1978-1980 Undergraduate Catalog

University of Wisconsin Green Bay

Contents

Introduction

INTRODUCTION

Students who have decided to continue their education beyond high school bring different kinds of expectations and goals to the choice of a university program.

One young man may be certain about his chief academic interest: he wants to study geology. Whether he eventually puts his knowledge to use in research, testing soils, or exploring for new oil deposits, doesn't concern him right now. The choice of a career direction can come later.

Another student may want to build her program around a deep concern for the problem of world hunger. She is considering a major in nutritional sciences along with other courses in which she can examine the issues faced by developing countries.

Someone else—active through high school in everything from band to basketball—hasn't sorted out his interests to the point where he is ready to settle on a major. He is counting on the first year of college as a time to explore some alternatives.

A secretary prepares to return to the campus to pursue a business degree. A homemaker decides, at 30, that she wants to be a music teacher, and a veteran police officer makes plans for a second career, in social work, that he can pursue after retiring at 55.

Each represents a different perspective on higher education—and each can find a comfortable "fit" with the distinctive academic plan of the University of Wisconsin–Green Bay.

It is a plan which brings together two influential traditions in higher education: the tradition of the liberal arts college and the tradition of the land-grant university.

From the liberal arts tradition comes emphasis on rigorous learning in the academic disciplines, critical analysis of issues, and scrutiny of value questions from every area of human life. Also from this tradition of the small liberal arts college comes a commitment to be concerned about the individual.

Interest in the individual student may express itself in various ways: in an individualized approach to admissions and flexibility in planning a course of study; in availability of small classes with an open, informal atmosphere; in ready access to individual counseling, whether for academic or personal matters; in faculty who often are ready to be friends and fellow learners with those in their classes.

The land-grant tradition contributes an emphasis on the practical application of learning, experience in the community, and preparation for careers. As at the best land-grant institutions, teaching, research, and community service are regarded as interrelated, rather than activities existing in isolation from each other.

At UWGB, the two traditions are integrated in an academic plan with three major components: disciplinary programs, concentration programs, and professional programs.

A student can work in one or more of the traditional disciplines of the arts and sciences curriculum: anthropology, art, biology, chemistry, and so on.

But because the academic plan includes the application as well as the acquisition of knowledge, each student also chooses a concentration. The application of learning is the emphasis of the concentration programs. A concentraton is broadly focused on a contemporary issue or problem which may have many facets. For understanding and action in the problem area, knowledge and insights are required from a cluster of disciplines.

In the core curriculum of the concentration in Urban Studies, for example, the student examines life in the city from the viewpoints of a number of academic disciplines: economics, political science, sociology, psychology, history and architecture, among others. He or she will probably also take courses—such as computer science and statistics—which develop analytical skills. The program may also include work in depth in such subjects as environmental design and urban ecosystems. A concentration program may follow one of several "tracks" or it may be highly personalized, depending on the student's interests. The nine concentrations are broadly defined, so that nearly every student can find one to encompass his or her academic interests.

Professional studies—career preparation in such areas as education, business and public administration, and social services—are the third component.

All three parts of the curriculum are related, mutually supporting each other. And the flexibility and depth of the UWGB academic plan derive from the fact that the student doesn't just take one, but typically builds a program from all three components.

A student enrolling at UWGB may start at the point which makes the most sense. He or she may begin with a focus on a particular subject, like geography, and then relate that subject to its application in a problem area, like land-use planning, or in a professional program, such as recreation resources. Or the student can begin with a problem focus, like the needs of the aging, enroll in the Human Development concentration, and work from there into such individual disciplines as psychology, sociology, and biology to complete a program of study. A third approach is represented by the person who comes to the University with a career choice in mind. Someone who wants to work in performing arts management, for example, might enroll in the Communication and the Arts concentration, take supporting work in the humanities—such as aesthetics, cultural history, art and music criticism— and add work in accounting, management, marketing and other subjects from the professional business program.

Along with this array of choices, the University provides a common educational experience for all of its students in a sequence of all-University requirements. Through these courses, each student gains the opportunity to explore additional academic areas which support and enrich his or her major field of interest. Required courses in the three traditional domains of knowledge—the natural sciences, social sciences, and humanities—combine basic information on the content and method of a field of knowledge with a consideration of the value implications of that knowledge.

Other opportunities exist as a natural outgrowth of the academic plan: flexibility in shaping one's program, including the freedom to design a personal concentration; independent study on campus or in the community; study experiences in a foreign country, in an "other culture" setting in the United States, or in an exchange program with another college or university; credit by examination; participation in courses initiated or led by students; an internship or part-time job related to a concentration or professional program.

The University encourages each student to take the initiative in planning an academic program, but at the same time provides resources for guidance. Counselors from the office of Academic Advising help students at registration time to select courses and locate appropriate faculty advisers. At other times the counselors can provide information and advice on such topics as majors and minors, credit transfers and degree requirements. The office of Placement and Career Counseling

maintains a large and current career library and offers assistance in career and life planning to those who are just beginning their education as well as to graduating seniors. Help with personal problems is available at all times in the Student Development and Counseling Center.

AT UWGB, academic programs and student services have been organized around a single goal: to prepare each student for the future in a rapidly changing world. Whether studying within the confines of a discipline,whether integrating instruction, research and practical experience in a concentration or professional program, or working in preprofessional courses toward a career which requires several years of study beyond the bachelor's degree, every student is encouraged to cultivate attitudes and abilities which will be useful through a lifetime of work and leisure. Self-discipline, self-understanding, an appreciation of cultures and values beyond those of Western society, the skill to organize and express ideas, the ability to make critical judgments, to analyze and solve problems and work with others—these, too, are part of learning. Without such abilities, the accumulation of facts and figures and dates is meaningless.

In the cultivation of these abilities, in the pursuit of academic excellence, the UWGB academic plan offers both freedom and responsibility. Students can exercise great freedom in shaping an education around individual interests and goals; they assume at the same time responsibility for putting to use the resources at hand which can help to make a success of the years on campus—and to lay the foundation for a productive and satisfying life.

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.

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 3400 undergraduate students and about 350 students in its master's degree program.

Although most (91 percent in 1977-78) of the University's students are from Wisconsin, the student body reflects a healthy diversity. Sixty-one of Wisconsin's counties are represented, as well as 34 other states. International students from about 20 countries attend UWGB: among them are students from Hong Kong, Japan, Nigeria, Thailand, Kenya, Guyana, Qatar, Ghana, Colombia, Ecuador, India, Turkey, Norway, Belgium, Canada, France, and the Philippines.

UWGB students bring a variety of contributions to the classroom and campus through their range of ages and experience. Nearly one-third of the undergraduates at UWGB are 25 years or older. There are slightly more women undergraduates (51 percent) than men (49 percent). Many students have attended some other college or university before coming to UWGB—47 percent of the incoming undergraduates in 1977-78 were transferring from another school.

Among the challenges of attending UWGB are its high academic standards. In the 1977-78 academic year, 85 percent of the incoming freshmen ranked in the upper half of their high school graduating classes and 50 percent came from the top quarter.

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

A study of graduates from the 1976-77 academic year showed that six months after graduation 81 percent were employed, attending graduate or professional schools, or pursuing teacher certification. (Sixty-five percent were employed; 16 percent continuing their educations.) Two percent of the graduates were not seeking employment, leaving eight percent seeking jobs at the time of the study. No information was available on the remaining nine percent.

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

Other '76-77 graduates continuing their education were distributed widely across the United States and in other countries. Some were studying law in such institutions as Antioch School of Law in Washington, D.C., and UW–Madison. Master's in Business Administration candidates were studying at the University of California at Berkeley, UW–Madison, Indiana State University, and others. The range of other graduate studies and locations was broad: management at the City University of London in London, England; mining engineering, water chemistry, and pharmacy at UW–Madison; German at the University of Iowa; aquatic chemistry and environmental studies at the University of Texas–Dallas; dentistry at Marquette University; theology at General Theological Seminary in New York; architecture at the University of Colorado; ecology at the University of Tennessee; English at Washington State University; community health at the University of Texas–Houston; linguistics combined with English as a second language at Southern Illinois University at Carbondale, 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 now teach. Examples include some of the faculty members in business and in public administration, the sciences, and other areas.

Of the 172 full-time faculty members, 158—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 632-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. An 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. Groups of academic buildings housing related concerns are placed like points of the compass on the north, south, and west around the Library Learning Center.

This grouping includes the University Commons, where the food service, snack bar, tap room, and recreation and activities rooms are located.

The academic buildings and the Commons are connected outdoors by plazas and walkways and indoors by a system of concourses. Ramps and elevators in every building provide accessibility to all facilities for 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 some student organizations and a club room which serves the golf course 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 Child Care 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 very 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; 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 which are evidence of 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, 1978 through August 31, 1980.

All of the information contained in this catalog was accurate at the time of its printing, which was well in advance of the 1978-79 academic year. In the normal course of things, changes in some of this information can be expected to take place before August 31, 1980. 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 distributed 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 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 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. Those falling below a 2.0 average 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.

Dean's Honor List

UWGB recognizes high scholastic achievement for full-time students each semester by compiling a Dean's 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 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 course 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 course loads during the regular semesters.

January Interim Period

UWGB's 4-1-4 calendar sets January aside as a month in which the student can concentrate on a single course or project emphasizing relevance, focus, intensive learning, and 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 and 483X) 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*—month-long 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 598) under faculty supervision; *developmental or extra elementary level work*—especially in mathematics, English, and foreign languages, and particularly for freshmen and sophomores.

January programs carry from one to four credits. A student preregisters for the January period when preregistering for the fall semester. *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 some 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 matter 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 private Bay Apartments next to the campus, or in nearby off-campus locations.

During the summer also a number of 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, basketball, soccer, golf and swimming. Many students commute to these clinics and workshops, but the Bay 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 Dean 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 four 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, and at the same time 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 11 formally constructed 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 problem 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 are the study of the chemical aspects of water pollution (Science and Environmental Change concentration/chemistry-physics 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 most 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).

The 27 credits of liberal education and distribution will most likely be taken in the freshman and sophomore years. This requirement includes nine hours 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

485-307 Other Cultures Through Humanistic Studies: Latin America Today
and
485-308 Other Cultures Through Humanistic Studies: Yucatan
or
485-309 Other Cultures Through Humanistic Studies: The Americas Look at Each Other

552-104 Introduction to Literature
and
485-204 Humanistic Values Through Literature
or
242-380 The Arts: London

938-240 The City in American Literature and Arts
and
938-340 Urban Visions and Cultural Traditions
or
242-380 The Arts: London

242-323 Language and Human Conflict
and
485-376 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 an Other Culture: London

426-202 The Growing Years
or
426-210 Introduction to Human Development
and
426-215 Issues in Human Development

875-201 Fiction and Society I
and
875-202 Fiction and Society II

938-230 Values in Black and White America I
and
938-231 Values in Black and White America II

Natural Sciences and Mathematics
862-180 River Basins in Transition I
and
862-181 River Basins in Transition II

862-184 Patterns of Scientific and Technical Based Problem Solving I
and
862-185 Patterns 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
779-204 Fertility, Reproduction and Family Planning

694-251 War Against Hunger I
and
694-252 War Against Hunger 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. These by no means are the only courses that will be accepted for distribution credit; additional courses will be designated and identified in each semester's *Timetable*.

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 ideals and commitments which shape individual and social experience.

The senior seminar encourages students to extend knowledge gained in their earlier coursework to the broad fundamental concepts and issues that are the basic social and intellectual concerns of our time. Its aim is to enlarge students' perspective, analytical ability, and interest in the enduring problems of self and society as they relate to contemporary issues. Courses are organized around general topics; students may choose one seminar from among them. Senior seminar courses are described at the end of this section on all-University requirements.

Transfer students' standing with regard to all-University requirements is based on class standing 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 requirement by transferring or completing the nine credits each in the humanities and fine arts, social sciences, and natural sciences and mathematics.

Students holding associate of arts degrees from accredited institutions will be assumed to have junior standing for purposes of all-University requirements.

Specific requirements for transfer students are explained in the chapter on Admission, Expenses, and Financial Aids.

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;

—increasing awareness of alternative approaches to individual and social issues and helping students to be more reflective and self-critical of the positions they choose to affirm.

Senior Seminars

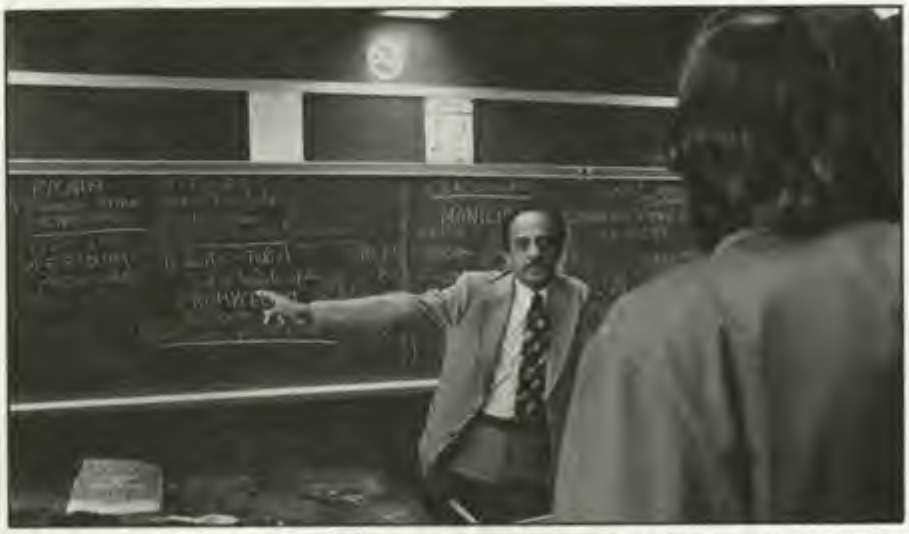
Faculty members who teach senior seminars, their interests, and brief descriptions of the seminars follow:

Professors: Curtis Graham, accounting, systems, management processes; William Kaufman, human physiology, environmental physiology, temperature regulation; Robert Maier, administration, management, physiology, bio-chemistry of soil-plant-animal-human relationships; James Murray, regional and community economic development, quantitative methods of spatial analysis, environmental economics, poverty; George O'Hearn, physics, cultural impact of physics, computer simulation; John Reed, botany, biology, international scientific research, environmental programs.

Associate Professors: Thomas Churchill, creative writing, fiction, history, playwriting; Norris Durham, behavior and ecology of monkeys, population differences in alcohol metabolism, dermatoglyphics, inherited diseases; Kenneth Fleurant, literature as a social force, humanistic perspective on normal and abnormal behavior, surrealism, existentialism, "absurdism"; Martin Greenberg, social science fiction, Middle East politics, the study of the future; Hallett Harris, wildlife management, environmental sciences; Estella Lauter, images in poetry, myth, aesthetics, analytical and humanistic psychology, women's studies; V.M.G. Nair, plant pathology, international quarantine regulations through the United Nations and international agencies; Nikitas Petrakopoulos, (chairperson), mathematical modern culture, theoretical physics, applied mathematics; Richard Presnell, teaching-learning processes in human relations, ecological education, and other areas; James Wiersma, techniques to assist understanding of human impact on aquatic ecosystems.

Assistant Professors: Sidney Bremer, American cultural mythology of urban places and stereotyped groups; David Littig, urban and transportation policy, humanistic psychology, politics; Craig Lockard, history, anthropology, East and Southeast Asian studies, Third World societies and development, American politics; Clary Nelson-Cole, humans and religion, African art and philosophy, rituals, masks and masquerades; Sharon O'Brien, Federal Indian law, comparative legal systems, human rights, international law, politics and media, women and law.

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 Man (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 (R. Maier)
Focuses on developing practical, and perhaps new, approaches to overcoming world hunger which involves understanding the present interdisciplinary nature of the problem; what has been done in the past to solve the problem; the state of current knowledge; and synthesis 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 (S. O'Brien)
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, invent new technologies, and create imaginative and highly responsive new democratic systems.

867-409 The Humanistic Movement: Its Philosophy, Principles, and Applications (D. Litlig)
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 (N. Durham)
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. Read)
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 (R. Maier)
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 (C. Graham)
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.

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, 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.

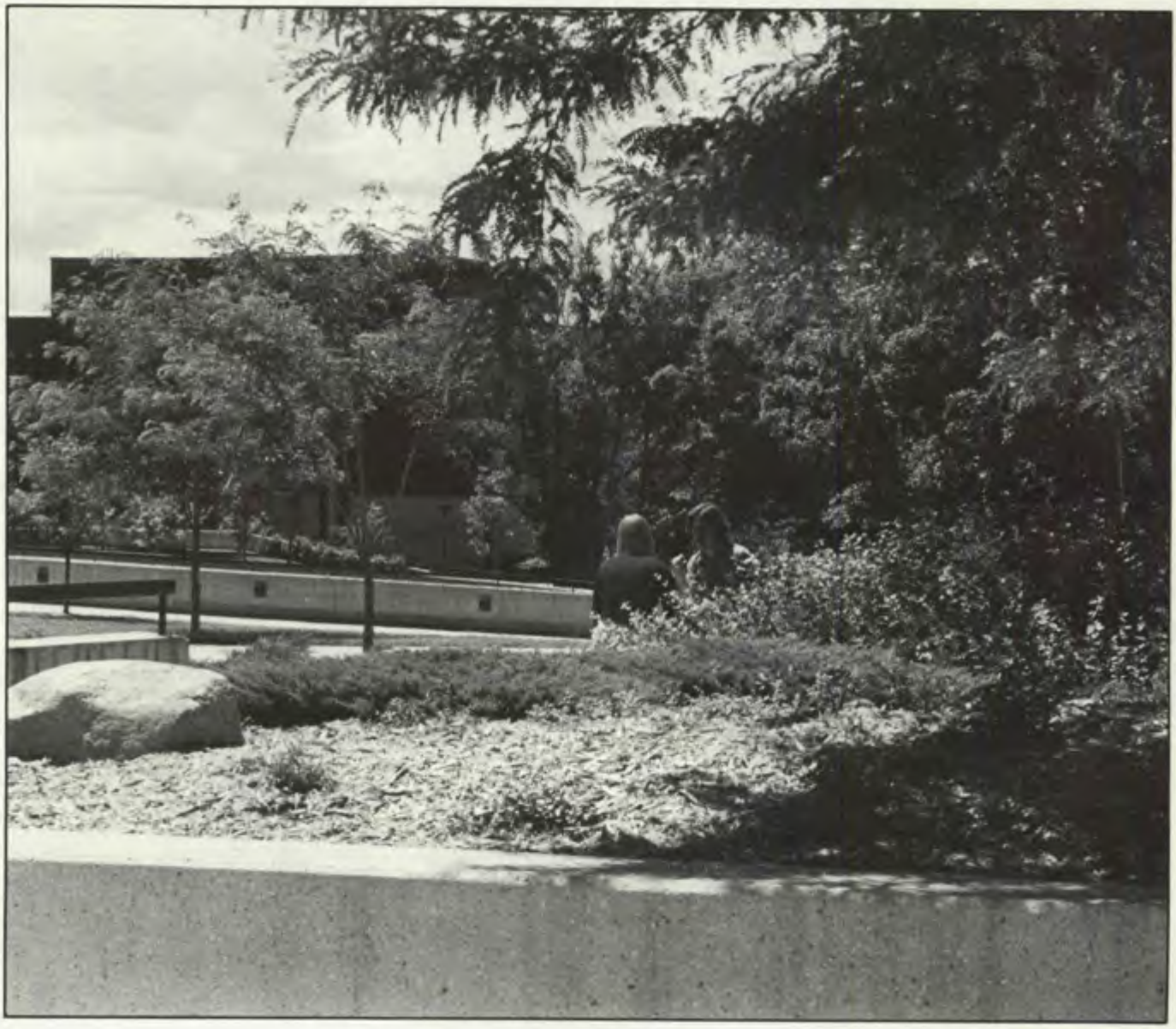
RESIDENCE REQUIREMENT

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 Dean 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; if possible, such a student should contact the office of Academic Advising as early as possible to enhance appropriate course selection for all-University requirements, and tool and background subjects for the probable major.



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.

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

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

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 to one of three emphasis areas: theory and technology, resource management and administration, science communication and interpretation.

Disciplinary Programs:

Biology
Chemistry
Chemistry-Physics
Earth Science
Mathematics
Physics

PROFESSIONAL STUDIES

Concentration:

Managerial Systems
Business and administration including accounting, finance, labor and personnel, management, and marketing.

Professional Programs:

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

Public and Environmental Administration
Public administration skills for non-business majors.

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

Social Services
Professional preparation in social work and community psychology.

INTERCONCENTRATION PROGRAMS

The Arts in Society
Environmental Design
Environmental Health Sciences
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. UWGB's 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. Descriptions of the physical education and coaching certification programs, Skills Learning Program, Graduate Program, Associate of Arts degree, and Extended Degree 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 to be considered as essentially advisory and not as firm requirements. 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 only, 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

Curriculum Area Numbers

The curriculum area number listed with each group of course descriptions is used for identification and record keeping. The student will need to combine the curriculum area 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 curriculum area; the last three to the course number. The six-digit number also is used to refer to course prerequisites.

Courses are listed numerically by curriculum areas 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.

Curriculum area numbers are:

156 Anthropology
204 Biology
226 Chemistry-Physics
242 Communication and the Arts
246 Communication Processes
255 Social Sciences
296 Earth Science
298 Economics
302 Education
350 Public and Environmental Administration
416 Geography
426 Human Development
448 History
478 Human Adaptability major of Human Biology
485 Humanistic Studies
532 Recreation Resources
552 Literature and Language: English-American
553 Skills Learning Program—English
554 Literature and Language: French
556 Literature and Language: German
558 Literature and Language: Spanish
575 Managerial Systems
600 Mathematics
601 Skills Learning Program—Mathematics
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
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
938 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 curriculum area student-led course number. The listed title will appear on student transcripts. Student leaders are eligible to receive double credit. 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 by the concentrations and professional programs 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.

Normally a student can take only one directed study course per semester. A cumulative grade point average of 2.5 or higher as of the previous semester is required for enrollment in 298 courses. A cumulative 2.0 grade point average is required to enroll in a 498 course. The instructor's advance permission in writing is always needed for registration. Directed study must be taken for a grade and not on a pass-no credit basis. A maximum of 10 credits can be accumulated in 298 and 498 courses without petitioning for special permission.

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. Information concerning specific details is available from the concentration advisers and chairpersons. The student is encouraged to register 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; Michael Kazar, watercolor, art education, aesthetic awareness; William Prevetti, drawing, relief printing, curator of art; Richard Sherrell, theater history and criticism, aesthetic awareness.

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

Assistant Professors: Clifford Abbott, linguistics; Dorothea Albert, theater costume and scenic design; William Burnett, acting, directing, voice, speech; Clary Nelson-Cole, painting, graphic arts; Gail Cronauer, acting, movement; David Del Colletti, theater technical director and producer; Curtis Heuer, ceramics and design; Princess Morris, dance and movement; Janice Ostrand, art history; Terence O'Grady, music theory and history; Marlys Trunkhill, voice.

Instructors: W. Patrick Neal, public address, rhetoric, communication theory.

Lecturers: Karen Cowan, dance; Muriel Davis, piano, organ; Jerry Dell, photography, electronic media; Robert Goltz, graphic arts; Robert Snider, percussion and bands; Karon Winzenz, textile arts, painting, drawing.

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

The concentration offers three programs of study, each of which can be pursued as an interdisciplinary major or as a program associated with four-year disciplinary programs in communications, music, theater, or art.

AESTHETIC AWARENESS

One of these concentration programs is aesthetic awareness, which includes core courses in aesthetic perception, expression, and evaluation, as well as related course work in art history, criticism, music theory/history, styles, popular culture, theater history, and other expressive modes. Many students have combined programs in aesthetic awareness with disciplinary programs in the fine arts (music, theater, art, creative writing), often in association with professional studies in education or business administration. This design has been approved by the Wisconsin Department of Public Instruction as a supportive program in aesthetic education for students seeking teacher certification in art, music, and English-communication arts, and it is also appropriate preparation for graduate study or professional work in the fine arts.

Students in aesthetic awareness plan their programs around this outline:

Tool Courses

242-100	Understanding the Visual Arts
242-120	Understanding Music
242-121	Masters and Masterpieces of Music
242-160	Introduction to Language
242-200, 201	History of the Visual Arts I, II
242-241, 242	Introduction to Theater History I, II
242-261	Foundations of Aesthetic Experience

Core Courses

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

242-310	Criticism of the Performing Arts
242-329	Cross-Cultural Communication II: Expressive Traditions
242-340	Greek and Roman Art
242-341	Seventeenth 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 Women in Contemporary Arts
242-395	The Individual and His Culture: The Film-Maker's View
485-430	Art, Ideas, Society and the Quality of Life
938-430	Urban Aesthetics

A program in aesthetic awareness combined with a disciplinary program in art, music, theater, or creative writing will usually involve 6-9 credits of tool courses, a minimum of 6 credits in core courses, and a minimum of 6 credits in related courses. Students seeking teacher certification are advised to enroll in 302-320, Methods in Aesthetic Education, as well. Students planning an interdisciplinary major in aesthetic awareness will typically take a minimum of 12 credits of tool courses, 9-15 credits in the core courses, and 15-21 credits in related courses.

ENVIRONMENTAL DESIGN

Design Processes and Environmental Problems is an interdisciplinary curriculum involving student and faculty in design, urban planning, social psychology, and engineering. It is co-sponsored by the concentrations in Urban Studies, Regional Analysis, Science and Environmental Change, and Communication and the Arts. Students have chosen environmental design as an interdisciplinary program, often in association with a professional program in public administration. Some students have elected the environmental design program along with a four-year disciplinary program in art, psychology, or communications.

Like the program in aesthetic awareness, the program in environmental design has attracted national attention to UWGB because of student and faculty contributions to solutions to environmental problems and to developing design and planning methods.

In Communication and the Arts, the program in design processes and environmental problems is structured in this way:

Tool Courses (6 credits)

957-104	Three Dimensional Design Studio (prereq. 957-102, 103)
862-105	Elements of Descriptive Geometry

Advanced Courses

242-401, 402	Designing the Environment I, II
242-405	Urban Technological Design (course described under 862-327)
834-325, 326	Human Living Space I, II
938-421	Urban Planning I
938-430	Urban Aesthetics

Workshops

938-401	Environmental Design Workshop I (individual scale)
242-471	Environmental Design Workshop II (small-group scale)
938-402	Environmental Design Workshop III (community scale)
242-472	Environmental Design Workshop IV (senior project)

An interdisciplinary program in environmental design will typically include 6 credits in tool courses, 21 credits in advanced courses, and 9 credits in the environmental design workshops. A program in environmental design in association with a disciplinary program in art, communications, or psychology will usually include 6 credits of tool courses, 9-12 credits in advanced courses, and at least 3 credits in workshop courses. Either program, especially when associated with a professional program in public administration, is excellent preparation for careers and/or graduate study in planning and environmental design.

BROAD-FIELD COMMUNICATIONS

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

Tool Courses

Individually negotiated, but usually including:

485-105	Introduction to Expository Writing
242-160	Introduction to Language
246-100	Writing Skills Laboratory
246-202	Introduction to Mass Communications

Two years of college-level study of a foreign language (required for students in linguistics)

Advanced Courses

242-301	Communication-Action 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
242-370	Modern American Culture
242-395	Photographic Design for Print Media
242-395	Biological Aspects of Language
242-395	The Individual and His Culture: the Film-Maker's View
246-430	Mass Media and Society

Broad-field communications in association with a disciplinary program in literature and language, communication processes, or art will usually include a minimum of 6 credits in tool courses (with exceptions as noted) and a minimum of 12 credits in advanced courses. An interdisciplinary major in broad-field communications requires a minimum of 6 credits in tool courses and 30 credits in advanced courses, usually including course work from other programs in such areas as rhetoric, communication theory, linguistics, graphics, or mass media.

Broad-field communications with a disciplinary program in communication processes or literature and language and a professional program in education, leads to teacher certification in English-communication arts, a program described as a state model by the Wisconsin Department of Public Instruction. A similar design combined with professional studies in business administration or public administration can prepare students for careers in public relations, mass communications, or graphic arts. Students in linguistics should plan on graduate study, and the combination of Communication and the Arts and communication processes has been very successful for placing students in graduate schools in linguistics.

These three programs of study—aesthetic awareness, environmental design, and broad-field communications—have led to many different career opportunities for Communication and the Arts graduates: teaching, public relations, graphic arts, music performance, design and planning, theater performance, music business, theater management, information and communications, government service, and many others. Most students have combined a program in Communication and the Arts with a disciplinary program in art, music, theater, or communication processes, together with professional programs in education, business, and public administration.

Personal and professional goals have much to do with the way an individual student organizes his or her plan of study in Communication and the Arts and related programs. Students should also see the program descriptions for communication processes, music, theater, art, psychology, and literature and language, elsewhere in this catalog.

COURSES

242 COMMUNICATION AND THE ARTS

242-100 Understanding the Visual Arts† 3 cr.
The more expressive contemporary visual arts (painting, sculpture, graphic arts, and popular arts) are examined from the standpoint of the creative artist, with emphasis upon interpretations of the sociological circumstances of the time. Artists may be of various minds at various times concerning their social environment, but they inevitably respond to social conditions, and these responses, conscious or subconscious, find their way into creative work. Normally includes one or more field trips to regional art centers.

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.

†Approved for Humanities and Fine Arts Distribution Credit.

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.

242-241, 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.

242-261 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.

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.

242-298 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.

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.

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.

242-329 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.

242-239 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.

242-340 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.

242-364 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 435-395

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.

*Academic Affairs Council Approval Pending.

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: 246-143.

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.

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 634/938-326, 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: 938-401 and cons inst.

**Environmental Design Workshops I and III are offered as 938-401, 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.

242-481 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; Thomas Daniels, American studies/literature, 20th century literature; Elmer Havens, English and American literature, theology; Frederick Kersten, humanities, phenomenology, value theory, ontology; George Rupp, comparative religion, Christian theology, western intellectual history; Irwin Sonenfield, music theory, history, and composition, musical aesthetics, interdisciplinary approaches to the humanities: music, art, film, and literature; *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; Coryl Crandall, American, English, and world drama, English renaissance literature, *Shakespeare, playwriting* and production, humanistic study and cultural relevance; 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, English renaissance literature, Shakespeare, English romantic literature, the humanities; Martha Wallach, German language, literature, and culture, Polish.

Assistant Professors: Gilbert Null, history of philosophy, metaphysics, ontology, epistemology, philosophy of logic and mathematics, philosophy of (natural and cultural) science, Husserlian phenomenology; Peter Stambler, creative writing: poetry, English Renaissance literature, *playwriting* and theater literature.

The humanities deal with what it means to be human. Humanists explore the nature of human-ness through literature, language, philosophy, history, fine arts, psychology, and other things as well. In short, the humanities are concerned with the intellectual and imaginative achievements and insights of people. Thus, humanistic works *are never obsolete.* New works and ideas do not replace the past, but add to it.

Traditionally, the humanities have consisted of the disciplines of literature, philosophy, and history, with strong relationships to the fine arts and to several of the social sciences.

However, the concentration in Humanistic Studies *tries to see knowledge not so* much in terms of separate and distinct disciplines, but as the result of essential connections of inter-relationships. More than that, these interdisciplinary perspectives are applied to the critical problems of society and individuals.

Students with disciplinary programs in creative writing, literature, foreign language, history, or philosophy most often have their concentrations in Humanistic Studies. However, students in these disciplines may choose some other concentration and students from other disciplines may have concentrations in Humanistic Studies. For example, students in areas of the social sciences, such as psychology or anthropology may elect a concentration in Humanistic Studies if their interests lie generally in the direction of the humanities. Students in professional programs, such as education, business administration, or social service often satisfy the concentration requirement with a program in Humanistic Studies.

PROGRAM OF STUDIES

Students who complete the concentration in Humanistic Studies are expected to take 29 to 38 credit hours of preparatory work in their freshman and sophomore years and a minimum of 12 credits in the junior and senior years.

Background preparation normally will include these studies:

Humanities Content Core

3-6 credits:

485-101-102	Foundations of Western Culture I, II

3 credits (one course) chosen from:

448-203, 204	History of Europe
448-205, 206	History of the United States
448-261-262	Ancient History

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
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
485-209	Folklore and Folkloristics
426-210	Introduction to Human Development

820-202 Introduction to Social Psychology
938-335 Aggressive Behavior: Biological and Psychological Roots

Tool Subjects
485-105 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
485-201, 202 Introduction to Humanistic Ideas I, II, 3 credits

Juniors and seniors choose their core courses from two alternatives. Both alternatives are organized around three problem areas. These are:

Problem Area 1: Defining the Quality of Life
The good life involves more and different things than clean air and the material and recreational standards of affluent suburbia that make up some modern measurements of the quality of life. In the ideas of the good life and the quality of life there has always been a central concern for human potentials like justice, honesty, and beauty —the subject matter of traditional humanities studies. This subject matter remains our central concern, but the assumptions of the past can no longer be taken for granted.

Especially in this century our received ideas from the past have often clashed with our experience. Artists have exalted the "ugly" and even denied meaning. Scientists have arrived at discoveries which throw the assumptions of science into question. Technologies designed to serve human purposes have made many wonder what our purposes are. The humanistic ideals of the past often have been dismissed as the product of a narrow social elite.

Students in the humanities should face such issues and read, write, and think about them. No social problem can be solved before the question of the quality of life has been addressed.

Problem Area 2: Individuals and Cultures: Identity, Alienation and Cultural Conflict
All individuals belong to and identify with groups which are culturally distinct. Individuals who share a culture share the ways in which their surroundings are made meaningful. In that sense, culture is integrally bound up in individual identity, or the ways in which people ascribe meaning to themselves.

Human identity and human culture are central aspects of two related problems. First, most societies contain more than one culture and in many, these different cultures clash physically. In countries such as Canada, Ireland, Uganda and the United States, cultural conflict is often at the root of social conflict. Such cultural conflict may occur when the individuals who comprise it either gain a part of their identity from the fact of belonging to that culture or define their identity in terms of the superiority of their culture to another. A second problem is alienation—the experience of individuals who do not feel a part of a culture and who are not able to find a way to define themselves meaningfully Such individuals may resort to violence, either against others or against themselves.

Thus, human identity is a major factor in the twin problems of cultural conflict and personal alienation. Relationships and dynamics among identity, alienation, and cultural conflict also are the subjects of study of much of the humanities. The humanities make the imaginative leaps which help us to gain otherwise unavailable insights into these contemporary dilemmas.

Problem Area 3: Continuity and Change in Values
People and societies frequently are torn between their need to preserve the familiar orientation of stable values and pressures for change and innovation which challenge their basic assumptions. Certain societies have become frozen and static as a result of excessive degrees of stability, while others undergo shock traumas from apparent disintegration of values. Societies also may have irreconcilable conflicts between their value ideals and the actual experience of that society.

It generally can be assumed that what people create and the way they behave are better indicators of their values than statements of principles. Therefore, it is necessary to be able to recognize such implicit value statements in human activities.

This problem area explores the nature of values; the ways in which thinkers, writers, and artists have perceived continuity and change in values; and how values are manifested in works of art, other human works, and in patterns of behavior. The particular value anxieties of our own time receive special attention.

Students approach the three problem areas in one of two ways.

Alternative 1
Students select courses designed to explore all three problem areas. They must take at least one 3-credit course from each area for a total of 9 credits. In addition, they take a 3-credit seminar during the senior year focusing on one of the problem areas.

Alternative 2
Students select one of the three problem areas as the focus of their studies. They take 9 credits in that problem area and the related 3-credit senior seminar.

Students in both alternatives choose courses to meet these requirements and to meet the needs of their own personal academic programs with the help of a concentration adviser.

The careers of Humanistic Studies graduates reflect the kind of diversity which the humanities attempt to encompass and integrate. In recent years, graduates have found positions in business, the media, government, private and public social agencies, and teaching. Many have gone on to graduate or professional schools.

COURSES

485 HUMANISTIC STUDIES

485-101, 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.

485-105 Introduction to Expository Writing 3 cr.
A course in modern, standard American written English stressing the achievement of college-level literacy basic to any disciplinary or interdisciplinary course of study. Like poetry and fiction, it draws from the resources, breadth, and flexibility of the language. Topics include structure, development, persuasion, logic, style and research techniques, as well as the conventions of correct usage. Intended as an advisory prerequisite for students in Humanistic Studies or for any student seeking training in the fundamentals of writing.

†Approved for Humanities and Fine Arts Distribution Credit.

485-201 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.

485-202 Introduction to Humanistic Ideas II: Literature, Philosophy and History in Western Civilization† 3 cr.
This course 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. The 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.

485-204 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 the 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.

485-207 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.

485-209 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.

485-274 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?

485-281 Student-Led Courses 1-4 cr.
See page 19.

485-283X Selected Topics in Humanistic Studies 1-4 cr.
See page 19.

485-298 Directed Study 1-4 cr.
See page 19.

485-301 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.

485-302 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: 485-201, 202, jr st or cons inst.

485-303 Action Training (Intensive) 4 cr.
Techniques and backgrounds of successful anti-poverty projects in the University Year for Action program. P: membership in the University Year for Action program.

485-307, 308 Other Cultures through Humanistic Studies I, II 3, 3 cr.
These courses study specific humanistic aspects of another culture, such as its history, art, literature, music, and value systems, in order to gain insight into the differences and similarities of that culture to our own. The goal is to come to as complete an understanding as possible of the people of another culture, including the way they see themselves and us. Sections offered in French, German, and Spanish cultures, and sometimes in others. May be taken out of sequence. P: 554, 558, credit competence at least 202, 203 level.

485-309 Other Cultures Through Humanistic Studies: The Americans Look at Each Other* 3 cr.
Latin American views of Anglo-American culture are relevant to the understanding of both cultures. The aim of the course is to teach something new about both the Latin and Anglo cultures which will enrich the student's insight into the awareness of his or her own cultural environment as cultural.

485-310 Criticism of the Performing Arts 3 cr.
See 242-310.

485-311 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: 485-201, 202, jr st or con inst.

*Academic Affairs Council Approval Pending.

485-312 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: 485-201, 202 or cons inst.

485-313 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: 485-201, 202, or cons inst.

485-314 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: 485-201, 202 or cons inst.

485-315 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.

485-320 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.

485-329, 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: 485-201, 202 jr st or cons inst.

485-332 Art, Ideas, Society, and the Quality of Life 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: 485-201, 202, jr st or cons inst.

485-340 The Literature of Alienation* 3 cr.
An examination of major works from several disciplines on the individual who is, by choice or otherwise, alienated from society. Themes include the outsider, social outcast, identity crisis, society's fear of the unusual, conflict of individual and social values. P: 485-202, jr st or cons inst.

485-351, 352 Wealth, Culture, and Society I, II* 3, 3 cr.
An interdisciplinary and cross-cultural study focusing on material life reflected in culture and society. Comparative methods are used to explore the similarities and differences among related societies. Concentrates on either the pre-industrial or the post-industrial period. May be repeated once for credit when content is different. P: jr st or cons inst.

485-369 Women: Crisis in Society 3 cr.
Aspects of women's relationships to American society are surveyed on an interdisciplinary basis, beginning with society's images of women and the mechanisms by which these images are imposed as rules. The biological and psychological bases of women's roles. The dilemma of women who do not accept traditional roles; possibilities for the future. Private innovation, in the form of alternative life styles; planned social change at the national level.

485-370 Women: Skills for Change 3 cr.
Provides theoretical knowledge and practical skills to implement desirable social reform for women at the local, state, and national levels. Concentrates on overcoming the personal and societal difficulties women experience upon assuming instrumental roles in our culture. Using social change theory, differing approaches to citizen action are contrasted and evaluated, with focus on concepts of power relations and ethics. Practical skills for social change, including methods of community research, organizational techniques, lobbying, use of the media, mechanisms of legislative reform, running for political office, and managing face-to-face encounters in a productive manner. Theory and skills are applied in community projects or through internships with appropriate organizations, officeholders or other skilled individuals of the student's choice (contact instructor 2 months in advance for internship).

*Academic Affairs Council Approval Pending.

485-374 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.

485-376 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: 485-202 or cons inst.

485-390 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.

485-395 The Individual and His Culture: The Film-Maker's View 3 cr.
The motion picture as a serious art form which examines and illuminates the relations between the individual and his/her society. Students view 12 significant and also entertaining movies which are analyzed for their aesthetic and cultural implications. Offered in January.

485-402 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 critical analysis of tradition 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 political issues in topics such as 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: major or co-major with jr st or cons inst.

485-404 Humanities Seminar: Identity, Alienation, and Cultural Conflict* 3 cr.
The seminar consists of in depth case studies of problems occurring both at individual and cultural levels, with at least one case study chosen from the immediate geographical area. The problems will be compared with similar problems in other cultures and other times with a particular concern for differences in problem definition and theories and methods of resolution. P: majors or co-majors with jr st or cons inst.

485-406 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 investigates the special nature and problems of high culture in our time and its relation to the popular and mass cultures. The course attempts 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: majors or co-majors with jr st or cons inst.

485-474 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.

485-481 Student-Led Courses 1-4 cr.
See page 19.

485-483X Selected Topics in Humanistic Studies 3 cr.
See page 19.

485-484 Senior Distinction Project 3 cr.
See page 19.

485-495 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.

485-498 Directed Study 1-4 cr.
See page 19.

Art

Professors: Bruce Grimes, ceramics; Michael Kazar, watercolor, art education, aesthetic awareness; William Prevetti, drawing, relief printing, curator of art.

Associate Professors: Ron Baba, environmental design, David Damkoehler, environmental design, drawing, sculpture, graphics; Robert Pum, (chairperson), drawing, art metal and jewelry design, art education, aesthetic awareness; Thomas Tasch, drawing, life drawing, sculpture.

Assistant Professors: Clary Nelson-Cole, painting, graphic arts; Janice Ostrand, art history.

Lecturers: Jerry Dell, photography, electronic media; Curtis Heuer, ceramics, design; Karon Winzenz, textile arts, painting, drawing.

The visual arts are creative and expressive components of human experience and provide self-involvement with life through seeing, feeling, making, and thinking in visual modes and symbols.

Art as a creative activity begins with visual imagination and manifests itself in production of aesthetic forms. Artistic vision involves seeing with sensitivity, developing heightened awareness of perception of the environment, and creating new visual ideas. The artist explores, experiments, invents, and seeks new possibilities through his or her vision and thinking.

Course work in the art studios provides the opportunity to develop competencies, skills, and knowledge in diverse art media. Emphasis is on both the conceptual and perceptual activities of two and three dimensional media.

Students interested in art have several alternatives in pursuing a degree at UWGB. A four-year program in art (minimum 45 credits), combined with an interdisciplinary program (minimum 18 credits), in environmental design, aesthetic awareness, or humanities, can lead to professional work or graduate study in studio art. Most students in the visual arts will choose concentrations in Communication and the Arts or Humanistic Studies but other concentrations may be equally appropriate, depending on interests and needs. For example, a few students in such areas as medical illustration have combined their studies with programs in Human Biology or Science and Environmental Change.

All students pursuing a program in art are expected to distribute their courses across several areas, including general liberal education, broad-field studies in aesthetics and expressive traditions, and areas more specific to the visual arts, including art history, design and drawing, basic studio courses, and advanced studio courses.

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 a professional program in administration and management (18 credits).

Programs for teacher certification in art are structured 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 most attractive for public school employment. Because an additional minor in aesthetic education is possible through course work in aesthetic awareness and expressive traditions available in the Communication and the Arts concentration, many art education students structure their programs by choosing that concentration along with the art disciplinary programs and the professional program in education. The aesthetic education minor has been approved and recommended by the Wisconsin Department of Public Instruction.

Following is a sample outline of courses for a student with an emphasis in studio art:

Aesthetic Awareness and Expressive Traditions

Tool courses, 6 credits minimum:
242-100 Understanding the Visual Arts
242-200 History of the Visual Arts I: Ancient to Medieval
242-201 History of the Visual Arts II: Renaissance to Modern
242-261 Foundations of Aesthetic Experience

Advanced courses, 12 credits minimum:
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

Basic Studio Courses, 21 credits minimum

Design sequence, 9 credits:
957-102 Drawing Design Studio
957-103 Color Design Studio
957-104 Three Dimensional Design Studio

Studio courses, 12 credits:
957-143 Introduction to Creative Photography
957-201 Painting I
957-202 Ceramics I
957-203 Sculpture I

These courses are followed by a minimum of 24 credits of advanced studio courses with an emphasis in sculpture, graphics, ceramics, painting, jewelry, or textile arts. This list represents minimum requirements. Many students take additional studio courses or arrange for independent study.

Visual arts faculty recommend that senior students plan a senior show for exhibition, either as a distinction project for students with a 3.5 minimum grade point average, or through directed study. Such a show provides valuable experience and helps to build a portfolio for graduate study or career work in art.

Teaching Certification in Art

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

COURSES

957 ART

957-102 Drawing Design Studio† 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.

957-103 Color Design Studio 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.

957-104 Three Dimensional Design Studio 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 with creativity systems, graphic and workshop tools and techniques.

957-143 Introduction to Creative Photography† 3 cr.
The creative process in photography is studied to develop visual perception through active participation in discussions and photographic exercises.

957-201 Painting I 3 cr.
Investigation of painting media; oil, watercolor, and acrylics and their inherent expressive qualities and characteristics. P: 957-102, 103.

957-202 Ceramics I 3 cr.
Introduction to the forming of clay by pitch, slab, and coil methods and throwing on the wheel. Pottery decoration and glaze application.

957-203 Sculpture I 3 cr.
Introduction to various sculpture media and their inherent expressive qualities. Construction of basic forms using clay, plaster, cement, and other media.

†Approved for Humanities and Fine Arts Distribution Credit.

957-303, 304 Watercolor Painting 3, 3 cr.
Creative approach to watercolor techniques; cultivation of personal expression and development of imaginative concepts. P: 957-201.

957-305, 306 Graphic Arts: Relief Printing 3, 3 cr.
Aspects of relief printing: woodcut and linoleum printing in black and white or color. The media 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: 967-301.

957-307, 308 Graphic Arts: Intaglio Printing 3, 3 cr.
Studio work in intaglio techniques, including dry point, engraving, and various etching procedures. Various color printing techniques are taught and the development of a personal concept encouraged. P: 957-201.

957-311, 312 Painting II, III 3, 3 cr.
Cultivation of techniques for personal expression; composition and development of imaginative concepts in oil paint and allied media. P: 957-201.

957-321, 322 Sculpture II, III 3 cr.
Intermediate and advanced 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.

957-331, 332 Ceramics II, III 3, 3 cr.
Continuation in the ceramic media with emphasis on wheelthrowing. Glaze theory and kiln stacking and firing. Aesthetic and functional considerations. P: 957-202.

957-341 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: 957-104.

957-342 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: 957-104.

957-343 Creative Photography II 3 cr.
Emphasis upon black and white photography and darkroom printing techniques. P: 246-143 or equivalent experience.

957-351, 352 Art Metal and Jewelry Design I, II 3, 3 cr.
Studio work in the creation and design of jewelry projects utilizing varied metal techniques, processes, and metal media. Forming, shaping, and designing of jewelry as quality handcrafted art forms for personal adornment and expression. P: 957-104.

957-361, 362 Life Drawing and Anatomy I, II 3, 3 cr.
The skeletal structure and muscular articulation of human and animal forms as a basis for artistic interpretation. P: 957-102, 103.

957-409 Materials Workshop for the Jewelry Designer 3 cr.
Investigation of various materials of the designer and techniques of fabrication with these materials. P: two courses in jewelry.

957-410 Materials Workshop for the Painter 3 cr.
Investigation and demonstration of painting media; the chemistry of paint; framemaking; preparation of painting grounds; underpainting, glazing. P: 957-102, 103 and a course in painting.

957-411 Materials Workshop for the Sculptor 3 cr.
Techniques and equipment; construction of tools; investigation of materials, traditional and innovative, as related to needs and aesthetic considerations of the sculptor. P: two courses in sculpture.

957-412 Materials Workshop for the Ceramist 3 cr.
Extension of pottery techniques and aesthetics into the development of an individual style. Investigations into high-fire, low-fire, raku, and salt glazing. Functional and sculptural approaches. P: two courses in ceramics.

957-413 Materials Workshop for the Textile Artist 3 cr.
Study of advanced techniques in one area of the fiber arts (textiles) including, but not limited to, weaving, free-form crochet and knitting, knotting, batik and tie-dye, creative stitchery or fabric collage. Emphasis upon the synthesis of technical mastery with mature, cohesive artistic statement. P: 957-103, 104, and either 957-341 or 957-342.

957-443 Advanced Problems in Creative 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: 246/957-343.

Communication Processes

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

Assistant Professors: Clifford Abbott, (chairperson), linguistics.

Instructors: W. Patrick Neal, public address, rhetoric, communication theory.

Lecturers: Jerry Dell, photography, electronic media.

A student in communication processes usually pursues an emphasis in linguistics or mass communication or photography or in a combined program field such as public relations or environmental communication. Developing programs soon will provide for additional emphases in speech communication and graphics.

The disciplinary program in communications requires successful completion of 24 junior and senior level credits. In most cases, at least half of these credits are in courses listed in the communication processes disciplinary program. Each emphasis requires a somewhat different set of junior-senior level courses.

Many students in communication processes take a concentration in Communication and the Arts. This requires an additional 12 upper division Communication and the Arts credits plus several "tool subject" courses. But a communication processes student may choose some other concentration instead, if it is more appropriate to his or her individual needs. Communications graduates have taken concentrations in Managerial Systems (business), Social Change and Development, Humanistic Studies, Regional Analysis, and Urban Studies.

Two combined programs recently have been established, one in public relations, the other in environmental communications. Each requires substantial coursework in another unit—in Managerial Systems for the first, and in Science and Environmental Change for the second.

Another combined program leads to certification for teaching secondary school courses in broad field communication. This program qualifies students to teach communication subjects that range beyond English literature and composition.

Whatever the program emphasis chosen by the student, specific courses should be chosen with the help of a faculty adviser.

LINGUISTICS

The linguistics emphasis includes course work in linguistics as well as related courses in mathematics, foreign languages, anthropology, logic, psychology, and 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 in which a Ph.D. is normally expected for entry-level positions. It has attracted students from computer science, philosophy, anthropology, English, foreign languages, classics, mathematics, physiology, and many other disciplines, and this is reflected in the special areas that have developed in the field, such as psycholinguistics, sociolinguistics, theoretical linguistics, mathematical and computational linguistics, neurolinguistics, and applied linguistics, as well as specializations in particular languages, TESOL (teaching English to speakers of other languages), language planning and recovery, historical studies in language families, and the like.

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 broad field English-communication arts program includes the possibility of a 22-credit specialization in linguistics, often involving TESOL work or other applied areas. Foreign language students may elect bilingual-bicultural education as an emphasis, particularly in Spanish-English and French-English.

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 the foreign service, in behavioral research laboratories, in TESOL 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.

Broad-field communications

Tool courses: (9 credits recommended)
156-100 Varieties of World Culture
156-210 Introduction to Cultural Analysis
242-160 Introduction to Language
600-251 Introduction to Computer Science

Foreign language training:
equivalent to two years' study of at least one foreign language: French, German, Spanish

Linguistics and related fields (24 credits minimum)

Linguistics courses: (12 credits recommended)
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 (proposed)

Related-field courses: (12 credits recommended)
156-301 Peoples and Cultures of a Selected Region
156-310 Culture and Personality
156-330 Aesthetic Anthropology
426-431 Cognitive Development
478-413 Neurophysiology
485-307, 308 Other Cultures through Humanistic Studies I, II (French, German, Spanish)
485-374 Wisconsin's Indians: Historical and Cultural Perspectives
485-474 The Native Americans: Emergence of Pan-Indian Cultures

Communication and the Arts Advanced-level courses (12 credits minimum)

242-301 Communication and the Arts Projects in the Community: *Oneida Language* Project (can be repeated for credit)
242-320 Communications: Extensions of Consciousness
242-323 Language and Human Conflict
242-395 Biological Aspects of Language

MASS COMMUNICATIONS

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

This emphasis is appropriate for students who plan to take jobs in journalism, publications, or teaching.

The emphasis in mass communications 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, photography, graphics, speech, linguistics, literature, language, composition, creative writing, public relations, and promotional strategies. All of the 24 upper division credits required for a communications processes program may be earned in courses about communication.

An alternative allows a students to take up to half of the 24 credits for the major in an area he or she plans to communicate about. For example, the prospective science writer or environmental reporter enrolls in courses in the concentration in Science and Environmental Change. In preparing for careers in general print or broadcast journalism, it is useful to pursue studies in political science, economics, history, urban studies, American studies, and other 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 the good journalist—are the qualities developed in the mass communications 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 of study in print journalism and publications. Sample programs in electronic media and public relations are available in a brochure explaining the communications program in greater detail. All students should plan their individual programs with the help of a faculty adviser.

Tool Courses From Among:

242-160 Introduction to Language
246-100 Writing Skills Laboratory
246-253 Practicum in Print Journalism I
246-143 Introduction to Creative Photography
246-166 Fundamentals of Interpersonal Communications
246-202 Introduction to Mass Communications
246-203 Newswriting Laboratory
485-105 Introduction to Expository Writing

Communication Processes Courses (24 credits)

12-18 credits from among:
246-303 Specialized Writing
246-353 Practicum in Print Journalism II (repeatable)
246-405 Professional Reporting Internship
Linguistics courses
Graphic design (to be developed)

6-12 credits in supporting areas from among upper division courses:
Subject specialization (e.g., political science)
Photography
Literature
Advanced composition or creative writing
Psychology
Public relations, promotional strategies (business courses)

Communication and the Arts (12 credits)

242-301 Projects in the Community
242/485-310 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
246-430 Mass Media and Society
448-302, 303 History of American Thought and Culture

Or, courses from any other concentration appropriate to the student's program.

PHOTOGRAPHY

The photography emphasis offers studio work in photography, an examination of the history of photography, and exploration of the social and aesthetic uses of photography. Course work is appropriate to a wide variety of careers in print and electronic communications, the arts, and education.

A successful photographer must control the craft of the medium and understand the meaning of the image. That understanding is centered in the humanities, and UWGB photography students broaden their conceptual base through the opportunities provided by the interdisciplinary organization of the University.

Within communication processes, two major areas of concern can be identified, although they are not mutually exclusive: Communications includes graphic communications and print media, journalism, broadcasting, instructional media, and public relations. Visual arts includes graphic arts, video art, and art education. Most photographers do course work in both areas, and photography courses are concerned with all the basic facts of the medium, recognizing both the print for the offset press and the print for the gallery wall.

Students may identify and develop with a faculty adviser other patterns, such as coursework in Science and Environmental Change and Human Biology in science communication, or work with Managerial Systems or the professional program in public and environmental administration in photographic management.

Courses in photography are not restricted to students primarily interested in photography. Students pursuing an emphasis in graphics or studio art or seeking teaching certification in art or aesthetic awareness take photography, as do students from other areas throughout the University.

The sequence in photography prepares the photographer for further development in the medium, including graduate study and career application of photographic skills to social, aesthetic, and applied communication. A new marketplace for photographic skills is forming. The traditional ways of supporting photographers have broken up just as the demand for images has increased and the availability of modern cameras has made photography so accessible that the mere ability to make a photograph will not make the photographer employable.

The successful photographer will not sell just photographs; the real products will be solutions to problems. The broadly based, flexible approach to photography is especially well suited to the emerging marketplace and is intended to be both highly theoretical and eminently practical.

Following is a guideline to planning a program of study in photography:

Tool courses from among:

242-100 Understanding Visual Arts
242-160 Introduction to Language
242-200, 201 History of Visual Arts I and II
246-133 Fundamentals of Public Address
246-143 Introduction to Creative Photography
246-202 Introduction to Mass Communications
246-203 Newswriting Laboratory
485-105 Expository Writing or 552-212, 213 Creative Writing
552-104 Introduction to Literature
957-102 Drawing Design Studio
957-103 Color Design Studio
957-104 Three Dimensional Design Studio

Communication processes

9-18 credits from among photography courses (Creative Photography II, Advanced Problems in Creative Photography [repeatable], independent studies, senior distinction project, professional reporting internship)

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

Visual arts, credits from among:
242-395 Photographic Design for Print Media
246-305 Elements of Electronic Media
Advanced courses in visual arts disciplinary program
Graphic design (planned)

Communications, credits from among:
242-395 Photographic Design for Print Media
246-303 Specialized Writing
246-305 Elements of Electronic Media
246-306 Electronic Media II
246-430 Mass Media and Society
Graphic design (planned)
Public relations, promotional *strategies (business courses)*

Communication and the Arts (12 credits)

242/485-310 Criticism of the Performing Arts
242-323 Language and Human Conflict
242-361 *Increasing* Aesthetic Awareness
242-370 Modern American Culture or 448-302, History of American Thought and Culture or 485-430 Art, Ideas, Society, and the Quality of Life
242-373 The Phenomenon of Style II: *Avant Garde Styles*

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.

246-143 Introduction to Creative Photography† 3 cr.
The creative process in photography is studied to develop visual perception through active participation in discussions and photographic exercises.

†Approved for Humanities and Fine Arts Distribution Credit.

246-161 English as a Second Language: Speaking and Aural Comprehension 3 cr.
Practice and discussion of articulation and pronunciation of American English, including intonation, stress patterns, and sound changes in rapid speech; development of aural comprehension skills for lectures and discussion at the college level. P: cons of inst. (ESL placement test required)

246-162 English as a Second Language: Reading and Vocabulary 3 cr.
Intensive practice in reading selected materials designed to improve comprehension of academic written English, including instruction in the use of syntactic, lexical, and cultural information in reading comprehension; rhetorical features of major types of writing; development of comprehension rate and vocabulary. P: cons of inst. (ESL placement test required)

246-163 English as a Second Language: Writing 3 cr.
Development of proficiency in expository writing in English; sentence structure and conventional patterns of organization necessary for clear expression in American English. P: cons of inst. *(ESL placement test required)*

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.

246-202 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.

246-253 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)

246-303 Specialized 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.

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.

246-333 Public Speaking and Speech Composition 3 cr.
A study of various types of speeches likely to confront an individual in his/her personal and professional life. Developing skill in composition and delivery and in the application of sound criteria for evaluating speeches of others. Speaking situations and types of speeches studied cover a variety of professional and general categories. P: 246-133.

246-343 Creative Photography II 3 cr.
Emphasis upon black and white photography and darkroom printing techniques. P: 246-143 or equivalent experience.

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.

246-402 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 Creative 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: 246/957-343.

See also relevant courses in other areas including:

156-310 Culture and Personality 3 cr.
242-323 Language and Human Conflict 3 cr.
302-318 Reading and Study Skills in the Secondary School 3 cr.
426-431 Cognitive Development 3 cr.
478-413, 414 Neurophysiology (with laboratory) 3-4 cr.
552-212, 213 Introduction to Creative Writing: Fiction and Poetry 3 cr. ea.
575-325 Principles of Public Relations 3 cr.
575-423 Principles of Advertising 3 cr.
575-425 Promotional Strategy 3 cr.
600-253 BASIC: A Time-Sharing Computer Language 1 cr.
600-255 An Overview of Computing for Non-Scientists 2 cr.
778-302 Community Political Behavior 3 cr.
820-202 Introduction to Social Psychology 3 cr.
820-309 Psychology of Motivation 3 cr.
820-335 Psychology of Attitudes and Public Opinion 3 cr.
820-438 Group Dynamics 3 cr.
900-203 Minority Groups 3 cr.

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; Jerrold Rodesch, U.S. intellectual and cultural history, history of Wisconsin.

Assistant Professors: Craig Lockard, Asian and Third World history; Janice Ostrand, art history.

History helps us appreciate more keenly the commonality and diversity of culture and society and leads us to a more profound awareness of our heritage. Since judgments for acting in the present and planning for the future are invariably based on understanding of past events and experiences, history examines the formation of contemporary societies and emphasizes those phenomena which shed light on present and future choices.

The history program consists of a lower level core of courses and a selection of upper level courses organized on a theme basis. This arrangement permits students who like to learn through the study of history a number of alternative paths that may be pursued in conjunction with professional programs and concentrations.

The program specifies a minimum of 36 credits, 12 of which must be taken from these freshman and sophomore level core courses:

242-200, 201 History of the Visual Arts I, II
485-101, 102 Foundations of Western Culture I, II
448-203, 204 History of Europe
448-205, 206 History of the United States
448-261, 262 Ancient History
448-202 Rise of the International Economy from 1400 to the Present
448-208 Development of Modern Science in Western Society
448-250 History of East Asia Since the 17th Century

In their upper level course choices, students will be guided by their individual needs, appropriate recommended program themes, and consultation with the history program adviser.

Recommended program themes include: social/political/economic; cultural/intellectual; European; United States; Asia; Africa; and Latin America.

Within the general liberal arts program offered by the University, supportive courses may be found to equip history program students for career pursuits of great variety. The history program adviser can help students wishing advising in regard to their history field and the process of career selection.

History can provide desired background for law, management, journalism, and administration. In its more applied forms, it may qualify students for entry-level positions in museums, historical parks, archives, teaching, industry and government agencies, and with environmental and cultural organizations.

COURSES

448 HISTORY

448-202 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 geographical 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.

448-203 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 secular and rational human.

448-204 History of Europe from 1815 to the Present† 3 cr.
The emergence of modern Europe Revolutions against the old regime; 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; the reconstruction of Europe.

448-205 *History of the United States from 1600-1865*† 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.

†Approved for Humanities and Fine Arts Distribution Credit.

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 and economic development and economic and ethnic-based social and political movements.

448-207 Roots of Black America*† 3 cr.
African life and culture, the slave trade, Afro-Americans create a culture, the Civil War, the rise of organized protest, and black nationalism are among topics considered in this course.

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 to shape and form the other. Emphasis on the blossoming of modern science in the seventeenth century, the influence of the sciences upon other intellectual disciplines, the relationship between science and technology in recent times, and the development of some of the major theoretical structures in science.

448-250 History of East Asian Civilization† 3 cr.
The evolution of East Asian civilizations as seen through their major cultural, political, and economic institutions. Primary emphasis on China and Japan.

448-261 Ancient History from the Neolithic Age to 323 B.C.† 3 cr.
An orientation into the methods of evaluating the history of human accomplishment in the areas where agriculture and metallurgy emerge. Begins geographically in Anatolia, the Mesopotamian Valley, the Fertile Crescent, the Nile Valley, and the islands of the Eastern Mediterranean. The history of the Mycenean, Hellenic, and post-Hellenic periods to the death of Alexander the Great provides the means for studying the history of the ancient near east, classical Greece, and the archaeological, artistic and documentary sources of knowledge. Attention given to a critique of the writing and reconstruction of history.

448-262 Ancient History, Mediterranean History from 323 B.C. to 337 A.D.† 3 cr.
The westward spread of Greco-Roman civilization, into which Christianity was born, and its press northward into the Celtic and Germanic areas. Of major interest is the great constitutional struggle that ended the Roman Republic and brought into being the Roman Empire. Study of the surviving monuments in art, architecture, and literature shows how the finished product developed and how the Semitic religion was influenced by Greek and Roman concepts.

*Academic Affairs Council Approval Pending.

448-302, 303 History of American Thought and Culture 3, 3 cr
The 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.

448-305 *History of Asian Thought and Culture* 3 cr.
The evolution of Asian thought, religion, and art; the agencies of cultural life; impact of European culture; influence of Asian thought outside Asia. P: jr st or cons inst.

448-306, 307 History of European Thought and Culture, Renaissance to the Present I, II 3, 3 cr.
The development, transmission, and impact of European philosophy, religion, science, literature, art, and social thought; significant thinkers and cultural institutions; major currents and trends. I: Renaissance, Reformation, Scientific Revolution, Age of Reason. II: 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.
The development of science since the 16th century seen as a part of the cultural matrices in which it has existed; discussion of important scientific concepts of the last four centuries. P: jr st or cons inst.

448-310 American Colonial History 3 cr.
Provides an excellent understanding of the foundations of American institutions and attitudes against which its subsequent continuity and change may be measured. The perspectives it offers on a number of problems, particularly in the areas of politics, economics and social movements offer meaningful insights into the perennial reconciliation between ideals and necessity. It also makes available an understanding of the evolution of values during the transition period between the pre-industrial and industrial society in America. P: an introductory history course, pref. 448-205 or 206.

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, 206, jr st or cons inst.

448-312 History of the Great Lakes Region from 1600 to the Present 3 cr.
The development of the Great Lakes Region as a distinct physiographic, economic, political, and cultural region in North America. The historical development of such an international region within the context of traditional nationalism and international rivalry, as well as its impact and influence within the respective nations. A frame of reference is provided for comparison with other regions within the North American milieu. P: jr st or cons inst.

448-314 The Transformation and Collapse of Imperial Russia 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.
A 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 and Business History of the U.S. 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 processes 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 a product of American culture; the international history of the city as a social system. P: jr st or cons inst.

448-350 Social History of Europe Since the Industrial Revolution 3 cr.
The social manifestation and consequences of continuing and accelerating economic change. The 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 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 to be discussed include Vietnam, Indonesia, Thailand, Malaysia, Singapore, Cambodia, Burma, Laos, and the Philippines. Emphasis is on the remaking of Southeast Asia under the stimulus of the West and the Southeast Asian response. Among 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.

448-356, 357 History of Africa 3, 3 cr.
The social, political, and economic institutions of African kingdoms from prehistoric times to the present, with emphasis upon the development of the institutions; analysis of European colonialism, African cultures and the emergence of modern African nation-states. P: jr st or cons inst. Can be taken out of sequence.

448-363 Medieval History from 337 to 1100 A.D. 3 cr.
The development of human institutions in the West beginning with the death of the first Christian Roman emperor. The northward movement of the newly Christianized Mediterranean culture in the West and the Celtic and Germanic peoples in the East; Greek Christianity's movement into the areas of the Slavs. Changes provided by the Turkic peoples and the Scandinavian Vikings. Development of the Carolingian empire and the Papacy in the West as indication that the inherited forms were inadequate. The First Crusade as an index of a new dynamism in the West. P: jr st or cons inst.

448-364 Medieval History from 1100 to 1453 A.D. 3 cr.
The continuation of the development of European society from the point where Mediterranean culture is modified. Sub-divisions of the Slavs; changes in the Byzantine empire; formation of new dynastic states; population increases. The rapid rise of the city, new classes based upon mercantile wealth, new forms in technology and their reflections in architecture, painting, sculpture, philosophy, theology, and the spread of the university. Similarities between the Hellenistic period and the lunar and space age are noted. Elements that are intensified in the Renaissance and Reformation are witnessed. P: jr st or cons inst.

448-367 World Wars I and II: The 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 considerations and implications; analysis of the belligerents' war aims; and assessment of the impact of the wars on specific societies and on development of the modern world.

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 emergence of the United States as an industrial 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-World War II 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 Problems in Historical Causation 3 cr.
A seminar involving the careful consideration of major schools in historiography; problems in the interpretation of cultural, economic, political, scientific, and social history. P: sr st or cons inst.

Literature and Language

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

Associate Professors: Tom Churchill, creative writing, fiction; Coryl Crandall, American, English, and world drama; Ken Fleurant, French language and literature, Canadian studies; Walter Herrscher, American literature, the short story; Raquel Kersten, Spanish literature and language, Latin American studies; Michael Murphy, (chairperson), English literature, Irish literature; E. Michael Thron, English literature, Shakespeare; Martha Wallach, German language and literature.

Assistant Professors: Peter Stambler, creative writing, poetry.

The literature and language disciplinary program has three major areas of emphasis: American and English literature; French, German or 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 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 6 to 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

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, 3 cr.
552-431 Shakespeare, 3 cr.
485-311 Perspectives of Human Values I, 3 cr.
OR
552-335 The Old Testament, 3 cr.

Any pre-1600 English Literature course, excluding Shakespeare, 3 credits (such as 552-335 Literary Eras)

Any foreign literature in translation course, 3 credits, such as:

552-350 Major Foreign Drama
552-351 Major Foreign Prose Fiction
552-352 Major Foreign Poetry
552-436/437/438 Major French/German/Spanish Writers

Elective courses in Literature and Language, 9 credits, such as:

552-310 Major English Drama
552-314 Major English Poetry
552-315 Major English Prose Fiction I
552-316 Major English Prose Fiction II
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.)
552-434 Major British Writers
552-435 Major American Writers
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 courses 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
552-361 Playwriting I

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. High school language students should inquire about the possibility of retroactive credit for high school language studies when enrolling at UWGB. See the footnote at the beginning of course descriptions.

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:

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
554/6/8-531 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
485-311 Perspectives of Human Values

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 should develop individual programs with faculty advice.

COURSES

LITERATURE AND LANGUAGE**

552 ENGLISH-AMERICAN

554 FRENCH

556 GERMAN

558 SPANISH

100 Basic College Writing 3 cr.
Designed to improve basic college-level writing skills. It is intended primarily for students whose entrance test scores indicate a need for this course. (Other students interested in improving their writing skills should enroll in 552-105.) Topics include sentence structure, paragraph development, grammar, spelling, punctuation, and usage.

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, one semester college language study prerequisite for 102. See footnote about receiving retroactive credit.

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.

**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. If the student passes a foreign language course with a grade "C" or better at a level one semester higher than the level of proficiency attained in high school work, credit will be given for college language courses preceding the one in which the student is enrolled to a maximum of 11 credits.

†Approved for Humanities and Fine Arts Distribution Credit.

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.

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, write, 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. May not be repeated for credit.

213 Introduction to Creative Writing: Poetry† 3 cr.
A first course in the writing, appreciation, understanding, and technique of poetry. May not be repeated for credit.

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, Jonathan 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 Dylan 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, 228. See footnote about retroactive credit. P: 202 or equivalent.

227, 228 Introduction to French, German, Spanish Literature 3,† 3† cr.
Introduction to historical periods in literature from the literary beginning to the present. Reading and discussion of representative works. May be taken concurrently with French, Spanish, German 225, 226. See footnote about retroactive credit. P: 202 or equivalent.

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: 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: cons inst.

304 Advanced Expository Writing
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: 552-105 or equivalent or cons inst.

307, 308 Other Cultures Through Humanistic Studies I, II 3, 3 cr.
These courses study specific humanistic aspects of another culture, such as its history, art literature, music, and value systems, in order to gain insight into the differences and similarities of that culture to our own. The goal is to come to as complete an understanding as possible of the people of another culture, including the way they see themselves and us. Sections are offered in French and Spanish cultures, and sometimes in other cultures. The courses may be taker out of sequence; 307 is not a prerequisite for 308.

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.

313 Major English Prose Fiction 3 cr.
A study of the short story and/or the novel either by period or by theme.

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

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.

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 footnote about retroactive credit. May be taken in translation.

†Approved for Humanities and Fine Arts Distribution Credit.

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

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.

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.

Lecturers: Michael Arendt, horn; Jay Bartley, clarinet; John Cameron, oboe, bassoon; Robert Snider, percussion, band; Muriel Davis, piano, organ; Ralph Holter, strings; William Wiederanders, voice; John Kolar, guitar; James Pahl, trumpet; Sandra Pahl, flute; Peggy Gard, piano; 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. This 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 the 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.

Students in music education can expect to complete about 140 credits to meet both graduation requirements and state certification requirements. This can be accomplished in four years by enrolling for 3 credits in each January term and taking a full course load each semester.

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 will 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

Following is an outline showing 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 Independent Study:
Counterpoint
Pedagogy
Performance Practices 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 cr. minimum required; 6 semesters):
707-151, 351 Orchestra
707-241, 441 Concert Band, Wind Ensemble
707-242, 442 Marching Band
707-261, 461 Concert Band
707-162, 362 Oratorio Choir

Minor ensemble performance (2 cr. 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 of 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 improvisational 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.

705-302 Piano for Elementary Teachers 1 cr.
Piano techniques for elementary school teachers, with emphasis on school music literature and flexibility in its use.

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.

705-331 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, violin-cello, 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 1 cr.
Lecture and laboratory experience in the performance of percussion instruments including snare drum, bass drum, tympani, xiyophone, 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 student. 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.

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, 411 Concert Band 1 cr.
707-242, 442 Marching Band 2 cr.
707-261, 461 Concert Choir 1 cr.

Philosophy

Professors: Fred Kersten, 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, (chairperson), freedom in the contemporary world, work and leisure, humanistic and behavioral psychologies.

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

The study of philosophy increases awareness and appreciation of the fundamental intellectual, aethetic, 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.

†Approved for Humanities and Fine Arts Distribution Credit.

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.

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.

736-301 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.

Theater

Professors: Richard Sherrell, theater history, criticism.

Associate Professors: Jack Frisch, (chairperson), directing, history, criticism.

Assistant Professors: Dorothea Albert, costume and scenic design; William Burnett, acting, directing, voice and speech; Gail Cronauer, acting, movement; David Del Colletti, technical director and producer; Princess Morris, dance and movement.

Lecturer: Karen Cowan, dance.

Theater training at UWGB includes substantial involvement with other disciplines and a serious interest in both 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 experimentation 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 freshman-sophomore course work from this list:

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

Theater History/Criticism
6 credits minimum:
242-241, 242 Introduction to 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
709-137 Dance I (Ballet)
709-145 Modern Dance I

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 Stage 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*
709-483X Theater Graphics

Theater History, Literature, Criticism
709-309, 310 Theater History
709-361, 362 Playwriting I, II

Dance
709-138, 237, 238, 337, 338 Dance II, III, IV, V, VI (Ballet)
709-146, 245, 246 Modern Dance II, III, IV
709-439 Advanced Dance Technique

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)
242-100 Understanding the Visual Arts
242-120 Understanding Music
242-241, 242 Introduction to Theater History I, II
242-261 Foundations of Aesthetic Experience

Upper Level Courses
(12 credits minimum)
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
242-461 Senior Seminar in Aesthetic Awareness

Some students in theater have emphasized course work in communications as well as aesthetics 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

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: Style and Verse in Acting 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: Ensemble Acting 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 system, which is 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 three energies comprising the Lessac system: structural action, tonal action, and consonant action.

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

709-137, 138 Dance I, II 3, 3 cr.
Basic study of ballet terminology and beginning movements coordinating the mind and body.

709-237, 238 Dance III, IV 3, 3 cr.
More advanced ballet technique to build a solid foundation of technique and understanding to prepare the student for a greater variety of dance styles. P: 709-137, 138.

709-337, 338 Dance V, VI 3, 3 cr.
Advanced techniques in ballet plus different influence of dance. P: 709-237, 238.

709-145 Modern Dance I 3 cr.
Introduction to modern dance involving the basic development of coordination, control, body awareness, self confidence, and physical self expression. Exposure to the techniques of Jose Limon, Martha Graham, Merce Cunningham, Alwin Nikolais, Eric Hawkins, Alvin Ailey, and our own technique based upon effort, shape, labanotation, yoga, and kinesiology.

709-146 Modern Dance II 3 cr.
An introduction to Jose Limon technique ("to prove the human entity for the powerful, often crude, gesture that speaks of man's humanity") based upon his principles of breath phrasing, body part leading, fall and recovery, and isolation. P: 709-145.

709-245 Modern Dance III 3 cr.
An introduction to the strong, dramatic technique of Martha Graham ("The gesture is the thing truly expressive of the individual . . . as we think, so will we act.") who feels that the center of power, the center of control, and the source of movement are in the pelvis. She bases her entire technique on two gestures she calls contraction and release. P: 709-145.

709-246 Modern Dance IV 3 cr.
A second course in Jose Limon technique ("I saw the dance as a vision of ineffable power. A man could, with dignity and towering majesty, dance.") involving an elementary level study of the principles of breath phrasing, body part leading, fall and recovery, and isolation. P: 709-145, 146.

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 Stage 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: Agnes E. Griffith, child development, observation techniques, children's play, early childhood education; James F. Sorce, infancy and early childhood development, intellectual development, applying cognitive theories and research in education.

†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 to enter a wide range of careers involving work 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.

For students planning careers in education, Human Development provides a pre-professional 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 Human Development. Students desiring elementary or secondary education certification will fulfill professional course requirements through the education professional program. All stu-

dents 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 interested in careers in social service agencies or other helping professions may combine a Human Development major with the sociology disciplinary program or, more typically, the professional program in social services. Since a Human Development major provides a foundation of basic information on individual development, developmental guidance, and problems of meeting individual needs over the life span, it makes an appropriate combination with the practical and applied experience gained in social services courses. The combination of Human Development with social services earns Social Worker I certification for positions in county agencies, and provides more than adequate background for advanced graduate training in social work.

Students aiming for careers 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 pursuing 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 study graduate school requirements and prepare for Graduate Record Examinations as early as possible.

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 face-to-face academic counseling.

ELEMENTARY EDUCATION

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

Background and Tool Subjects (3 courses)

462-210 Introduction to Human Development
OR
820-102 Introduction to Psychology
478-102 Introduction to Human Biology
255-205 Social Science Statistics
OR
600-260 Elementary Statistics

Human Development Courses (total of 10)

Required:
426-331 Human Development I: Infancy and Early Childhood
426-332 Human Development II: Middle Childhood and Adolescence
426-431 Cognitive Development
426-433 Human Development III: Adulthood and Aging
426-435 Developmental Problems and Deviations

Five electives chosen from:

Strongly recommended:
426-436 Developmental Guidance With Children and Adolescents
426-437 Developmental Guidance With Adults and the Aged

To fulfill human relations requirements:
426-432 Cultural Impacts on Human Relations
426-336 Sex Role Development in Contemporary Society

Additional electives including:
426-429 Theories of Personality Development
426-334 Play and Creative Activities in Childhood
900-304 Deviant Behavior
478-313 Brain Functions in Human 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:
426-331 Infancy and Early Childhood (Human Development I)
426-332 Middle Childhood and Adolescence (Human Development II)
426-433 Adulthood and Aging (Human Development III)

Clinical sequence:
426-435 Developmental Problems and Deviations
426-436 Developmental Guidance with Children and Adolescents
AND/OR
426-437 Developmental Guidance with Adults and the Aged

Desirable courses for graduate school preparation:
426-429 Theories of Personality Development
426-337 Developmental Tests and Measurements
426-431 Cognitive Development
426-432 Cultural Impacts on Human Development

Psychology Courses

820-300 Experimental Psychology
An advanced social psychology course
An advanced physiological psychology course, such as 820-306, 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. For example, courses of study in biopsychology and development might be arranged for pre-medical students interested in acquiring the behavioral science background for a psychiatry career, or in Human Development and Managerial Systems for students interested in personnel management or social service or health administration, or in Human Development and music, art, or theater for prospective teachers or therapists in these areas.

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

426 HUMAN DEVELOPMENT

426-202 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 students not intending to major in Human Development; prospective majors should enroll in 426-210.

*Academic Affairs Council Approval Pending.

426-210 Introduction to Human Development† 3 cr.
An interdisciplinary approach to the study of human development from conception through death. This survey covers topics such as physical development, social and emotional development, personality development, the development of language, intellectual development and creativity, and the process of human learning. Students considering majoring in Human Development should take this course.

426-281 Student-Led Courses 1-4 cr.
See page 19.

426-283X Selected Topics in Human Development 1-4 cr.
See page 19.

426-298 Directed Study 1-4 cr.
See page 19.

426-331 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: 426-210 or equiv.

426-332 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: 426-331.

426-333 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: 426-331.

†Approved for Social Sciences Distribution Credit.

426-334 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: 426-331.

426-335 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: 426-331 and written cons inst.

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

426-336 Sex Role Development in Contemporary Society 3 cr.
Analysis of the impact of social change on sex roles from an interdisciplinary and developmental orientation. Effects of child rearing practices, current social demands and expectations, problems of identity resolution. P: soph st and some course work in psychology, sociology, or anthropology.

426-337 Developmental Tests and Measurements 3 cr.
Problems of measuring human characteristics, including determination of validity, reliability, and interpretive schemas for such measures. Examination of selected tests in intelligence, achievement, attitudes, interests, and personality. Typical uses of tests and methods for reviewing tests. P: a course in statistics.

426-429 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, Lewin, Rogers, Skinner, and selected existentialists. P: 426-331 and jr st.

426-431 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: 426-331, 332.

426-432 Cultural Impacts on Human Development 3 cr.
Cultural differences in perception, cognition, language and thought, child development, child-rearing, and personality. The relationships between various aspects of culture (value, economy, ecology, political system) and psychological functioning within both non-Western cultures and American ethnic subcultures. P: 426-331, 332.

426-433 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: 426-331, 332.

426-435 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: 426-331, 332.

426-436 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 426-435. P: 426-331, 332, 435.

426-437 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 426-435. P: 426-331, 332, 433, 435.

426-439 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, social status, and psychological change, with emphasis upon individual differences. Historical and anticipated future changes in the older population will be discussed. Field trips will be made to nursing homes and rehabilitation facilities in the Green Bay area.

426-441 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. P: 426-331, 333, 334 and 431.

426-442 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. P: 426-331, 333, 334, 431, and 441.

426-444 Advanced Experience with Young Children 6-12 cr.**
Supervised teaching of young children. The role of the teacher and of the relationships inherent in programs for young children. Participation in licensed preschool and/or kindergarten settings. P: 426-331, 333, 334, 431, 441, 442, and cons inst.

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

426-481 Student-Led Courses 1-4 cr.
See page 19.

426-483X Selected Topics in Human Development 1-4 cr.
See page 19.

426-484 Senior Distinction Project 3 cr.
See page 19.

426-495 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. January course. P: 426-331.

426-498 Directed Study 1-4 cr.
See page 19.

Regional Analysis

Professors: Donald Gandre, (chairperson), 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; William Kuepper, regional geography (Africa), climatology, settlements; William Laatsch, 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; Anis Rahmaan, regional and community planning.

Instructors: Russell Stubbles, outdoor recreation planning, tourism planning, public policy, spatial analysis, simulation and games.

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 Great Lakes region of North America, 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:

Land Use Analysis and 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 Recreational 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.

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:
296-202 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 Human Living Space 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 1865 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 Transport Systems of 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)

Land Use Analysis and 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.
532-412 Regional Outdoor Recreation Planning I
532-413 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.

834-223 The Ocean of Air Laboratory 1 cr.
Recommended but not required to accompany 834-222.

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.

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 socioeconomic functions in general. The courses 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 Human Living Space 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.

834-326 Human Living Space 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.

834-335 Transport Systems in Selected World Regions 3 cr.
Intercity transportation systems in the United States, their development, impact, present character problems and trends. P: jr st.

†Approved for Social Sciences Distribution Credit.

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.

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.

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.

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.

834-385 Land Resources and Man 3 cr.
Nature and regional variations in relationships among surface form, water, vegetation, and surface materials. People as evaluators and agents of change. The use, capability, and distribution of earth resources. Land-use classification schemes and techniques are reviewed, developed and applied at a variety of scales. Some field work is required. P: jr 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.

834-420 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; sources of data and other information; techniques and methods of population, economics, land use, housing, and transportation analysis and projects. P: jr st.

834-427, 428 Man in Thinly Populated Regions I, II 3, 3 cr.
Human communities in the thinly populated regions of the world, their physical and human settings, the form and character of the communities and their effects on human behavior, health, and well-being. Second semester includes field experience and research on problems. P: jr st.

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, mythology, women's studies; Tony Galt, (chairperson), social anthropology, social change, Mediterranean society; 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: Gil Gardner, sociology, marxism, community action, power structure research, minority group problems, health care, development of action-oriented research methods; Craig Lockard, social history, Southeast and East Asia, revolutionary change; Lloyd Nesberg, psychology, learning, social and cultural aspects of stress, role of punishment in social change; Sharon O'Brien, political science, international law, Native American law, law and society; Daniel Rosenberg, anthropology, socio-political change, socialist societies, drugs and society, contemporary American culture; 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 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 wide 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 concentration in Social Change and Development.

Pre-Law

Freshman and Sophomore Years:

448-205 History of the United States from 1600-1865
448-206 History of the United States from 1865 to the Present
736-102 Problems in Ethics
736-111 Elementary Logic
778-207 Macropolitics
778-208 Micropolitics
875-100 Contemporary Problems and Social Change
875-290 Power and Change in America

Junior and Senior Years:

448-302, 303 History of American Thought and Culture
448-306, 307 History of European Thought and Culture, the Renaissance to the Present
552-304 Advanced Expository Writing
875-320 Law, the Constitution, and American Development
875-325 Law in Society
875-360 Models and Social Change
875-361 Historical Perspectives on Social Change
875-400 Environmental Law

Women's Studies

Freshman and Sophomore Years:

156-100 Varieties of World Culture
875-100 Contemporary Problems and Social Change
875-241 Women and Changing Values
900-203 Minority Groups
900-208 Marriage and Family

Junior and Senior Years:

156-304 Family, Kin, and Community
426-336 Sex Role Development in Contemporary Society
485-369 Women: Crisis in Society
485-370 Women: Skills for Change
875-301 Social Change and Development Field Studies
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

Social Activism

Freshman and Sophomore Years:

298-202 Macro Economic Analysis
298-203 Micro Economic Analysis
448-208 The Development of Modern Science in Western Society
778-207 Macropolitics
778-208 Micropolitics
820-102 Introduction to Psychology
875-100 Contemporary Problems and Social Change
875-290 Power and Change in America

Junior and Senior Years:

875-301 Social Change and Development Field Studies
875-320 Law, the Constitution, and American Development
875-360 Models and Social Change
875-361 Historical Perspectives on Social Change
875-371 Motivation and Social Change
875-385 Dynamics of Revolutionary Change
875-450 Schooling, Education and Social Change
938-444 National Issues and Community Reform

International Affairs

Freshman and Sophomore Years:

Foreign languages
156-100 Varieties of World Culture
448-203, 204 History of Europe, 1300-Present
736-104 Freedom and Individuality
778-207 Macropolitics
875-100 Contemporary Problems and Social Change

Junior and Senior Years:

298-403 International Trade
298-406 Comparative Economic Systems and Institutions
778-304 Comparative Political Systems
778-403 Foundations and Problems of International Relations
875-325 Law in Society
875-360 Models and Social Change
875-361 Historical Perspectives on Social Change
875-460 Continuity and Change in Agrarian Societies

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.

†Approved for Social Sciences Distribution Credit.

875-201, 202 Fiction and Society I,* II*
Focuses on the relationship between fiction and the social sciences, particularly on how the two areas of knowledge are related in that they both attempt to show humans and human societies and cultures as they really are. 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 inter-group 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 Maniast 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 Societyt 3 cr.
Examines some of the major social, political and personal issues related to sexual attitudes, sexual behavior, 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.

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.

875-281 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 or elsewhere. Variable content offering.

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.

*Academic Affairs Council Approval Pending.

†Approved for Social Sciences Distribution Credit.

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.

875-360 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.

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.

*Academic Affairs Council Approval Pending.

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 codes which touch upon aspects of the physical environments. Attention to decisions of administrative units (AEC, Forest Service, National Park Service, etc.), problems of legal jurisdiction (including procedural questions), and substantive determinations by the courts.

875-410 Alternative Social Environments from Speculative Fiction 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.

875-450 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.

875-498 Directed Study 1-4 cr.
See page 19.

Urban Studies

Professors: Nicholas Pollis, social psychology, altruism and helping behavior, organizational behavior, urban stress.

Associate Professors: Forrest Armstrong, American studies, historical development of role of the city in American life, electorial process; Ronald Baba, social ecology, environmental design; Per Johnsen, (chairperson), psychology, environment and behavior, social and behavioral consequences of design, human spatial behavior, privacy and territoriality; Peter Kellogg, urban life and history, ethnicity in the U.S., modern U.S. history, civil rights; Eric Knowles, psychology, environment and behavior, human spatial behavior, research methods, community development and change, social influence, personality research; Charles Matter, experimental/biological psychology, psychophysiology of urban stress, perceptual processing, roots of aggressive behavior, urban social behavior; Robert Mendelsohn, social and clinical psychology, community psychology, community mental health systems, criminal justice system; E. Nelson Swinerton, political science (on leave); C. Jarrell Yarbrough, political science, policy sciences, environmental administration, the political novel.

Assistant Professors: Sidney Bremer, literature, fiction by and about women and ethnic figures, cultural and intellectual history; David Littig, urban politics, public policy, Latin American politics, urban transportation; Judith McIlwee, sociology.

Instructors: John Gould, sociology, deviant behavior, collective behavior, complex organizations.

Lecturers: Daniel Alesch, political science, community political behavior, planning, executive decision making.

The concentration in Urban Studies applies social, humanistic, and professional perspectives to examination of the nature of urban life.

Since the city is a complex, interrelated whole consisting of linked systems of people, resources, values, and styles of life, the concentration encourages developing a variety of study programs as a means to an integrated understanding of urban peoples, their environment, and the processes by which they may change or control the quality of life in the urban settlement.

Students in Urban Studies may investigate a variety of topics including the nature of urban systems; the effects of urbanization on the individual, social groups, and cultures; and strategies for managing and improving the urban settlement.

Throughout human history, the city has been identified with civilization itself—the words "city" and "civilization" both come from the same Latin word, "civitas." Today, almost 75 percent of the population of the United States lives in cities and there can be little question that the city has a profound impact on the character of American life. The pervasive influence of the urban settlement does not stop at the city limits, for the problems, priorities, and policies of the cities are of vital concern to the suburbanite as well as the farmer, in the United States and abroad.

Urban Studies provides preparation in the traditional disciplines, and through the concentration program, makes this knowledge more accessible and functional for investigation of the city.

Students in Urban Studies can gain pre-professional preparation for careers in city planning, urban administration, human/social services, law, communications, and education, as well as for careers in the private sector of the economy. They also may obtain a solid foundation for graduate studies in the various disciplines represented by the faculty.

Urban Studies incorporates diverse perspectives which can be combined into a variety of programs of study, some of which have been identified as "tracks." Tracks provide students with cohesive, broadly founded academic programs. Some Urban Studies tracks represent programs of study for combined Urban Studies/disciplinary programs in sociology, political science, psychology, or modern American history, while others adopt a more interdisciplinary and/or professional orientation.

Tracks have been developed for those who desire majors in Urban Studies with disciplinary or concentration emphases and those who wish to combine their work in Urban Studies with one of the professional or preprofessional programs such as public administration, education, Managerial Systems (business administration), or social services. Students are encouraged to tie their programs in Urban Studies to one of the identified tracks. However, students may develop personal tracks which meet the same requirements with the help of the concentration adviser.

Students who wish programs in environmental design take programs which draw upon the resources of both the Urban Studies and the Communication and the Arts concentrations. They are advised by persons from both concentrations.

Urban Studies requirements generally include:

Recommended background courses. Courses providing fundamental concepts and theoretical structures that are built upon in concentration course work.
Tool subjects. Courses aimed at specific skills required in the individual's chosen field of study (6 credits required).
Core courses. Junior and senior level courses which focus on various aspects of the urban place or urban culture. These ensure that students will be exposed to the diversity of perspectives available in the concentration.
Related courses. Upper division courses important to in-depth preparation in the area of study.

Tracks in Urban Studies are:
Urban Studies/disciplinary program tracks (36 upper division credits and 6 tool subject credits required):
- Political Science/Urban Studies
- Psychology/Urban Studies
- Sociology/Urban Studies

Concentration tracks (30 upper division credits and 6 tool subject credits required):
- Urban Studies
- American Studies/Urban Studies
- Environmental Design
- Environment and Behavior
- Modern American History/Urban Studies
- Urban Human Services (Social Services)
- Urban Planning
- Urban Public Policy and Minority Groups
- Urban Services and Minority Groups
- Women's Studies/Urban Studies

Concentration/Professional program tracks (30 upper division credits in Urban Studies; 18 credits professional program; 6 credits tool subjects required):
- Public Policy Analysis/Urban Studies
- Public Systems Planning and Management/Urban Studies
- Urban Management/Urban Studies
- Urban Human Services/Social Services

SAMPLE PROGRAM

Following is a sample program for one of the possible orientations available through the Urban Studies concentration. Keep in mind that this is only an example. Students' programs will vary depending on the particular track or emphasis they choose. This example shows the courses that might be taken by a student following the Human Services track:

Background Courses:
298-202 Macro Economic Analysis
820-102 Introduction to Psychology
820-202 Introduction to Social Psychology
900-202 Introduction to Sociology
938-200 The City: an Introduction

Tool Subjects:
255-205 Social Science Statistics
255-305 Foundations for Social Research

Core (major) Courses:
662-381 Causes and Consequences of Poverty
820-415 Organizational Psychology
820-416 Psychology of Intergroup Relations
892-330/331 Basic Concepts of the Social Services I & II
900-356 Social Demography
938-312 Studies in Urban Behavior
938-370 Police in Modern Society
938-435 Sociocultural Aspects of Urban Stress
938-479 The Concept of Community in American Society

COURSES

938 URBAN STUDIES

938-200 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.

938-230, 231 Values in Black and White America I,* II*
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 aspirations of the human spirit and the social context of individual values.

938-240 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.

938-281 Student-Led Courses 1-4 cr.
See page 19.

†Approved for Social Sciences Distribution Credit.

*Academic Affairs Council Approval Pending.

938-283X Selected Topics in Urban Studies 1-4 cr.
See page 19.

938-295 The Urban Experience: A Simulation 4 cr.
See 938-495.

938-298 Directed Study 1-4 cr.
See page 19.

938-310 Studies in Urban Culture and Society 3 cr.
The cultural and social dimensions of urban life are explored through case studies within this topic area. Specific topics 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.

938-311 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 include: Urban Environmental Policy, Housing, Land Use Policy.

938-312 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 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.

938-313 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.

938-325 Human Living Space 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.

938-326 Human Living Space 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.

938-330 Migration and Adaptation to an Urban Setting 3 cr.
Explores the adaptation and integration of migrants to urban settings. Variations in patterns and forms of migration are considered, and institutional mechanisms used by migrants to adapt to the new setting are examined.

938-335 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.

938-336 Research on Aggression 3 cr.
Offers students the opportunity to examine some aspect of aggressive behavior in animals or man in the context of guided research based upon a design they submit prior to the course. Includes discussion of problems faced in research design and data analysis. Primarily intended for students who have completed 779-336 or 938-335.

938-337 Urban Violence: Causation and Control 3 cr.
An 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.

938-340 Urban Visions and Cultural Traditions* 3 cr.
The 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, and the experiences and values embodied in cultural traditions, on the other, by comparing examples of creative visions developed in different cultural contexts.

938-350 The City as Habitat 3 cr.
The physical aspects of the city, focusing on the demographic, spatial, and resource subsystems. The contemporary American city is viewed in historical and cross-cultural context.

*Academic Affairs Council Approval Pending.

938-351 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.

938-360 New Communities 3 cr.
The history and development of an important alternative to metropolitan areas. European and American new towns are examined and compared.

938-370 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.

938-395 Advocacy Planning 3 cr.
An analysis of citizen participation in the urban planning process. A critical investigation of the urban planner in the role of community advocate. Reading and discussion topics include: a services perspective on urban systems, development of community organizations, analysis of community problems and goals, and design of intervention strategies.

938-400 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.

938-401 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 938-325, 242-401, and guest lectures on such topics as ergonomics, ecological psychology, lighting, and acoustics. Projects aimed at elucidation of 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: 957-104.

938-402 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 programs sponsored by Urban Analysis. P: 938-401, 421, and cons inst. 862-327 and 938-430 are recommended.

938-414 The Self in the Urban Setting 3 cr.
Focuses on the aspects of urban existence which aid and impede Americans' personal quests for identity. As such, the course explores the relationships between urban commercial institutions, recreational facilities, aesthetic conditions and community structures and the individual's search for significance, control, pleasure and companionship. In examining such relationships, the course will concentrate on the effects of an urban setting on the problems of acculturation, loneliness, helplessness, boredom, apathy, and mental stress.

938-421 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, the contemporary issues in planning, the implementation of plans, an overview of major federal programs for the delivery and improvement of the urban environment.

938-422 Urban Planning II: Community Project 6 cr.
A field research seminar focusing on the planning/decision-making processes involved in an ongoing program for the revitalization of a 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. Typical 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 of the community and description of its residents; analysis of community needs; systems of service in the community; design and implementation of strategies of intervention; basic systems for the generation and organization of information for planning and intervention activities.

938-430 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.

938-432 Evolutionary Roots of Urban Behavior 3 cr.
Is the behavior of man influenced by his evolutionary history? The question is explored through a study of the relationship between the social behavior within animal societies, both nonhuman and human, and the environment to which they evolved. The course draws from the fields of human evolution, evolutionary animal behavior, environmental and comparative psychology. The purpose is to attempt to identify those behaviors that warrant study in terms of their evolutionary roots.

938-435 Sociocultural Aspects of Urban Stress 3 cr.
An examination of human adaptation to sociocultural stressors typically prevalent in present day communal life. Emphasis is on planning and execution of projects concerned with the impact of such stressors on individual experience and behavior and the impact in turn of those adaptive responses upon the nature of the communal environment.

938-440 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 any changes in these patterns as America became increasingly industrialized and urbanized as well as to any changes produced by counterculture movements.

938-444 National Issues and Community Reform 3 cr.
Focuses on two general areas: the effect of national socioeconomic problems on urban concerns, and the effect of community reformist action on urban and national issues. As such, it explores the urban effects of corporate and national governmental policies towards the distribution of wealth and power in urban America. Moreover, the course examines a variety of strategies employed by Americans who have attempted to use community action to cope with urban and national problems.

938-445 Planning in a Simulated Environment 4 cr.
Techniques and limitations of environmental planning are explored through readings, lectures, discussions, and the use of an adaptation of the River Basin Model which simulates the lower Fox Valley including the city of Green Bay. Students assume various decision-makers' roles such as government official, school director, industrialist, planner, etc., and in the light of many social, economic, and environmental indicators plan for and observe the effects in the simulated region.

938-453 Community Noise: Effects, Assessment and Solutions* 3 cr.
Noise is the most common environmental complaint in urban areas. This course combines an examination of the physical, physiological, psychological, social, and legal characteristics of the problem with field research on the nature of community noise in the city of Green Bay. With this background, we will consider the various techniques for the abatement and control of noise.

938-460 The Corporation and the City 3 cr.
Explores the interrelationship between values, organizational structure and function, and urban sociopolitical life. As such we will be looking at the continuity and change in corporate structure, function and linkage under various conditions of industrialization and bureaucratization and urban structural and interactional consequences.

938-479 The Concept of Community in American Society 3 cr.
Analyzes changing concepts of community and consequent difficulties involved in American urbanization and industrialization. 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. Through the study of these issues students seek concepts which may clarify potentialities for both integrating and diversifying the needs of cities, the nation and the American people.

938-481 Student-Led Courses 1-4 cr.
See page 19.

*Academic Affairs Council Approval Pending.

938-483X Selected Topics in Urban Studies 1-4 cr.
See page 19.

938-484 Senior Distinction Project 3 cr.
See page 19.

938-495 The Urban Experience: A Simulation 4 cr.
Designed to introduce students to simulations and add the experiential component to the learning process. By participating in simulations, students "become" community influentials for a time and make all the decisions required of such influentials in real life. Simulations such as SIMSOC, TRACTS, CLUG, IMPACT, and GHETTO introduce students to different types of simulations, each of which help them experience important parts of human's urban existence.

938-495 Southern Appalachian Migrants in Northern Urban Centers: A White Anglo-Saxon Minority 3 cr.
The migrant experience in new environments is typically characterized by pronounced social and psychological strains. These stresses are particularly evident under circumstances of impelled migration. This course examines patterns of adjustment and channels for integration of one such migrant population—Southern Appalachian peoples whose movement to northern metropolitan centers has been the result of economic stagnation in their native region.

938-498 Directed Study 1-4 cr.
See page 19.

Anthropology

Professors: *James Clifton, applied anthropology, Native American studies, North America culture area.*

Associate Professors: Norris Durham, (chairperson), biological anthropology, evolutionary theory, primate behavior studies, South American culture area; Anthony Galt, cultural anthropology, prehistory, South American and European culture areas; Richard Logan, culture and personality, psychological anthropology, African culture area.

Assistant Professors: Craig Lockard, Southeast Asian history, migration patterns, Southeast Asian culture area; Daniel Rosenberg, cultural anthropology, alcohol and drug studies, Siberian culture area; Lynn Walter, cultural anthropology, women's studies, South American culture area.

Anthropology is the study of cultural and biological variation among people as members of societies, viewed in both historical and contemporary perspective. 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, Science and Environmental Change, 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, contract archaeology, educational anthropology, and urban anthropology. Faculty advisers can offer suggestions about vocationally 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 Pre-Historic Archaeology

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 may include the following as a core and 30 credits that make up the major.

156-301 Peoples and Culture of a Selected Region
156-303 Cultural Ecology
156-304 Family, Kin, and Community
156-310 Culture and Personality
246-322 Modern Linguistics
779-342 Human Evolution
779-364 Human Variability

The remaining 12 credits are selected from the anthropology course offerings with the approval of an adviser.

Credits for work taken in conjunction with the Concourse Museum program apply. 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.

156-301 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, Northern Great Lakes Region, and the cultures of American Indians, Afro-Americans, and European peasantries. Course 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.

†Approved for Social Sciences Distribution Credit.

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.

156-330 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.

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.

Economics

Professors: James M. Murray, regional economics, regional economic development, new planned communities.

Associate Professors: Kumar Kangayappan, (chairperson), economic theory, economic development, land economics, economics of poverty, monetary theory and policy; 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 and financial 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 in economic systems. It involves analyzing how the economy has developed, how it is organized, and how it functions.

Components of the economy—households, businesses and governments—as well as pricing, use of resources, and community, regional and international development are studied.

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 school—economics or business—and law school.

Economics is particularly appropriate when combined with social science or business concentrations: Regional Analysis, Social Change and Development, Urban Studies, and Managerial Systems. But other concentrations can create equally relevant combinations; for example, Humanistic Studies, Science and Environmental Change, Human Development, the Human Adaptability major in Human Biology, or virtually any other. Economics is useful for those seeking teacher certification in some fields.

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. Any economics faculty member may approve such an arrangement. Particularly relevant courses may be found in philosophy, history or the social sciences.

A student with an emphasis in economics and a bachelor's degree will qualify for beginning management positions in business, industry or government. By taking courses in statistics, mathematics and/or data processing, economics students also may find jobs in these areas.

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 corporations and industries.

Students in economics often work in related fields such as insurance, real estate, market research and analysis, financial planning, credit and collection agencies, advertising management, sales management, statistics, systems analysis, and administration at federal, state, county and municipal levels.

Courses in economics concentrate in five areas. They are: economic theory; business, industrial, and labor economics; international economics; public finance; and resource economics. With the approval of faculty advisers a student may choose an emphasis in economics by selecting junior and senior level economics courses and appropriate courses in various concentrations.

The following listing arranges the principal courses in terms of the five fields within the economics disciplinary program. See also courses listed under the appropriate concentrations and disciplines and the complete list of economics courses.

Business, Industrial and Labor Economics
298-302 Intermediate Macro Economic Theory, 3 cr.
298-303 Intermediate Micro Economic Theory, 3 cr.
298-304 Contemporary Labor Markets, 3 cr.
298-308 Business Cycles, 3 cr.
298-330 Money and Banking, 3 cr.
298-498 Directed Study, 3 cr.

Economic Theory
298-302 Intermediate Macro Economic Theory, 3 cr.
298-303 Intermediate Micro Economic Theory, 3 cr.
298-307 Sources of Contemporary Economic Concepts, 3 cr.
298-308 Business Cycles, 3 cr.
298-401 Regional Economic Analysis, 3 cr.
298-402 Resource Economics Analysis, 3 cr.
298-498 Directed Study, 3 cr.

International Economics
298-302 Intermediate Macro Economic Theory, 3 cr.
298-303 Intermediate Micro Economic Theory, 3 cr.
298-403 International Trade, 3 cr.
298-404 Economics of Developing Areas, 3 cr.
298-406 Comparative Economic Systems and Institutions, 3 cr.
298-498 Directed Study, 3 cr.

Public Finance
298-302 Intermediate Macro Economic Theory, 3 cr.
298-303 Intermediate Micro Economics Theory, 3 cr.
298-306 Public Finance and Fiscal Policy, 3 cr.
298-330 Money and Banking, 3 cr.
298-498 Directed Study, 3 cr.

Resource Economics
298-302 Intermediate Macro Economic Theory, 3 cr.
298-303 Intermediate Micro Economic Theory, 3 cr.
298-305 Natural Resources Economic Policy, 3 cr.
298-402 Resource Economics Analysis, 3 cr.
298-404 Economics of Developing Areas, 3 cr.
298-498 Directed Study, 3 cr.

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.

†Approved for Social Sciences Distribution Credit.

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 intra-regional and interregional context; problems in regional analysis; economic concepts regarding location, spatial organization, and planning for regional development. P: 298-202.

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.

Geography

Professors: Donald A. Gandre, economics, transportation, urban land use.

Associate Professors: William G. Kuepper, 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.

Instructors: Russell Stubbles, recreation, cartography.

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 the "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, Biogeography, and Soil Classification and Geography.

Courses appropriate to **cultural geography** majors include: Introduction to Cultural Geography, Economic Geography, Urban Geography, Geo-Historical Approaches to the Environment, and Social Demography.

Students interested in **regional geography** would select a number of area courses such as: Introduction to Regional Analysis, Analysis of the Great Lakes Region of Africa, Analysis of the Great Lakes Region of North America, and Regional Analysis of Northeastern Europe. 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 including these courses: 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.

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 The Regions of Earth: An Introduction to Geography† 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.

†Approved for Social Sciences Distribution Credit.

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.

416-250 Maps and Air Photos 3 cr.
The appreciation, use, and evaluation of maps and air photos as informational sources.

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.

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.

416-376 Geography of Developing Areas 3 cr.
The geography of countries in various stages of development and the role of physical and human resources. P: soph st.

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.

416-378 Geography of Tension 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.

382 Regional Analysis of Northwestern Europe 3 cr.
See 834-382.

Political Science

Professors: Edward W. Weidner, (chancellor).

Associate Professors: Forrest Armstrong American studies, historical development of the role of the city in American life, electoral process; James Kolka (on leave); C. Jarrell Yarborough, policy sciences, environmental administration, the political novel.

Assistant Professors: David Littig, (acting chairperson), urban politics, public policy, Latin American politics, urban transportation.

Political science is concerned with the systematic study of political behavior, processes, structures, functions, and policies within particular political systems, among varieties of political systems in the world, as well as relations among political systems.

Undergraduate study in political science emphasizes the study of the philosophical bases and behavior of humans as political beings, both as individuals and collectively. Special attention is given to problem focused areas of the discipline such as the making, administration, and impact of public policy.

A disciplinary program in political science opens career opportunities in city management, foreign service, journalism, business, politics, teaching, law, overseas assignments with private and public organizations, and public service positions with private and public agencies at the local, state, regional, and federal level.

Political science is an appropriate combination with a variety of concentrations and professional programs. Because it is a discipline which draws upon other social sciences, students with concentrations in these areas will be very much "at home" in political science. Students from concentrations such as Science and Environmental Change and professional programs like environmental administration, whose professional careers will require that they understand and deal effectively with government and public policy issues should consult with the faculty adviser to develop a program of study to meet their needs.

Students planning political science studies should take 778-207, Macropolitics, and 778-208, Micropolitics, within the first two years. Students should consult the chairperson to help select courses appropriate to the desired program of study.

COURSES

778 POLITICAL SCIENCE

778-101 The American Governmental System† 3 cr.
An examination of the American federal system of government with emphasis on the jurisdictions, structural components, ideologic foundations, legal basis, functions, processes, and decision-making centers of the system and its point of interface with citizens and groups. Covers the functions and impacts of governmental activities in contemporary society, the major recurrent substantive and procedural issues associated with the operations of the system, and focuses on answering the following question for each student: What do I need to know about American government in order to make it work for me? Develops student capacity to participate in public policy-shaping activities.

778-103 Introduction to Political Analysis† 3 cr.
The nature and function of political science; politics as a cultural phenomenon.

778-207 Macropolitics† 3 cr.
Approaches to political analysis which proceed from the perspective of the political system as a whole.

778-208 Micropolitics† 3 cr.
The political behavior and characteristics of individuals and other sub-community units: groups, parties, councils, and bureaucracies. Social and psychological traits associated with political behavior are explored and explanations of who participates in politics, how, and with what consequences are examined.

778-210 Normative Politics† 3 cr.
The relationship between normative principles as guides to political conduct or as standards of political action and the consequences of such principles in empirical political situations. Topics include: existing and emerging normative orientations toward public policy; the search for universal political norms; political ideologies as competing approaches to achieving the good society, etc.

778-302 Community Political Behavior 3 cr.
Major trends in American local politics; behavior of major structures and local associations. Some field experience is provided. P: jr st.

778-303 Elections and Voting Behavior 3 cr.
Psychological and social elements in voting behavior; current electoral trends; roles of voters in the governmental process. P: jr st.

†Approved for Social Sciences Distribution Credit.

778-304 Comparative Political Systems 3 cr.
An introduction to comparative political analysis stressing both essential structures and functions. Modes of analysis in reference to the British, French, Russian, and other political systems. P: jr st.

778-307 Concepts in Political Theory 3 cr.
The nature of conceptual thought about politics; various problematic concepts of traditional and scientific theory: power, authority, community, justice, and others. P: jr st.

320 Law, the Constitution, and American Development 3 cr.
See 875-320.

778-350 Political Conflict and Urban Policy 3 cr.
The management of conflict in urban areas. Emphasis on the relationship between patterns of conflict, management of urban governments, and the public service provided by these governments such as criminal justice, education, welfare, and poverty programs. P: 255-102.

778-400 Intergovernmental Relations in the United States 3 cr.
The American system of government as a federal system with governments operating on three planes (federal, state, and local), yet functioning as one integrated and interdependent system. Attention given to constitutional bases of federalism, how intergovernmental relations affect public policy, and revenue sharing. P: jr st. 778-207 recommended.

778-403 Foundations and Problems of International Politics 3 cr.
Contemporary international politics, stressing the wide variety of approaches. P: jr st and one political science course at the 300 level.

778-404 American Foreign Economic and Military Policies 3 cr.
The role of economic and military policies in efforts by the United States to assure security, international stability, and economic development. P: jr st and one political science course at the 300 level.

778-405 American Executive Behavior 3 cr.
The patterns of executive behavior at the local, state, and national levels in the United States; interplay of administration and partisan politics; influence of variations in structural arrangements. P: jr st and one political science course at the 300 level.

778-426 American Legislative Process 3 cr.
Procedures through which American national and state legislatures arrive at legislation; group behavior of representative bodies in the contemporary United States. P: jr st and one political science course at the 300 level.

778-450 Political Change 3 cr.
Theories of political change, the relation 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: sr st.

778-472 Parties and Pressure Groups 3 cr.
The role of parties and pressure groups in the American political system; techniques employed in advancing their interests. P: jr st and one political science course at the 300 level.

Psychology

Professors: 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, and architectural psychology; Eric Knowles, (chairperson), social, environmental, and personality psychology; Charles Matter, biological psychology, perception, comparative ethology, cognitive processes; Robert Mendelsohn, community, social, and cognitive psychology.

Assistant Professors: Agnes Griffith, developmental psychology, early childhood education; Lloyd Nesberg, learning, stress, adjustment; Egbert Pfeiffer, neural organization, learning disabilities, early child development, industrial psychology; James Sorce, cognitive processes, developmental psychology.

Lecturers: Thomas Hogan, psychological testing, educational evaluation, research methods.

Psychology is the systematic and scientific study of behavior. It seeks to understand the physiological, personal, social, and environmental conditions that influence thought and action. Through studies of animal and human behavior, it seeks to understand, predict, and influence behavior.

The psychology program at UWGB provides an undergraduate training in all areas of psychology and has particularly strong opportunities in developmental, social, community, and environmental psychology.

The study of psychology can be combined with any of the concentrations in the University, depending on the student's particular focus and areas of emphasis. Often, concentrations in the humanities area are selected by students interested in philosophical, aesthetic, environmental, and clinical psychology; concentrations in the life sciences are selected by students interested in physiological, population, clinical, and developmental psychology; concentrations in the social sciences are selected by students interested in social, environmental, clinical, or general psychology; and concentrations in the physical sciences are selected by students interested in quantitative or mathematical psychology. Students should examine the opportunities offered by each of the concentrations and consult with a faculty member in psychology.

In addition, a psychology disciplinary program can be combined with a number of professional and preprofessional programs, such as environmental design, environmental administration, recreation resources, social services, or education in order to strengthen knowledge or career orientation in particular areas. Teacher certification can be gained by combining psychology with the professional program in education.

Students electing a disciplinary program in psychology develop programs that meet the following requirements:

3 credits introduction to the discipline, chosen from:
820-102 Introduction to Psychology
426-210 Introduction to Human Development

3 credits in statistics, chosen from:
255-205 Social Science Statistics
600-260 Elementary 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 Psychology of Stress

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:
426-331 Human Development I: Infancy and Early Childhood
426-332 Human Development II: Middle Childhood and Adolescence

11-12 credits in areas of specialization, elected from the following:
Any 300 or 400 level psychology course
246-324 Psycholinguistics
302-406 Evaluation and Testing in Education
426-336 Sex Role Development in Contemporary Society
426-337 Developmental Tests and Measurements

426-429 Theories of Personality Development
426-431 Cognitive Development
426-432 Cultural Impacts on Human Development
426-433 Human Development III: Adulthood and Later Maturity
426-435 Developmental Problems and Deviations
426-437 Developmental Guidance with Adults and the Aged
478-313 Brain Functions in Human Behavior
478-413 Neurophysiology
485-302 Human Identity
485-315 Theories of Creativity
736-406 Philosophical Problems in the Sciences: Psychology
834-325 Human Living Space I
834-326 Human Living Space II
875-311 The Role of Punishment in Society
875-371 Motivation and Social Change
938-335 Aggressive Behavior: Biological and Psychological Roots
938-336 Research on Aggression
938-432 Evolutionary Roots of Urban Behavior
938-435 Socio-cultural Aspects of Urban Stress

Appropriate Selected Topics courses (483) or Directed Studies (498) on approval of adviser.

Psychology helps to deepen understanding of individual and social behavior and provides a good general background for a variety of careers. Psychology graduates, some of whom combined a professional program with psychology, are employed in a variety of positions with social and community service agencies, businesses, research institutes, and governmental agencies.

Graduate degrees generally are required for specialized professional work such as psychological testing and counseling, college teaching, and most psychological research activities. Preparation for graduate work should combine a broad program of liberal arts with a sound background in general psychology and an emphasis on research methods and experiences. Many UWGB psychology graduates continue their professional training in such fields as social work, education, medicine, and business, as well as psychology.

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.

820-290 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.

820-300 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: jr st.

†Approved for Social Sciences Distribution Credit.

820-306 Psychology of Perception 3 cr.
Nature of perceptual processes and their functional relationships to environmental, 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.

820-337 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.

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.

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; Gilbert Gardner, (acting chairperson), minority groups, methods, social change, social theory; Harvey J. Kaye, political economy and social stratification, historical and comparative social science, Latin American studies; Judith McIlwee, social stratification, methods of social research, social theory, sociology of women.

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.

The 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 among others.

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 Elementary 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 Independent 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
426-336 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
938-330 Migration and Adaptation to an Urban Setting
938-440 Social Dynamics of Urban Life

Ways of combining the major in sociology with a specific concentration or interconcentration 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.

900-302 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.

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.

†Approved for Social Sciences Distribution Credit.

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.

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.

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
Physics

Human Biology

(Majors in HUMAN ADAPTABILITY, NUTRITIONAL SCIENCES, POPULATION DYNAMICS)

Professors: Harry G. Guilford, 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, physiological, industrial and consumer aspects of nutrition, biochemistry, nutritional status and assessment; Norris M. Durham, biological anthropology, evolutionary theory, primate behavior, South American culture; Charles A. Ihrke, genetics, plant breeding and agricultural genetics, human inherited disease syndrome, cellular biology; Elaine N. McIntosh, (chairperson), community nutrition, dietetics, nutrition education; Thomas Mowbray, (on leave), plant ecology, wildlife, lower green plants, regional resource assessment and planning; 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; Dorothea B. Sager, reproductive physiology, developmental biology.

Instructors: Donna Z. Randall, general chemistry, chemistry for nursing, nonmajors.

Three majors are offered by the concentration in Human Biology. They are Human Adaptability, Nutritional Sciences, and Population Dynamics. Descriptions of each follow.

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 humans.

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 managment, and library sciences. Placement in medical and dental schools has been exceptionally good.

Students can choose from three tracks in Human Adaptability: Laboratory Life Sciences, Human Biology and Applied Human Biology.

LABORATORY LIFE SCIENCES

This track emphasizes study of the fundamental physiological and chemical bases for the functioning of the human body and the related psychological influences. It is the most appropriate course of study for students interested in preparing for medicine, dentistry, veterinary medicine, environmental health, industrial nutrition or for graduate work in such fields as physiology, pharmacology, and public health.

HUMAN BIOLOGY

This focus 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 track 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 designing 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 human biology track in Human Adaptability concentration with the human services administration track in Managerial Systems. The human services administration track offers coursework 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 the design of this program allows for completion of a bachelors degree for nurses and hospital technical personnel, and for professional updating and new career directions for persons presently 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
226-120 Chemistry-Physics: Basic Concepts
226-121 Chemistry-Physics: Atomic & Molecular Structure
226-122 Chemistry-Physics: Fluids & Solutions
600-202, 203 Calculus and Analytic Geometry I & II
600-260 Elementary Statistics
572-104 Introduction to Literature
426-210 Introduction to Human Development

Sophomore Year:
204-302 Microbiology
204-303 Genetics
204-340 Comparative Anatomy of Vertebrates
226-125 Chemistry-Physics: Basic Instrumentation
226-223 Chemistry-Physics: Energetics
226-311 Analytic Chemistry
485-105 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
426-331 Human Development I: Infancy & Early Childhood
478-402 Human Physiology
478-403 Human Physiology Laboratory
478-413 Neurophysiology
779-318 Vertebrate Reproduction

Senior Year:
226-330 Biochemistry
Human Biology Electives
478-450 Psychological Factors in Human Adaptability
779-412 Principles of Parasitology

Human Biology

Freshman Year:
204-202, 203 Principles of Biology I, II
OR
478-102 Introduction to Human Biology
AND
478-104 Anatomy and Physiology
226-108 General Chemistry
426-210 Introduction to Human Development
485-105 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 Introduction to Public Administration
478-313 Brain Functions in Human Behavior
572-104 Introduction to Literature
600-260 Elementary Statistics
694-232 Nutritional Significance of Food
779-312 Evolutionary Processes
779-320 Introduction to Population Dynamics

†Approved for Natural Sciences and Mathematics Distribution Credit.

Junior Year:
204-303 Genetics
204-347 Developmental Biology
350-301 Environmental Administration
478-402 Human Physiology
694-302 Nutrition and Culture
779-318 Vertebrate Reproduction
820-309 Psychology of Motivation
820-337 Social Behavior Dynamics

Senior Year:
350-401 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
485-105 Introduction to Expository Writing
575-202 Business and Its Environment
600-150/152 Computer Science (BASIC and COBOL)
600-260 Elementary Statistics
478-102 Introduction to Human Biology

Sophomore Year:
298-203 Micro Economic Analysis
426-210 Introduction to Human Development
478-104 Anatomy and Physiology
478-201 Adaptation to the Environment
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.
The development, nature and processes of human adaptability.

478-104 Anatomy and Physiology 4 cr.
The structure of the human body and the physiology of the organ systems. Primarily for nursing students. Includes laboratory. P: 204-202 and 226-108 or equivalent.

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.

478-281 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 acclimatization. P: 204-202 and 203 and 226-120, 122, 123, 125, or equivalent.

478-302 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, 226-120, 122, 123, 125, or equivalent, or cons inst.

478-303 Laboratory in Comparative Physiology 2 cr.
Laboratory experiments demonstrating phenomena discussed in 478-302 acquaint students with the techniques and rationale of laboratory science. Several alternative approaches to each laboratory exercise. P: 478-302 or concurrent registration.

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 the delivery of medical services and the funding of research. P: jr st.

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: jr st and 204-202 and 203.

478-325 Biological Instrumentation 2 cr.
Laboratory exercises with instruments useful in biological investigations. The mechanical principles of instrumentation, and reliability and accuracy of measurements. P: 226-120, 122, 123, 125 or equivalent and 204-202 and 203.

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.

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 and 203 and 226-120, 122, 123, 125 or equivalent.

478-403 Human Physiology Laboratory 2 cr.
Laboratory exercises in conjunction with 478-402 with special emphasis on experimental techniques and fundamentals of research. P: 478-402 or concurrent registration.

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 and 203 and 226-120, 122, 123, 125, or equivalent, or cons inst.

478-414 Neurophysiology Laboratory 2 cr.
Experiments and techniques to demonstrate phenomena discussed in 478-413; anatomical, histological, electrophysiological, and behavioral approaches to experimentation. An individual research project is offered. P: 478-413 or concurrent registration.

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 and 203 and 226-120, 122, 123, 125, or equivalent.

478-440 Seminar: Topics in Human Adapability 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.

†Approved for Natural Sciences and Mathematics Distribution Credit.

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 industrial nutrition.

COMMUNITY NUTRITION

The very existence of widespread malnutrition in the United States, coupled with pleas from federal agencies, international organizations, and foundations, stresses the need for well-trained nutrition workers of a new kind, dedicated to community action. The program in community nutrition is intended to provide the appropriate training by combining natural and social science courses with the development of skills in communication. 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 sub-program should seek faculty advice early in order to complete requirements. Combinations directed toward social work and communications also are possible.

INDUSTRIAL NUTRITION

Methods for maximum utilization of the world's food resources must be explored, including improved methods of distribution, preservation, and achievement of greater palatability and nutritional value, particularly of low-cost foods. Emphasis on industrial nutrition prepares students to work as technicians or scientists in areas of food or nutrition research in university, government, and industrial laboratories.

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, possible 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, history, and voice and speech.

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 Principles of Biology I
204-203 Principles of Biology II
225-208 General Chemistry
226-300, 301 Bio-organic Chemistry with laboratory
246-133 Fundamentals of Public Address
OR
246-166 Fundamentals of Interpersonal Communications
600-101 Intermediate Algebra (or advanced placement)
694-232 Nutritional Significance of Food

Sophomore Year:
204-302 Microbiology
600-260 Elementary 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, 386 Advanced Human Nutrition I and II
820-102 Introduction to Psychology
900-202 Introduction to Sociology
OR
an anthropology course
900-302 Social Stratification

Senior Year:
478-402, 403 Human Physiology with laboratory
694-421, 422 Community Nutrition I and II
820-320 Personnel Psychology
OR
575-362 Principles of Personnel Management

Industrial Nutrition

Freshman Year:
204-202 Principles of Biology I
204-203 Principles of Biology II
226-120 Chemistry-Physics: Basic Concepts
226-121 Chemistry-Physics: Atomic and Molecular Structure
226-122 Chemistry-Physics: Fluids and Solutions
600-202, 203 Calculus and Analytic Geometry I and II

Sophomore Year:
226-123 Chemistry-Physics: Energy and Power
226-125 Chemistry-Physics: Basic Instrumentation
226-302, 303, 304, 305 Organic Chemistry I and II with laboratories
226-311 Analytic Chemistry
694-232 Nutritional Significance of Food

Junior Year:
204-302 Principles of Microbiology
204-303 Genetics
600-260 Elementary Statistics
694-302 Nutrition and Culture
226-330, 331 Biochemistry with laboratory
694-303 Food Science
Selected Nutritional Sciences course

Senior Year:
226-320 Thermodynamics and Kinetics
226-321 Structure of Matter
226-413 Instrumental Analysis
478-402 Human Physiology
694-485, 486 Advanced Human Nutrition I and II

COURSES

694 NUTRITIONAL SCIENCES

694-142 You and Your Food† 2-3 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. Recommended as distribution course. No initial chemical or biological knowledge needed beyond the high school level. The number of credits for a given term is determined by the instructor in consultation with the program unit and announced in the current *Timetable*.

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 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 226-122.

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.

694-281 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.

*Academic Affairs Council Approval Pending.

†Approved for Natural Sciences and Mathematics Distribution Credit.

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.

694-328 Principles of Nutritional Biochemistry 3 cr.
See 226-330.

694-329 Principles of Nutritional Biochemistry Lab 1 cr.
See 226-331.

694-383 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. Offered in alternate years. 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. Offered in alternate years. 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.

694-481 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, 486 Advanced Human Nutrition 3, 3 cr.
Physiological and biochemical principles of nutrition; fundamental concepts of human nutrition and nutritional diseases. P: 204-202 and 203; 226-330.

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 equiv.

694-498 Directed Study 1-4 cr.
See page 19.

Population Dynamics

One of the most serious and challenging problems facing humans today is the rapid increase of their own numbers, a phenomenon commonly referred to as the "population explosion."

Continued, rapid population growth could be considered the root of many environmental problems presently besetting the world; problems including pollution, urban crowding, malnutrition, resource shortages, and physical and mental stress, which often are expressed in increasing crime rates, drug abuse, alcoholism, and similar social ills. Overpopulation is not only a problem of humans, but of animal and other organic populations.

For these reasons, population structure, food production and distribution, as well as planning strategies for population change are becoming increasingly important areas of study.

To deal with problems related to growing populations, individuals are needed who understand the dynamics of human, animal, and other organic populations, and who can combine the expertise now found separately in the biological, social, 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 Evolution; or a sociological emphasis, choosing subjects like Social Demography; Demographic Methods; Variation in Culture and Economics in Human Populations; Human Variability; 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.

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.

Since population programs and concerns are world wide, opportunities exist for jobs overseas with international institutions such as the United Nations, the World Health Organization, and with various programs of the United States government.

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 particularly good background for high school biology teachers.

The study and control of non-human populations is another career field for graduates of this concentration. Populations of insects and animals interact with populations of predators, plants, and other insects and animals, affecting crop yields, the need for insecticides, the numbers of songbirds, and availability of fish, game, and timber. Management of recreational areas and wildlife draws heavily on knowledge of Population Dynamics. Careers in agricultural genetics and population biology are especially appropriate.

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 Elementary Statistics
799-312 *Evolutionary Processes*
799-318 Vertebrate Reproduction
799-320 Introduction to Population Dynamics

Semester IV

799-310 Human Genetics
900-202 Introduction to Sociology

Semesters V-VIII

Individualized Program

COURSES

779 POPULATION DYNAMICS

779-204 Fertility, Reproduction and Family Planning 2 cr.
Reproductive physiology. Historical, philosophical, cultural, religious, social, and emotional aspects of the family unit, human sexuality, and fertility control. Organizational and technical factors in birth control and family planning programs.

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 Vertebrate Reproduction 3 cr.
Basic reproductive processes, with emphasis on the factors, both hormonal and environmental, that affect reproductive functions in vertebrates, particularly 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.

779-330 Biological History of Wisconsin 2 cr.
Modifications in Wisconsin vegetation and animal life from the late pleistocene due to the effects of population growth and cultural changes. Includes fur trade, logging, advent of farms, fisheries, market hunting.

†Approved for Natural Sciences and Mathematics Distribution Credit.

779-342 Human Evolution 3 cr.
Phylogenetic history and affinities of Homosapiens 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.

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.

779-395 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: 204-202, 203.

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 600-260.

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.

779-480 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.

779-498 Directed Study 1-4 cr.
See page 19.

Science and Environmental Change

Professors: Harold J. Day, hydrology, resource management; David Jowett, biometrics, biomathematics, ecosystems modeling; Thomas H. McIntosh, soils, agricultural land management, biogeochemistry; Robert H. Maier, soil, plant, animal, human relationships; John F. Reed, botany; Keith L. White, ecology and resource management.

Associate Professors: Robert S. Cook, (on leave), wildlife ecology, ornithology; 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; Joseph M. Moran, meteorology, air pollution; Michael D. Morgan, ecology; V. M. G. Nair, plant and forest pathology, mycology; Jack C. Norman, radiochemistry; Nikitas L. Petrakopoulos, applied mathematics, theoretical physics; Charles Rhyner, solid waste management; Paul E. Sager, limnology, acquatic biology; Leander J. Schwartz, microbiology, plant physiology; Nancy J. Sell, industrial resource recovery; Roger A. Simons, mathematics and computer science; Ronald H. Starkey, organic chemistry and air chemistry; Thomas E. Van Koevering, high school science teaching; Robert B. Wenger, (chairperson), solid waste management and mathematical optimization; James H. Wiersma, water chemistry, analytical chemistry.

Assistant Professors: John E. Barger, mathematics; Steven I. Dutch, structural geology, mineral resources; Sterling P. Randall, physical and inorganic chemistry; Ronald D. Stieglitz, geology and land use, sedimentary geology.

Lecturers: Richard B. Stiehl, veretebrate zoology, ornithology, mammalogy; Donn P. Quigley, geology of Wisconsin; Roy J. Stumpf, mathematics.

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 other problem solving 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 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.

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. Normally, SEC majors select chemistry, physics, biology, earth science, or mathematics, but in some instances economics, anthropology, geography 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, as well.

INTERDISCIPLINARY EMPHASIS

An interdisciplinary emphasis requires 30 credits of course work at the junior-senior level, 18 of which are in one of these *three areas:*

—Theory and Technology
—Resource Management and Administration
—Communication and Interpretation

All three areas have in common a fundamental basis in the natural sciences, yet each is designed to fulfill specific interests *that cross traditional disciplinary* boundaries.

Theory and Technology is appropriate for students interested in developing competencies in rigorous scientific techniques useful in analyzing environmental problems. In pursuing this area, students will likely support their interdisciplinary course work with advanced study *in biology,* chemistry, physics, earth science, or mathematics. In addition, the major may be strengthened by courses in other concentrations including Regional Analysis, Urban Studies, or the Population Dynamics major in Human Biology.

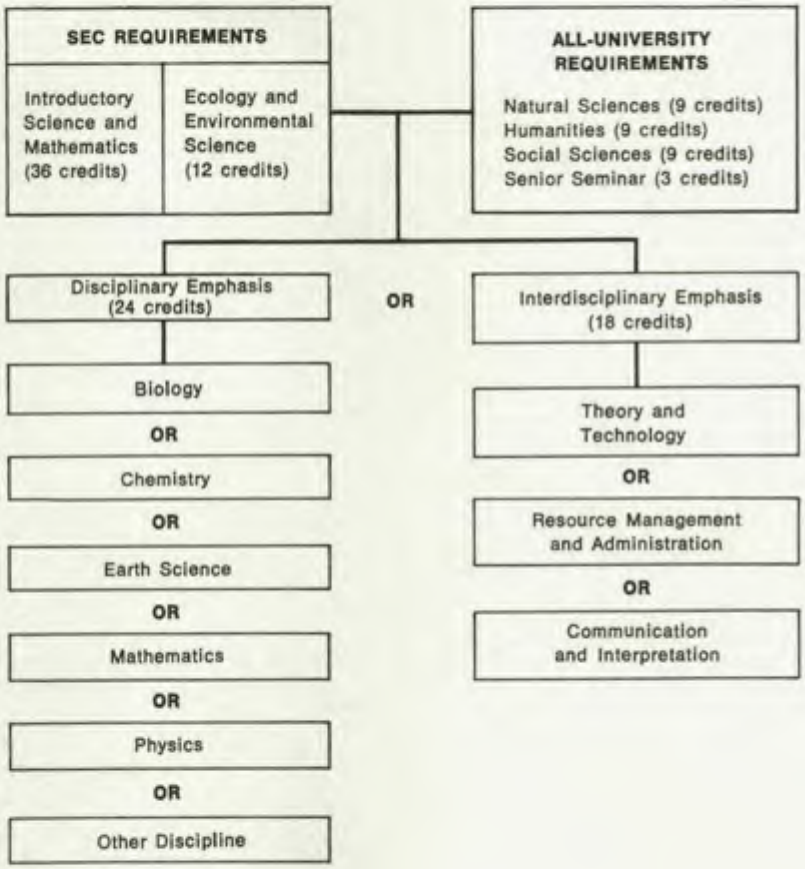
Resource Management and Administration combines training in basic sciences with studies in socio-economics. This background is appropriate preparation for responsible decision-making regarding managing natural resources. In addition to courses in the social sciences, the major is encouraged to select appropriate courses in Managerial Systems (business), Regional Analysis, Social Change and Development, and public and environmental administration.

Communication and Interpretation provides the opportunity to develop a facility in the natural sciences along with skills in communication. Individuals so prepared are capable of bridging the communications gap that often separates science and society. In addition to courses in the natural sciences and communications, the student may choose courses in philosophy and in recreation resources.

By majoring in SEC students may, in the context of either a disciplinary or interdisciplinary emphasis, focus studies on specific resource problems such as water quality, solid waste management, air quality, or land use planning. Also, SEC provides preprofessional training in engineering, medicine, dentistry, nursing, 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 or public and environmental administration.

SCIENCE AND ENVIRONMENTAL CHANGE

This diagram illustrates some of the possibilities available through the program in Science and Environmental Change.



REQUIREMENTS

Each SEC major prepares for a disciplinary or 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, and natural sciences.

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 36 credits of course work in introductory science and mathematics: earth science (4 credits), chemistry and physics (15 credits), and mathematics (9 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.

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.

Theory and Technology

Freshman Year:
204-202 Principles of Biology I
204-203 Principles of Biology II
226-120 Chemistry-Physics: Basic Concepts
226-121 Chemistry-Physics: Atomic and Molecular Structure
226-122 Chemistry-Physics: Fluids and Solutions
600-202, 203 Calculus and Analytic Geometry I and II

Sophomore Year:
226-125 Chemistry-Physics: Basic Instrumentation
226-223 Chemistry-Physics: Energetics
226-227 Chemistry-Physics: Qualitative Analysis
226-311 Analytical Chemistry
296-202 The Earth's Physical Environment
600-260 Elementary Statistics
600-320 Linear Algebra I

Junior Year:
226-302, 303 Organic Chemistry I and II
226-320 Thermodynamics and Kinetics
226-321 Structure of Matter
862-322, 323 Ecosystems Analysis I and II

Senior Year:
204-302 Microbiology
226-413 Instrumental Analysis
600-355 Applied Mathematical Optimization
862-330 Hydrology
862-403 General Limnology
862-434 Water Chemistry
862-460 Resource Management Strategy

Resource Management

Freshman Year:
204-202 Principles of Biology I
204-203 Principles of Biology II
226-120 Chemistry-Physics: Basic Concepts
226-121 Chemistry-Physics: Atomic and Molecular Structure
226-122 Chemistry-Physics: Fluids and Solutions
600-202 Calculus and Analytic Geometry I

Sophomore Year:
226-123 Chemistry-Physics: Energy and Power
226-125 Chemistry-Physics: Basic Instrumentation
296-202 The Earth's Physical Environment
350-301 Environmental Administration
600-203 Calculus and Analytic Geometry II
600-260 Elementary Statistics

Junior Year:
226-311 Analytical Chemistry
298-305 Natural Resources Economic Policy
862-322-323 Ecosystems Analysis I and II
862-330 Hydrology
862-332 Geophysical Fluid Mechanics
875-400 Environmental Law

Senior Year:
862-331 Oceanography
862-403 General Limnology
862-434 Water Chemistry
862-445 Planning in a Simulated Environment
862-460 Resource Management Strategy

Communication and Interpretation

Freshman Year:
204-202 Principles of Biology I
204-203 Principles of Biology II
226-120 Chemistry-Physics: Basic Concepts
226-121 Chemistry-Physics: Atomic and Molecular Structure
226-122 Chemistry-Physics: Fluids and Solutions
246-143 Introduction to Creative Photography
296-202 The Earth's Physical Environment

Sophomore Year:
204-344 Vertebrate Zoology
226-123 Fundamentals of Chemistry-Physics: Energy and Power
226-224 Principles of Chemistry-Physics: Materials
246-202 Introduction to Mass Communications
600-251 Introduction to Computer Science
600-260 Elementary Statistics
779-342 Human Evolution
862-331 Oceanography
862-302 Principles of Ecology

Junior Year:
204-320 Field Botany
204-350 Field Zoology
204-354 Animal Behavior
532-303 Recreational Supply and Demand Analysis
532-310 Formulating and Administering Recreational Programs
779-318 Vertebrate Reproduction
862-141 Elementary Astronomy
862-403 General Limnology
862-483X Directed Study in Environmental Interpretation and Communication

Senior Year:
296-350 Field Geology
296-305 Natural Resources Economic Policy
532-345 Landscape Architecture I
532-407 Environmental Impacts of Recreation
600-364 Biometrics
862-320, 321 The Soil Environment with Laboratory
862-350 Meteorology
Capstone Course in Communication/Interpretation

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.

862-104 Selected Concepts from Physical Science 3 cr.
Laboratory-discussion format that supplements lectures in 862-102 with an increased emphasis on the principles of physics which include mechanics, heat, light, sound, and electricity. Other topics include: resources from the earth, science and pollution, and science and the future. Does not serve as a prerequisite for any Chemistry-Physics course. P: concurrent registration in 862-102.

862-105 Elements of Descriptive Geometry 3 cr.
Orthographic projection and its application to analysis and solution of three-dimensional problems involving points, lines, planes, and solids; axonometric projections for pictorial representation with engineering and design applications.
P: 600-101.

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.

862-180, 181 River Basins in Transition I,* II* 3, 3 cr.
Use of the river drainage basin as an important element in planning human activities compatible with existing local natural resources is introduced. A historical review of development in two river basins including one in Northeastern Wisconsin and one in either India, Africa, Europe, Central America or elsewhere in the U.S. will be presented with an emphasis on the interrelationship between the natural resources such as water, land, plants, and animals and human activities such as agriculture, industry, transportation, and pollution. Elements of hydrology, geomorphology, and socio-economic geography will be used as the foundation for considering value questions addressing future resource management alternatives.

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 establishment of priorities among alternatives in such applied science areas as environmental health and energy will be examined.

862-202 Environmental Information Sources 2 cr.
Research techniques and methods, with special reference to information on the environment, ecology, pollution, and related fields that is available in the library and elsewhere.

†Approved for Natural Sciences and Mathematics Distribution Credit.
*Academic Affairs Council Approval Pending.

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 of, 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, Electric Power and Society† 3 cr.
The technological, economic, and environmental aspects of electrical power generation and use. Primary emphasis on general concepts of power generation alternatives provides the student with an overview of the energy crisis as applied to electrical power.

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† 2 cr.
Historical (Indian, settler, logger) and contemporary (fire, grazing, urbanization) modification of Wisconsin forest vegetation. Biology of individual species and community dynamics. Interpretation of current vegetation research and management practices.

862-288 Man and Wildlife 2 cr.
Wildlife resource stressing the interrelationship with modern society and the importance to humans. Cultural, recreational, and biological aspects of the resource.

862-295 Consumer Chemistry 2 cr.
An elementary discussion of the chemical principles which govern many household procedures, and some quantitative investigation of the active constituents comprising various commercial products. January course. P: 1 semester h.s. chemistry.

862-295 Laboratory Glassblowing 1 cr.
An introduction to the techniques of glassblowing related to the construction and repair of laboratory glassware. January course.

862-295 Philosophical and Mathematical Exploration of Man's Concepts of Infinity 2 cr.
A survey of a broad spectrum of interpretations of infinity. Several philosophical theories are studied and some are interpreted mathematically. Also includes mathematical properties of infinity, often leading to philosophical questions. January course.

862-295 Solid Waste Management Problems 2 cr.
A study of the nature of the solid waste problem. Alternative methods for handling and disposal will be considered such as landfilling, incineration, composting, and recycling. January course.

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. January course.

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 flow, 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 the understanding of 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, 226-125, 223 or cons inst.

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. Offered in January. P: 204-203.

862-310 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.

862-311 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, 226-122 and 226-123.

862-312 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.

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: 600-202.

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, deflections of beams, statically indeterminate members, columns. P: 862-313.

862-317 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 measurement of electromagnetic radiation. Topics may include solar radiation, atmospheric optics, photochemistry, and plant growth chambers. P: 226-125 and 226-228.

862-319 Industrial Pollution Control Technology 2-3 cr.
Air and water pollution control measures; nature of major industrial pollutants, and brief overview of government regulations. Specific industries will be considered including paper and pulp making, cement manufacturing, breweries, foundries and chemical processing. Discusses manufacturing process, how and where pollution arises, and specific techniques of control employed. Field trips. P: 226-122 and 226-123 or 226-223.

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 122; 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.

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, 226-121, 122, 123, 125, 296-202, and 600-260.

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.

862-330 Hydrology 3 cr.
The principles of hydrology dealing with the waters of earth; the occurrence, 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.

862-332 Geophysical Fluid Mechanics 3 cr.
Fundamental behavior of fluids and fluid flows; the statics, kinematics, and dynamics of fluids, with applications to atmospheric and hydrospheric flow phenomena and to engineering problems. P: 600-203.

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: 226-223 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.

862-380 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 the experimental methods currently used in the life sciences, including tracers in biology, radiation biology, nuclear medicine and radioecology. This course provides the background needed to obtain an AEC license to use radionuclides in most tracer experiments. Credit will not be given for both this course and 226-418.

862-395 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 will be of a basic lecture format and each student will be asked to prepare a paper on an aspect of chemical ecology which is of interest to him. P: cons inst.

862-395 Green Bay: Under the Ice 3 cr.
An analysis of water quality conditions in lower Green Bay during the period of ice cover and including observations on algae and nutrient concentrations, organic matter, dissolved oxygen and specific conductivity. Emphasis will be placed on data collection and assessment of assimilation rates in the lower Bay in relation to inputs from the Fox River. P: 204-203, 226-122 or cons inst.

862-395 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 grassland, 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 .

862-403 General Limnology 3 cr.
The 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 the characterization of the aquatic environment. P: 204-203 and 226-120.

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: 204-202, 203 and 226-123 or 223.

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.

862-420 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.

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 or 301, 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.

862-445 Planning in a Simulated Environment 4 cr.
Techniques and limitations of environmental planning are explored through readings, lectures, discussions, and the use of an adaptation of the River Basin Model which simulates the lower Fox Valley including the city of Green Bay. Students assume various decision-makers' roles—such as government official, school director, industrialist, planner, etc.—and, in the light of many social, economic, and environmental indicators, plan for and observe the changes in the simulated region. P: Jr st or cons inst.

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: 226-121, 122, 123 (or 223).

862-460 Resource Management Strategy 3 cr.
Applications of the principles of systems analysis to the design of resource management systems and to the development of strategies for maintaining optimum environmental qualities. 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 the management of 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.

862-495 Mathematical Political Science 2 cr.
Construction of a numerical index measuring the degree of political democracy of an institution or government. Computations for a variety of political structures on an institutional, state, or national level. Models of the swing ratio effect in two-party systems, prediction of the left vote in Chile and the behavior of other ideologically compact groups, the pendulum swing in two-party fortunes, and the generalization of the Downsian model of electoral processes.

862-496 Directed Study 1-4 cr.
See page 19.

Biology

Professors: Harry Guilford, parasitology, anatomy; William Kaufman, human physiology; John F. Reed, botany-plant anatomy; Keith White, plant ecology.

Associate Professors: Robert S. Cook, (on leave), wildlife ecology, ornithology; Norris Durham, evolution, animal behavior; Alice I. Goldsby, microbioloby; Hallet J. Harris, animal ecology, mammalogy; Charles Ihrke, genetics; Michael Morgan, (chairperson), plant ecology, plant physiology; Tom Mowbray, (on leave), plant ecology-taxonomy; V. M. G. Nair, plant-forest pathology, mycology; Paul Sager, limnology, acquatic biology; Leander Schwartz, microbiology, plant physiology; Richard Stevens, human neurophysiology.

Assistant Professors: Dorothea Sager, zoology, embryology.

The biology program can prepare students for careers, not only in traditional areas such as field or laboratory biology and in management of various natural resources, but also for roles as interdisciplinary team members working on biological aspects of such problems as air quality, water quality, solid waste disposal, and land use planning.

Students can select biology courses which will prepare them to apply to medical, dental, veterinary, or other professional schools, to graduate schools, or for careers in such areas as forest-plant pathology, microbiology, wildlife ecology, teaching, nature and science communication, medical technology, environmental health, and other biology-related jobs in industry and government.

Biology students can prepare for teacher certification by enrolling in the professional program in education. Students aiming for biology-related administrative positions may prepare through the professional program in public and environmental administration.

UWGB biology graduates are presently employed in industry, in government agencies (Environmental Protection Agency, Food and Drug Administration, Wisconsin Department of Natural Resources, U.S. Fish and Wildlife Service, and others), and are teaching in primary and secondary schools. Many graduates also have been accepted and are attending graduate and professional schools.

Entrance to the program begins with two introductory courses: Principles of Biology I (204-202) and Principles of Biology II (204-203). Students who feel they 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 are expected to 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 these 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 recommended that basic courses in chemistry-physics and mathematics be included.

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
862-308 Ecology of Invasions
862-322 Ecosystems Analysis I
862-323 Ecosystems Analysis II
862-395 Ecology of Fire
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)

204-317 Structure of Seed Plants
204-340 Comparative Anatomy of Vertebrates
204-347 Developmental Biology
478-302 Comparative Physiology
478-313 Brain Functions in Human Behavior
478-402 Human Physiology
478-403 Human Physiology Lab
478-413 Neurophysiology
478-414 Neurophysiology Lab
779-318 Vertebrate Reproduction
862-311 Plant Physiology

Systematics and Classification

204-306 Ornithology
204-315 Biology of Lower Green Plants
204-320 Field Botany
204-341 Ichthyology
204-350 Field Zoology
204-355 Principles of Entomology
204-402 Advanced Microbiology
862-310 Plant Taxonomy
862-312 Mycology

Additional Courses

204-302 Principles of Microbiology
204-345 Animal Behavior
779-395 Biological Microtechnique
779-412 Principles of Parasitology
862-363 Plants and Forest Pathology

In addition to formally scheduled biology courses, students have the 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 arrangements.

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.

It is in the concentration that students learn how to apply the knowledge of biology to significant problems and to work with persons trained in other disciplines whose skills and knowledge are also needed in order to develop answers to the complex issues of today. Biology is particularly appropriate in combination with such concentrations as Science and Environmental Change, Regional Analysis, and the Population Dynamics, Human Adaptability, and Nutritional Sciences majors in Human Biology.

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 (Toft Point, Lilly Lake, Fuller Tract, West Shore Wetlands, and others), plant growth chambers, environmental chamber, physiograph, spirometer, oxygen analyzers, oscilloscopes, *high-speed centrifuges, radio*-isotopes equipment, chromatographic apparatus, auto-analyzer, total carbon analyzer, microclimatological equipment, UV-visible infrared spectrophotometry, boats and other aquatic studies equipment, Carl Richter Natural History Collection (emphasizing ornithology), herbarium, fossil collection, Zeiss photo microscope, computing facilities.

COURSES

204 BIOLOGY

204-202 Principles of Biology† 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 II 4 cr.
An introduction to biological principles; structure and function of organisms and their relationship to the environment. Includes laboratories. 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.

204-302 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 229-108 or 226-120 and 226-122.

204-303 Genetics 3 cr.
Mechanisms of heredity and variation, their cytological basis and their implications in biology. P: 204-202.

204-304 Genetic 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.

†Approved for Natural Sciences and Mathematics Distribution Credit.

204-306 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.

204-315 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.

204-345 Animal Behavior 3 cr.
The biology of animal behavior patterns; the behavioral interactions of animals with their environment. P: 204-203.

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.

Other courses that count toward a major or co-major in biology are:

478-302 Comparative Physiology 4 cr.
478-311 Brain Functions and Human Behavior 3 cr.
478-402, 403 Human Physiology 5 cr.
478-413, 414 Neurophysiology 5 cr.
779-310 Human Genetics 3 cr.
779-312 Evolutionary Processes 3 cr.
779-318 Vertebrate Reproduction 3 cr.
779-342 Human Evolution 3 cr.
779-395 Biological Microtechnique 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.
862-308 Ecology of Invasions 2 cr.
862-310 Plant Taxonomy 3 cr.
862-311 Plant Physiology 4 cr.
862-312 Mycology 3 cr.
862-322, 323 Ecosystems Analysis I, II 4 cr., 4 cr.
862-363 Plants and Forest Pathology 3 cr.
862-395 Ecology of Fire 2 cr.
862-403 General 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 Professors: Sterling Randall, physical and inorganic chemistry.

Instructors: 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. 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:
226-120 Fundamentals of Chemistry-Physics: Basic Concepts, 4 cr.
226-121 Fundamentals of Chemistry-Physics: Atomic and Molecular Structure, 2 cr.
226-122 Fundamentals of Chemistry-Physics: Fluids and Solutions, 3 cr.
226-125 Fundamentals of Chemistry-Physics: Basic Instrumentation, 3 cr.
226-223 Principles of Chemistry-Physics: Energetics, 3 cr.
226-224 Principles of Chemistry-Physics: Materials, 2 cr.
226-227 Principles of Chemistry-Physics: Qualitative Analysis, 2 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. (Physical Chemistry I)
226-321 Structure of Matter, 3 cr. (Physical Chemistry II)

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:
226-322 Thermodynamics and Kinetics Lab, 1 cr.
226-323 Structure of Matter Lab, 1 cr.
226-331 Biochemistry Lab, 1 cr.
226-418 Nuclear Physics and Radiochemistry Lab, 1 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.
862-319 Industrial Pollution Control, 2-3 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
226-120 Fundamentals of Chemistry-Physics: Basic Concepts
226-121 Fundamentals of Chemistry-Physics: Atomic and Molecular Structure
226-122 Fundamentals of Chemistry-Physics: Fluids and Solutions
226-223 Principles of Chemistry-Physics: Energetics
600-202 Calculus and Analytic Geometry I
600-203 Calculus and Analytic Geometry II

Sophomore Year:
226-125 Fundamentals of Chemistry-Physics: Basic Instrumentation
226-224 Principles of Chemistry-Physics: Materials
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
296-200 Basic Earth Science
600-255 FORTRAN for Scientists

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 the following courses relevant:
226-120 Basic Concepts 4 cr.
226-121 Atomic and Molecular Structure 2 cr.
226-122 Fluids and Solutions 3 cr.
226-125 Basic Instrumentation 3 cr.
226-223 Energetics 3 cr.
226-224 Materials 2 cr.
226-227 Qualitative Analysis 2 cr.
226-302, 303 Organic Chemistry I, II 3 cr. ea.
226-304, 305 Organic Chemistry Laboratory I, II 1 cr. ea.
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.
694-328, 329 Nutritional Biochemistry (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 dust 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:

Fundamentals of Chemistry-Physics:

226-120 Basic Concepts
226-121 Atomic and Molecular Structure
226-122 Fluids and Solutions
226-125 Basic Instrumentation

Principles of Chemistry-Physics:

226-223 Energetics
226-224 Materials
226-227 Qualitative Analysis
226-228 Fields and Relativity

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 Lab
226-323 Structure of Matter Lab
226-324 Advanced Physical Laboratory
226-418 Nuclear Physics and Radiochemistry Lab

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
862-317 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 are referred to separate descriptions under each heading.

COURSES

226 CHEMISTRY-PHYSICS

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. Students who complete this course will not receive full credit for 226-120, 122, 123, or 224.) P: 601-094 or equivalent.

226-120 Fundamentals of Chemistry-Physics: Basic Concepts† 4 cr.
Fundamental quantities, description of motion, forces, energy, gas laws, changes of state, kinetic theory of gases, stoichiometric calculations, periodic law, concepts of chemical bonding. P: 600-104.

†Approved for Natural Sciences and Mathematics Distribution Credit.

226-121 Fundamentals of Chemistry-Physics: Atomic and Molecular Structure 2 cr.
Nuclear and electronic structure of atoms, radioactivity, quantum mechanical concepts of the atom and of bonding, molecular bonding, molecular orbitals, molecular geometry. P: 226-120.

226-122 Fundamentals of Chemistry-Physics: Fluids and Solutions 3 cr.
The physical and chemical properties of water systems, fluid statics and dynamics, solutions, colligative properties, acid-base and oxidation-reduction reactions, solution equilibria. P: 226-120.

226-123 Fundamentals of Chemistry-Physics: Energy and Power 3 cr.
Work, mechanical energy, heat, heat transfer, thermodynamics, electrochemistry, dc circuits, magnetic induction, nuclear energy. Students in chemistry, physics, and engineering must take 226-223. (Credit will not be given for both 226-123 and 226-223.) P: 226-120.

226-125 Fundamentals of Chemistry-Physics: Basic Instrumentation 3 cr.
Principles of electronics and electronic instruments, signal processing, transducers, amplification and display, special emphasis on common laboratory instruments, principles of sound and optics.
P: 226-120.

226-223 Principles of Chemistry-Physics: Energetics 3 cr.
Same topics as 226-123 but with a more mathematically intensive treatment. (Not open for credit to students who have taken 226-123.) P: 226-120 and 600-202.

226-224 Principles of Chemistry-Physics: Materials 2 cr.
Physical and chemical properties of materials. Mechanical, thermal, electrical and optical properties of materials, extraction and refining of metals, industrial chemicals, consumer materials.
P: 226-121.

226-227 Principles of Chemistry-Physics: Qualitative Analysis 2 cr.
Chemical separation and identification schemes, discussion of selected chemical families.
P: 226-122.

226-228 Principles of Chemistry-Physics: Fields and Relativity 2 cr.
Study of electric and magnetic fields, Gauss' law, Ampere's law, Maxwell's equation, postulates and implications of the theory of special relativity, introduction to general relativity. P: 226-223 and 600-203.

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: 226-122 and 123 (or 226-108 and cons inst.)

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: 226-121, 122 and 123 (or 226-223).

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 and 304.

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: 226-121, 122 and 223 (or 226-123).

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: 226-228, and 600-205 and 209.

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: 226-121, 122 and 223.

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: 226-320 or 226-228 and cons inst.

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: 203-202, 226-303 and 305 or cons inst.

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: 226-125, 228, 600-206, 209.

226-405 Electronics for Scientists 4 cr.
Fundamentals of electronics, electronic elements, basic circuits, combinations of these into measurement and control instruments. P: 226-125 and 228.

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, electro-analytical 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: 226-321 or 226-121 and 226 and cons inst.

226-418 Nuclear Physics and Radiochemistry Laboratory 1 cr.
One three-hour laboratory per week. P: credit or concurrent registration in 226-417.

Other courses for chemistry-physics credit include:
862-141 Astronomy
862-306 Biophysics
862-313 Mechanics I
862-314 Mechanics II
862-317 Electromagnetic Radiation
862-332 Geophysical Fluid Mechanics
862-350 Meteorology
862-412 Bioenergetics
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.

Associate Professors: 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.

Lecturers: 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, rocks, soil, 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 meteorology/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. Students who wish to pursue graduate study in geology, soil science, hydrology, or meteorology are advised to select Science and Environmental Change.

For those interested in business, earth science may be combined with a concentration in Managerial Systems. A career in science communications may be pursued through a major that links earth science with a concentration in either Communication and the Arts or Humanistic Studies.

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 the Population Dynamics major in Human Biology.

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

296-202 Earth's Physical Environment
296-302 Geologic Evolution of the Earth
296-303 Geologic Evolution of the Earth Laboratory
862-141 Elementary Astronomy
862-303 Conservation of Natural Resources
862-422 Environmental Biogeochemistry

Geology

296-310 Paleobiology
296-340 Rock & Mineral Resources
296-350 Geologic Field Methods
296-366 Structural Geology
296-380 Geomorphic Processes
296-402 Stratigraphy and Sedimentology
296-441 Mineralogy
296-442 Petrology
296-470 Glacial Environment and Chronology
862-342 Environmental Geology
005-563 Mineral Resources: Geology and Economics

Land and Soil Resources

416-250 Maps and Air Photos
416-351 Elements of Cartography
416-353 Air Photo Interpretation
862-284 Husbandry of the Land
862-320 Soil Environment
862-321 Soil Environment Lab
862-420 Soil Classification and Geography
862-460 Resource Management Strategy
834-235 Wisconsin Landscapes and Regions
834-356 Environmental Impact Analysis
005-541 Land Use, Institutions and Policy
005-561 Global Environmental Monitoring
005-573 World Soil Management

Hydrology

862-330 Hydrology
862-331 Oceanography
862-332 Geophysical Fluid Mechanics
862-403 General Limnology
862-434 Water Chemistry
005-559 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
005-576 Bioclimatology

In addition, certain prerequisite courses are necessary depending upon the individual'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. Offered in summer only.

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. 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.

296-302 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.

296-310 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.

†Approved for Natural Sciences and Mathematics Distribution Credit.

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.

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 stain 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.

296-441 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: 226-121, 226-122 and 296-202.

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.

Other courses for earth science credit include:

Land and Soil Resources
416-351 Elements of Cartography
416-353 Air Photo Interpretation
834-356 Environmental Impact Analysis
862-320 Soil Environment
862-321 Soil Environment Laboratory
862-342 Environmental Geology
862-420 Soil Classification and Geography
862-460 Resource Management Strategy
005-541 Land Use, Institutions and Policy
005-561 Global Environmental Monitoring
005-563 Mineral Resources: Geology and Economics

Hydrology
862-330 Hydrology
862-331 Introduction to Oceanography
862-332 Geophysical Fluid Mechanics
862-403 General Limnology
862-434 Water Chemistry
005-559 Coastal Zone Management

Meteorology-Climatology
416-325 Regional Climatology
862-350 Meteorology
862-351 Synoptic Meteorology Laboratory
862-450 Air Pollution Chemistry and Meteorology
005-576 Bioclimatology

Mathematics

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; Nikitas L.Petrakopoulos, applied mathematics, analysis, mathematical modern culture, mathematical physics; Roger A. Simons, Boolean algebras, logic, computer science, geometry; Robert B. Wenger, mathematical optimization, linear algebra, analysis, operations research.

Assistant Professors: John E. Barger, statistics, algebra, analysis, geometry; William Conley, computer science, algebra.

Mathematics is well known as one of the sciences. The natural scientist uses mathematics 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 teach in the secondary schools; teach and do research in a university, or be employed in a laboratory, in industry, or in government.

—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, 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 mathematics major is an excellent method of preparing for a highly competitive graduate program in Business Administration.

Requirements for a major in mathematics are:
600-202, 203 Calculus and Analytic Geometry I and II
600-320 Linear Algebra I
At least 21 more hours of course work at the 300 level or higher, within the requirements listed for statistics, broad-field, or applied mathematics.

STATISTICS

In addition to the first two requirements 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
600-364 Biometrics

And at least one of the following:
005-567 Statistical Design and Analysis of Experiments
005-568 Multivariate Statistical Analysis
005-504 Discrete Multivariate Statistical Analysis

Students in the statistics program ordinarily begin their study with 600-260, Elementary Statistics, and take in addition to the required courses listed, one or more courses in computing. Students planning on continuing 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 mathematics 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
005-564 Systems Analysis

APPLIED MATHEMATICS

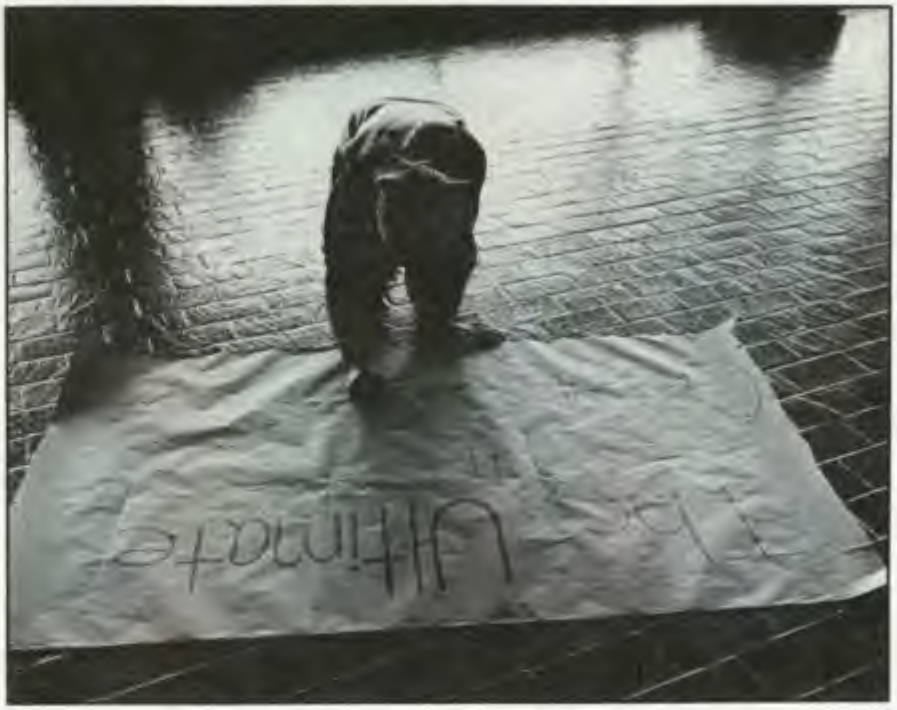
Students, with the help of mathematics faculty, may construct coherent programs in applied mathematics in areas such as computer science, mathematical optimization, and mathematical applications to the physical sciences and to business and management.

In addition to the universal 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 several concentrations appropriate, 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 within mathematics would be:

Freshman Year:
600-150 BASIC, Computer Language
600-202 Calculus and Analytic Geometry I
600-203 Calculus and Analytic Geometry II
600-251 Introduction to Computer Science
600-260 Elementary 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
005-567 Statistical Design and Analysis of Experiments
005-568 Multivariate Statistical Analysis

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; students 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 150, 151, 152, 180, 201, 204, 240, 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 four 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.

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 the 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.

**A prerequisite implies a satisfactory performance. In most mathematics courses, a grade of C is sufficient; in some a grade of B is advisable.

600-151 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 for Non-Scientists† 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. Basic notations and operations in arithmetic; place notation with various bases; development of the basic algorithms of arithmetic; prime, decimal, irrational, and real numbers; divisibility; rational arithmetic. 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.

600-201 An Overview of Calculus Techniques 2 cr.
The 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 yrs. high school algebra and satisfactory placement score. (Full credit will not be given for 600-201 and 202. The student who enrolls in 600-202 after receiving credit for 600-201 will receive 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 including vectors; applications. P: 600-104 or satisfactory placement score.

600-203 Calculus and Analytic Geometry II 4 cr.
Transcendental functions; technique of integration; applications; alternative representations. P: 600-202.

†Approved for Natural Sciences and Mathematics Distribution Credit.

600-209 Multivariate Calculus 2 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; surface area; vector fields; surface and line integrals; physical applications. P: 600-203.

600-240 Finite Mathematics† 3 cr.
For students in the natural and social sciences and administrative studies. Topics in discrete mathematics are used in applications. Sets, relations, and functions. Vectors, matrices, probability, linear programming, game theory, with applications. P: 600-101 or two years of high school algebra and satisfactory placement score.

600-251 Introduction to Computer Science 3 cr.
Designed to develop an understanding of the 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: both 600-150 or 151 or 255, and 600-152 or a 200-level math course.

600-252 Machine Organization 3 cr.
Concepts involved in the design of computers and computer systems. P: 600-152.

600-255 FORTRAN For Scientists 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 dimentional arrays, FORMATs; functions; and subprograms. P: 600-202.

600-260 Elementary Statistics† 3 cr.
Descriptive and inferential statistics; frequency distributions; graphic techniques; measures of central tendencies and of dispersion; normal distribution; probability, statistical inference, correlation, regression analysis of variance. P: 600-101, or two years of high school algebra and satisfactory placement score.

600-305 Ordinary Differential Equations 2 cr.
Solutions and applications of first and higher-order linear differential equations; the meanings of existence and uniqueness theorems; non-linear differential equations; modeling physical and biological systems.

†Approved for Natural Sciences and Mathematics Distribution Credit.

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 in systems ecology. 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.

600-328 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.
Solutions of equations, polynomial approximations; initial value problems for ordinary differential equations; matrix inversion. P: Fortran ability and 600-305.

600-351 Data Structures, Storage and Retrieval 3 cr.
An introduction to concepts involved in storage, retrieval and management of data for computer applications. Includes abstract data structures such as stacks, queues, linked lists, trees and networks, as well as their implementation using a built-in data base system. P: 600-251.

600-353 Advanced Programming 3 cr.
Structure of languages and of a particular programming language; theory of compilers; evolution of a translator. P: 600-251.

600-355 Applied Mathematical Optimization 3 cr.
Analytical and numerical optimization techniques; non-linear, integer, and dynamic programming. Techniques applied to problems of water, forest, air, and solid waste management. P: 600-202 and 320.

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 using large-scale program packages. P: 600-260.

600-385 College Geometry 3 cr.
Intuitive and deductive introductions to Euclidean, affine, hyperbolic, spherical, 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, analytic continuation, conformal mapping, and integral transforms. 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: 600-205 and 320.

Other courses applicable to mathematics:
226-315 Mechanics III 3 cr.
862-495 Mathematical Political Science 2 cr.
005-567 Statistical Design and Analysis of Experiments 4 cr.
005-568 Multivariate Statistical Analysis 4 cr.

Physics

Professors: 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 dust 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 bio-physics.

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 for teaching in a secondary school. A degree in physics also provides good preparation for graduate study in other fields such as meteorology, mathematics, and some fields of engineering.

The physics student can gain career preparation through professional programs. The professional program in education can prepare the student for teaching certification. Students who wish to work in administrative positions can prepare by enrolling in the professional program in public and environmental administration in addition to studies in physics.

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:
226-120 Fundamentals of Chemistry-Physics: Basic Concepts, 4 cr.
226-121 Fundamentals of Chemistry-Physics: Atomic and Molecular Structure, 2 cr.
226-122 Fundamentals of Chemistry-Physics: Fluids and Solutions, 3 cr.
226-125 Fundamentals of Chemistry-Physics: Basic Instrumentation, 3 cr.
226-223 Principles of Chemistry-Physics: Energetics, 3 cr.
226-224 Principles of Chemistry-Physics: Materials, 2 cr.
226-228 Principles of Chemistry-Physics: Fields and Relativity, 2 cr.

A minimum of 27 credits of the 300-400 level:
Six required courses:
226-321 Structure of Matter, 3 cr.
226-404 Electricity and Magnetism, 3 cr.
226-417 Nuclear Physics and Radiochemistry, 3 cr.
862-313 Mechanics I, 3 cr.
226-315 Mechanics III, 3 cr.
862-317 Electromagnetic Radiation, 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 Lab, 1 cr.
226-323 Structure of Matter Lab, 1 cr.
226-324 Advanced Physical Laboratory, 1 or 2 crs.
226-405 Electronics for Scientists, 4 cr.
226-418 Nuclear Physics and Radiochemistry Lab, 1 cr.
862-306 Biophysics, 3 cr.
862-332 Geophysical Fluid Mechanics, 3 cr.
862-350 Meteorology, 3 cr.
862-414 Conventional Energy Technology, 3 cr.
862-415 Solar and Alternate Energy Techniques, 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, 2 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. One of the strong features of the program is the possibility of emphasizing energy studies.

Freshman Year:
204-202 Principles of Biology I
204-203 Principles of Biology II
226-120 Fundamentals of Chemistry-Physics: Basic Concepts
226-121 Fundamentals of Chemistry-Physics: Atomic and Molecular Structure
226-122 Fundamentals of Chemistry-Physics: Fluids and Solutions
226-223 Principles of Chemistry-Physics: Energetics
600-202 Calculus and Analytical Geometry I
600-203 Calculus and Analytical Geometry II

Sophomore Year:
226-125 Fundamentals of Chemistry-Physics: Basic Instrumentation
226-224 Principles of Chemistry-Physics: Materials
226-228 Principles of Chemistry-Physics: Fields and Relativity
296-200 Basic Earth Science
600-209 Multivariate Calculus
600-320 Linear Algebra I
600-255 FORTRAN for Scientists
862-313 Mechanics I

Junior Year:
226-315 Mechanics III
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 Lab
600-305 Ordinary Differential Equations
600-309 Systems of Ordinary Differential Equations
862-306 Biophysics
862-317 Electromagnetic Radiation

Senior Year:
226-324 Advanced Physical Laboratory
226-332 Geophysical Fluid Mechanics
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.
226-120 Basic Concepts 4 cr.
226-121 Atomic and Molecular Structure 2 cr.
226-122 Fluids and Solutions 3 cr.
226-125 Basic Instrumentation 3 cr.
226-223 Energetics 3 cr.
226-224 Materials 2 cr.
226-228 Fields and Relativity 2 cr.
226-315 Mechanics III 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.
862-141 Astronomy 3 cr.
862-306 Biophysics 3 cr.
862-313, 314 Mechanics I, II 3 cr. each
862-317 Electromagnetic Radiation 3 cr.
862-332 Geophysical Fluid Mechanics 3 cr.
862-350 Meteorology 3 cr.
862-414 Conventional Energy Technology 3 cr.

Professional Studies

CONCENTRATION:

Managerial Systems
- **Accounting**
- **Finance**
- **Management**
- **Marketing**
- **Personnel and Labor**

PROFESSIONAL PROGRAMS:

Education
Public and Environmental Administration
Recreation Resources
Social Services

Managerial Systems

Professors: Curtis Graham, (chairperson), accounting.

Associate Professors: Robert Obenberger, marketing, promotional strategy, and marketing management; John Powers, management, and small business feasibility; Michael Troyer, economics, and human services administration; Karl Zehms, accounting.

Assistant Professors: Maurice Better, labor; William Conley, quantitative methods and computer sciences; John Harris, management and organization behavior; Daniel Spielmann, law and collective bargaining; Daniel Stolper, law.

Lecturers: Boyd Coleman, marketing, retailing, and purchasing; Patrick Crawford, finance and investments; William Read, accounting; Marilyn Sagrillo, accounting; Dale Thomas, industrial management.

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 and who wishes to work in industry, government, or a non-profit organization, should select a major in business administration. Through the business administration major, programs are offered in accounting, finance, labor and personnel, management, and marketing. Within each broad program area, a variety of career-directed professional programs may be pursued.

Today's business professional is an analyst, decision maker, and organizer who must function effectively within changing economic, social, and political environments. The business program is designed and taught to prepare the graduate for success as a business professional. Each student earning a degree will have the opportunity to acquire sound technical knowledge in his or her field of specialty plus broad preparation in the appropriate 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. The business or administration graduate will earn either the Bachelor of Science or Bachelor of Arts in Administration degree. The degree recipient will be prepared for immediate entry into a variety of professional positions in business, human services administration, or public and governmental administration.

The program of study totals 124 semester credit hours comprised of four components. These are:

Pre-Business and Foundation Program: This component provides breadth, perspective, and skills necessary in 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 programs of study in accounting or fields of specialty in marketing, finance, management, labor and personnel, etc. Within each functional field there are a variety of career directions the student might pursue. For example, in marketing there are six different career directed tracks ranging from general marketing/brand management to retailing/wholesaling, to market research/market analysis.

Supportive Field of Study: Students complete a minimum of 18 credit hours in non-business courses to develop additional interdisciplinary perspective, judgment, and expertise in subject areas supportive of their career objectives. The supportive field may be in the humanities, fine arts, social sciences, natural sciences and math, or an appropriate combination. Courses are selected with the advice and approval of a business adviser.

Accounting students complete this requirement by taking appropriate accounting and other designated coursework. Students pursuing other fields of specialty may choose courses that interest them and support 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 in foreign languages. A supportive field of study in music is appropriate for the business student in marketing or management seeking entry into the broad field of music including musical instrument sales, distribution, manufacturing or production. The general marketing or management student might take a combined field of study in psychology, sociology, and economics and thereby be prepared to enter many different industries. 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 may help.

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):
Fine Arts and Humanities (9 cr.)
Social Sciences (9 cr.)
Natural Sciences and Math (9 cr.)
Senior Seminar (3 cr.)

Except for the senior seminar, this requirement should be fulfilled in the freshman and sophomore years.

Foundation Subjects (26-30 credit hours):
One course in written communication:
485-105 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

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 Elementary Statistics
298-202 Macro Economics
298-203 Micro Economics

*Students pursuing the accounting program must take instead:
600-151 Introduction to COBOL: A Business Data Processing Language
AND
600-201 Calculus for the Social Sciences

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

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 a business adviser.

Business Fields of Specialty
Accounting (33 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, upon approval of their transcript by the Wisconsin CPA Examining Board, the Certified Public Accountant (CPA) Examination.

Finance (21-25 credits) Tracks include:
Corporate Financial Management
Financial Institution Management

Marketing (21-25 credits) Seven identified tracks include:
Brand Management/General Marketing
Sales/Sales Management
Advertising/Advertising Management
Transportation/Logistics
Retailing/Wholesaling
Market Research/Market Analysis
Non-Business Marketing

Management (21-25 credits) Tracks are:
General Management
Production and Industrial Management
Small Business Management
Labor Relations Management
Personnel Management
Nonprofit Management

Human Services Administration (21-24 credit hours) This track 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, or other community service organizations of a public or private nature. The track can easily be linked through the supportive field of study credits with other programs which can help students prepare for future careers in the various fields.

The human services administration track and the applied human biology track in the Human Adaptability major also have combined to offer a co-major. This unites knowledge and skills in human life sciences and administration of non-profit, human service organizations. It is a particularly appropriate major for persons seeking careers or graduate study in such fields as hospital administration, clinic or nursing home administration, and public health services. A sample program for this co-major and other information may be found in the description of the Human Adaptability major in this catalog.

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 enterprise and its environments of resources, competition, and regulation are studied by participation in a simulated world of competitive manufacurers 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 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.

575-395 Practicum in Financial Statement Analysis 3 cr.
Examines the theory and practice of the analysis of published financial statements. The course will include a review of the balance sheet and income statement as well as an in depth analysis of such topics as short and long term liquidity, funds flow analysis, ROI analysis, the analysis of operations and the problems related to the project of earnings.
P: 575-204 & 575-343 or cons inst.

575-406 Legal Issues in Business 3 cr.
Introduction to the law and to the legal problems connected with business. Analysis of government regulations, environmental law and community planning, administrative agencies, employer-employee relations, non-profit organizations, consumer protection, and criminal and tort law relating to business. P: 575-206 or 575-305 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.

*Academic Affairs Council Approval Pending.

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.

575-415 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.

*Academic Affairs Council Approval Pending.

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.

575-332 An International Program in Transportation Systems 3 cr.
Compares and contrasts the cultural aspects of our society and those of two European nations, and what impact they have upon the corporate process, transportation systems, and environmental deterioration. P: 575-331.

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.

575-445 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.

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.

575-364 Labor Unions in America 3 cr.
The history and development of labor unions in private business and in government service; present status of unionization. P: jr st.

575-365 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.

575-463 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.

575-464 Cases in Collective Bargaining 3 cr.
Cases involving union recognition, type of shop, aspects of wages and hours determinations, strikes, grievance machinery, and fringe benefits. P: 575-365 and sr st.

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.

ORGANIZATION AND OPERATIONS

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 change 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.

575-482 Planning, Control, and Routinization 3 cr.
The ongoing process of an administrative organization in operation: job analyses, routinization of procedures; handling variations in work load; standing orders; translating control information into planning terms. P: jr st.

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. 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 4 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: Michael Kazar, art and aesthetic education; George O'Hearn, science education.

Associate Professors: Richard Bruland, reading and elementary education; Dennis Bryan, curriculum development and evaluation; James Busch, science education; Richard Presnell, environmental education; Norris Sanders, (chairperson), social studies education; Philip Thompson, English, language arts and aesthetic education; Thomas Van Koevering, science education and environmental education.

Assistant Professors: Lyle Bruss, (adjunct) educational planning; Ed Pfeiffer, child development and origin of personality.

Lecturers: Robert Darula, counseling and human relations skills.

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)—see Human Development concentration
- 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
  - General science
  - Geography
  - German
  - History
  - Journalism
  - Mathematics
  - Music: instrumental or vocal (secondary or K-12; includes special education-music opportunity)
  - Native American languages: Oneida
  - Physical science
  - Physics
  - Political science
  - Psychology
  - Science: broad field
  - Social studies: broad field
  - Sociology
  - Spanish
  - 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. Through reciprocal agreements, approximately 35 other states will grant initial certification to persons who have completed UWGB's certification program.

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 the 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 UWGB Placement Office in the fall of 1977, responses from 85 percent of the persons who completed teacher certification programs at UWGB in 1976-77 showed that 63 percent of them were employed in teaching positions.

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. Advisers in the education program are happy to discuss these concerns so that students plan for their futures wisely.

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. Eighteen percent of the respondents to the 1977 study were employed in government or business positions.

Teacher preparation is a cooperative responsibility of the education faculty and the various other departments of the University. While pursuing degree requirements in their chosen major, students also follow a program to meet the 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

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 who is 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 profession 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 the 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.

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.

Following is an outline that students may use to plan a program in education:

All-University Requirements (30 credits)

All students must fulfill All-University requirements described at the beginning of the section on academic programs.

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 will 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 professional program office for the current list of courses which meet this requirement.

Specific Requirements for Education Specialties

Early childhood certification:
See Human Development concentration

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 (29 credits):
One course in cognitive development (3 credits) chosen from
- 426-210 Introduction to Human Development
  OR
- 426-331 Human Development I: Infancy and Early Childhood
  OR
- 426-431 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

Additional courses required for kindergarten:
- 426-331 Human Development I: Infancy and Early Childhood
- 426-334 Play and Creative Activities in Childhood
- 426-441 History, Philosophy, and Current Programs in Early Childhood Education
- 426-442 Curriculum and Program Development in Early Childhood Education (recommended)
- Student teaching, minimum of 5 weeks, at the kindergarten level

Secondary education (also elementary art or music certification):
- 302-318 Reading and Study Skills in the Secondary School (3 credits)

One course in cognitive development (3 credits)
Methods course in subject area (3 credits)
Student teaching (8-12 credits)

Plus, a minimum of 2 to 5 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
- 302-410 Introduction to the Education of Exceptional Children
- 302-411 Nature and Identification of Learning Disabilities
- 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.

302-292 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 contronted within a given society. Cross-cultural comparisons foster a clear perspective of American education.

*Academic Affairs Council Approval Pending.

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.

302-207 Education in an Other 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.

*Academic Affairs Council Approval Pending.

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 Methods 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, 600-160 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.

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.

**These courses are required for an elementary school teacher's license in Wisconsin.

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 secondary 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 aesthetic 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.

302-355 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.

302-451 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.

*Academic Affairs Council Approval Pending.

302-483X Selected Topics in Education 1-4 cr.
See page 19.

302-498 Directed Study 1-4 cr.
See page 19.

Courses in other curriculum areas for which education credit may be received include:
426-210 Introduction to Human Development 3 cr.
426-331 Human Development I: Infancy and Early Childhood 3 cr.
426-332 Human Development II: Middle Childhood and Adolescence 3 cr.
820-338 Psychology of Learning 3 cr.

Public and Environmental Administration

Professors: Arthur A. Atkisson, (chairperson), public policy and management for local government, environmental quality control, and 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; Robert H. Maier, planning and management of higher education, food production and distribution, public sector enterprises, administrative leadership styles in public organizations, chemistry of soil-plant-animal-human relationships.

Associate Professor: 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 policy-making in urban communities.

Assistant Professors: Michael Krafl, public policy processes, politics of population and environmental problems, congressional behavior and legislative processes.

Lecturers: Michael Monfils, mayor of Green Bay, policy and management systems for local government.

Changes in society during this century have created rising demands for greater effectiveness, efficiency, and productivity in government operations. Population growth, urbanization, rising human aspirations, environmental change, industrialization, resource depletion, and rapid changes in technology all have contributed to this escalated demand.

As a result, there is increasing need for public policy makers and public administration professionals who can carry out sophisticated processes of leadership and decision-making, public problems identification and analysis, public policy evaluation and development, and public systems planning and management.

This need is the focus of the professional program in public and environmental administration. UWGB is the only campus in the University of Wisconsin System authorized to provide an undergraduate major in public administration and to offer a graduate area of emphasis in environmental administration.

Undergraduate studies can lead to award of the B.A. or B.S., Administration, through a major in public administration; to a minor in public and environmental administration; or to award of the two-year associate of arts degree.

Public and environmental administration programs develop student capacity to: identify and analyze problems, values, and public policies; develop and synthesize information; engage in professional level processes of decision-making, leadership, and social change; develop public problem-solving strategies; and engage in planning and managing public systems. Students have considerable latitude in selecting a problem focus for their studies and choosing the means for meeting those requirements.

Study in public and environmental administration permits students to develop career competencies in one or more of the specialized areas of public administration. After meeting core program requirements students have two choices: they can design a personal career-focused program aimed at preparing for a specific specialty, or they may complete requirements for a faculty-designed field specialization.

Field specializations prepare students for a variety of public administration careers such as administrative analyst, budget analyst, city or county manager, environmental quality analyst/planner, health systems planner, hospital administrator or assistant, land use planner, legislative research specialist, office manager, personnel management specialist, public relations specialist, regional planner, systems analyst, training or employee development specialist, urban planner, and others.

Four broad groups of field specializations have been defined through which students can prepare for such careers. They are: environmental planning and management; health and human services; local government administration; and public management.

MINORS 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 Introduction to Public Administration
350-201, 202 Problem Analysis and Decision Making I, II
485-105 Introduction to Expository Writing
600-260 Elementary Statistics
OR
255-205 Social Science Statistics
778-101 The American Governmental System

Other courses to complete the minor are planned by the student with the help of an adviser.

MAJOR IN PUBLIC ADMINISTRATION

The major in public administration comprises a rigorous program of study. All candidates for the major must complete a common set of required general education courses (21 credits), public and environmental administration tool courses (9 credits), and public and environmental administration core courses (24 credits). Then the student completes an approved 24 credit program of study tailored to his or her own career and academic interests and which develops knowledge and skills in either a public service or public management field specialization. Completion of this requirement may qualify students for a co-major in a related field of study.

Credit distribution for the major in public administration is as follows:

Liberal education courses	45 credits
Public administration tool courses	9 credits
Public administration core program	24 credits
Public service field specialization	24 credits
OR	
Public administration field specialization	
AND	24 credits
Field-relevant disciplinary or public problem-focused study	
Electives	22 credits
Total	124 credits

Candidates for the major are required to complete the following course clusters. Where appropriate, these may also be used to meet all-University requirements.

Oral and Written Communications (6 credits)

485-105 Introduction to Expository Writing
246-333 Public Speaking and Speech Composition

Quantitative Methods and Computer Sciences (9 credits)

600-101 Intermediate Algebra
OR
600-104 Elementary Functions: Algebra and Trigonometry
OR
600-202 Calculus and Analytical Geometry I
OR
575-204 Introductory Accounting
600-260 Elementary Statistics
OR
255-205 Social Science Statistics
600-251 Computer Science
OR
Other computer course

Economics and Political Science (6 credits)

298-102 Economics and the Modern World
OR
298-202 Macro Economic Analysis
778-101 The American Governmental System

History (recommended) (6 credits)

448-205, 206 History of the United States I, II
448-302, 303 History of American Thought and Culture I, II

Public Administration Tool Courses (9 credits)

350-201, 202 Problem Analysis and Decision-Making I, II
779-456 Demographic Methods
OR
426-337 Developmental Tests and Measurements
OR
820-300 Experimental Psychology
OR
Additional course in math or accounting

Each student also must complete the following core courses in public administration:

350-102 Introduction to Public Administration
350-310 Administrative Leadership
350-401 Planning and Management of Public Systems
350-415 Administrative Planning, Programming, and Budgeting Systems
350-460 Public Policy Analysis
350-430 Administrative and Planning Internship
OR
350-433 Public Problems I
OR
350-435 Administrative and Policy Laboratory
575-346 Public Finance and Fiscal Policy
575-362 Principles of Personnel Management

Beyond this, students complete field specializations and other relevant courses and electives. These courses are selected with the help of an adviser.

COURSES

350 PUBLIC AND ENVIRONMENTAL ADMINISTRATION

350-102 Introduction to Public Administration* 3 cr.
Examines major ideas, issues, problems, administrative control systems, and value conflicts associated with planning, organization, and management of public institutions and organizations both in the U.S. and in other national settings. Opportunities for in-depth student examinations of the major institutions, career roles, and administrative systems in the field of public administration. Covers theories of public administration, policy-making and implementation in executive agencies, the role of interest groups and citizen participation, public accountability of bureaucracies, and organizational change.

*Academic Affairs Council Approval Pending.

350-201 Problem Analysis and Decision-Making I* 3 cr.
Focuses on theories and methods applicable to identification and analysis of problems and issues and to development of alternative problem-solving strategies. Considers the role of facts and values in problem-solving operations, the criteria appropriate for distinguishing between private and public problems, and develops student 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 development, assessment, and selection of strategies for problem-solution and goal-attainment.

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 Administration 3 cr.
An introduction to the social, economic, administrative and political aspects of environmental problems and to administrative and political processes affecting those problems, with special emphasis on American government, politics, and public policy. Examines the nature and scope of ecological problems; the environmental movement and processes of agenda-building; policy formulation, implementation, and evaluation; and the principal institutional, organizational, and public policy approaches to resolution of environmental problems. Develops skill in the use of methods and models for environmental decision-making and planning. P: jr st or cons inst.

350-305 Public Regulatory Processes 3 cr.
An examination of the purposes, structure, legal aspects, and operations of public regulatory agencies and programs in the United States. Covers issues in regulatory policy-making and rational methods for risk analysis, standards setting, and regulatory decision-making. Attention is devoted to case studies and exercises concerned with a variety of regulatory processes, including those associated with environmental quality, land use, public health, product safety, and consumer protection. Develops skills in preparation of regulatory bills, ordinances, rules, regulations, and legally-enforceable standards. P: 778-101.

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 or sr st or cons inst.

350-401 Planning and Management of Public Systems 3 cr.
Examines principal tools and methods for analyzing, designing, planning, and managing public systems; the structure, attributes and system locus of public administrative institutions and organizations; the requirements and restrictions associated with public administrative organizations, operations, and outcome-producing systems; structure and principal elements of decision-making processes, and service delivery systems. Develops skill in application of systems design and analysis techniques to problems associated with the planning and management of public systems. P: 350-102.

350-410 Administration of Local Government I* 3 cr.
Covers contemporary problems and trends in intergovernmental relations and in the organization, management, and financing of local governmental and public service entities. Examines ideas and issues concerning the management of such entities and means for improving and/or reducing the costs of local governmental services, including service consolidation, interjurisdictional contracts, and metropolitan government. Emphasis local governmental systems, institutions, and administrative arrangements in Wisconsin, and includes supervised student research on topics of interest to class participants.

350-411 Administration of Local Government II* 3 cr.
Continuation of 350-410. Covers major functions and service delivery problems of local governments and includes opportunities for individual and small team research on this subject.

350-415 Administrative Planning, Programming, and Budgeting Systems 3 cr.
Covers history, philosophy, purposes, attributes, types, and operational elements of major public budgetary systems utilized 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 utilized in design and management of public budgeting systems and relationship between program planning, policy planning, and budgetary operations. Develops skill in application of analytic and decision-assisting tools to public budgetary operations.
P: jr or sr st or cons inst.

350-421, 422 Planning Processes and Methods I,* II 3, 3 cr.
Focuses on planning for complex socio-technical systems in the public sector, including analysis, design, evaluation, and control. Covers theory of planning, general systems theory, 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 the specialized fields of planning, including those concerned with urban, regional, land use, environmental, policy, and resource planning.

350-430 Administrative and Planning Internship* 3-12 cr.
Supervised internship in an organization appropriate to the student's career interests and program of study. Includes supervised reading and periodic seminars relevant to internship.

350-433, 434 Public Problems I* & II* 1-6 cr.
A problem-oriented, personal study approach to learning, focusing on decision-action problems typical of those faced by mature professionals engaged in organizational planning, urban management, environmental administration, environmental planning, and public systems planning and management. Problems are examined through directed study and research. Students independently develop problem-solutions utilizing recommended references and other materials.

*Academic Affairs Council Approval Pending.

350-435 Administrative and Policy Laboratory* 1-12 cr.
Multi-disciplinary, team investigation of selected problems, policies, operations, programs, program outcomes, organizations, and organizational subsystems in the public sector. Students participate in design of project protocol and development of project plan, and function in appropriate project-related roles.

350-460 Public Policy Analysis 3 cr.
An introduction to the field of public policy analysis and to the policy process in American government. Covers approaches to the study of public policy, the nature of public problems, agenda-building, policy formulation and implementation, evaluation, and the utilization of policy analysis. Special attention is given to the political aspects of the policy process, to practical application of policy studies, and to models, methods, and techniques for critical analysis and rational design of public policies. Develops skill in legislative research, development of legislative histories, preparation of policy-development documents, position papers, and staff reports.

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.

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.

350-494/495 Workshops in Environmental Planning and Management I* & II* 3, 3 cr.
Four intensive workshops selected from a larger list conducted under this title. Each workshop consists of 12 instructional hours oriented around a specific set of topics operations, decision-assisting tools, issues, or problems associated with managerial and/or administrative performance, conducted over a period of two consecutive days. Provides students with a significant opportunity to acquire capsules of knowledge and/or skills whenever required by their program of study.

350-496/497 Workshops in Public Systems Planning and Management I* & II* 3, 3 cr.
Four intensive workshops selected from a larger list conducted under this title. Each workshop consists of 12 instructional hours oriented around a specific set of topics, operations, decision-assisting tools, issues, or problems associated with managerial and/or administrative performance, conducted over a period of two consecutive days. Provides students with a significant opportunity to acquire capsules of knowledge and/or skills whenever required by their program of study.

350-498 Directed Study 1-4 cr.
See page 19.

Recreation Resources

Instructors: Russell Stubbles (chairperson), outdoor recreation planning, tourism planning, public policy, spatial analysis, simulation and games.

Lecturers: Joanne Westphal, park design, landscape architecture, vernacular landscapes, environmental impacts of recreation, soils and land use.

Recreation resources provides both an intellectual problem focus on recreation related issues and preparation for professional work in recreation related professions, principally planning.

The program's intellectual focus is on planning for acquiring, developing, and managing recreation resources. This core blends together studies in interpretation, landscape architecture, regional outdoor recreation planning, and tourism planning.

Core courses in recreation resources vary according to the track selected, but each track has 532-201, Foundations of Recreation and Parks, as one of its core courses.

Professional program emphasis is in four different tracks. Each corresponds with one or more of the concentrations or other programs. Tracks, or areas of specialization, and corresponding programs are:

Regional Outdoor Recreation Planning:
- Human Development
- Regional Analysis
- Urban Studies

Tourism Planning:
- Managerial Systems
- Regional Analysis
- Urban Studies

Interpretation:
- Communication and the Arts
- Science and Environmental Change

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.

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

532 RECREATION RESOURCES

532-201 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.

532-281 Student-Led Courses 1-4 cr.
See page 19.

532-283X Selected Topics in Recreation Resources 1-4 cr.
See page 19.

532-298 Directed Study 1-4 cr.
See page 19.

532-303 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.

532-310 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.

532-320 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.

532-340 Survey of Park Planning and Design 3 cr.
A critical and historical analysis of man's design of outdoor space. Emphasis will be on the social factors that influence man's perception of his role in the landscape. Comparisons between U.S. and Europe park and outdoor recreation areas will be drawn. A term paper will be required; previous enrollment in the January practicum is desired.
P: soph/jr st.

532-345 Landscape Architecture 3 cr.
Provides a systems approach to the analysis and solution of design problems concerning landscape architecture. The course deals with the fundamentals of landscape planning and design. Students will examine the application, integration, and visual analysis of design elements and principles into natural and man-made landscapes. Psychological and sociological implications of planting schemes and landform arrangements—e.g., creation of moods, feelings of identification or isolation, etc.,—to user groups. Studio projects in the form of graphic presentations, three-dimensional modeling and planting plans are an integral part of the course. P: 938-210.

532-346 Recreation Landscape Architecture 3 cr.
Deals specifically with the design and landscape construction of outdoor recreation areas. Physical as well as social characteristics of site selection will be examined. Design projects will include work on special types of recreation areas and facilities—i.e., playgrounds, marinas, urban parks, wilderness areas. Design for a variety of user groups including the handicapped and the elderly will be an integral part of the course. P: 532-345.

532-380 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.

532-405 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. 532-302, 255-305, and jr st highly recommended.

532-407 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.

532-412 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: 532-303 and jr st.

532-413 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 532-303 recommended.

532-475 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.

532-481 Student-Led Courses 1-4 cr.
See page 19.

532-483X Selected Topics in Recreation Resources 1-4 cr.
See page 19.

532-498 Directed Study 1-4 cr.
See page 19.

Social Services

Associate Professors: David Galaty, (chairperson), social service theories and applications, history and philosophy of scientific ideas, epistemology, environmental problems; Robert Mendelsohn, social psychology, community psychology, community mental health systems, the criminal justice system, social psychology of human service delivery, police.

Assistant Professors: Winston Chao, community organization, social service administration, sociology; Rolfe White, group work, organizational change, evaluation of services, counseling and therapy.

Lecturers: Dick Jansen, human relations training, communication skills, behavioral dynamics of human systems, humanistic psychology, human resource development.

The professional program in social services prepares students to be professional helpers in a variety of public and private settings. A graduate may be employed as a social worker, welfare worker, employment counselor, group worker, street worker, equal opportunity counselor, personnel specialist, social advocate, administrator, and consultant, to name just a few of the possibilities. Students who enroll in social services can expect increased interpersonal understanding and communication skills regardless of their specific vocational application.

The primary focus of the program is *on* the behavioral dynamics of individuals, groups, and organizations including the dynamics of the classroom experiences. The program's concern is not in what's wrong with people, but on how people—individuals, groups, and organizations—can be assisted toward more effective, satisfying, and productive behavior. Emphasis is on creating social and institutional settings which foster individual growth. Many of the theories and skills learned will thus focus on methods of changing organizations so that they are better for people who come into close contact with them.

Although in principle every concentration program may be combined with the professional program in social services, in practice almost all Social Services students major 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 also have chosen a second professional program in public and environmental administration.

Each of these programs has particular strengths, depending upon the student's projected emphasis within the social services field. Before choosing a major, students are strongly urged to take the social services introductory course and consult with a member of the social services faculty.

The "core" social services program is designed to be taken as a one year package of 18 junior-senior level credits. It is recommended for students in their junior or senior years who have a good portion of their concentration credits completed. The program is organized as a "package" in order to maintain interrelationships between the basic concepts, methods of social service intervention, and *experiences* in a field placement agency; thus permitting integr*a*tion of theory with experience.

However, it may not always be possible for a student to take advantage of such an intensive integrated program in the same academic year. Students who must make alternative plans should work out the details of their academic programs with the social services adviser.

UWGB presently has entitlement to plan a bachelor of social work (BSW) degree and is in the process of developing plans for such a program. Prospective students who are interested in this program also should seek the advice of the social services adviser or chairperson.

PROGRAM OF STUDY

The core curriculum of the social services professional program consists of three distinct elements: a theory course, placement in a helping role in a community social service agency, and a methods course integrating theory and field experience. For the greatest learning, these three elements are taken simultaneously for two consecutive semesters.

As a prerequisite to the core program, students take 892-202, Introduction to the Social Services.

Theory core courses are:
Semester I
892-330 Basic Concepts in the Social Services I, 3 credits
Semester II
892-331 Basic Concepts in the Social Services II, 3 credits

Field placement core courses are:
Semester I
892-402 Field Experience in a Social Service Agency I, 3 credits
Semester II
892-403 Field Experience in a Social Service Agency II, 3 credits

Core social services methods courses are:
Semester I
892-410 Principles of Social Service Methods I, 3 credits
Semester II
892-411 Principles of Social Service Methods II, 3 credits

Additional courses which may be taken as Social Services electives are:
892-250 Concepts of Counseling and Psychotherapy, 3 credits
892-255 Interviewing Skills: The Art and Practice of Social Communication, 3 credits
892-257 Training in Social Service Skills and Techniques, 3 credits
892-302 Social Service Issues: Public Welfare, Aged and Infirm, Drug Abuse, Probation and Parole, Child Welfare, Community Organization and Action, 3 credits (The course focuses on one of the above issues per semester and may be repeated for credit each time a different issue is studied.)
892-350 Concepts of Group Therapy and Group Counseling, 3 credits
892-355 Theory and Practice of Human Relations Skills, 3 credits
892-360 Social Service Delivery Systems and Cultural Differences, 3 credits

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.

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 and 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.

892-302 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. Required of students in social services. 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. Required of all students seeking a professional minor in social services. 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 serve. 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. P: 892-202, concurrent registration in 892-410, 411.

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 to influence individuals, groups, and organizations refined through the field experience. P: concurrent registration in 892-402.

892-411 Principles of Social Service Methods II 3 cr.
Students apply various social service methods to stimulate the clients and the placement agency into greater effectiveness in the direction of their/its goals. A dual focus of client change and organizational change using general problem solving methods for change is developed. P: concurrent registration in 892-403.

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.

Inter-concentration Programs

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

The Arts in Society

Three concentrations presently 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 Carol Pollis 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
938-210 Drawing Systems for the Designer
957-104 Three Dimensional Design Studio

Upper-Level Courses
938-401 Environmental Design Workshop I
242-471 Environmental Design Workshop II
938-402 Environmental Design Workshop III
242-472 Environmental Design Workshop IV
242-401 Designing the Environment I
242-402 Designing the Environment II
938-325 Human Living Space I
938-326 Human Living Space II
862-327 Urban Technological Design
938-421 Urban Planning I
938-422 Urban Planning II
938-430 Urban Aesthetics

Environmental Health Sciences

Coordinators: Associate Professors: Fritz A. Fischbach, chemistry-physics, biophysics, study of aeroallergens; 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 contribu-

tions 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.

Women's Studies

Coordinator: Associate Professor: Julie Brickley, mythology, women's studies.

Women's studies is an interconcentration program which broadly 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—from anthropology to biology, from the arts to political science. One goal of the program is that it seeks to improve the quality of human life by expanding women's appreciation and understanding 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.

The program in women's studies provides preparation for students interested in working in a number of areas. These include human service fields involving work with girls and women, professional positions established to rectify discrimination, social action and community service agencies, teaching careers, as well as others.

Students majoring in any of four concentrations—Communication and the Arts, Humanistic Studies, Social Change and Development or Urban Studies—would fulfill the normal requirements of their concentration as well as the women's studies requirements. Students should develop courses of study in joint consultation with advisers in their concentrations and in 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; 938-483X, Women in American Perspective; or 242-483X, Women as Creative Agents. In addition the student would take four other women's studies courses for a total of 21 credits.

Women's studies courses are emphatically interdisciplinary. The introductory course explicitly addresses current issues relating to social and personal values while the upper division core courses establish other cultural and historical contexts for studying sex discrimination as a problem deeply embedded in humankind's sociocultural environment, and introduce creative skills for meeting the needs of men and women in the community.

STUDY PROGRAM

There are a number of ways in which a student can develop an interconcentration program in women's studies. A student whose major interests are in Communication and the Arts might take a program like the following:

Core Courses
875-241 Women and Changing Values
938-483X Women in American Perspective
242-483X Women as Creative Agents

Upper-Level Courses
242-395 Images of Women in Contemporary Arts
485-498 Independent Study: Women as Writers
875-340 Woman as Worker
875-342 Women, Myth and Identity

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 Programs 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.

Pre-professional 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 fields 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 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 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 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 3.0 or better and who achieve good dental entrance exam scores have all been accepted into dental schools.

Most of UWGB's pre-medicine and pre-dental students have attended professional schools in Wisconsin because state-funded institutions accept mostly in-state residents. Some students have been accepted at professional schools out-of-state.

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.

Pharmacy: The University of Wisconsin–Madison pharmacy program offers the bachelor's degree after completion of five years of work. Two years of that 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 pre-professional 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 the humanities. Several UWGB courses are directly applicable to agricultural sciences. The student in this field ordinarily would take two years at UWGB, transferring to a school or college of agriculture at the beginning of the junior year.

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. A student at UWGB can prepare for this graduate course of study through the professional program in social services, the concentration in Human Development, and other programs of study. UWGB is currently developing a Bachelor of Social Work degree program.

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

Staff: Henry J. Eichin, coaching certification; Robert Goemans, coaching certification; Carole Hammerle, coaching certification, women's field hockey and basketball coach, coordinator for women's athletics; Roger Harriman, swimming and diving coach, aquatics coordinator; Janis Pum, women's tennis coach; Bernard Starks, coaching certification coordinator, academic adviser.

Physical Education

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 and enables students to understand themselves physically and thus improve their relationships with their 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.

Levels of physical education courses are:

Beginning level (100) which anticipate novice performers.

Intermediate level (200), in which participants should have some previous training or experience in the skill area selected.

Advanced level (300), intended for those who desire to pursue interests and develop abilities beyond the average.

Students should consult the *Timetable* for specific physical education offerings in a particular semester. Selections are made from the following list:

Aquatics: 100 series—swimming; 200 series—swimming, life saving, synchronized swimming, skin and scuba diving, springboard and platform diving, water skiing and sailing; 300 series—water safety instruction (utilizes Red Cross program and standards leading to certification).

Dance: 100 series—folk, modern, social and square.

Exercise and Fitness: 100 series—yoga for relaxation, personal conditioning, weight training, running conditioning, fitness and diet, exercise and aging; 200 series—weight training, swimnastics and slimnastics, yoga for active people.

Individual Sports: 100 series—archery, bowling, golf.

Martial Arts: 100 series—judo and karate; 200 series—judo, karate.

Outdoor Activities: Cycling, orienteering, backpacking, boating and canoeing, sailing and outdoor survival skills.

Personal Health: 100 series—first aid.

Racquet Skills: 100 series—badminton, tennis, handball and racquetball; 200 series—tennis.

Sports Officiating: 100 series—basketball, football, softball/baseball, volleyball, and gymnastics.

Team Sports: 100 series—basketball, volleyball, and softball/baseball.

Winter Sports: 100 series—cross country skiing, curling, snowshoeing, and downhill skiing; 200 series—downhill and cross country skiing.

Coaching Certification

The coaching certification program consists of 16 credits and has been approved by the Wisconsin Department of Public Instruction. It is designed to offer students an opportunity to prepare to assume the responsibilities of coaching.

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 certification program.

Persons already teaching and/or coaching may elect certification courses to expand their personal and professional backgrounds.

The 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.

Following is an outline for the course of study for coaching certification.

Required Courses (16 credit minimum)
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 (Prerequisite: 820-102, or 820-202, or 900-202)
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)
742-410-430 Principles of Coaching, 2 credits, select from courses listed below:
410 Baseball/Softball
411 Basketball
415 Fencing
416 Field Hockey
417 Football
418 Golf
419 Gymnastics
420 Team Handball
421 Ice Hockey
424 Skiing—Alpine/Nordic
425 Soccer
426 Swimming and Diving
427 Tennis
428 Track & Field
429 Volleyball
430 Wrestling
742-435-455 Field Experiences in Coaching 2 credits, see courses listed under Principles of Coaching

Electives
742-116 First Aid Procedures 2 credits
742-171-184 Athletic Officiating 1 credit
171 Basketball
172 Field Hockey
173 Football
174 Gymnastics
179 Baseball/Softball
181 Swimming and Diving
183 Volleyball
184 Wrestling

Skills Learning Program

Staff: Jerry M. Hill, director; Robert Davies, mathematics; Trudy Jacobson, writing; Marian Kupsky, reading; Stan Rickert, mathematics and tutoring coordinator; Joan Thron, writing coordinator.

Effective writing, efficient reading, good studying techniques, and an understanding of basic mathematics are essential in college. The Skills Learning Program can assist students to develop these skills in a variety of ways.

The Skills Learning 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 Skills Learning Program also offers one credit workshops in college study skills, spelling, and sentence structure 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 Skills Learning Program office.

COURSES

553 SKILLS LEARNING 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.

553-090 Spelling Workshop 1 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.

553-096 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.

Graduate Program

UWGB's graduate program is as responsive to the variety of human talent as it is to the work that men and women engage in.

The program, which leads to a Master of Environmental Arts and Sciences degree (MEAS), is personalized and problem-centered so that students can develop their abilities by concentrating on the areas that most concern and interest them.

Because almost no problem of any scope can be solved within a single discipline, there is little danger that the student will be either isolated in a narrow specialization or cut off from vocational opportunities in the modern, shifting job market. The MEAS program is invigorated by interdisciplinary teamwork, and its graduates will be generalists, not technicians. Technical competence is not neglected, but it does not dominate.

At UWGB, it is understood that the arts and humanities, economics, the sciences of life and behavior, education, and communication all deal with the precious, controversial links between the person and the environment, both synthetic and natural.

UWGB offers concentrated work through five tracks—Global Ecology; Environmental Administration; Environmental Management; Environmental Stressors (beginning 1979-80); and Community Human Services; and offers opportunities to develop personalized tracks.

Global Ecology provides a variety of courses in environmental science, with particular attention to the areas of ecosystem productivity, environmental quality, and community health. In addition, emphasis is placed on the nature and dynamics of the population-energy-food-natural resource mix.

The goal of the graduate track in **Environmental Administration** is to assist governmental and non-governmental career professionals (and prospective professionals) to meet the complex demands of high-level organizational positions in the field of environmental planning and management.

Environmental Management provides students with a broad understanding of issues of planning and administration in both natural and synthetic environments. Students in this track investigate human activities as they impact on these environments in the context of an area of specialization such as Waste Management and Resource Recovery.

Environmental Stressors provides advanced instruction in the sciences necessary for an understanding of the nature and impact of environmental stressors (food additives, PCB's, sound, crowding, etc.) and provides training for individuals in the techniques required to identify these stressors and measure their levels.

Community Human Services emphasizes psychological services in the Northeastern Wisconsin region. Students are trained to be knowledgeable change facilitators on the social and individual level with a special emphasis on social ecology, i.e., the fit between individuals and the social environment.

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 MEAS programs. For this reason, the MEAS is particularly suitable for mature students as well as new students.

Each student works with a major professor and at least two other members of a graduate committee who guide their study plan. Each plan follows this broad outline (some tracks require more than 30 credits):

Formal coursework	12-15 credits
Assigned study	9-12 credits
Thesis	6 credits
Total	30 credits

Formal coursework is selected from a group of graduate courses which apply to the student's area of concentration or individualized program of study.

The assigned study can be completed in many ways. Some choose to take additional graduate courses. Other possibilities are internships, field work, independent and tutorial study, a program to deepen or broaden an existing skill, and credit transferred from other institutions.

The thesis is the organizing center and culmination of the MEAS program. It may be the traditional report of basic research, but other possibilities also exist. In fact, students are encouraged to seek relevant publics for the materials they develop and translate their knowledge into forms that will reach beyond campus publics—perhaps an in-depth filmed documentary, a fine arts exhibit, or a position paper for environmental policy.

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 a student cannot transfer more than 47 credits from another accredited college or university)

—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 sequential 3-credit courses and one 3-credit distribution course):
1. humanities and fine arts
2. social sciences
3. 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

The state-wide Bachelor of Arts: General Studies degree at the University of Wisconsin–Green Bay, is a broad-based liberal arts program which incorporates the elements of problem-solving and life-long learning.

The program is directed toward the mature adult who has had some prior college or equivalent learning experiences, and who is likely to be established in his or her vocation. It is designed for individuals who desire and are prepared to undertake upper division studies through a competency-based curriculum in the extended format in order to obtain a baccalaureate degree. The "extended format" in this instance simply means that students will not be required to meet the usual residency requirements, and, indeed, it will be possible for them to obtain the degree by demonstrated competency in the outlined subject areas.

There are a variety of reasons why someone may wish a general studies degree: personal enrichment; increasing career potential; gaining competencies which enhance effective participation in family, occupational, and community contexts.

Competencies have been developed in each of these areas: business and economics; communications; humanities and fine arts; natural sciences; problem solving; and social sciences. Students will be expected to demonstrate attainment of competence at a prescribed level in each area. Further, all students will be required to have an area of emphasis in one of the above mentioned areas, or, in collaboration with a faculty adviser, a student may construct an individualized cross-competency area of emphasis such as public administration or creative writing. An area of emphasis requires the equivalent of approximately 15 credits beyond the basic requirements in each of the six competency areas.

More information on the program is available from the Extended Degree Program office at UWGB.

Special Learning Opportunities

This chapter summarizes some of the additional ways in which students can individualize or add innovative aspects to their academic programs.

THE PERSONAL CONCENTRATION

Ellen Winogrond has used the personal concentration to structure a highly individual program that has emphasized experience and interdisciplinarity.

"It feels absolutely right," says Ellen of her personal concentration entitled, "Cross Cultural Studies in Folk Traditions." "For years I didn't know what I wanted to do. I had all of these ideas, but they didn't fit together in any traditional way."

"All these ideas" meant that Ellen wanted to do something combining the arts and anthropology; that she was interested in folk lore, art, proverbs, handed-down wisdom, superstition, and generally, "the things that get passed down from generation to generation that help people find meaning in life and survive." And she was interested in making comparisons between cultures.

Ellen has incorporated a variety of elements into her personal concentration. She has taken regular UWGB courses as diverse as Ethnomusicology and Plants and Civilization. She has taken advantage of January interim travel to make two trips to the Yucatan. And she has completed several independent studies. One consisted of preparing summaries of Latin American studies materials to use in teaching first through third graders for NEWIST (North East Wisconsin In-School Television). Another involved research on the Allouez Town Hall for Heritage Hill State Park in Green Bay. That project led to a summer job as a park guide. In the fall semester of 1978-79, Ellen will work in the anthropology department of the Milwaukee Public Museum for college credits. Among other experiences Ellen hopes to have before she graduates in December 1980, is to spend some time in a Spanish language school in Guatemala.

"I think experience is equally important to education that takes place in a classroom setting," Ellen says. "Experience puts more meaning into going to school. I agree with the saying that too much book learning provides a lot of knowledge but not much understanding."

Along with experience, Ellen's program emphasizes the interconnectedness of things. "Interdisciplinarity provides meaning," she says, "Isolated pieces don't make for understanding."

What are Ellen's plans for the future?

"I have a broad basis; I feel I can take it any direction I want," says Ellen. Graduate school is a possibility, but she would like to spend some time working first. "I'm interested in community outreach programs for museums," she adds. "Particularly those reaching out to kids—that's where it has to start."

One aspect of her future is certain. "I know I will go where people want someone who is innovative and has different ideas," Ellen says.

Ellen'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 has approved the proposal, the student may register for independent study.

Cathy Kashanski, a senior in 1977-78, completed an independent study that was, in a way, the culmination of her studies at UWGB. "I gained so much," she says. "I can't imagine graduating and not having done this." Cathy had a concentration in Science and Environmental Change and a biology disciplinary program.

Cathy and four other students each earned independent study credits during the spring semester for a population study of sandhill cranes in the Navarino wildlife area as well as a vegetation analysis of the marsh in order to gather data on one of the factors which might cause the cranes to choose to nest in that particular place. The students had become interested in the cranes as a result of a January course on endangered species.

"This study encompassed everything I learned in the sciences as well as introducing me to new things," Cathy says. For example, all of the students had experience with statistical analysis when they began, but none was familiar with computers. Eventually, the volume of data they generated was so great that computerization was the only solution, so they had to learn how to put the material on a computer program.

Most independent studies are carried out by individuals rather than by groups working together such as this one. There were both advantages and disadvantages to the group situation, Cathy says. "All of our interests were in the sciences," she explains. "The difficulty was that we had different levels of skills and knowledge; the advantage was that the diversity added depth and breadth to the group." The students also worked with three faculty members, a distinct advantage because students could take advantage of each professor's specialties and gain diversity of input from them.

The semester-long study not only proved valuable for the students, Cathy hopes it will be valuable for the future. "I am hoping others will want to continue the study," she says, explaining that it is far from complete. "What we have is baseline data for the future. For example, if the cranes do not come back to nest in that marsh, people will be able to study our data to perhaps learn some reasons why they did not." Results of their study also may be able to provide information to managers of the marsh so that it can be supervised in such a way to promote a good environment for the nesting cranes.

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 services, 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. Up to 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 test is available from the office of Academic Advising.

CREDIT FOR EXPERIENCE

A student who has had some experience that may be the equivalent of college-level learning, may be able to use it for degree credit. Experiences such as previous employment, volunteer activities, participation in workshops and seminars, hobbies and interests, travel, and publications may be used as the basis for a petition seeking credit if they are related to courses, disciplines, or programs at UWGB.

To get credit for experience, a person must be a registered student at UWGB. Then he or she must be prepared to describe in detail the experiences, to articulate the skills or learning acquired, and to submit documentation or verification. Credit for experience is granted on approval of appropriate faculty and administrative units.

Information on credit for experience is available from the office of Academic Advising.

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.

For example, Bonnie Petrovich was one of five student leaders of a course offered in 1977-78 called, "Appropriate Technology As If People Mattered."

"One of the things we were trying to do was to put values on technology," Bonnie explains. "Inherently, technology is valueless. What matters are attitudes toward it and the way it is used." She describes appropriate technology as "technology that is not exploitative of the earth or of people."

The course grew from the interest of a group of students who had attended a conference on the subject the year before. They wanted to learn more and as a result of a series of informal brain-storming sessions, the idea of a student-led course took root. The group found faculty sponsorship and began compiling resources and preparing for the course months before it actually began. "It was quite a lot of work," Bonnie recalls.

What was the most valuable result of the course?

"For me, I think it was learning to take responsibility for my own learning and learning how to do that," Bonnie says. "Also, learning to share with others."

Although student leaders of courses do a great deal more work than for a normal class, the leaders are eligible for double credits.

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 for students who want an education based on individualized learning, who are self-directed, and who can motivate themselves. Although they are not required to be on campus on a regular basis, they must meet UWGB graduation requirements.

UWW students can earn degree credits through learning contracts. A learning contract is an agreement between the student and a faculty sponsor outlining what work will be done, resources to be used, means of evaluation, and number of credits. Narrative evaluations rather than grades are used to evaluate the student's contract learning projects, and the narrative evaluations appear on the transcript.

Educational objectives, then, can be pursued at home, on the job, in the community, and through travel, as well as in the library or the classroom.

Because much of the work in UWW is done in the context of learning contracts, prospective students need to be aware that in many respects the program is more difficult than a conventional one. The importance of designing and carrying out their own learning experiences means students must be realistic about their learning objectives and styles.

UWW, therefore, is an alternative way for some students to earn a B.A. or B.S. degree from UWGB. UWW students pay regular tuition and are eligible for financial aid and other student services. They may apply for credit for prior learning and credit by examination and can have work at previous institutions evaluated for transfer credit.

Students should consult with the staff of UWW to get more information and application forms.

RESEARCH

Students at UWGB have many opportunities to participate in research—experience 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 research experience can be seen through the example of the Human Adaptability major of Human Biology. There, students may work with faculty who are engaged in research through work/study employment, or, if the research is grant-supported, through regular employment. Courses may be research-oriented, such as a January environmental physiology course in which each student selects and carries out a research project. Or, students may engage in research through independent study, or as senior distinction projects.

Human Adaptability faculty have engaged in research on human thermo regulation as applied to space suits; the use of natural and synthetic fibers for such items as sleeping bags and comforters; pain perception and pain management; and other topics. Students have been involved in all of these projects.

Students in Human Adaptability have carried out a variety of individual research projects. In a recent January interim course, students did such studies as rewarming of human bodies after immersion in cold water; the diving reflex (a reflex that may occur when a person is submerged in water and unable to breathe); and the effects of eating large quantities of eggs on blood cholesterol levels, among others. Some student research projects result in publishable papers.

Opportunities for appropriate research are equally available in the social sciences and humanities and fine arts.

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, and other places.

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, according to Andrew Stuckey, student coordinator of the program.

"Often, people do it to experience another location while continuing their education," he explains. "Others are motivated by very specific needs. For example, an earth sciences student here might want to spend a semester at the University of Wyoming or at Utah to study earth sciences in a location that geologically is totally different." Or, students might exchange in order to study with particular faculty members in another location or to take advantage of special courses or programs.

"Students come here from other schools to take advantage of the environmental studies, among other things," Drew adds.

Drew is well qualified to discuss the exchange program, having been an exchange student himself. He originally came to UWGB on exchange from the University of Oregon. A native of the Pacific Northwest, Drew decided to exchange because he wanted a change of geographical area, academic situation, and pace. Drew says he selected UWGB, first on the basis that it has a nutrition program, then, "I arranged as many opposites as I could. I had never lived in the Midwest. I had never experienced the winters of this climate. UWGB was a small school, and a new school."

Transferring to the exchange school does not make Drew entirely typical of exchange students, but, he says, "It's not an uncommon experience."

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Why did he stay?

"I liked the size of the school and the availability of resources and professors," he explains. "In a small situation you can get to know people in the University more deeply; there are more interesting opportunities available in student organizations here than in a big, established university; it's easier to get involved. There is more opportunity to do things." Some of the "things" Drew has done have included being one of the leaders of a student led course, and taking care of a professor's farm for a summer. Also, he had the opportunity to become coordinator of the student exchange program for UWGB on a work/study basis, a job which he hopes to use to strengthen the already active student exchange program.

"I'd like to increase our rapport with other schools to encourage more students to exchange here," he says.

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 their exchange. Exchange students are prohibited from accepting college work/study awards, but all other financial aids are not affected by participation in an exchange.

The names of available exchange institutions, more information about the exchange process, and applications are available in the Student Exchange Program 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 painting, photography, or other visual arts media. 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 senior distinction projects completed recently or in progress have included:

—an historical study of the architecture of Main street in Green Bay with proposed motifs for restoration. This involved historical research, documentary photography, and drawings, and resulted in presentations to local planning groups, and a substantial document which is filed in the Area Research Center in UWGB's Library. The student who completed it won a scholarship to Columbia University's School of Architecture.

—a study investigating the feasibility of a housing cooperative for students. This study resulted in a paper and oral presentations.

—a study of the economic geology of iron mining in the upper peninsula of Michigan. The student who completed it is a graduate student in mining engineering at UW–Madison.

—organization of a collection of manuscripts at the Neville Public Museum in Green Bay and preparing a scholarly index to the collection. The student who did this senior distinction project went on to graduate study and employment at a state historical society.

—a tentative proposal to encourage private voluntary organizations in the field of social and economic development to study their own actions and learn from them. This project was organized around relief efforts which took place after a major earthquake in Guatemala and involved interviewing representatives of agencies which participated in relief efforts.

—a study of the effects of water fowl populations and sludge removal on water quality on the lagoon in Bay Beach Wildlife Sanctuary in Green Bay. This was a long range study which included tests of water quality both before and after dredging. The information gathered provides insights into better design for such urban sanctuaries.

Graduating with distinction is explained in more detail in the section of this catalog on academic programs.

MILITARY SCIENCE (ROTC)

The Military Science (Army ROTC) cross-enrollment program is conducted by the Military Science Department at St. Norbert College on the UWGB campus. The program provides an elective opportunity for a UWGB student to earn two credits for each course completed successfully on a pass/no credit basis in transfer from the St. Norbert Military Science Department. Successful completion of the program leads, upon graduation from UWGB, to a commission as a second lieutenant in the U.S. Army or its reserve components.

Military science is a four-year on campus program consisting of a two-year pre-professional elective course which bears no obligation for further military service, and a two year professional course which is both elective and selective in that the professor of military science determines, in conjunction with school officials, which cadets qualify for admission.

Sophomores, transfer students, and junior college students may qualify for the professional program by participating in a six week basic camp taken during the summer prior to their junior year.

The service obligation varies for ROTC graduates: it can be three years of active duty for selected students while others are chosen or choose to serve on active duty training (ADT) for three to six months, then go into a local National Guard or Reserve Unit. The recipient of a Regular Army Commission must serve three years on active duty. Scholarship students must agree to serve four years in active service and to accept a Regular Army Commission if offered.

The Army awards financial assistance, on a competitive basis, to outstanding young men and women who are interested in the Army as a career.

During the basic camp, a cadet receives approximately $500 in pay plus travel expenses, in addition to an opportunity to compete for a two year ROTC scholarship. Scholarships provide free tuition, textbooks, lab fees, and a monthly subsistence allowance—currently $100 each month—for up to 10 months of each school year. Scholarships are offered for four, three, two, and one years. The four year scholarships are awarded on a national competitive basis to students who will enter college for the first time the following fall. The three, two, and one year scholarships are awarded competitively to students who are enrolled in ROTC. Students who attend the basic camp may also compete for two year scholarships.

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.

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, Academic Advising, Student Development Center, Placement and Career Counseling, University Health Services, the International Student Center, the Ethnic Heritage Center, the Child Care Center, and the Lucy Stone Center (Women's Center).

The Dean of Students tries to help students accomplish personal goals and solve problems through a variety of means. Rather than doing things for students, the Dean seeks to provide advice, counsel, referral, and support to aid students in using their own personal resources and those of the University to solve 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, 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, Dean 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

A student cannot hope to take full advantage of the flexibility of UWGB's academic plan without seeking the advice of the faculty and staff. Such advice is available from a variety of sources.

General advice on program planning is available from the Academic Advising office for the student who has not declared a major, and from concentration advisers for the student who has. Disciplinary and professional program advisers help the student fit these areas of study into a major program. The Academic Advising office refers students to faculty advisers in their areas of interest.

Information on preparing petitions to waive or modify academic requirements and regulations, on gaining credit by examination rather than by taking a course, and on participating in a variety of special study programs is available from the Academic Advising office.

The *Timetable* published each semester by the Registrar's office, contains a list of academic regulations, as well as information about various forms a student will need to complete from time to time to insure steady progress toward a degree. This information should be consulted and followed carefully. The *Timetable* also carries a list of faculty advisers along with their office and telephone numbers.

STUDENT DEVELOPMENT AND COUNSELING CENTER

The Student Development and Counseling 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 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.

Drop-in facilities are maintained in the Student Services Building as a welcome to those who would like to get to know the staff and the services offered.

The center also coordinates and jointly supervises the Bay Apartments resource student program in cooperation with the manager of the Bay Apartments.

PLACEMENT AND CAREER COUNSELING

The Placement and Career Counseling office provides comprehensive career advising and placement services for UWGB students and alumni.

Employers from business, industry, government, and education are brought 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. The office also publishes *Focus*, a newsletter containing current information about careers, employment trends, salaries, and other relevant data. 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 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 plus scholarship/fellowship information are available.

An abundance of career information and career descriptions is also housed in the career library. These materials 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.

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 physical examination 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.

Every attempt is made to inform students of the services of the Health Service and of the application of preventive medicine to their lives. The nurses and support staff approach the often unique needs of students with personal and confidential service.

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 reader service is available for blind students. Two rooms in the Library Learning Center serve as resource centers for persons with sight disabilities. They are equipped with tape recorders, a braille typewriter, a talking book machine, and tapes of books used most frequently in introductory level courses. Elevators and many doorways are marked with braille.

The Health Services office provides special help, such as arranging for special parking spaces. The office of Academic Advising, counseling staff in the Student Development Center, and other offices are ready to assist students with disabilities.

Services are coordinated by the handicap resource person in the office of Academic Support and Minority Affairs. The handicap resource person's responsibility is to provide whatever assistance handicapped students require.

CHILD CARE CENTER

The University student who is the parent of children aged 2 to 6 may use the facilities of the Child Care 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

The Educational Opportunity Program is designed for a limited number of students who do not meet the normal entrance requirements of the University. It is based on a special relationship between the student and members of the faculty and staff which includes weekly counseling and academic learning skills sessions, and closer faculty/student/staff instructional efforts. This is to assure that the student is aware of all of the resources of the University, that his or her academic efforts are as fruitful as possible, and that he/she is informed of the available academic alternatives.

Students can seek admission to UWGB under the Educational Opportunity Program if they show good potential for academic success and such potential is verified by a recommendation from a high school adviser or teacher or a member of the community.

Freshman enrollees in the Educational Opportunity Program should be aware that a leading objective of the program is to assure that they will be able to complete the sophomore, junior, and senior years.

Persons interested in the Educational Opportunity Program also should read the section in this catalog on admission.

SKILLS LEARNING PROGRAM

The Skills Learning Program is designed for students who need to strengthen their reading, composition, study, and mathematics skills. The Skills Learning Program office is always open to students who wish assistance in these 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 Skills Learning 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 six floors house a modern library learning facility, with more than 200,000 books, 4,735 current periodical subscriptions, 120,000 maps, 2,500 sound recordings, and over 1200 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, music scores, and art slides. 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.

The library is a depository for United States government publications and for Wisconsin documents. The Canadian government has designated UWGB as one of the few U.S. depositories for its documents. Many retrospective United Nations documents are available on microprint as well as a good selection of current U.N. 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 records maintained in other parts of the state. A Bicentennial study of 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 twelve 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 opportunities.

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 a comfortable building near the main entrance to the campus, and worship and other large-group meetings are held at the Deckner Center near downtown Green Bay. A free church bus is provided every Sunday for Bay Apartments residents.

ETHNIC HERITAGE CENTER

The Ethnic Heritage Center works toward establishing and improving communication among the various ethnic groups. It fosters awareness of differences within society while promoting a consciousness that all are human beings entitled to respect and dignity.

Minority students who want to meet other students of their culture and non-minority students who want to learn about the history and tradition of minority cultures both use the center.

The center has a lounge area, and frequently has displays, programs, and performances emphasizing different ethnic cultures. It is the home of the Black Student Union and the Native American Club, each of which sponsors an annual awareness week. These events bring to campus speakers such as Georgia State Senator Julian Bond, Pulitzer Prize winner N. Scott Momaday, and others.

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, however, 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 Art Festival, which usually has a week-long schedule of activities, and a Women in Business conference, which brings several hundred persons to campus for its meetings.

The Lucy Stone Center also publishes a newsletter, 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 the 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 own countries.

The *International Newsletter* is published twice 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.

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 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

The office of Outreach serves as the doorway back to school for community people who want to continue their education. The staff offers advice to returning adults, whether they are part-time or full-time students, taking classes on campus or off. In 1977-78, 33 percent of UWGB's total student body was 25 years of age and older.

All courses at UWGB are open to returning 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, Marinette, Menominee, Outagamie, and Shawano counties to provide opportunities for people 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 non-credit courses is offered for those not interested in pursuing a degree.

Older students may audit (take courses without credit) courses at half the usual cost. Senior citizens may audit courses free of charge.

Students taking at least 6 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 office's Talent and Speaker's Bureau, 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.

Events such as these enrich both campus and community, as well as meeting UWGB's goal of community involvement.

Recent conferences on campus have included topics such as care of dying patients and their families, preserving old architecture for contemporary use, solar energy, cooperatives, learning disabilities, the family under stress, double duty lives (a conference for working women), and many others.

EDUCATIONAL COMMUNICATIONS

UWGB's Educational Communications Office produces and supplies film, graphics, photography, audio and television media materials to faculty and students.

The media library makes available such educational materials as video and audio tapes, slides, transparencies, discs, simulation games, programmed instruction, reel and loop films, filmstrips, and multimedia kits. The media library catalog describes and indexes each item to help students and faculty engaged in research and instructional projects. UWGB's audiovisual materials inventory exceeds 2,000 properties.

The media services office furnishes audiovisual materials and equipment for playback and projection. Media equipment is available on a checkout basis to faculty and students. A complete multi-track audio production facility is equipped for recording and duplication of reel tapes and cassettes. UWGB television facilities range from small-format portable equipment to professional quality color studio production. Classroom projects and off-campus learning experiences are documented through video cassette and reel-type equipment, which can be operated by students and faculty.

The teleproduction center provides studios and operates control facilities for public TV Channel 38 under an agreement with the Wisconsin Educational Communications Board.

Nationwide distribution of television courses produced at UWGB has brought UWGB college credit instruction to thousands of students beyond Wisconsin; UWGB programs have been telecast coast to coast by several networks and have won numerous awards.

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 32 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) and a variety of computing languages such as: BASIC, FORTRAN, COBOL, APL and others.

Some computer-aided instruction programs, DIALOGS, developed at the University of California–Irvine are available. Further development of CAI type capabilities is in progress.

Keypunching and test-grading equipment are available. In a separate workroom seven DECWRITER II terminals, one graphics terminal, and one keypunch are available to students. Hours during which students may use Computing Services facilities are very liberal.

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 possibilities, 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 have input into 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 Bay Apartments adjacent to the campus which are privately owned and operated especially for UWGB students. Bay Apartment rentals are among the lowest housing 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 Bay Apartments are designed specifically for students. 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 Student Development and Counseling Center, live in each of the apartment buildings. Resource students are familiar with campus and community resources and Red Cross First Aid procedures, serve as organizers for activities, and perform simple maintenance chores.

Information about Bay Apartment rentals is available from: Manager, Bay Apartments, 105 Wasserman Lane, Green Bay, WI 54301.

Private housing off-campus is not difficult to find in Green Bay. Both furnished and unfurnished accommodations are available for rent. The office of Student Life can help students locate off-campus housing. That office maintains a list of available housing, can suggest what to look for in a lease, advises students of their responsibilities as tenants and of landlord responsibilities, and can answer other questions about living off campus. The office of Student Life is in Room 1908 of the Student Services Building.

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 student 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 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 $350,000 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 become participants 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 1977-78 academic year ranged from A—Accounting Club, Agape Christian Fellowship, Alternative Energy Club, Antiquitas, and Artist's Guild—to Y—Young Republicans (there were no 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. Some clubs serve short term purposes, such as those supporting political candidates; others have 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, Antiquitas, History Club, Marketing Club, Collegium Musicum, and St. Jude Players.

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. Friends of the Green Bay Indian community promotes community and University awareness.

Veterans Club also is based upon common experience.

Organizations concerned with environmental issues include Round River Alliance, Alternative Energy Club, and Northeast Wisconsin Crane Club.

Active and sedentary sports and recreation are served by groups such as Martial Arts Club, SPORE, Sailing Club, and Chess Club.

Other organizations are based upon concern for life style, such as Cooperative Concerns and Organic Gardening Club.

Some organizations come into being in response to particular issues. Energy Central evolved spontaneously among students who wanted to express their feelings about the direction of the University's academic program. In Progress came about as the result of an independent study project to establish channels for mid-term "feedback" on courses from students to faculty.

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

The Shorewood Club functions as a student union. It provides a place to relax away from academic pressures. Students, faculty, staff, and their guests can gather there for refreshment, recreation, and relaxation.

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 the golf course Pro Shop. 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. Instruction in touring and racing is provided and events are scheduled for all winter sports.

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 UWGB 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 both modern and ballet at UWGB. Phoenix Dance Ensemble presents one or two performances annually. 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 the Symphonic and Concert Bands, the Concert Choir, the University Singers (pops), jazz ensembles, 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.

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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 Dr. Frederick Lenz, an authority on meditation and para-psychology, Shawn Michael Costeau, an oceanographer/photographer, and science fiction writer James Mapes.

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 usually find information on who to contact and where to contact them in the first issues of the paper each academic year.

THE SHEEPSHEAD REVUE

Creative writers and artists may get their work published in the campus literary magazine, *The Sheepshead Revue*. The *Revue* 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 Revue* 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 resources toward the operation of 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

UWGB men and women compete in several intercollegiate sports. Women's teams include basketball, field hockey, tennis, and swimming and diving, and men's competition is in basketball, soccer, tennis, and golf.

All intercollegiate athletic events are held on campus with the exception of men's basketball. It is played in Brown County Veteran's Memorial Arena in Green Bay.

Women's sports abide by the rules of the Wisconsin Women's Intercollegiate Athletic Conference (WWIAC) and men's sports are affiliated with the National Collegiate Athletic Association, Division II (NCAA).

During the first nine years of intercollegiate competition, the men's basketball team has compiled a 195-60 win and loss record and has been involved in post-season tournament action in seven out of nine years. In 1978, the team took second place in the national championship finals.

The soccer team, which also has competed for nine years, has twice competed in national Division II championship finals—in 1975 and 1977.

Women's intercollegiate teams are younger than the men's, but have compiled some impressive records. In 1977-78, the basketball team finished with a 14-9 win and loss record, finishing second in the WWIAC Northern Division. The 1977-78 academic year was the first for the swimming and diving team, which finished with nine wins and only two losses.

Information about game schedules and try-outs for intercollegiate teams is available from the intercollegiate athletics 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 physical examination report 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 System 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.

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/her evaluation will be held until a 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 transferring to UWGB with fewer than 42 credits must fulfill all requirements of the University and the major.

Transfer students must satisfy all-University requirements by completing a three-credit senior seminar and by meeting the 27-credit distribution requirement by transferring or completing nine credits each in the humanities and fine arts, social sciences, and natural sciences and mathematics.

Transfer students will fulfill the six-credit sequence requirement of all-University requirements according to their transferred class standing as follows:
Freshman standing (1-23 credits): must complete the six-credit sequence in all three areas.
Sophomore standing (24-53 credits): must complete the six-credit sequence in any two areas.
Junior standing (54-83 credits): must complete the six credit sequence in any one area.
Senior standing (84 credits): none.

Students holding Associate of Arts degrees from accredited institutions will be assumed to have junior standing for purposes of all-University requirements.

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 in the current *Timetable*.

Incoming transfer students are encouraged to meet with a general adviser in the office of Academic Advising to have their questions answered about credit evaluation and standing with respect to general requirements for a degree. This 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 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—Open Admission

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.

Recent high school graduates whose academic records are at the marginal college entrance level may enroll for Summer Session Only college work on a trial basis to demonstrate their ability to complete college-level work successfully. Such students should contact an admissions counselor for specific information before enrolling.

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 to the Admissions Committee. 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 publication describing the program also 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 tuition remission scholarships exist. In addition, it is difficult to gain permission from the U.S. Office of Immigration and Naturalization 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.

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 1977-78, Wisconsin undergraduate students paid $31.25, and graduate level students paid $49.25 per credit. Nonresident undergraduate students paid $109 and graduate level students paid $146.50 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.

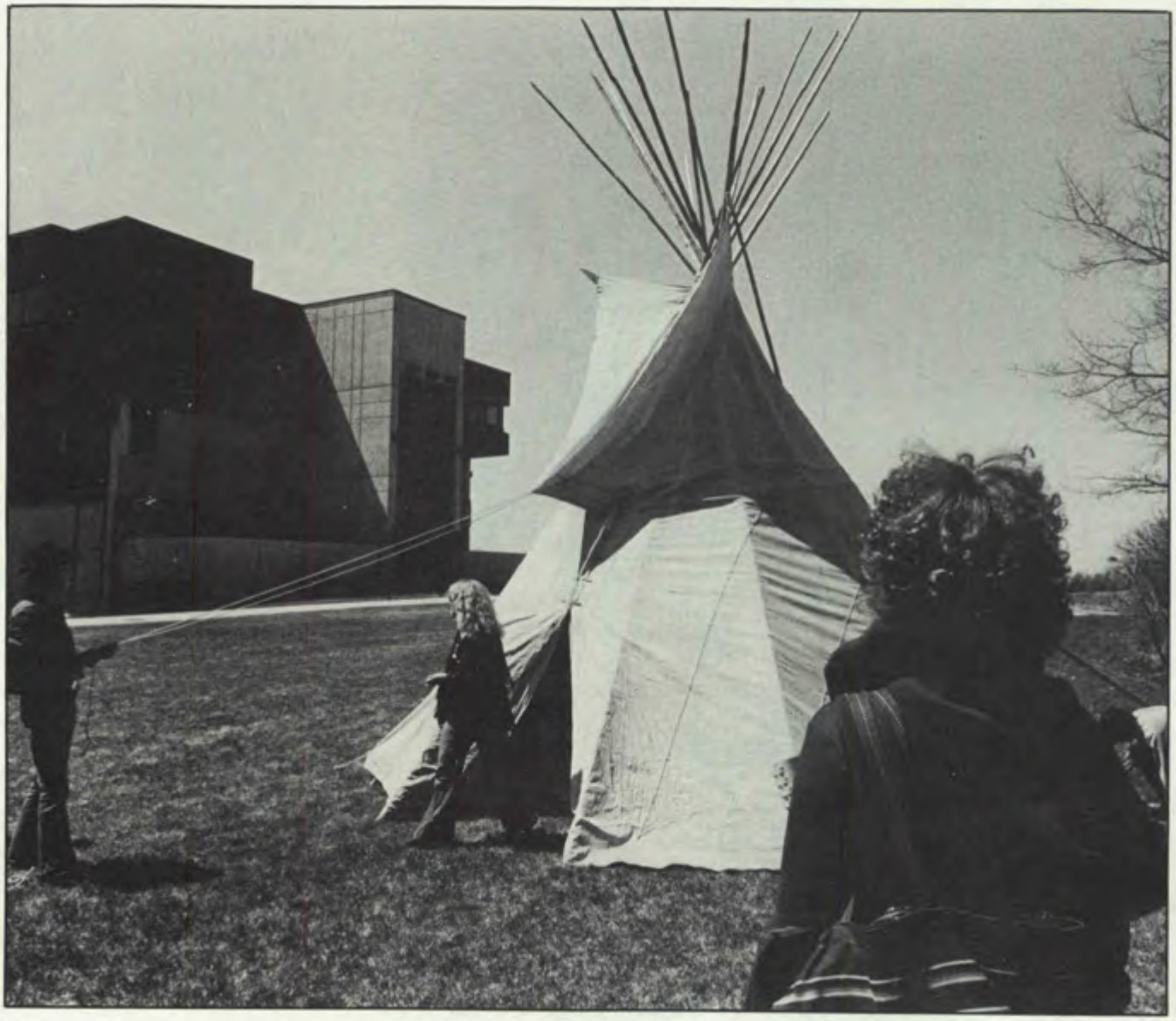
1978-79 Semester Fees for Full-Time Students

Level	Wis. Res.	Non Res.
Undergraduate	$375	$1305.50
Graduate	$440.50	$1317

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 office of Student Financial Aids 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 on campus
Books and Supplies	$ 175	$ 175
Room and Board	$ 650	$1550
Travel, Personal, and Misc.	$ 780	$ 790
Total costs to be added to tuition	$1605	$2515

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 $825. 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 from the agency a Student Eligibility Report (SER) 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 part-time 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.*

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 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, finance, science, and music.

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 $1600 (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 $1,500 and do not have to be repaid or matched by other aid.

Wisconsin Indian Student Assistance Grants. Grants of up to $1,500 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 since 1964. The yearly grant of up to $200 for single and $400 for married veterans is determined by a special application form.

Vocational Rehabilitation Grant. Provided to students with some disability as determined by the Department of Vocational Rehabilitation. The amount is generally matched 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 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 a 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.

Wisconsin State Student Loans. Wisconsin residents with financial need may be eligible to borrow from this program. Students must first show evidence of being turned down for 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 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.

Wisconsin Guaranteed Loan Program. Residents of Wisconsin may borrow loans 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 Wisconsin Higher Education Corporation (a subsidiary of the Higher Educational Aids Board) and the University.

Depending upon the total amount borrowed, the student has up to 10 years to repay the loan at 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 $300 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

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 $2.65 to $4 an hour. The exact rate depends on the complexity of the job. The chart below shows possible expected earnings (before taxes and other deductions) in a school year of about 34 weeks:

Hours worked weekly at $2.90/hr:

10 hours	$ 986
12 hours	$1183
15 hours	$1479

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 $3,400 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.

Map

1. Studio Arts (SA)
2. Creative Communication (CC)
3. Student Services (SS)
4. Library Learning Center (LC)
5. Instructional Services (IS)
6. Environmental Sciences (ES)
7. Laboratory Sciences (LS)
8. Community Sciences (CS)
9. Socio-Ecology (SE)
10. Welcoming Booth
11. Visitor Parking
12. Circle Entrance
13. Amphitheater
14. Grounds Equipment
15. Communiversity Park
16. Outing Center
17. Shorewood Club West
18. Shorewood Club East
19. Pro Shop
20. Golf Course
21. Physical Plant Center
22. University Commons
23. Student Apartments
24. Student Apartments, Parking
25. Phoenix Sports Center
26. Phoenix Field
27. Tennis Courts
28. Ball Diamonds
29. Air Quality Control Station
30. Farmhouse
31. Utility Control Center
33. Day Care Center
34. Ecumenical Center
35. Student Staff Parking

Calendar

CALENDAR*	1978-79	1979-80	1980-81
Fall Semester			
Registration and new student period (or register by mail earlier)	Aug. 28-31	Aug. 27-31	Aug. 25-29
Classes begin	Sept. 5	Sept. 4	Sept. 2
Thanksgiving recess	Nov. 23-26	Nov. 22-25	Nov. 27-30
Classes end	Dec. 13	Dec. 12	Dec. 10
Final examinations	Dec. 14-20	Dec. 13-19	Dec. 11-17
Commencement	Dec. 17	Dec. 16	Dec. 14
Holiday recess	Dec. 21-Jan. 1	Dec. 20-Jan. 2	Dec. 28-Jan. 4
January Interim Period			
Begins	Jan. 2	Jan. 7	Jan. 5
Ends	Jan. 26	Feb. 1	Jan. 30
Spring Semester			
Registration and new student period (or register by mail earlier)	Jan. 22-25	Jan. 30-Feb. 1	Jan. 28-30
Winter recess	Jan. 27-Feb. 4	Feb. 2-10	Jan. 31-Feb. 8
Classes begin	Feb. 5	Feb. 11	Feb. 9
Spring recess	Apr. 14-22	Apr. 5-13	Apr. 18-26
Classes end	May 18	May 23	May 22
Final examinations	May 21-26	May 27-31	May 25-30
Commencement	May 19	May 24	May 23
Summer Session			
Registration and new student period (or register by mail earlier)	June 7-8	June 12-13	June 11-12
Classes begin	June 11	June 16	June 15
Independence Day (holiday)	July 4	July 4	July 4
Classes end (finals)	Aug. 3	Aug. 8	Aug. 7

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

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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 30 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 a 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., many physical education courses do not carry degree credit.

Degree Credits. Those credits which will count toward the 124 credits required for a bachelor's degree. Certain courses in physical education and all SLP 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 (Failure)	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 Action:
—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 Dean for Academic Affairs or his designated representative. The Dean 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 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 opportunty 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 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 Dean for Academic Affairs, or the dean'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 Dean 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 Dean who also consults with the instructor and the appropriate chairperson. The Dean 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 30 days after final grade slips have been mailed. 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 term, i.e., illness during the final examination period.

REPEATING COURSES

A student may choose to repeat any course previously completed with the understanding that a course for which credit has been earned previously does not count for credit if it is repeated. All grades earned remain permanently on the student's record. Any grade and grade points earned by repeating a course will be calculated into the grade point average along with the original grade and grade points; this will result in an average grade effect on the grade point average. Repeated courses will be denoted with a letter "R" after the course title of the original course entry. Courses repeated at another institution have no effect on the GPA 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 Skills Learning Program are the only courses 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 SLP courses, 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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Credits

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