies and procedures. Activities listed in this section are by no means all of the possibilities that exist. Students with a variety of interests will be able to find extracurricular activities in which to put their energies and talents to work.

HOUSING

Students at UWGB can choose from three housing alternatives:

1. They can live in the University Village Apartments adjacent to the campus. University Village Apartment rentals are competitive with dormitory rates in the UW System.

2. They can live in an apartment, room, or house in Green Bay or in the nearby rural area.

3. If they are from the region, they can live at home and commute.

The University Village Apartments are designed specifically for students. They offer more individual space and privacy than the traditional dormitory. A typical, furnished, four-person unit has a living room, two bedrooms each with twin beds, a compact kitchen with built-in appliances and cupboards, and a bathroom with shower. A few two-person and single person units also are available.

Resident resource students, selected and trained by UWGB's Counseling and Student Development Center, live in each apartment building. Resource students are familiar with campus and community re-

sources and Red Cross First Aid procedures, and serve as organizers for activities. Information about apartment rentals is available from: Director of Housing, University Village, University of Wisconsin–Green Bay, Green Bay WI 54302.

Private housing off-campus is not difficult to find in Green Bay. Both furnished and unfurnished accommodations are available for rent. The housing director also maintains a list of available housing off campus. Inquiries about off-campus housing may be sent to the housing director, or obtained from the Dean of Students' Office.

Living at home and commuting offers an economical housing alternative providing distances to campus are not too great. The campus can be reached by private automobile and by Green Bay public transportation.

Each housing alternative has its own advantages and disadvantages. What kind of housing students choose must be based upon what each feels is most appropriate for him or her.

TRANSPORTATION

The Green Bay Transit Commission provides bus service between the UWGB campus and downtown Green Bay on Monday through Saturday. Schedules usually operate from early morning to approximately 10 p.m. Student rate tickets and bus route maps are available at UWGB's Information Center.

FOOD SERVICE

Students may purchase discount coupons at the Commons food service that are redeemable at any time in the cafeteria or in the Loft snack bar. Breakfast and lunch are available in these dining facilities. Lunches include a variety of hot and cold entrees, salads, desserts, and beverages, served cafeteria-style and some made- to-order items.

STUDENT GOVERNMENT

Student Government Association is an umbrella organization for two legislative bodies representing students at UWGB. One aspect of SGA is the Student Senate, comprised of two students chosen from each concentration in at-large elections. Student Senate will consider any issue important to the student body.

SUFAC (Segregated University Fee Allocation Committee) is the other branch of SGA. Its 12 student members allocate expenditure of all student fee monies to student organizations, student programs, athletics, and related activities—over $375,000 a year.

Student Government Association welcomes interest from new students and invites them to visit SGA offices in the Student Services Building.

STUDENT UNIONS

Student Unions operate somewhat like lobbying groups. Students in several academic concentrations have organized unions and use these organizations as structures through which to approach issues of concern to students in the concentration. Some student unions work with faculty in their concentrations on academic issues such as class offerings, requirements, faculty hiring and firing practices, and other issues. The unions also provide opportunities for social contacts among students and between students and faculty.

COMMITTEES

Student/faculty/staff committees provide other opportunities for students to have a voice in campus issues. Each committee deals with a specific activity or concern such as student conduct policy, student rights and responsibilities, library, academic actions, adult education, admissions, athletics, ethnic studies, women's studies, equal opportunity, awards and recognitions, chancellor's student advisory, and others. Students may volunteer to participate in these committees at the office of Student Life, the SGA office, or the office of the Dean of Students.

GOOD TIMES LTD.

Good Times Limited is a student-run programming board which coordinates the activities of six special interest committees. Good Times, through these committees, schedules films, bands, folk entertainment, arts and crafts shows, and outdoor activities.

The committees are: SPORE, International Film, Popular Film, Arts and Crafts, Bands, and Coffeehouse. Committee names are self-explanatory, except for SPORE which stands for Self Propelled Outdoor Recreation Enthusiasts (canoers, bicyclists, hikers, etc.) and possibly Coffeehouse, which schedules entertainment for the Blue Whale Coffeehouse in the Shorewood Club, and occasionally sponsors folk festivals and other entertainment.

Students who would like to work on any of these committees may sign up in the office of Student Life.

STUDENT ORGANIZATIONS

Nearly 50 student organizations registered with the office of Student Life at the close of the 1979-80 academic year ranged from A—Accounting Club, Agape Christian Fellowship, AIESEC, Alternative Theater, Alternative Energy Society, and Aviation Club—to W—Writer's Union (there were no X's, Y's, and Z's).

Students with recreational, social, political, academic, environmental, social service, or religious interests who wish to become involved in activities have a variety of campus clubs and organizations to choose from.

Registering with the office of Student Life makes organizations eligible for student fee funds. Unregistered organizations also exist which require no financial support or raise their own.

Student groups are easy to organize by registering at the office of Student Life. Some clubs serve short term purposes, such as those supporting political candidates; others become permanent parts of the campus scene.

Among organizations serving academic, cultural, and professional interests are the foreign language clubs; Philosophy Forum; the Writer's Union, Accounting Club, Social Work Club, Alternate Theater, Science and Environmental Change, Jazz Club, and others.

Some groups have state, national, and international affiliations, such as AIESEC (Association for the International Exchange of Students of Economics and Management), MENC (Music Educator's National Conference), Student Wisconsin Education Association, and the student chapter of the Wisconsin Society of Professional Engineers.

Other groups serve students with common ethnic backgrounds or common experience in coming to UWGB, such as the Black Student Organization, the Native American Club; and the International Student Club. Black and White Awareness promotes communication between ethnic groups.

Veterans Club is based upon a shared experience.

Organizations concerned with environmental issues include Round River Alliance, Alternative Energy Society, and Organic Gardening Club.

Active and sedentary sports and recreation are served by groups such as SPORE, Sailing Club, Ski Club, New Games, and Chess Club.

These are only some of the student organizations at UWGB. More information about existing organizations or about forming new ones is available at the office of Student Life.

SHOREWOOD CLUB

Students, faculty, staff, and their guests can gather at the Shorewood Club for refreshment, recreation, and relaxation. The club serves as a clubhouse for summer golf and winter cross-country skiing.

Many Good Times Ltd. functions are scheduled at the Shorewood Club—concerts, weekend dances and parties, and Blue Whale Coffeehouse are examples. Pool, foosball, cribbage, and chess tournaments are scheduled. The club also is the site of student and guest poetry and prose readings, plays, and other special events.

Shorewood Club has several facilities that can be reserved through the office of Student Life by any University group.

BAYSHORE OUTING CENTER

Bayshore Outing Center provides information, equipment, and instruction for persons interested in taking advantage of the outdoor recreation possibilities provided by Brown and Door counties and the larger area of northeastern Wisconsin and Upper Michigan.

The center operates separate recreation programs for summer and winter. The winter program is housed in Shorewood Club East. From about mid-December to mid-March, cross country skis, snowshoes, toboggans, and sleds are available for rent. Marked ski trails are maintained on the campus and golf course and group lessons are given.

The summer outing program, which operates from the center on the bay, offers equipment for hiking, backpacking, canoeing, and sailing. Tents, sleeping bags, stoves, packs, canoes, and sail boats can be rented for nominal fees. Instruction, maps, and information can be obtained from the qualified staff. The Phoenix Sailing Club and Sailing Team have their headquarters at the Outing Center. Outing and group trip information also can be obtained.

THEATER

A student can become involved in theater at UWGB as a spectator or as a participant. One way to become a participant is through the academic program. Classes in theater can lead to work on all aspects of UWGB productions. Play writing classes can result in work in the theater also.

Two distinctive theater experiences are available: main stage productions, directed by faculty, and student-directed experimental theater productions which take place in a smaller, more intimate atmosphere.

A student who has a desire to work in theater can probably do so without taking a class by watching for opportunities and volunteering. Many activities other than acting are available: set construction, scenery painting, lighting, publicity, photography, make-up, costume design, ushering, sewing, and stage managing.

UWGB students frequently participate in theater activities in the larger community, too. Among opportunities are Green Bay Community Theater which holds open auditions for a full schedule of winter season plays; Harlequin Players, which presents more avant-garde work; Ashwaubenon Little Theater, and others. Because northeast Wisconsin is a summer resort area, there also are opportunities for summer theater nearby.

DANCE

Students interested in the dance can see and participate in all styles of dance at UWGB. University Dance Theater presents a major performance each spring. Dancers also participate in UWGB theater productions.

MUSIC

Students can participate in music activities at UWGB no matter what their major. They can do so by registering for these activities when signing up for classes each semester.

The UWGB Marching Band, which plays for several Green Bay Packer games each fall, and the Oratorio Chorus are open to everyone without audition.

Other groups require auditions. These include concert band, the vocal choir, the University Singers (pops), jazz ensembles, Collegium Musicum, and a variety of small ensembles and groups. Some students audition for the Green Bay Symphony Orchestra and receive UWGB credit for playing in it.

Other opportunities—for credit or without—exist on and off campus. Occasionally there are pit orchestras or other campus groups needed for special events. Green Bay Community Chorus is open to students. Many students form groups of their own and play for campus and community events.

LECTURES AND PERFORMANCES

Professional performing arts programs and entertainment appear on the UWGB campus under the auspices of the office of Lectures and Performances. Over the years performers such as Vincent Price, Carlos Montoya, the Murray Louis Dance Co., Lotte Goslar, the Oxford and Cambridge Shakespeare Co., the Minneapolis Guthrie Theater Co., and many others have appeared at UWGB.

Lectures and Performances also schedules the annual University Lecture Series which has brought to campus persons such as Margaret Mead; Dr. Bruno Bettelheim; *Roots* author Alex Haley; LaDonna Harris, founder of Americans for Indian Opportunity and 1973 Woman of the Year for Public Service, and others.

STUDENT LECTURE FORUM

Student Lecture Forum is a seven-member student board which sponsors and co-sponsors workshops, demonstrations, seminars, and films on campus. Lecturers who have appeared under their sponsorship include persons with such varied interests as Black poet Nikki Giovanni, former Congresswoman Bella Abzug, oceanographer/photographer Shawn Michael Costeau, the mentalist The Amazing Kreskin, and others.

FOURTH ESTATE

Students plan, write, make photographs, sell and design advertising, draw cartoons, manage the budget, edit, and lay out the weekly student newspaper, *The Fourth Estate*. The newspaper is distributed free on campus.

Students interested in working on the newspaper can find information on who to contact and where to contact them in the first issues of the paper each academic year.

THE SHEEPSHEAD REVIEW

Creative writers and artists may get their work published in the campus literary magazine, *The Sheepshead Review*. The *Review* is published twice each academic year and concentrates on high quality writing—both prose and poetry—and photographs, drawings, prints, and other reproducible art work. The magazine has a student editor and students are responsible for design and production. *Sheepshead Review* is distributed free on the campus.

RADIO STATION WGBW

Students operate station WGBW, a 3,000 watt stereo FM station. Students of all academic and social interests have the opportunity to apply their talents toward operating this "alternative" broadcast service, which provides the people of northeast Wisconsin with programs they may not be able to hear on other area stations.

Programming to a large extent depends upon the interests of students who work at the station, but it always includes news, features, and a wide selection of music. Play-by-play broadcasts of some UWGB intercollegiate sports also are scheduled.

INTRAMURAL SPORTS AND OPEN RECREATION

Intramural sports and recreational activity programs attempt to be responsive to student interests, so offerings vary from time to time. Both co-ed and men's and women's intramurals are organized.

Intramural teams usually include basketball, volleyball, flag football, innertube water polo, water basketball, racquetball, table tennis, swimming, softball, and others. Teams in other sports may be organized.

Students, faculty, staff, and their families can use recreational facilities for open recreation when they are not scheduled for classes or organized intramural programs. These include the Phoenix Sports Center with its pool, gymnasium, and racquetball courts; outdoor tennis courts, softball diamonds, multi-purpose fields, and volleyball courts. In wintertime, there are toboggan runs, cross country skiing trails, and often an ice skating rink.

INTERCOLLEGIATE ATHLETICS

Varsity competition plays an important role in University campus life and gives students an opportunity to participate as players or spectators in 12 sports. The men field teams in basketball, soccer, tennis, golf, cross country, and sailing. Women participate in basketball, field hockey, tennis, swimming/diving, cross country, and sailing. Sailing, a new sport in 1980, is coeducational. Cross country competition also began in 1980.

All intercollegiate athletic events are held on campus with the exception of men's basketball, which plays its games at the Brown County Veterans Memorial Arena.

Women's sports abide by the rules of the Wisconsin Women's Intercollegiate Athletic Conference (WWIAC) and the Association for Intercollegiate Athletics for Women (AIAW). The men are affiliated with the National Collegiate Athletic Association (NCAA). UWGB men played their final year in Division II sports in 1980 and will be elevated to Division I in the fall of 1981.

The UWGB men's basketball team has an overall 234-80 win/loss record with Coach Dave Buss at the helm during its 11 years of existence. UWGB has been in post-season tournament play in eight of 11 years, including the NCAA nationals in 1978 and 1979 and the NAIA finals in 1973.

The UWGB soccer team, directed by Head Coach Aldo Santaga, had an excellent 11-3-3 season in 1979-80 and only lost one game in 15 consecutive outings after dropping the team's first two contests of the season.

UWGB has competed in women's basketball for seven years and last season Head Coach Carol Hammerle took her team to the WWIAC Division II qualifying tournament championship and finished the season with an 18-9 overall record. Women's swimming and diving has been in existence for three years and Head Coach Roger Harriman's swimmers placed third in state competition last year with a 19-3 record and an overall three year mark of 40 wins and only 9 losses.

Cross country, sailing, golf, and tennis are not generally considered major sports in most academic institutions, but they offer an excellent opportunity for many students to excel in sports which are among our most popular pastimes and compliment a well-rounded intercollegiate athletic program.

Information about game schedules and try outs for intercollegiate teams is available by contacting the Intercollegiate Athletic Office in the Phoenix Sports Center.

Admissions, Costs, and Financial Aids

ADMISSION

While UWGB has basic admission requirements, it is guided by a philosophy of "personalized admission" which considers each applicant individually. Total experience through and since high school and special circumstances or socioeconomic backgrounds are always considered. Appropriate innovative programs and courses taken through non-traditional curricula are given full and positive consideration. Therefore, students who do not meet the basic requirements but who feel they meet the spirit of this admission philosophy are encouraged to apply.

Admission Procedures

An application should be submitted no later than August 10 for the fall semester, December 15 for the January interim period, January 10 for the spring semester, or May 30 for the summer session. There is no application fee for undergraduate admission.

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

Every new student is required by University of Wisconsin regulations to submit a medical history form to the University Health Service before registering. The form is mailed to the student with the permit to register.

Freshman Admission Requirements

A high school graduate who wishes to qualify for admission as a degree candidate should normally fulfill the following requirements:

1. Be graduated from a recognized high school or equivalent (as defined in UW Systems Policy).

2. Rank in the upper half of the graduating class.

3. Present 16 units of high school preparation, or needed requirements for graduation as defined by the high school. Unit distribution is:

English	3 units
Mathematics (not general math)	1 unit
Science	1 unit
Social Studies	1 unit
Academic Electives	6 units
From the areas of:	
English	
Speech	
Foreign Language	
Social Studies and History	
Sciences	
Mathematics	
Other Electives	4 units
TOTAL	16 units

Students who do not meet requirements 1, 2, or 3 above, may apply and will be considered. Entrance examination (ACT or SAT) scores are *not* required for admission but all students are encouraged to submit this information. Both admissions counselors and academic advisers will use this information in order to assist students in their educational planning. Students not meeting admissions requirements are especially urged to submit test scores.

Students who hold General Educational Development (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 Admission Requirements

Students who have attended any kind of school after high school graduation should fulfill the following requirements:

1. Transfer and advanced standing students should have a 2.0 grade point average (on a 4.0 scale).

2. Students with fewer than 15 credits or less than a 2.0 grade point average must have a high school transcript sent directly to UWGB.

3. Students with less than a 2.0 grade point average may be considered for admission if they would have met UWGB basic *freshman* admission requirements, and they would not have attained a "drop" action had they earned the same academic record at UWGB.

A prospective transfer student must request that all schools he or she has attended since high school forward an official transcript *directly* to the office of Admissions. Included are nursing, business, and vocational and technical schools, as well as other colleges and universities. Excepted are training schools attended as part of military service. The student must submit the records whether or not the work was completed and regardless of his/her desire to request UWGB credit for the courses.

Credits earned in a non-college parallel program at a vocational-technical institute are not transferable to UWGB. This is University of Wisconsin System policy. Students who took general education and/or liberal arts courses from such institutions are encouraged to seek credit through examination at UWGB.

Undergraduate Transfer Credit Evaluation

UWGB is flexible in regard to the transfer of credits from other accredited colleges and universities. An official credit evaluation will show a prospective transfer student what courses and credits can be accepted to fulfill UWGB requirements. The accreditation status of the previous institution or institutions and the quality of a student's achievement are determining factors for course and credit transferability.

A credit evaluation will be started after all transcripts have arrived at UWGB and the student has been admitted. If a student is currently enrolled at another college when accepted, his or her evaluation will be held until a final transcript showing grades from the last term is received. The evaluation will then be completed and mailed directly to the student.

A student who would like to receive a tentative evaluation before the end of the last term should make a written request to the office of Admission after he/she has been accepted. A student who has taken independent study courses must supply titles and descriptions for these courses when applying so that these can be evaluated.

A student who transfers to UWGB must satisfy all-University requirements by:

—completing one three-credit course in the senior seminar program;

—meeting the liberal education and distribution 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.

Transfer students will be informed in writing by the Registrar's office of their exact standing with respect to fulfilling all-University requirements as soon as an evaluation of their completed credits is concluded. Prospective transfer students should read the description of all-University requirements in the section of this catalog on the academic program.

Students coming to UWGB from two year institutions may transfer up to 72 credits of lower division (freshman and sophomore level) course work only.

Transfer students begin with a new grade point average at UWGB.

Transfer students must meet residence requirements described in the section of this book on academic programs and the current *Timetable*.

Specific questions on transfer credit evaluation may be directed to the Registrar's office. Incoming transfer students are encouraged to meet with a general adviser in the office of Academic Advising to have their questions answered about general requirements for a degree. The adviser can refer students to faculty advisers in their areas of academic interest.

Academic Plan Form

The academic plan form is a student's graduation contract at UWGB. Completing this form as soon as possible is of primary importance to all junior and senior transfer students. The completed form specifies courses to be taken to satisfy graduation requirements at UWGB. The form is available from the Academic Advising office.

Early Admission Programs

UWGB permits superior students to begin college work before graduation from high school. Selection for early admission is based on high school record, social maturity and educational plans. Scholastic ability is measured by high school record

with emphasis on grades and subjects taken. A student seeking early admission must have completed the 11th grade. Consideration is given to recommendations of the high school principal and counselor.

Students wishing to enroll in UWGB courses while still attending high school should apply as "high school specials." High school specials must normally be seniors, juniors, or sophomores in high school and must rank in the upper half of their respective classes. Enrollment in particular UWGB courses may require the approval of the high school or the permission of the instructor. Contact an admission counselor for additional information on the high school special program.

Adult Students and Veterans

UWGB provides many opportunities for adults who have never pursued higher education and for those who have 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 office of Outreach.

Summer Session

Students enrolled at another college or university and high school students who have completed the 10th grade can 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 these institutions will accept credits earned at UWGB. Credits earned by students prior to graduation from high school will be held in escrow.

Continuing students who were registered at UWGB the preceding term and are eligible to continue do not need a new permit to register. Students previously enrolled at UWGB, but returning after an absence of a semester or more, must reapply. Students from other University of Wisconsin campuses and other colleges or universities who plan to enroll for summer session and continue at UWGB in the fall should complete the UW System Undergraduate application and submit all transcripts. See the section on academic programs for additional information on summer session.

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. Such students must show good potential for academic success.

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. EOP is described in more detail in the section of this catalog on resources and services.

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:

1. A baccalaureate degree.

2. A 3.0 grade point in the major field of study, measured on a 4-point scale.

Candidates for entry are required to submit:

1. A completed application form, including a statement of the student's intended area of study and educational objectives.

2. A transcript of grades.

3. Three letters of recommendation.

4. An application fee of $20.

5. Such additional evidence as the applicant may deem helpful. Recent graduates are urged but not required to submit Graduate Record Examination Quantitative and Verbal Scores, or Miller Analogies Test Scores.

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

International Student Admission

UWGB presently enrolls students from more than 20 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), a test 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, at U.S. educational commissions and foundations abroad, and other locations.

An international student must be prepared to finance his or her education. 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.*

COSTS

Semester Fees and Tuition

Legal residents of Wisconsin as defined in state statute 36.27, with certain exceptions, are charged fees only. Nonresidents are charged a combination of fees and tuition. A reciprocal fee remission agreement between the states of Wisconsin and Minnesota permits legal Minnesota residents to attend UWGB at Wisconsin resident fee rates. The following tentative fee and tuition schedule is subject to change by the University of Wisconsin Board of Regents and the Wisconsin Legislature. Up-to-date fee information can be found in the *Timetable* or a fee information sheet for the current semester.

Fees for UWGB students are determined by an undergraduate and graduate level fee schedule and by state residency classification as determined by the office of the Registrar. A part-time undergraduate student registers for 11 credits or fewer on a per credit basis. A part-time graduate student registers for 8 credits or fewer on a per credit basis. In 1980-81, Wisconsin undergraduate students paid $39, and graduate level students pair $64.50 per credit. Nonresident undergraduate students paid $128.50 and graduate level students paid $187.50 per credit for part-time enrollment. The actual costs for each academic year are announced in advance and are available on request from the office of the Registrar.

1980-81 Semester Fees for Full-Time Students

Level	Wis. Res.	Non Res.
Undergraduate	$463.50	$1,537.50
Graduate	$577.00	$1,684.50

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 to avoid late payment penalties. Information about fees, including late payment penalties and the refund schedule for official withdrawal or reduction of credits, is contained in the *Timetable*.

Summer Session Fees

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

FINANCIAL AIDS

The primary objective of the Student Financial Aids 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 those students who have financial need. By completing the necessary applications, a student is automatically considered for scholarships, grants, loans, or work/study for which he/she may qualify. The financial aids office can provide detailed information for certain aid programs and scholarships.

A Typical Budget

A single student who attends UWGB for the full academic year—covering the fall and spring semesters and the January interim period—can expect approximately the following expenses in addition to the fees or tuition listed previously.

Expenses for Academic Year

	Commuter student living at home	Resident student living off campus	Resident student living on campus
Books and Supplies	$ 225	$ 225	$ 225
Room and Board	$ 820	$1710	$1710
Travel, Personal, and Misc.	$ 930	$ 930	$ 930
Total costs to be added to tuition	$1978	$2865	$2865

The "living at home" budget shows the actual costs of supporting a student in college, including the cost of food, miscellaneous expenses, and travel. Commuters and their parents should keep in mind that they are already paying these items. The only additional costs are for fees and books, a total of about $1060. Transportation costs depend on whether the student lives in Green Bay or commutes from a more distant residence.

Financial Aid Application Procedures

Forms. The aid application process basically requires the completion of two forms: the application for admission to UWGB and the Financial Aid Form.

1. For new, transfer, or re-entry students an application for financial aid is initiated by completing the Financial Aid section on the UW Admissions Application which is available from most state high school guidance offices or from the UWGB Admission office.

2. The financial need analysis document is the Financial Aid Form (FAF), processed by College Scholarship Service. All aid applicants are asked to complete and submit this form as part of the aid process. The information from this FAF is used to determine eligibility for the Wisconsin Higher Education Grant, the federal Basic Education Opportunity Grant (BEOG) and for aid administered by the University financial aid office.

Students who file the FAF and request BEOG consideration will receive a Student Eligibility Report (SER) from the Basic Grant processor which must be sent by the student to the University in order to receive the grant.

Additional forms may be requested of certain students such as transfer or re-entry applicants. The needed forms will be sent to students.

Students who submit applications 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 have a permit before UWGB can make an offer of aid.

Deadlines. The application priority date for all financial aid is March 1. Students who file 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 and if there is reasonable time before the end of the school term. Students applying after the priority date will be notified of their awards as soon as they can be processed.

Determination of Financial 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 called the Financial Aid Form (FAF). The FAF is first analyzed by the College Scholarship Service 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 substantial amount of their own resources toward their education expenses. Also, students are expected to earn and save some funds ($500 to $700) from summer employment which can help meet academic year costs.

Aid Awards. Rarely can students meet all their expenses through one type of financial aid. Also, very 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 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.

Eligibility. In addition to demonstrated financial need, the student must meet certain other eligibility requirements to qualify for various types of financial aid. In most cases the student must be a citizen or permanent resident of the United States, must be enrolled at least half time, and must maintain satisfactory academic progress. To be eligible for Wisconsin loans and grants, the student must also be a resident of Wisconsin. Also, a student must not be in default on any education loan, owe a refund, or show unwillingness to repay any educational loan.

Students desiring further information about financial aid policies and student responsibilities may request a copy of the *Financial Aid Award Information Guide and Instructions*.

Withdrawal and Refund Requirement. Students who withdraw from school are expected to return the unused portion of any grant or scholarship money which they have been awarded. The amount is set by the Financial Aids office at the time of withdrawal. Also, if students withdraw during the first semester, the second semester portion of their award will be cancelled automatically unless they provide a written appeal for committee review.

Any refund due the student from UWGB will first be credited toward any financial aid award already received. A student who withdraws during the first four weeks of the semester will be expected to return the following percentages of the total financial aid received:

First week	100%
Second week	80%
Third week	60%
Fourth week	40%

Students may receive future assistance only if they do not owe a refund for previously received grants, or if they are not in default on any previous loan repayments. (Refer to Public Law 94-482; Section 132 amended).

Types of Financial Aid. In general, financial aid can be divided into three main categories: scholarships and grants, student loans, and employment.

Scholarships

Leadership and Academic Excellence Scholarship. This scholarship, awarded on a competitive basis to students new to UWGB, is based only on academic excellence and leadership qualities. It does not consider financial need. A separate application is required for this scholarship.

To be considered for a UWGB merit scholarship, a prospective new freshman must meet these criteria: rank in the top fourth of the high school graduating class; provide evidence of substantial leadership involvement in high school extracurricular and community service activities; obtain letters of recommendation from a high school counselor and one other person of his or her choice. Comparable criteria apply to new students enrolling above the freshman level. In addition, several scholarships are available for applicants who meet the above criteria and who also have shown exceptional talent in science and mathematics, music, drama, or dance. The same application form is used.

Completed applications must be received by March 15 of the year in which the applicant plans to enroll at UWGB. The selection committee will announce names of successful applicants by April 15.

Funding for these scholarships comes from a variety of private donors such as: The Frankenthal Family Foundation of Green Bay, in memory of the late S. W. Frankenthal; the late Mrs. Walter G. Scherf of Green Bay in memory of herself and her husband; Mr. and Mrs. Oliver C. Trampe of Milwaukee; the Lucy Peckham Gfoerer estate; the UWGB Founders Association.

UWGB Nonresident Fee Remission Scholarship. This award provides partial or total remission of the nonresident portion of fees at the University. The recipient's nonresident tuition charge is reduced by the value of the award. Eligibility is determined by scholastic ability and financial need. The number of such scholarships is limited by legislation. Students must apply for financial aid to be considered.

UWGB International Student Fee Remission Scholarship. Partial or total remission of the nonresident portion of fees. Awarded to international students selected on the basis of academic excellence and financial need.

UWGB Private Scholarships. Awards vary according to need. The funds are made available through private donations and awarded on the basis of scholastic ability and financial need. Some of these scholarships are available to students in certain fields such as business, science and mathematics, music, and theater.

Grants

Grants, like scholarships, consist of gift aid, which is not repaid. The main criteria for grants is financial need.

Basic Educational Opportunity Grants (BEOG). Federally funded grants to needy students range from $200 to $1800 (determined by a federal schedule). Students who wish to apply for any financial aid are required to apply for these grants by checking a section of the FAF application.

Supplemental Educational Opportunity Grants (SEOG). Federally funded grants to students who have exceptional financial need. SEOG must be matched by another type of aid offered by the University. SEOG awards may not exceed $1,500 in one year or a total of $4,000 for undergraduate education.

Wisconsin Higher Education Grants. State appropriated grants awarded by the Higher Education Aids Board. Awards range from $50 to $1,800 and do not have to be repaid or matched by other aid.

Wisconsin Indian Student Assistance Grants. 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 grant based upon financial need. Additional funds on a matching basis 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.

Wisconsin Talent Incentive Grants. A limited number of need-based awards determined by the Wisconsin Education Opportunity Center may be used for up to two years by students who are considered nontraditional or disadvantaged. Students must be clients of the Wisconsin Education 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 the Wisconsin resident fee amount. Students must apply directly to the Minnesota Higher Education Coordinating Commission, Suite 901, Capitol Square, 500 Cedar Street, Saint Paul, MN 55101.

Viet Nam Era Veterans Grant. Made available to eligible Wisconsin veterans who served in the armed forces betwen 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. This aid covering tuition and books is provided to students with some disability as determined by the Department of Vocational Rehabilitation. The amount is generally included with other financial aid. Students with disabilities should contact their regional Department of Vocational Rehabilitation.

Loans

In order to meet the full financial need, students may wish to borrow funds for their educational expenses and repay these loans with future earnings. In general, student loans are interest-free while the student is enrolled at least half time. Repayment of the loan and interest begins nine months after the student ceases to be enrolled. A promissory note containing specific information must be signed when the loan is received.

National Direct Student Loan Program (NDSL). Loans are made up to $2,500 for the first two years with a $5,000 cumulative undergraduate maximum. Interest is currently three percent and both interest and payments are deferred until nine months after the student leaves school.

A borrower has up to 10 years and 9 months after he or she ceases to be at least a half-time student to repay the loan.

Cancellation of all or a portion of the principal borrowed is available under certain circumstances. Cancellation is limited to combat veterans, teachers of the handicapped and mentally retarded, teachers employed in schools in low-income areas, and pre-school 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. NDSL program regulations may be changed by Congress.

Wisconsin State Student Loans. Wisconsin residents with financial need may be eligible to borrow from this program. Students must first show evidence of being denied a guaranteed student loan from private lenders.

Undergraduates may borrow up to $2,500 per fiscal year with a maximum accumulation of $7,500. For freshmen the amount cannot exceed one-half of the cost of education. There is no interest as long as the student is in school on at least a half-time basis. Nine months after the student ceases to attend school, repayment and 7 percent current interest commence.

The student has up to 10 years from this date to repay the loan depending upon the total amount outstanding. The state bills on a monthly basis and requires a minimum yearly repayment of $360 plus interest. Deferments of up to three years may be obtained for active duty service with the Armed Forces or as a Peace Corps/Vista volunteer.

Guaranteed Student Loan Program. 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 higher education agency, and the University.

Depending upon the total amount borrowed, the student has up to 10 years to repay the loan at a present rate of 7 percent interest, after he/she has permanently left school. The undergraduate may borrow up to $2,500 per fiscal year with a maximum accumulation of $7,500. Nonresident students may obtain guaranteed loans from lending institutions in their home states.

University Short-Term Loans. Loans from funds established by gifts to the University are generally granted in amounts up to $250 per academic year. Repayment usually is expected within the same semester that the loan is acquired. The loans are generally interest free and are made only for emergency situations. Students must have a definite source of repayment.

The emergency loan funds are provided from the following memorials and donations:

Ben J. Rosenberg Student Loan Fund
Robert P. Brebner Memorial Student Loan Fund
L. G. Wood Memorial Student Loan Fund
The Honorable William J. Duffy Student Loan Fund
UWGB Alumni Association Student Loan Fund
UWGB Faculty-Staff Student Loan Fund
UWGB University League-Thelma DuChaine Student Loan Fund

Student Employment

Enrolled students and their spouses may use the employment services of the office of Student Financial Aids. Students may apply any time during the year but they cannot be referred to job openings until they arrive on campus. Student employment openings are generally categorized under two programs: college work/study and regular employment.

College Work/Study. Part of the financial aid award and 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.

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 Aids office.

The rate of pay for student jobs on and off campus generally ranges from $3.10 to $5 an hour. The exact rate depends on the complexity of the job. The chart below shows possible expected earnings (before taxes and other deducations) in a school year of about 34 weeks:

Hours worked weekly at 3.10/hr:

10 hours	$1054
12 hours	$1264
15 hours	$1581

Veterans Educational Assistance Program. 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 $4,000 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.

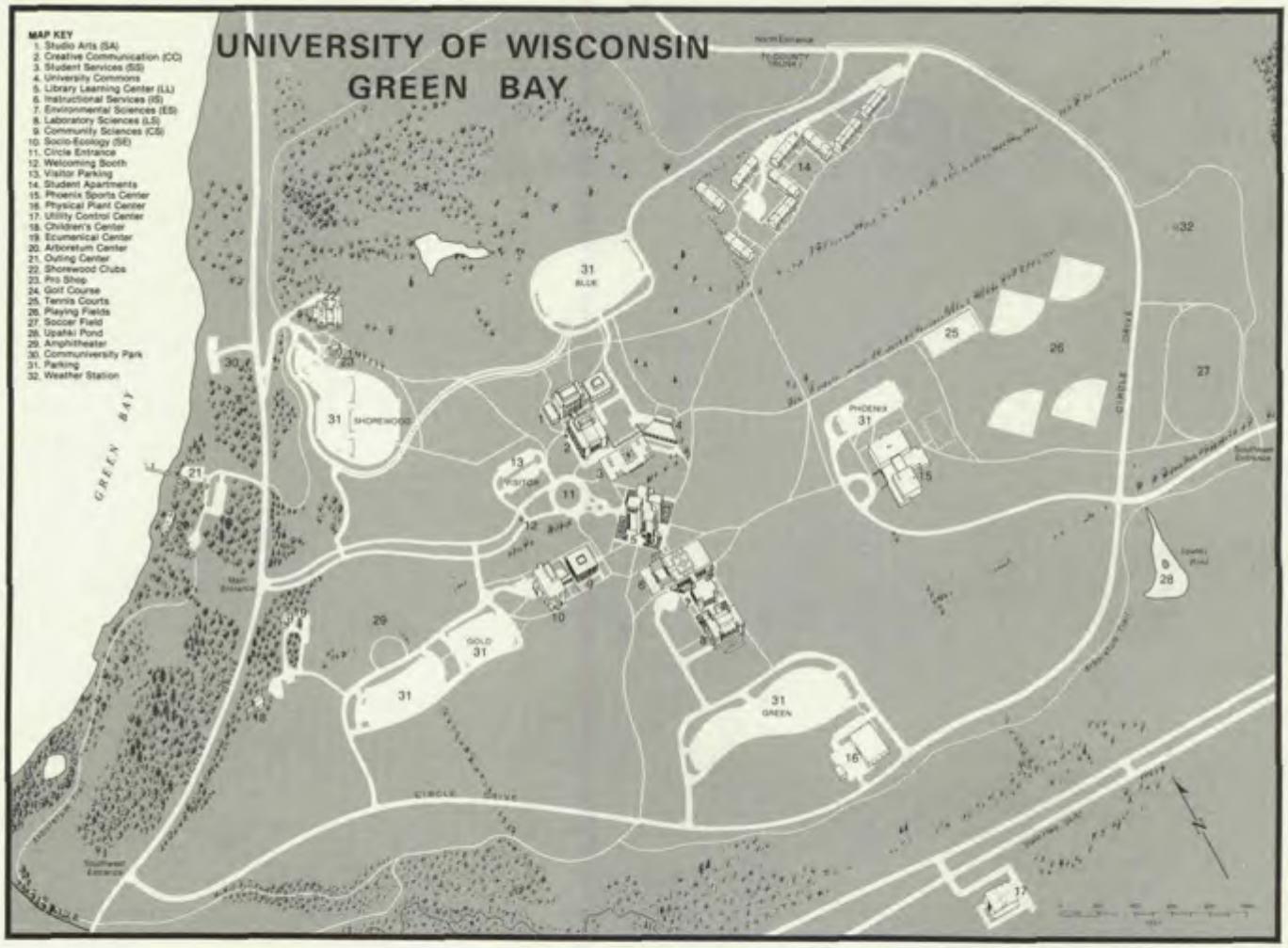
Financial Aid Counseling. Counseling is available before and after admission to students applying for financial assistance. Students who have special problems or questions concerning financial aids are encouraged to make use of this service. Call 414/465-2075 for an appointment.

Calendar

CALENDAR*

Fall Semester	**1980-81**	**1981-82**	**1982-83**
Registration and new student period (or register by mail earlier)	Aug. 25-29	Aug. 31-Sept. 4	Aug. 30-Sept. 3
Classes begin	Sept. 2	Sept. 8	Sept. 7
Thanksgiving recess begins	Nov. 27	Nov. 26	Nov. 25
Classes resume	Dec. 1	Nov. 30	Nov. 29
Examinations begin	Dec. 15	Dec. 17	Dec. 17
Commencement	Dec. 14	Dec. 20	Dec. 19
Examinations end	Dec. 20	Dec. 23	Dec. 23
January Interim Period			
Classes begin	Jan. 5	Jan. 4	Jan. 3
Spring registration (or register by mail earlier)	Jan. 27-29	Jan. 26-28	Jan. 25-27
Last day of classes	Jan. 30	Jan. 29	Jan. 28
Winter recess	Jan. 31-Feb. 8	Jan. 30-Feb. 7	Jan. 29-Feb. 6
Spring Semester			
Classes begin	Feb. 9	Feb. 8	Feb. 7
Spring recess	Apr. 18	Apr. 10	Apr. 2
Classes resume	Apr. 27	Apr. 19	Apr. 11
Examinations begin	May 26	May 24	May 23
Commencement	May 30	May 29	May 28
Examinations end	May 31	May 30	May 29
Summer Session (8 Week Session)			
Registration	June 11-12	June 10-11	June 9-10
First day of classes	June 15	June 14	June 13
Last day of classes	Aug. 7	Aug. 6	Aug. 5

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


UNIVERSITY OF WISCONSIN
GREEN BAY
MAP KEY
1. Studio Arts (SA)
2. Creative Communication (CC)
3. Student Services (SS)
4. University Commons
5. Library Learning Center (LL)
6. Instructional Services (IS)
7. Environmental Sciences (ES)
8. Laboratory Sciences (LS)
9. Community Sciences (CS)
10. Socio-Ecology (SE)
11. Circle Entrance
12. Welcoming Booth
13. Visitor Parking
14. Student Apartments
15. Phoenix Sports Center
16. Physical Plant Center
17. Utility Control Center
18. Children's Center
19. Ecumenical Center
20. Arboretum Center
21. Outing Center
22. Shorewood Clubs
23. Pro Shop
24. Golf Course
25. Tennis Courts
26. Playing Fields
27. Soccer Field
28. Upahki Pond
29. Amphitheater
30. Communiversity Park
31. Parking
32. Weather Station
GREEN BAY
SHOREWOOD
PHOENIX
BLUE
GOLD
GREEN
CIRCLE DRIVE

Map

Directory

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Elmer Havens, Secretary of the Faculty

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Patrick Joyce, Green Bay
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Lee Meyers, Florence
Bonnie Platten, Green Bay
Ellen Schell, Green Bay
Benjamin J. Teague, Green Bay
Gordon Ware, Green Bay
Marian Warpinski, Green Bay

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Mehra, Anjani K., Associate Professor of Science and Environmental Change; B.S., M.S., Allahabad (India); Ph.D., I.I.T., Kapur (India).

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Morgan, Michael D., Associate Professor of Science and Environmental Change; B.A., Butler; M.S., Ph.D., Illinois.

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Appendix

Academic Rules and Regulations

DEFINITIONS OF TERMS

Credit. A quantitative unit of measurement of effort devoted to reading, discussion, lecture, and other activities associated with the learning process. Usually a credit involves 15 hours of classroom time and an additional 33 hours of out-of-classroom effort.

Credit Loads. The number of credits a student is carrying as a program at a given time in a term, e.g., at registration or at the end of the semester. All credits, regardless of grading status, count toward the credit load for certain purposes.

Maximum Credit Load. A specific limitation of the number of credits that a student is allowed to carry at any time during a term. For an undergraduate student in good standing the maximum credit load for a semester is 18 credits and for a student on probation this maximum is reduced to 15 credits; for shorter terms lower pro rata limitations are specified.

Minimum Credit Loads. A specific number of credits that must be carried to be eligible for a variety of programs and benefits, e.g., athletics and financial aids.

Attempted Credits. The number of credits which are taken for a grade that will affect the grade point average. Some attempted credits may not count as degree credits, e.g., all Academic Support Program courses do not carry degree credits.

Degree Credits. Those credits which will count toward the credits required for a degree. Certain courses in physical education and all Academic Support Program courses do not result in degree credits even though they may have a credit value assigned for certain load measurement purposes.

Completed Credits. The number of credits, excluding audited credits, for which a final grade, other than a temporary grade of I or N, has been received. P-NC credits, passed, degree credits, and attempted credits are included.

Audited Credits. Credits associated with courses in which the student has elected to enroll as an auditor. While these credits are subject to maximum credit load and fee assessment they are of no significance for any other purpose. Enrollment on an auditor basis is subject to special conditions.

P-NC Credits. Credits taken under a special grading option; these credits do not have any effect on the grade point average but, if passed, may add to the degree credits earned.

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 graded basis. P-NC, incomplete, and audit grades and credits have no effect on the grade-point average. Only those courses attempted at UWGB are included in the GPA. Example for a semester:

Grades Received	Credits	Grade Points
A	3	12
B	4	12
C	4	8
P	3	0
	11	32

32 divided by 11 equals 2.9 GPA.

Cumulative Grade Point Average. A GPA for all terms at UWGB calculated by dividing the cumulative total grade points earned by the cumulative total attempted credits.

Probation. A status assigned to a student for lack of academic progress as measured by completed credits or inadequate performance as measured by the grade point average. This should be considered as an advisory warning that improved performance is necessary to continue as a student.

Academic Drop. A status assigned when the record of academic progress and/or achievement is unacceptable to the extent that the student is not permitted to continue to enroll at the University.

Good Standing. A status assigned when a student is making adequate academic progress and his/her cumulative GPA is 2.0 or better.

GRADING SYSTEM AND GRADE POINTS

Grade point averages (GPA) indicate academic and class standing and are a means of measuring the quality of the student's academic work. Grade point averages are computed on a 4.0 basis. Point values for letter grades are:

Letter Grade	Grade Points Per Credit
A (Excellent)	4.0
B (Good)	3.0
C (Fair)	2.0
D (Poor)	1.0
F (Unacceptable)	0.0
WF (Unofficial Withdrawal)	0.0
P (Pass—any passing letter grade)	No effect (undergraduate only)
NC (No-credit letter grade of F)	No effect (undergraduate only)
U (Unsatisfactory audit)	No effect (undergraduate only)
S (Satisfactory audit)	No effect (undergraduate only)
N (No report from instructor)	No effect—lapses into an F after one semester
I (Incomplete)	No effect until removed or lapsed into an F

A student may elect courses on a pass-no credit basis with certain restrictions; see the section on P-NC grading.

Since grading standards differ among institutions, grades received from institutions other than the University of Wisconsin–Green Bay are not used in computing the grade point averages.

ACADEMIC STANDING

Every student is expected to maintain certain standards of academic achievement in all work carried at the University. The University has established these standards in terms of the quality of the work as measured by the semester and cumulative grade point averages, and the quantity of work satisfactorily completed, as measured by the proportion of the credit load successfully completed each semester.

Certain exceptions are allowed for part-time students, but unless otherwise stated, part-time students are expected to meet the same standards of academic achievement as any other student.

Academic standings are reviewed at the end of each term and a revised standing is reported to every student on the final grade point which is issued after each academic term.

PROBATION AND DROP STATUS

The University is concerned about students whose academic achievements seem to indicate that they are not able to meet the expectations of their instructors or are experiencing other problems that may be interfering with their studies. A probation action is an advisory warning that a student should take appropriate actions to improve his/her achievement. A drop action is taken when the University feels that the student's academic achievement record to date indicates a need to reassess and reevaluate goals and plans. A student who has been placed on probation or drop status should give careful consideration to factors that may be involved. The University encourages such students to seek assistance from counselors, advisers and course instructors, and provides various testing services and study skills development programs.

Every student is expected to maintain at least a C average (2.0 GPA) on all work carried, whether passed or not. Failure to achieve this minimum C average (2.0 GPA) in any term will result in a probation, continued probation, or drop action at the end of that term. Drop actions are taken at the end of each term. However, if a student was not enrolled for the fall semester, a drop action will not be taken solely on the basis of inadequate achievement in the January Interim.

Every student is expected to complete successfully a certain proportion of the credits for which he/she originally enrolled. Failure to meet this second standard in each semester will result in a status of probation, continued probation, or drop. Successful completion means that a grade of A, B, C, D, or P was earned. This does not include previously passed courses which are being retaken voluntarily.

A student on probation may return to good standing if he/she fulfills certain requirements.

The following shows the actions resulting from grade point averages both for students in good standing and for students on probation or continued probation.

Student in Good Standing

Grade-Point Requirements and Actions:
—1.0 to 1.999 end of semester or term GPA will result in probation status;
—0.999 or less end of semester GPA will result in a drop status;
—action on a part-time student will be withheld until at least 12 credits have been attempted at UWGB.

Credit Completion Requirements and Actions:

Original Credit Load	Credits Successfully Completed	End of Semester Status
12 or more	8 or less	Probation
9 - 11	5 or less	Probation
6 - 8	2 or less	Probation

Student on Probation

Grade Point Requirements and Actions:
—1.50 to 1.999 end of semester or term GPA will result in continued probation status for one term;
—1.49 or less end of semester GPA will result in a drop status;
—2.0 or better end of semester or term GPA and a 2.0 cumulative GPA will result in a return to good standing.

Credit Completion Requirements and Actions:

Original Credit Load	Credits Successfully Completed	End of Semester Status
12 or more	8 or less	
9 - 11	5 or less	Drop
6 - 8	2 or less	
12 or more	9 - 11	Continued
9 - 11	6 - 8	Probation
6 - 8	3 - 5	
12 or more	12 or more	If cumulative GPA
9 - 11	9 or more	is 2.0 or better, return
6 - 8	6 or more	to good standing.

Student on Continued Probation

Grade Point Requirements and Actions:
—Less than 2.0 cumulative GPA will result in a drop status;
—2.0 or better end of semester or term GPA and a 2.0 cumulative GPA will result in a return to good standing.

Credit Completion Requirements and Actions:
—Same as for probation standing.

Drop status is assigned for a period of one semester for the first drop earned. If a student is dropped for a second time, the drop status will be for a period of two semesters. A student who is dropped at the end of the fall semester may enroll in the January Interim with the understanding that he/she is not eligible to continue for the spring semester unless achievements during the January Interim would 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/she is not eligible to continue for the fall semester unless achievements during the summer session would result in a return to good standing or continued probation.

Conditional matriculants must meet special contractural requirements specified at the time of admission. When a CM student is removed from CM status he/she must then meet all normal requirements. While enrolled as a conditional matriculant classification, the determination for drop action or continued conditional matriculant status will be made by the Admission Review Committee.

Appeals

Academic probation is not subject to appeal. Academic drop status may be appealed by means of a special academic appeal to the Vice Chancellor for Academic Affairs or his designated representative. The Vice Chancellor may seek advice from the Academic Actions Committee. Appeals should be filed within two weeks after the end of the semester. A student who is allowed to continue will be on probation and will be subject to any other special conditions that may be designated. An academic drop period provides time for a student to give careful thought to the situation that resulted in the drop action, to seek appropriate non-credit remedial preparation or assistance, and to reassess goals and aspirations in the context of the academic achievement record that has been compiled. Any appeal must include a clear explanation of the problems that resulted in the inadequate achievement and how the student proposes to resolve those problems.

Readmission

Readmission after an academic drop is not an automatic process. The Office of Admissions may decide to deny readmission or to grant readmission subject to specific requirements or conditions. A student who is readmitted after an academic drop is always readmitted on probation and subject to the normal standards of progress and achievement. An application for readmission should be submitted to the

Director of Admissions at least 30 days in advance of the desired term of admission to allow for the full review process that may be required.

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 Counseling and Student Development Center, an adviser in the office of Academic Advising, or the Dean of Students. 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 twelfth week of a semester, the sixth week of an eight week summer session, or the second week of a January Interim period. If a student has not attended classes or taken the final examination in a course, a grade of WF will be given unless official withdrawal procedures have been followed.

A decision to withdraw should be given careful consideration in terms of academic retention policy, veteran's benefits, Social Security benefits, financial aids, and other situations that have specific prohibitions against withdrawals. *Any student who withdraws from two consecutive semesters will not be eligible to enroll without seeking readmission.*

All students should be aware of the fact that any semester in which a withdrawal is made after the end of the second week of a semester does count as a semester of enrollment for academic progress standards and will result in a probation action. If a student can provide evidence that a withdrawal is necessary due to unforeseeable extenuating circumstances he/she may be allowed to withdraw without a probation action if such evidence is provided at the time of withdrawal.

COURSE DROPS

The course drop deadline has been established to allow the student ample opportunity to decide 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 to be utilized. In some courses, feedback from a formal evaluation process may not be available before the drop deadlines. 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, feedback in the form of grades on papers or examinations is not an acceptable circumstance that would 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, a reasonably early drop means that the student can then devote a greater portion of available study time and effort to remaining courses, and the instructor will be able to devote more time and effort to the students participating in the course. The 8 week deadline for 14 week semester courses should provide an adequate opportunity to become acquainted with what a course is all about and make a decision as to whether it fits into one's program of study.

The two phases of the drop policy are:

First 8 weeks of semester
—Student can drop any course without signature of instructor.
—No record of action on transcript.

9th - 14th weeks
—No official drops allowed. WF or F appears on transcript.

For terms or classes of a shorter duration than 14 weeks, pro rata deadlines shall be established as follows:

Course Length in Weeks	Drop Deadline—End of Course Session Week
1	Wednesday, Week 1
2	Friday, Week 1
3	Wednesday, Week 2
4	Friday, Week 2
5	Wednesday, Week 3
6	Friday, Week 3
7	Wednesday ,Week 4
8	Friday, Week 4
9	Wednesday, Week 5
10	Friday, Week 5
11	Wednesday, Week 6
12	Friday, Week 6
13	Wednesday, Week 7
14 or more (normal semester course)	Friday, Week 8

A course session week always ends on a Friday. All courses that begin or end on non-standard session weeks will have a non-standard drop deadline, e.g., 742-154-2, Sect. 1, meets February 7 through March 23 (7 weeks), thus the drop deadline would be Wednesday, March 1.

COURSE ADDS

After final registration a student may add other courses to his/her program if such an addition does not exceed the maximum credit load limitation and is completed before a specific deadline for additions. During a normal semester the add period is limited to the first two weeks of classes; for shorter terms, an earlier deadline will be in effect. A student may petition for an exception if unforeseeable extenuating circumstances prevent compliance with the deadline.

LATE PROGRAM CHANGES AND WITHDRAWALS

A student may be granted permission to drop a course or courses after the eight week deadline, or make a complete withdrawal after the normal twelfth week deadline, if one of these specific criteria can be verified:

—The student has serious mental or physical health problems as verified by a physician's or professional counselor's statement.

—There is a death or prolonged serious illness in the immediate family as verified by the family physician.

Under these circumstances, a counselor in the Counseling and Student Development Center or an adviser in the office of Academic Advising is authorized to grant permission for a late drop or withdrawal. If a student has any other reason for requesting a late drop or withdrawal he/she should direct a written appeal, stating the circumstances, to the Vice Chancellor for Academic Affairs, or the Vice Chancellor's designee for consideration.

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/she is responsible for notifying the instructor(s), in writing, of the reason for nonattendance and intentions to complete the course. Registered students are obligated to pay all fees and penalties as listed on the fee schedules; nonattendance does not alter fee obligations in any way.

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 will not be allowed to register for credits in excess of 18 if he/she does not have *prior written permission* to carry an overload from the Academic Affairs Vice Chancellor or his/her designee (Coordinator of Academic Advising). Likewise, any course adds that would have the effect of exceeding the maximum will not be 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/she will then be considered a part-time student. A student who reduces the credit load below 12 credits must check with the proper offices concerning implications for financial aids, government benefits, and other programs with credit load eligibility stipulations, including standards of progress for probation and drop status purposes.

MAXIMUM CREDIT LOAD— PROBATIONARY STUDENTS

Maximum semester credit load for students on probation is 15 credits.

GRADES AND GRADE APPEALS

Each student will receive a grade from the instructor in charge of a course at the end of the respective semester or session. Grades must be in the Office of the Registrar no later than 96 hours after the final examination. Accompanying grade rosters received from the Registrar each semester will be information on current grading policies.

If a student is dissatisfied and wishes to appeal a particular course grade, he/she must first contact the instructor who issued the grade. If the student is still dissatisfied he/she may appeal to the concentration or professional program chairperson who must, in turn, consult with the instructor in the course. If the student wishes to appeal further, he/she consults with the Academic Affairs Vice Chancellor who also consults with the instructor and the appropriate chairperson. The Vice Chancellor or chairperson acts in an advisory capacity to the student and instructor.

GRADE CHANGES

All final grades, with the exception of incompletes (I) or progress (PR), will become permanent grades at the end of the next regular semester. Any discussions with faculty regarding grade levels or missing (N) grades should be pursued within this time period.

INCOMPLETES

If, due to unusual yet acceptable circumstances, a student is unable to take or complete a final examination or other course work, he/she may arrange with the instructor to receive an "incomplete" in the course. The incomplete is filed with a tentative grade and a specific deadline for completing the work required for removal of the incomplete. The course instructor must file an incomplete removal form, stating the conditions for removal as well as the specific deadline for removal, before a grade of incomplete will be accepted for recording. Since the course is incomplete, grade points and degree credits remain undetermined until a permanent grade is established; however, a tentative academic action may be assigned on the basis of grades and credits received in other courses. Such an action is reviewed after the incomplete has been converted into a permanent grade.

Students who miss a final examination receive an F unless they are able to prove that some acceptable factor beyond their control prevented taking the examination.

INCOMPLETES FOR GRADUATING SENIORS

Seniors anticipating graduation must remove all pending incompletes by the end of the sixth week of the final semester of attendance. Outstanding incompletes will be considered as I grades for purposes of estimating eligibility for graduation and, if applicable, honors.

REMOVAL OF INCOMPLETES

The course instructor is responsible for informing the student, the Office of the Registrar and the concentration or professional program chairperson as to the specific deadline for removal of an incomplete. If no earlier deadline is specified, an incomplete (I) must be removed no later than the last day of classes for the next semester; *this is the absolute maximum allowable deadline.* If no other grade is submitted by the instructor within this deadline, incomplete (I) grades shall become a permanent grade of F with normal effect on the student's grade point average and earned credits.

A student may file a special petition for an exception to the removal deadline if bona fide unanticipated extenuating circumstances prevented compliance with the removal deadline, such as the following:

—The student has serious physical or mental health problems which have been documented by a physician or professional counselor's statement.

—The student has had a death or serious illness in the immediate family and this has been documented by a physician's statement.

—The course instructor is on leave during the semester for removal.

If a student is a graduating senior, all I grades must be converted to a permanent passing or failing grade before commencement date. All grades on the record shall become permanent as of that date with no possibility for removal or change.

An incomplete (I) grade is normally a temporary grade *which is given when, due to unforeseeable extenuating circumstances,* a student is unable to complete the course requirements within the normal terms, i.e., illness during the final examination period.

REPEATING COURSES

A student may choose to repeat any course. Repeated courses will be designated with the letter "R" after the grade on the transcript. When a repeated course is completed, the original grade and entry on the transcript will remain, but the credits, grade, and grade points earned for the most recent completion shall be the only enrollment completion that will have effect on the cumulative attempted credits, grade points earned, and grade point average. Courses repeated at another institution have no effect on the grade point average at UWGB.

Repeated courses do not count toward fulfillment of standards of progress requirements, for probation and drop status purposes, unless the previous grade was NC, F, WF, S or U.

PASS-NO CREDIT ENROLLMENT

Pass-no credit is a student-elected grading option available if a student does not want a grade that would affect his/her grade point average. *Courses used for a concentration, disciplinary program, professional program (including all courses in the teaching majors and minors), business supportive field of study, independent study, senior distinction, or all-University requirements courses, cannot be taken on pass-no credit,* but courses used for tool subjects and electives can be taken in this manner. Courses in the Academic Support Program, student teaching, and any course that cannot be counted for degree credit are offered exclusively on a pass-no credit basis. Graduate courses cannot be taken on a P-NC basis.

If a course is taken on pass-no credit, grades of A, B, C, or D are designated pass and the grade is recorded on the final grade slip and the permanent record card as a P. These grades are not used in computing the grade point average, but the earned credits do count towards graduation.

If a student should receive a grade of F in the course, the grade slip will read NC or no credit. An NC does not affect the grade point average or earned credits.

For example, if a student would like to explore a completely new area of interest it may be advisable to take it on pass-no credit since it may be difficult to estimate the difficulty of the work required as well as the level of other students in a course.

However, if a student is considering applying for graduate or professional schools or transferring to another undergraduate campus, this grading system may have an adverse effect on admission. Graduate schools generally prefer letter grades, because this enables them to better judge potential for academic success.

Since instructors generally do not know which students are taking their courses on pass-no credit, they record a letter grade. The letter grade is changed to a P or NC by the computer. This letter grade will be released *only* upon the student's written request and the written request of an academic official from the college or university, or prospective employer, to whom the grade is to be sent. Students are cautioned about taking courses on pass-no credit even though the grade can be released in this way. Prospective employers often share many of the negative feelings about pass-no credit grades that graduate schools have. For more information check with an academic adviser before classes begin.

The decision to elect P-NC grading should be made at the time of registration and no change in P-NC status decisions is allowed after the normal course add deadline. With the exception of Academic Support courses, student teaching, and courses which are not offered for degree credit, no course is graded exclusively on a P-NC basis.

AUDIT ENROLLMENT

A student may audit a course if space is available after students who have enrolled for credit have been accommodated. Special policies apply to senior citizen auditors and any other students who enroll under the special half-price fee arrangement; these policy statements are published in the *Timetable* for each term. Conditions and requirements for class participation are completely at the discretion of the course instructor. A student enrolled for credit may change to auditor status, for grading purposes, at any time up to the course drop deadline. Audited credits do not count in the determination of credit completion requirements or for any program or benefits eligibility status. Audit credits do count toward maximum credit load limitations. Any change from audit status to credit status, for grading purposes, must be completed within the course add period.

PROGRAM DECLARATION AND ADVISERS

To ensure the best possible program planning and course selection, all students are strongly encouraged to seek out advice and information on majors, all-University requirements, tool subjects, and other programs as soon as possible. All 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 for each registration until the student has filed an Academic Plan Form. A student who attains junior standing (54 or more degree credits) must declare a major before he/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 before he/she is allowed to register for another term.

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