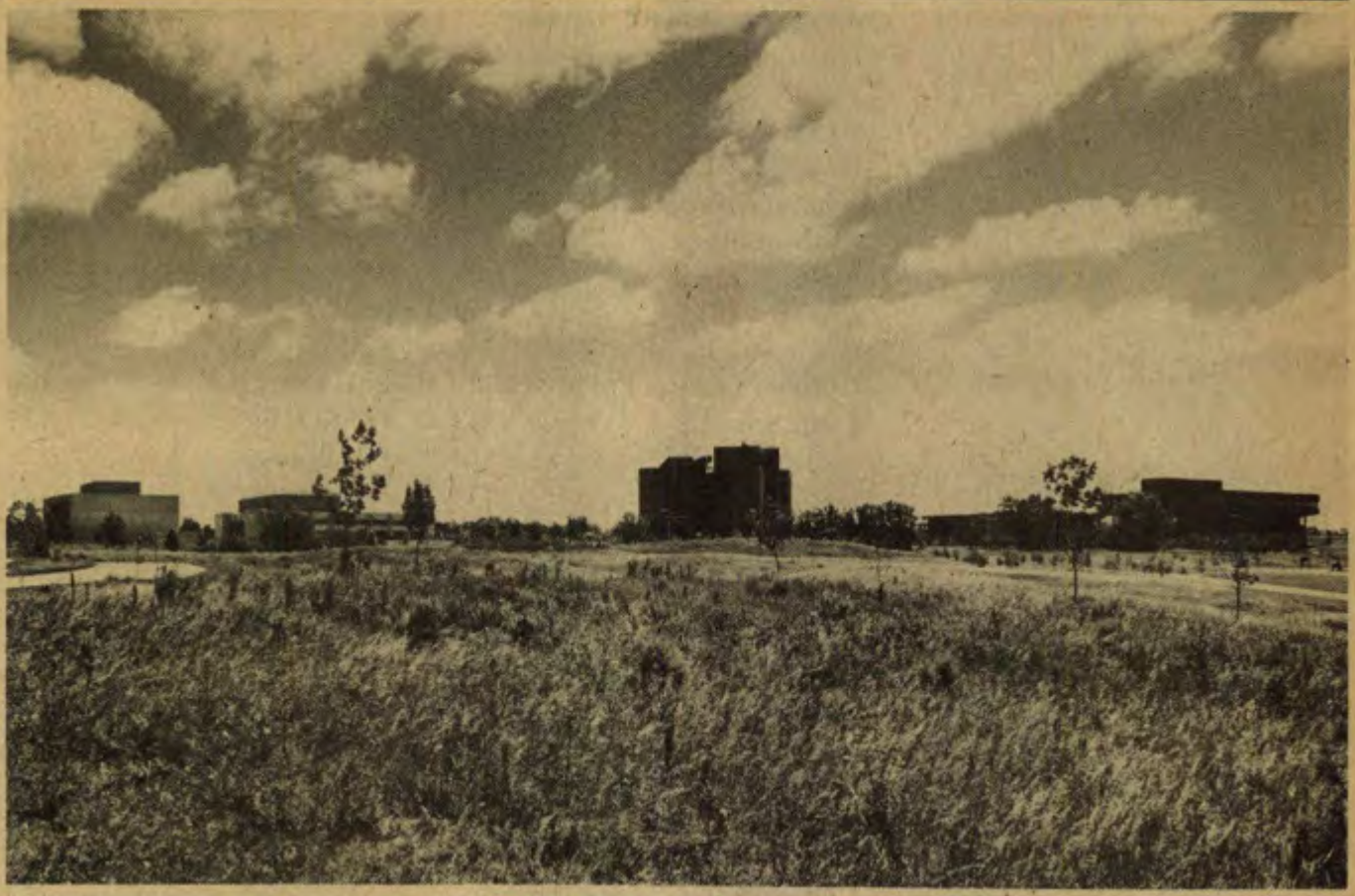
1976-1978
UNDERGRADUATE CATALOG
UNIVERSITY OF WISCONSIN
GREEN BAY

Contents

Campus



Socio-Ecology

CREDITS

This book is a tool. We say that on page one and we reinforce it throughout the book in the text and in the photographs. We expect you to make use of this tool to learn what the University of Wisconsin-Green Bay has to offer you and in planning your program of study.

This catalog was published in September, 1976, by the UWGB Office of Publications. Eleanor J. Crandall, Director, was general editor and production supervisor. Virginia C. Dell, Editor, wrote the opening sections (up to programs of study). Dennis S. Thulin, Designer, designed the book and the cover, produced the page layouts, and made some of the photographs.

Photo Credits

Jerry R. Dell, UWGB photography teacher, served as general photographic consultant for this catalog. Photos fall into several categories. Tools used by students, faculty, and staff is the major theme and is carried throughout the book with top-of-the-page illustrations. Tools also are used on section title pages. These photos were made in a studio setting by Dell and Dennis Thulin.

Photos made to illustrate the friendly character of our students and faculty were made by Dell and members of the Educational Communications photo staff. Dell made the "portraits" of our campus buildings that end each catalog section.

Credits for individual photographers follow.

Tool Photos

Jerry R. Dell: 4, 8, 10, 13, 19, 20, 33, 35, 41, 43, 46, 48, 58, 60, 73, 74, 76, 84, 87, 89, 90, 95, 96, 103, 106, 110, 115, 117, 123, 125, 135, 136, 139, 142, 146, 148, 153, 156, 159, 160, 167, 169, 173, 177, 179, 181, 182, 187, 194.

Dennis S. Thulin: 1, 3, 6, 15, 17, 23, 26, 31, 38, 44, 51, 55, 57, 66, 69, 70, 79, 81, 93, 98, 105, 109, 112, 119, 120, 127, 129, 130, 132, 144, 149, 151, 154, 166, 175, 188, 193.

Chad Moritz: 25, 29, 37, 53, 63, 64, 83, 101, 140, 162, 171, 185, 190, 196.

People and Building Photos

Michael L. Brisson: 1, 2, 5, 7, 8, 9 top, 10 left, 13, 18, 19, 20, 24, 25, 29, 33, 34 top, 38, 43, 44, 45, 56 top, 61, 62, 71, 77 right, 81, 94, 97, 99, 100, 103, 104, 107, 114, 116, 120, 121, 124, 134.

Jerry R. Dell: iv, v, 11, 21, 27, 34 bottom, 39, 49, 52, 67, 75, 106, 122, 137, 197, 210.

Doug Hanpeter: 30, 31, 36, 48, 51, 87, 92 bottom, 112, 131.

Tom Knuth: 3, 5, 9 bottom, 10 right, 14, 16, 17, 23, 32, 37, 42, 47, 54, 56 bottom, 59, 64, 68, 72, 77 left, 82, 85, 86, 89, 90, 92 top, 102, 105, 108, 111, 118, 125, 128, 132, 133.

Cover Photos

Brisson: student couple; Dell: Library Learning Center and girl's face; Thulin: tools.

PREVIEW

The book you have in your hands is a tool for planning your college education at the University of Wisconsin-Green Bay. To make college decisions, you need to know two important things: what a University offers you and what it will expect of you. This catalog will give you both kinds of information about UWGB.

UWGB's educational program is organized around some basic ideas the University believes are important. One is that the University's purpose should be to help students apply knowledge in a responsible way to the problems facing all people. Another is the recognition that students are individuals; that they bring with them to the University different abilities, accomplishments, interests, and goals. These ideas are the foundation for the educational experience you will have at UWGB.

You will find at UWGB all of the courses necessary for basic preparation for professional, creative, business, administrative, and technical careers, and for graduate and professional schools. Teaching, business administration, accounting, social services, regional and urban planning, law, medicine, dentistry, chemistry, nutrition, and scientific research are among the many career areas for which you can prepare at UWGB.

But, as you prepare for your future in specific ways, UWGB also provides a broad education. Knowledge and skills that transfer from one life situation to another are important. Learning how to solve problems, to make critical judgments, to make decisions, to seek out resources, to express mature values, supplies you with skills that you can apply in your career and in avocations throughout your life. At UWGB, we believe that preparing for today's society requires the broadest possible education. A narrow vocational training in a world that changes so fast is poor preparation indeed. Therefore, UWGB encourages its students to broaden their interests, their knowledge, and their skills so that they can face the future with confidence.

UWGB is one of the newest members of the University of Wisconsin system. It offers both the bachelor's and master's degrees. The campus is located at the northeast edge of Green Bay, Wisconsin, and overlooks the water of Lake Michigan's Green Bay. Although UWGB is within the city, fields, meadows, and farmsteads nearby create an essentially rural setting for the campus.

The campus itself is contemporary in appearance and feeling. Buildings and equipment are new and modern. Before UWGB was built, the land was occupied by farms and a golf course and attempts are being made to preserve the character of the land. A nine hole golf course remains. Much of the campus is occupied by open fields and meadows. Wooded areas along the bay and a creek are preserved as part of an arboretum which is being developed around the entire periphery of the 600-acre campus.

Many students like UWGB's size. With about 4,000 students, the University is large enough to offer a diversity of programs and opportunities and small enough to make it easy for you to have an individualized educational experience. Class sizes vary, but most are small. UWGB faculty members are, on the whole, easy to approach and talk to outside of the classroom as well as in the classroom setting.

Campus activities develop as a result of what students want. Since UWGB is a relatively new school, tradition does not dictate what activities are available. If you have an interest that is not served by an existing student club or group, it is highly likely that you can organize one. You can be active in campus events or not, depending on your preference.

As you prepare for college, you should be aware that a university can only offer you opportunities. It cannot guarantee that you will emerge as a leader in your career field or as a well-educated person. That is up to you. Basically, your success in college is your responsibility. UWGB does, however, have a variety of resources to help you sort through the maze of college programs and requirements and decide which opportunities you want to take advantage of. Academic advisers will help you get started with your general college program. Once you've decided upon a specific area of study, professors in that area are available to help you plan your program — semester by semester and course by course. Whether or not you take advantage of these resources is up to you. It is also possible to plan your program on your own, or you may want to seek advice only occasionally.

UWGB believes that the student who can benefit most from a college education is the person who is eager to seek out opportunities and to take a high degree of responsibility for his or her own educational experience. If you want to take an active role in your education and in shaping your future life, UWGB will almost certainly be a good place for you to start.

We invite you to explore this catalog to discover if UWGB is the right university for you. We also hope you will visit the campus. If, after reading the catalog, you have unanswered questions, please write for more information.

Foundations

Let us give you a more detailed idea of what UWGB can offer you, as well as what it will expect of you.

First, you should know that UWGB was founded during the decade of the 1960's when traditional educational institutions and practices were being severely challenged. Many people said that universities showed little concern for students as individuals and that higher education too often created "ivory towers," ignoring what was happening in the "real" world. UWGB's academic plan is one answer to these criticisms.

UWGB is student-centered. This means we recognize that you are different from every other student. We encourage you to take part in planning your own education. Student initiative is important to UWGB's academic plan. "Student initiative" does not mean that you are left at loose ends or without guidance. While you are presented with opportunities to assert yourself, UWGB has available resources to help you apply your initiative, when help is needed. With this support, you can increase your proficiency and gain confidence in making life decisions.

Flexibility and practical experience are essential parts of the academic plan. Flexibility gives you the opportunity to gain an education that meets your individual needs. Practical experience lets you test knowledge learned in the classroom. There are plenty of opportunities for both at UWGB.

One of the primary benefits of an education at UWGB is the way that knowledge from several subjects or disciplines is applied to a given problem or area of concern. No subject or concern in the world of practical experience exists in isolation. For example, if you are interested in the health professions, it will be helpful to have a knowledge not only of the appropriate sciences, but of psychology, communications, human growth and development, modern society, and many other areas. If the business world is your aim, a background in economics, history, communications, and other subjects will be helpful. If you want to study literature, knowledge from the disciplines of history, philosophy, the languages, and others, will apply to your major field of study. All of UWGB's majors relate knowledge from several subjects in this way.

For many of the same reasons that we believe in multi-subject majors, UWGB believes that the college experience is part of a lifelong progression of learning and growing. Your college years are not separate from what you did before and what you will do after, but rather are part of a continuing process. It follows that UWGB encourages "non-traditional" students. A "traditional" student is one in the 17 or 18 to 22 age group who starts college immediately after graduating from high school. Most of our students are in this group. But we believe that many others may need and want the college experience — people who have been out of high school for a time and who come to realize they want a college education; people who do not have the conventional background for college; people seeking additional professional skills; people who want to change careers; people who want to learn for personal fulfillment. If you are in the "non-traditional" group, you also are welcomed to UWGB. Not only does UWGB have something to offer you, but you may have a lot to offer as a result of your practical experience.

Contact with diverse people, ideas, and experiences is an essential part of your education. UWGB encourages students to approach new things with an open mind and a sense of adventure. At UWGB, we believe that a college education should be an experience that opens your life to new possibilities.

The Benefits to You

These benefits are the foundation for many opportunities at UWGB. Classes are based on the free exchange of knowledge among many disciplines and sources to emphasize the interrelatedness of bodies of knowledge and concerns of the world. Students are encouraged to participate in the classroom. Individual and group projects are an important part of many classes. Some offer opportunities to test classroom knowledge in practical campus and community projects.

There are many opportunities for you to shape your own educational experiences. You can receive degree credit for experience, independent study, student-initiated and student-led courses, competency tests, and through special petitions which might permit you to substitute an experience of your choosing for a requirement or provide flexibility in some other way. Some concentrations or majors involve students in planning courses.

If none of UWGB's regular concentrations or majors fits your interests, you can develop a Personal Concentration.

The January interim period offers the opportunity to concentrate your attention on one concern or course for a month. Many January courses are experimental and deal with specialized topics. January is also a time when many students take advantage of University-sponsored travel in this country and abroad for credit. This fulfills your requirements for an experience in a cultural setting other than your own.

Attending another university for a semester or a year through a student exchange program is another way to broaden your experiences. A semester or a year can also gain for you practical, career-related experience through the ACTION and Cooperative Education programs. You can receive college credits and often at least a subsistence income. Internships are another practical experience that you can take advantage of. Many instructors are willing to help you arrange such experiences.

University Without Walls serves students who are unable to come to campus to pursue a college education. UWW students do most of their work on a contract basis.

UWGB's master's degree program allows for a large degree of individualization. Each student writes his or her own program and completes it with the guidance of a committee.

All of these opportunities, as well as many others, are described in more detail elsewhere in this catalog.

History and Mission

The University of Wisconsin-Green Bay is young, as universities go. It officially began 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 freshman-sophomore University of Wisconsin Center. The two-year center was established in 1933 and by the mid-1960's had more than 1,000 students. In 1968, it was integrated with the new University of Wisconsin-Green Bay. The center's building in Green Bay was used for UWGB classes until a new campus could be built.

The first group of three buildings on the present campus opened in 1969. Presently 12 new buildings are complete or nearly so, and seven buildings that were already on the site are used by the University.

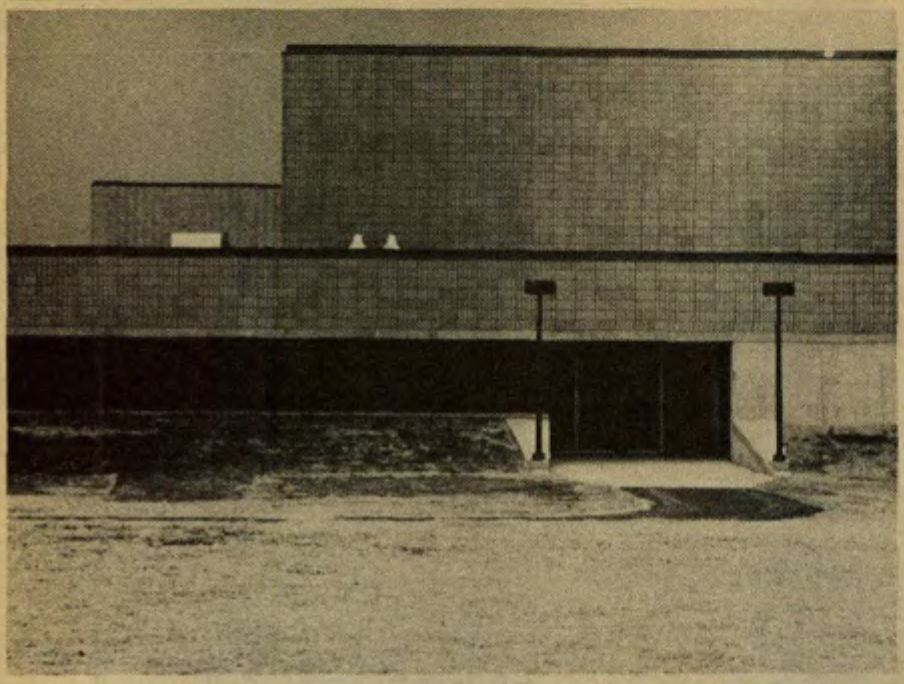
UWGB's newness and the times in which it was founded provided an opportunity which few universities have — an opportunity for a new start. UWGB's planners were able to study the state of higher education carefully and to try to plan a university that had special meaning for the last half of the twentieth century. This has given UWGB a singular position within the University of Wisconsin. UWGB has been assigned a special mission to provide an educational program that is substantially different from that of any other UW System unit.

A major aspect of UWGB's mission is its organization around a central theme — that of the relationships between humans and their environments. The concern with the nature and effects of our relationships with the physical, social, cultural, biological, and aesthetic environments in which we live has gained national and international recognition for UWGB.

Accreditation

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.

Phoenix Sports Center



GENERAL INFORMATION

This section contains information that will be helpful to you in your academic and personal life at UWGB.

Much of it is facts about degrees, grading, academic policies, the calendar, and other things you need to know to progress toward a degree. The section also explains where to get various kinds of services and information on campus, and describes some resources that exist at UWGB to help you in both academic and non-academic pursuits.

Degrees Offered

UWGB offers a Bachelor of Arts or Bachelor of Science degree in each of five areas: Environmental Sciences, Human Biology, Community Sciences, Creative Communication, and Administration.

UWGB also offers a graduate program leading to the degree, Master of Environmental Arts and Sciences (MEAS).

For graduation, 124 semester hours of degree credit and a cumulative grade point average of at least 2.0 are required. A semester's minimum load for a full-time student is 12 credits; the normal maximum load is 18 credits. Qualified students who wish to take more than 18 credits in any one semester must request permission on a petition before registration. An average semester load is 15 or 16 credits. Twelve credits are considered a maximum full-time load for graduate students.

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.

Dean's Honors List

UWGB recognizes high scholastic achievement for full-time students each semester by the compilation of 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. The 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 also 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 are listed in the *Timetable*, published each semester, January interim, and summer session by the Registrar's office. The *Timetable* also contains information about registration procedures, graduation requirements, listings 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* that provide total immersion learning experiences, as in foreign language speaking skills; *other-culture experiences* — month-long study or research in one of UWGB's community observatories or in national and international study tours; *independent study* — individualized instruction, study, or research (in courses numbered 298 and 498) 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 fee. Students are expected to pay their own expenses for off-campus programs. Some financial aids may be available for these programs.

January fine arts activities and lectures often relate to study themes. Many student organizations function and social activities continue during the month.

Summer Session

UWGB's summer session has its own set of course offerings. Most express UWGB's fundamental themes, and some are selected to meet the educational needs of special groups. Regular academic and special courses, workshops, short courses, clinics, conferences, and in-service programs are included.

These programs are intended to 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 can 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.

Courses or workshops in personal development, counseling, composition and study skills, foreign languages, and basic mathematics are offered regularly. Tutorial assistance and individual or small group guidance are provided.

Some course offerings carry graduate level credit, in cooperation with University Extension and UWGB's graduate program.

Summer housing is available in either the private Bay Apartments next to the campus, or in nearby off-campus locations.

A number of clinics and workshops, one to four weeks in length, are offered for junior high and high school students and include such activities as art, theater, band and choral music, basketball, soccer, golf, and reading skills. 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.

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 the concentration advisers for the student who has. Disciplinary and professional program advisers help the student fit these areas of study into a major program.

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.

CLEP

A student who wants to earn credit for College Level Examination Program (CLEP) tests at UWGB should take these exams before earning 15 college credits at any college. UWGB will grant six credits for each of the following general CLEP exams for performance at or above the standard

score shown: humanities (489), social sciences (488), and natural sciences (489). UWGB will not grant credit for the CLEP general exams in English or mathematics, regardless of score. Scores on CLEP subject exams should be submitted when you apply for admission and will be evaluated individually based on score and subject.

Educational Opportunities Program

This 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 advisory/tutorial relationship between the student and members of the UWGB faculty and staff. This relationship includes weekly counseling and academic learning skills sessions, in addition to closer faculty-student-staff instructional efforts. This is to assure that a 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 academic alternatives available.

A student can seek admission to UWGB under the Educational Opportunities Program if he or she shows good potential for academic success. Such potential may be verified by a recommendation from a high school adviser or teacher or member of the community.

Freshman enrollees in the Educational Opportunities 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.

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 through placement tests or by faculty members.

Most work in the program is on a tutorial and small group basis, scheduled at the convenience of the student. Non-credit workshop projects on topics of particular interest to the student can be arranged. Student tutoring in content courses also can be arranged.

Dean of Students

The office of the Dean of Students functions as a student resource. It is concerned with all aspects of student life and with a student's adjustment to the University relative to policies and procedures of offices directly administered by the Dean of Students. These include Admissions and Orientation, Financial Aids and Student Employment, Academic Advising, Student Development Center, Placement and Career Counseling, University Health Services, and the Ethnic Heritage Center.

The Dean of Students essentially works to help students use their own power. Rather than doing things for students, the dean seeks to provide advice and support to aid students in using their own personal resources and those of the University to solve problems and make changes.

The Dean of Students serves as a resource person for the Student Government Association.

The office also 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 will be 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 and for advice and opinions on individual cases regarding student disciplinary guidelines. The Dean is concerned with student rights and due process, but primarily the goal is appropriate counseling if it is needed and requested.

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.

Student Development Center

The Student Development Center provides three basic services: counseling for students experiencing emotional crisis in their lives and/or wanting to use their personality resources more effectively; growth group experiences for students, including para-professional training; and consultation to student groups, faculty, and other administrative units for enhancing positive, humanistic, and democratic attributes in their relationships.

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 interactional process.

Drop-in facilities are maintained in the Student Services Building as a welcome to those who would like to familiarize themselves with 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 advice and placement services for UWGB students and alumni.

Employers from business, industry, government, and education are brought to the campus to interview students for job opportunities. Additional services offered to job 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 job 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 graduates who are seeking admittance into graduate or professional schools and/or are seeking employment.

In conjunction with the Student Development Center and the Lucy Stone 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 career 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. A student must be enrolled for a minimum of 6 credits to be eligible for the program. 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.

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 some 200,000 books, about 3000 current periodical subscriptions, 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. Reference librarians and other specialists recognize that as information resources and their dissemination become more wide-ranging and complex, more assistance must be given to the novice in library research.

Besides the customary books and journals, the library makes available through play-back 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 and listening equipment, drama and other spoken word recordings, 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 one of the more 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.

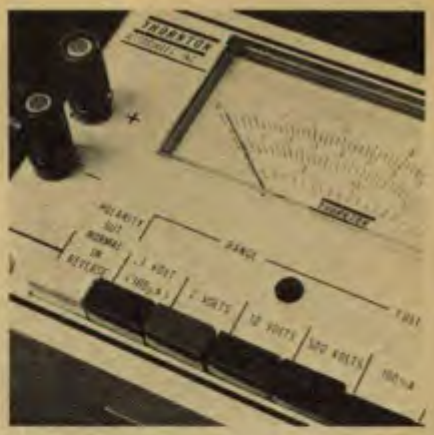
A Bicentennial study of Belgian-American culture, which attracted national and international interest, is one example of the kind of research project which such library collections can support, and a number of student research projects have been inspired by materials in these collections.

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 attempts to obtain 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 catalog (as of 1969) and an unusually full and varied collection of periodical indexes and abstracts facilitate such borrowing.

Educational Communications

UWGB's Educational Communications office produces and supplies media materials to faculty and students. Practical instructional tools are developed by specialists in film, graphics, photography, audio, television, and classroom media utilization.



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 exeeds 1,500 properties.

The media services office furnishes audiovisual materials and equipment for playback and projection. Media equipment is available on a check-out basis to faculty and students.

A complete multi-track audio production facility is equipped for recording and duplication of reel tapes and cassettes. Graphic artists help faculty and students to visualize instructional concepts through maps, graphs, charts, and original illustration. Photography and motion picture specialists document laboratory experiments, off-campus learning experiences, produce multi-screen slide presentations, and copy artwork onto slides and transparencies for classroom projection.

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. Complete credit courses and teaching modules of a more complex nature are recorded in broadcast-format color television studios.

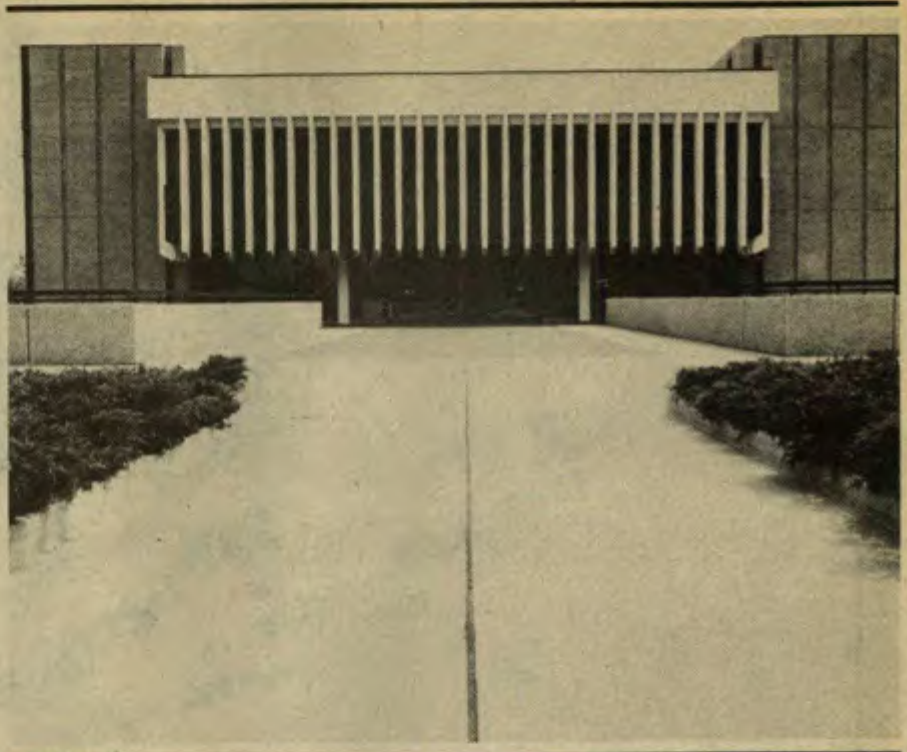
Student staff members in Educational Communications can advance their career objectives by getting practical experience while they are in college.

UWGB 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 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 awards in national competitions.

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.

Environmental Sciences



The computer system consists of a Xerox Sigma 6 computer with 384 K 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.

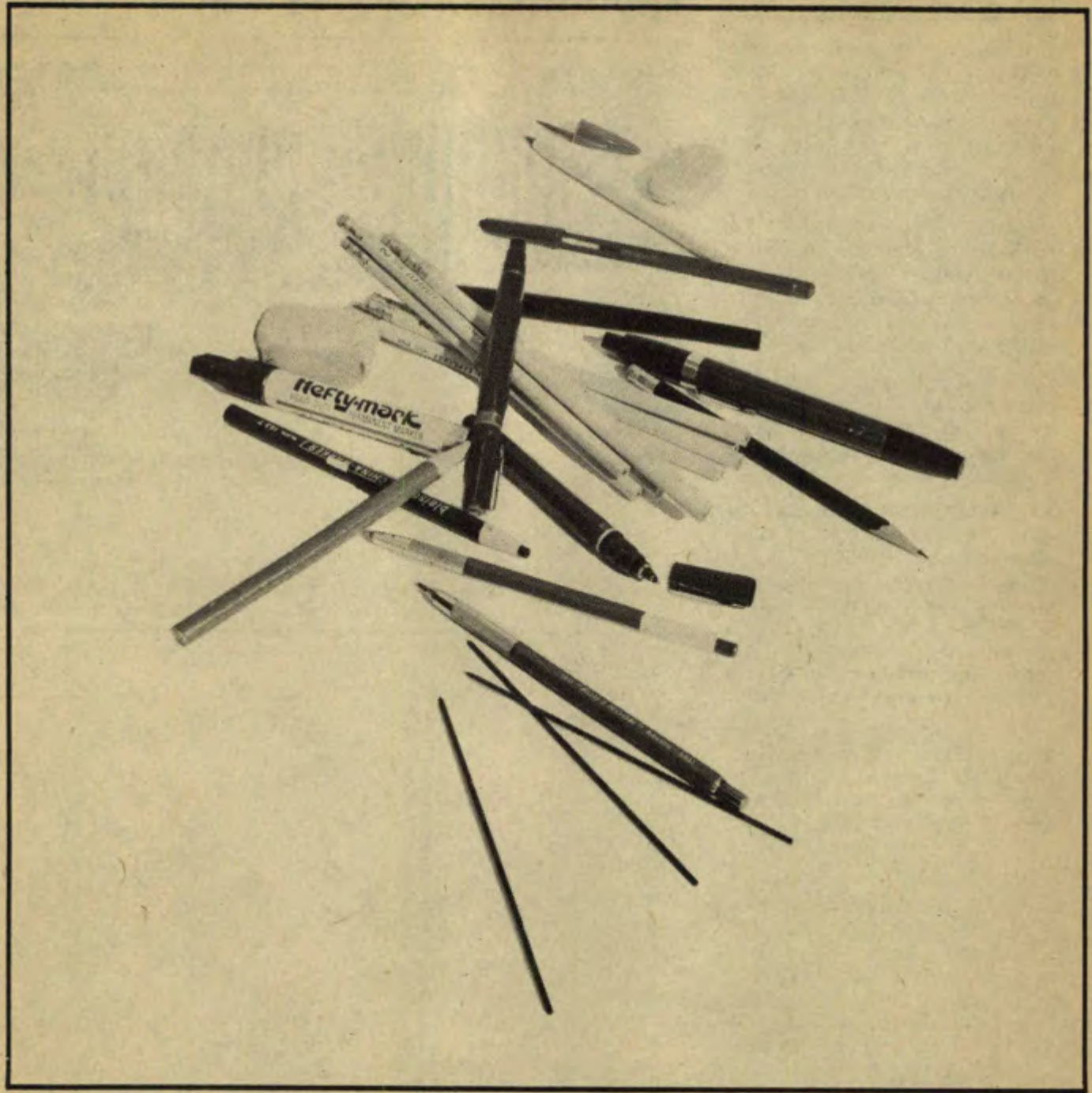
Software capabilities include an Extended Data Management System (EDMS), the Statistical Programs for Social Sciences (SPSS) and a variety of computing languages such as; BASIC, FORTRAN, COBOL, APL and others.

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 six DECWRITER II terminals and one keypunch are available to students from 8 a.m. to 10 p.m. on weekdays and 10 a.m. to 4 p.m. on Saturdays. Student batch jobs can be submitted during these hours with a turn-around time of about one hour.

Both batch and interactive computing are used in mathematics, computer science, and courses in other disciplines.

SPECIAL OPPORTUNITIES



Some of the special benefits resulting from UWGB's academic plan mentioned briefly in the preview to this catalog are explained in more detail in this section.

It also describes other opportunities for pursuing your special interests and ways in which you can plan your educational experience at UWGB to suit your own needs.

Independent Study

Independent study permits a student to get credit for a special project or research. To arrange for independent study, a student must prepare 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 independent study. Once the instructor has approved the proposal, the student may register for independent study.

Freshmen and sophomores must have grade point averages of C plus or better and juniors and seniors of C or better in order to take independent study.

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.

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. Standardized examinations such as the College Level Examination Program (CLEP) tests are sometimes used. In other cases, locally developed exams or methods of demonstrating competence are used. To learn more about credit by examination talk to an adviser in the Academic Advising office.

Student Initiated Courses

It 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 on an experimental basis; after that time, they are subject to review and may become part of the permanent curriculum at UWGB. New courses are frequently offered during the January interim period.

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.

One to three qualified students may work with a faculty adviser to propose a course they feel they can lead. If the course is approved, student leaders are eligible for double credits.

Student-led courses are listed in the *Timetable* along with regular UWGB courses. Guidelines for starting courses are available in the concentration offices.

ACTION/Cooperative Education

The ACTION/Cooperative Education program offers the opportunity to get major program and career related experience in off-campus jobs while also earning credits toward a degree.

A student enrolled in ACTION/Cooperative Education will work full-time off-campus and will probably receive at least a subsistence income. Placements are available in the Green Bay area, in other parts of Wisconsin, and out of state. Job placements range from four to twelve months in duration. A student may elect several short-term periods of experimental learning.

Nine to 34 UWGB credits may be earned during the period of service.

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 part of the University Seminars and provide a way for students to fulfill their required "other culture experience," as well as to have exciting and unusual learning experiences.

Trips usually are offered during the January interim, although some have been available during the summer months. The University Seminar program is explained in more detail elsewhere in this catalog.

Student Exchange Program

The exchange program gives students an opportunity to incorporate in their undergraduate education a semester or year of study at another university. Advantages of the exchange include the availability of a wider range of courses than can be offered at any one institution, the experience of learning in a different educational environment, exposure to new faculty members, and the opportunity to travel.

Exchanges are available with member institutions of the National Student Exchange Program and with some other institutions. The names of available exchange institutions can be obtained from the National Student Exchange office.

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 each term. Most financial aids are not affected by participation in an exchange.

Further information about the exchange process and application forms is available in the Student Exchange office.

Black Studies

A number of courses at UWGB emphasize the Black experience.

These include History of Africa (two semesters), Black and White Americans: How We View Ourselves and Each Other (three semesters), Black Man in White America, Ethnicity in American Cities, Values in Conflict, The School Experience of Minority Background Students, Racism and Social Change, and Minority Groups. These courses do not constitute a major, but it is possible for a student to design a program with an emphasis on the Black experience.

Course offerings in this area may change as needs and faculty evolve.

Native American Studies

UWGB does not have a major in Native American studies, but a number of courses dealing with the Native American experience have been offered.

These have included Native American Culture Seen Through Archaeology, Oneida Language Project, Red Man in White America, The Native American: Emergence of Indian Culture, and Native American Culture: Film and Performance (three semesters).

Courses are offered in response to need and availability of qualified faculty to teach them, so new courses dealing with the Native American experience may be developed.

Women's Studies

Several courses at UWGB focus on the participation of women in society and their relationship to social, physical, and aesthetic environments. These include Sex Role Development in Contemporary Society; Women: Crisis in Society; Contemporary Moral Problems/Technology and Human Values; Freedom and Social Control/Contemporary Moral Problems; Individual and Social Consequences of Sex Roles (three courses); Major American Poetry: Contemporary Poetry; Women and Changing Values; Women, Myth and Identity; Social Planning for Future Women's Roles; and Marriage and Family.

These courses do not now constitute a major, but they make it possible for a student to design his or her academic program with emphasis on women's studies. Other courses in the area may be offered from time to time.

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. UWW students are also UWGB students. They must meet UWGB graduation requirements and will receive a UWGB degree.

The essential difference between UWW and the other UWGB programs is that degree credits can be earned 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 by the sponsor 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 based on experience 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.

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 1975-76, 30 percent of UWGB's total student body were 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. 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.

TV credit courses available on Channel 38, a radio credit course on WGBW, 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 are offered for those not interested in pursuing a degree. Courses such as Personal Growth for Women, Basic French Cooking, Cross-Country Skiing, Assertiveness Training, Computer Programming, Birds of Wisconsin, and The Art of Belgium are typical of these offerings.

Action by the Board of Regents provides the opportunity for older students to 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 person with financial need who want to take only one credit course at a time.

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. UWGB Growth and Development graduates (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 office of Outreach.

Conferences, Seminars and Workshops

UWGB regularly conducts conferences in an effort to serve the community's need for educationally oriented programs. Students, faculty, and area citizens are encouraged to participate in these events. During 1976 UWGB hosted conferences and workshops including the Explorer Scouts Career Conference, Northeastern Wisconsin Foreign Language Organization Conference, and workshops in management and administration. Conferences such as these add to the enrichment of the University as well as meeting UWGB's goal of community involvement.

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 to a commission as a Second Lieutenant in the U.S. Army or its reserve components upon graduation from UWGB.

Military Science is a four-year on-campus program consisting of a two-year pre-professional elective course (no obligation for further military service), and a two-year professional course which is both elective and selective (selective in that the professor of Military Science determines, in conjunction with school officials, which cadets qualify for admission).

The professional program begins with a six-week basic camp taken between the sophomore and junior years to qualify for entry. It is designed for junior college students or sophomores at four-year institutions who have not taken ROTC. During the camp a cadet receives approximately $400 in pay plus travel expenses.

The service obligation for most ROTC graduates is three years of active duty and four years in a reserve status. Some ROTC graduates are either chosen or opt to serve on active duty training (ADT) for three to six months, then go into the National Guard or Ready Reserve until the eighth anniversary of the date of their commission. 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. 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, and two 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 year and two year scholarships are awarded competitively to students who are enrolled in ROTC. Students who attend the basic camp of the two-year program may also compete for two-year scholarships.

Handicapped Student Facilities

Students with physical disabilities will find that efforts are made to accommodate their special needs.

Creative Communication

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. One room in the Library Learning Center serves as a resource center for persons with sight disabilities. It is 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.

THE UNIVERSITY AND THE LARGER COMMUNITY

Going to college offers you many opportunities other than the obvious academic ones. It offers you the possibility to explore and develop a mature life style; to discover new interests that may continue to be important to you throughout your adult life, and to engage in non-academic activities for recreation, for personal fulfillment, or to develop skills — such as leadership and organizing — that can be valuable in your career as well as in your avocations.

This section describes the campus and its facilities and tells you a little about the Green Bay community. It discusses some of the choices you can make at UWGB in practical matters like housing, and in activities and recreation. It also tells about some offices that exist to help you with details of life on campus or to serve your special interests. You may want to request a special publication, "UWGB and the Art of Self Maintenance," which tells more about campus life and student organizations and activities, as well as more about the region.

You will notice that some of the activity possibilities take you off campus into the larger community. UWGB encourages its students to extend their interests beyond the campus. Involvement in the community is an excellent way to begin applying what you have learned to the "real world." Northeast Wisconsin offers many opportunities for involvement and recreation. We hope you will seek them out.

The Campus

UWGB has a 600-acre site which slopes from the ridge of the Niagara Escarpment — the geological formation that creates Niagara Falls hundreds of miles to the east — to the waters of Green Bay.

The campus, approximately seven miles from the "downtown" business district of Green Bay, is located where the city meets the country. Except for some residential areas, urban development has not reached the campus, but the skyline of the central city is clearly visible from the upper floors of the Library Learning Center.

The campus is most easily reached from Nicolet Drive (County A), which runs along the bay shore. Three entrances are marked from this access. There are also entrances at the southeast corner of the campus from Bay Settlement Road, and on the north side nearest the student apartments, from Scottwood Drive (County I). The visitor parking lot is accessible from the main entrance on Nicolet Drive.

The central landmark on campus is the eight story red brick Library Learning Center. Groups of academic buildings housing related concerns are placed like points of the compass around the Library Learning Center. They are the College of Creative Communication to the north of the Library, the College of Community Sciences to the west, and the College of Environmental Sciences to the south. Each college has a parking lot. One group of buildings, the College of Human Biology, remains to be built east of the Library Learning Center. This College presently shares other campus facilities. Two of the existing buildings, Student Services and Instructional Services, are mostly below grade.

The academic buildings are connected outdoors by plazas and walkways and indoors by a system of concourses.

The new University Commons, where the food service, a tap room, and activities rooms are located, is connected to the academic buildings at the concourse level through the Student Services Building.

Student apartments are near the Commons and academic buildings and not far from the gym, swimming pool, and other sports facilities. The student apartments are owned by a private corporation, but operated specifically for UWGB students.

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.

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.

On the bay shore, near the southwest entrance to the campus, is the Human Development Center, a preschool that provides a training and observation center for students studying growth and development and early childhood education. Also near this 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.

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 Communiverity Park, a picnic and recreation area.

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 and pedestrian paths connect all parts of the campus.

Some areas of the campus are wooded, mostly along the bay and Mahon Creek on the south side of campus. They are part of the Cofrin Arboretum.

The 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 Indian 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. On the campus are WGBW, a student-run 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, and several business colleges.

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 the result 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.

Housing

UWGB owns no student housing so all housing arrangements must be made independently of the University.

Surveys of UWGB students show that two-thirds of them live in residences apart from their parents. For students who live independently, two housing alternatives exist.

1. They can live in the Bay Apartments adjacent to the campus which are privately owned and operated for UWGB students by Inland Steel Corporation.

2. They can live in an apartment or room in Green Bay or in the nearby rural area.

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 manager and a maintenance person live in one of the nine units.

The eight other apartment buildings each has a resident resource student. The resource student program is a cooperative one between UWGB's Student Development Center and the Bay Apartment management. The Student Development Center trains and selects the resource students. Their training includes communications and relationships skills, learning the resources of the campus and the community, and a Red Cross First Aid course. At least one resource student is on duty at all times.

Resource students do minimum kinds of maintenance (for example, unlocking a door if someone is locked out), perform a semi-counselor role by answering questions and listening to students' problems and referring them to a source of help if one is needed, and stimulate activities in the apartment buildings that will help students get to know each other and learn about resources and opportunities.

Private housing off-campus is not difficult to find in Green Bay. Both furnished and unfurnished accommodations are available for rent.

To get general information about off campus housing and a current list of some housing in the Green Bay area, contact the office of Student Life. This office can suggest what to look for in a lease, advise you of your responsibilities as a tenant, tell you about your landlord's responsibilities, and answer other questions you may have about living off campus.

Transportation

The Green Bay Transit Commission provides bus service between the UWGB campus and downtown Green Bay during the day on Monday through Saturday. Schedules usually operate from early morning to early evening. Student rate tickets are available at UWGB's Information Center.

In addition, the University operates a free Monday through Friday night bus between the campus and the city. Student identification cards are necessary. More information about both buses is available at the office of Student Life and at the Information 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 most 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 publishes a weekly list of events, "This Week on Campus," which is posted in a number of locations.

The Information Center is a first stop on campus for many visitors. It 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.

Student Life Programs

The office of Student Life Programs is where students and staff meet to plan activities for the campus community. A major goal of Student Life is to help students establish social as well as academic links with other students and the UWGB faculty.

Student organizations become recognized as bona fide groups and qualify for funds by registering with the office of Student Life. The office functions as an information center for off campus housing, as well as for the food service, university bus, and bookstore.

Shorewood Activities Board (SAB)

The SAB is a group of students elected to develop activity programs that provide a well-rounded social life for the UWGB community.

The board's program areas cover arts and crafts, international films, popular films, outing and recreation, Coffeehouse (located in the Bay Apartments), dance and concert, and publicity and promotion. Each area has an elected chairperson and a volunteer committee. Activities are planned and made available for participation by everyone on campus. The board is eager for student input and involvement.

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 at the Shorewood Club for refreshment, recreation, and relaxation. It is a good place for students who live on campus to meet informally with those who commute.

Many SAB functions are scheduled at the Shorewood Club — film showings, informal theater productions, concerts, weekend dances and parties are examples. Pool, foosball, cribbage, and chess tournaments are scheduled regularly. Canoe, bicycle, cross-country ski and sailing races provide outdoor recreation for those who prefer greater physical challenges.

The 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 student staff. Memberships in the UWGB Sailing Club allow for unlimited sailing during the regular season. Outing and group trip information can also be obtained.

Student Government and Campus Activism

The legislative branch of the Student Government Association (SGA) is the Student Senate, composed of two legislators from each concentration who are chosen in at-large elections each fall. Senate issues include any of concern to the University that students wish to address. UWGB maintains contact with other UW campuses through its membership in the United Council of University of Wisconsin Student Governments.

SUFAC

The Segregated University Fee Allocation Committee (SUFAC) is a 12-member, all-student committee that sets, allocates, and oversees expenditure of all student fee money. This money is paid in tuition and designated exclusively for student organizations, programs, and related expenses. Most SUFAC members are elected for one-year terms in at-large elections each fall.

Student Unions

Student unions function somewhat like labor unions. They are organizations of students within the concentrations and deal with issues of special interest to those students. Existing student unions have dealt with issues as varied as class offerings, requirements, faculty hiring and tenure, professionalism, and social activities. Not all of the concentrations have organized student unions. More information about the student unions is available from the SGA office or the office of Student Life.

Committees

Students can participate on any of the student-faculty committees on campus. Currently existing committees include Instructional Services, Library, Rights and Responsibilities, Student Conduct Policy, Academic Actions, Adult Education, Admissions, Lectures and Performances, Natural Areas, Intercollegiate Athletics, Ethnic Studies, Equal Opportunity, Physically Handicapped, Parking and Computer Advisory.

Students who would like to become active in campus committees should contact the SGA office, office of Student Life, or the Dean of Students.

Student Organizations

Students with recreational, social, political, academic, environmental, social service, or religious interests and concerns who wish to become involved in activities have a variety of campus clubs and organizations to choose from.

More than 50 student organizations were registered with the office of Student Life during the 1975-76 academic year. Registering makes organizations eligible for student fee funds. In addition, there are non-registered organizations which raise their own funds or which make no use of funds.

Student organizations are easy to organize. Some serve short-term purposes, such as clubs supporting political candidates; others have become permanent parts of the campus scene.

Among the organizations serving academic, cultural, and professional interests are the German, French, and Spanish clubs, Philosophy Forum, the Writer's Union, Accounting Club, and Orchesis (dance).

Some groups have national and international affiliations, such as AIESEC (Association for the International Exchange of Students of Economics and Management) and MENC (Music Educators National Conference).

Other groups are for students with common ethnic backgrounds or common experience in coming to UWGB, such as the Black Student Organization; Wekataweh, the Native American Club; and the International Student Club.

The Veterans Club also is based upon common experience.

The Environmental Action Committee is among the organizations which are active in contemporary issues. It is concerned with educating the public about environmental issues.

Active and sedentary sports and recreation are served by groups such as the Fencing Club, SPORE (Self-Propelled Outdoor Recreation Enthusiasts), Ski Club, and Chess Club.

Other organizations are based upon concern for living arrangements or life style. These include groups such as the Bay Apartments Community Organization, Organic Gardening Club, and Phoenix Food Club, which is a student-run food co-op located at the Bay Apartments.

These are only a few of the student organizations at UWGB. More information about existing student organizations or about forming new ones is available at the office of Student Life.

Intercollegiate Athletics

UWGB men and women compete in several intercollegiate sports. Women's teams include basketball, field hockey, and tennis, 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 Veterans Memorial Arena in Green Bay.

Women's sports abide by the rules of the Wisconsin Women's Intercollegiate Athletic Conference and men's sports are affiliated with the National Collegiate Athletic Association, Division II.

During the first seven years of intercollegiate competition, the men's basketball team has compiled a 139-55 win and loss record and has been involved in post season tournament action in five out of the seven years. In the 1975-76 season the team finished first in defense and third in field goal percentages in the NCAA Division II national statistics.

The soccer team took the NCAA Division II Mid-Western Championship in 1975 and went on to the nationals in Seattle.

UWGB men have had a golf team for six years. They compete independently in both the spring and fall semesters against college teams in Wisconsin, Michigan, Illinois, and Iowa. The team, which practices on UWGB's own golf course, completed the spring 1975-76 semester with 17 wins and 8 losses.

Women's field hockey and tennis begin their third season of intercollegiate competition with the 1976-77 academic year. It will be the tennis team's second year of eligibility for the Conference state tournaments. The team will have a 10-match schedule which includes triangular and quadrangular meets with the various colleges in the conference.

Field hockey competes in the Midwest College North Division and the women's basketball team is in the North Division of the Small College Conference. UWGB's women also compete against non-conference schools, but the results do not count toward the state tournament.

Information about game schedules and try-outs for intercollegiate teams is available from the intercollegiate athletics office in the Phoenix Sports Center.

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.

A number of intramural programs are co-ed. These include volleyball, softball, innertube water polo, water basketball, water polo, badminton, tennis, and table tennis.

Separate activities for men and women are available in flag football, basketball, soccer, racquetball, handball, bicycle marathon, and cross-country skiing.

Students, faculty, staff, and their families can use the 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 handball courts; outdoor tennis courts, softball diamonds, multi-purpose fields, and volleyball courts. In wintertime, there are toboggan runs, cross country skiing trails, and usually an ice skating rink.

Media on Campus

Students can become involved in and entertained and enlightened by a variety of print and non-print media on the campus. These include a non-commercial stereo FM station that is student-operated, a weekly student newspaper, and a student literary magazine. UWGB also has television production facilities and a public television station has its home on campus. These do not serve as a direct laboratory for student experience, but educational programs are produced at UWGB and the public television station carries instructional programs and provides air time for programs originated at UWGB.

Radio Station WGBW

Operating radio station WGBW is one of the most demanding and rewarding activities available to students. At WGBW, students are trained to provide both the leadership and talent necessary to keep this 3,000-watt stereo FM station on the air each day of the year.

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 are not able to hear on other area stations.

Highlights of WGBW's programming include an extended block of comprehensive news and information each week night, current and historical features from a variety of sources on campus and around the world, and a wide selection of music.

About 30 students form the core of the WGBW staff. Many receive academic credit for independent study projects directly related to their work or interests at the station.

Student broadcast and independent study efforts are directed and encouraged by the station manager, a full-time professional. The chief engineer and engineering assistants also are salaried. WGBW is licensed to the Board of Regents of the UW System.

The Fourth Estate

The *Fourth Estate* is the weekly student newspaper at UWGB. Students plan, write, make photographs, sell and design advertising, draw cartoons, manage the budget, edit, and lay out the paper. Some students receive independent study credits for working on the newspaper.

The newspaper is distributed free on campus. The first issue of each school year is usually published the first or second week of classes. *Fourth Estate* editors advertise for more staff members in early issues of the paper and include information about who to contact and where for students who want to become involved.

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.

Music Activities

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.

Opportunities in 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 often result in production of student plays in the Student Regional Theater. The student playwrights become involved in production and acting as well as writing plays through this interdisciplinary program.

A student who has a desire to work in UWGB or Student Regional Theater productions can probably do so without taking a class by watching for opportunities and volunteering.

Coffeehouse Players is a student group that offers several productions each year. These are often presented in the Coffeehouse at the Bay Apartments.

UWGB students frequently participate in theater activities in the larger community, too. Green Bay Community Theater holds open auditions for a full schedule of plays during the winter season. Harlequin Players presents plays that are sometimes a bit more avant garde than those being done by other non-professional groups in the area. Their productions often are presented on the campus. The Little Theater in suburban Ashwaubenon accepts student auditions.

Because northeast Wisconsin is a summer resort area, there also are opportunities in summer theater nearby.

Dance

Both ballet and modern dance are available at UWGB for students interested in the dance. Students in dance give performances and participate in UWGB theater productions requiring dancers. Dance students have an organization, Orchesis, which promotes their special interests.

American Heritage Ensemble

The Ensemble is a program activity primarily geared to off-campus performances of musical/theatrical productions based on midwest and American heritage. The program began in 1970 as a short term student activity and has grown to a year around program presenting hundreds of shows each year. Ensemble performers include both full time professionals and students on a more limited basis.

Entertaining and informative productions are created on themes from our rich heritage. Major emphasis in the Ensemble program is on taking performances to the people; in schools and colleges, state and local parks, historic sites, fairs, and a variety of community sponsored events.

Lectures and Performances

A student-faculty committee and staff director comprise the office of Lectures and Performances, which books professional performing arts programs. Guest artists and groups in music, drama, and dance provide opportunities for students, faculty, and community residents to see and hear professional performances, and thus complement the University's instructional program.

The office works closely with the instructional program to lend production support for on-campus shows. Through its Talent and Speakers Bureau, appearances and tours of University-based performing groups are arranged, including the midwest tours of the University's professional touring troup, the American Heritage Ensemble. The office also sponsors daytime programs through its Concourse University series. Concourse University programs are presented during noon time and usually are free.

Lucy Stone Center

The Lucy Stone Center offers an atmosphere of informal friendliness and support for women. The center tries to make its activities responsive to the needs of a variety of women as well as simply being a place where women can meet. It sponsors seminars and discussions on such topics as careers for women, problems of older women returning to school, women and credit, lesbianism, problems of divorced women, the common problems between sexism and racism, self defense, and other issues that campus women express concern about. The center often sponsors a Women's Arts Festival and other events.

Ethnic Heritage Center

The Ethnic Heritage Center is a place where all members of the Black, Native American, Latino, and other minority communities can come together to feel at home among people of their own origin. It is a place to study, relax, listen to music, and meet friends. The center provides an atmosphere to which people of color can relate and serves as the focal point for their campus activities. The center also helps enlighten the University and Green Bay community to the unique cultural backgrounds people of different ancestory bring to this campus by sponsoring Black Awareness Week, Native American Week, and other events and displays.

Ecumenical Center

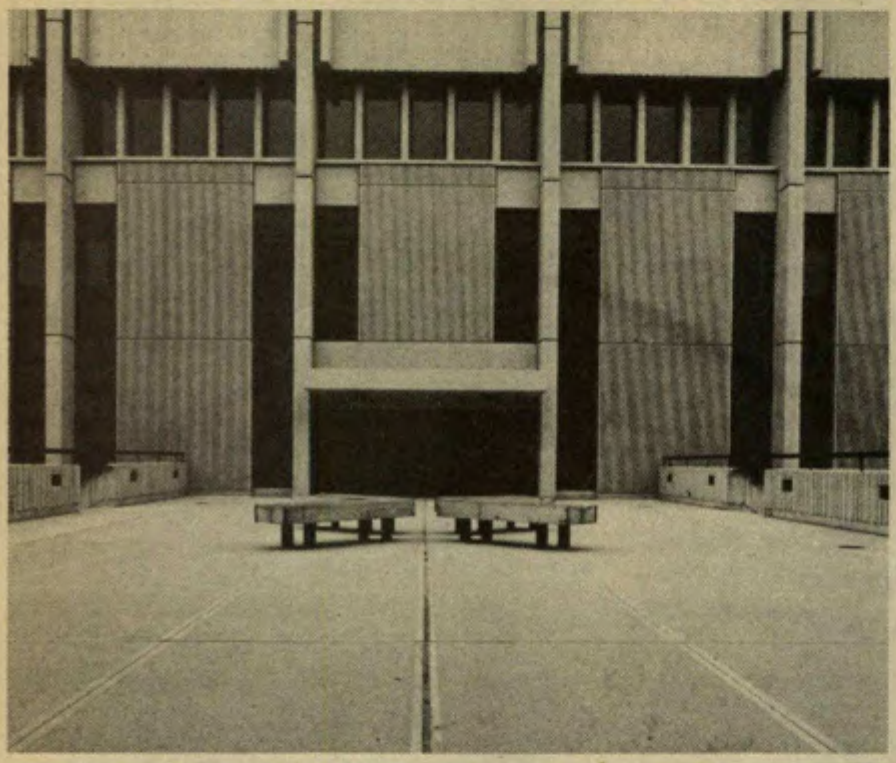
The religious ministry on campus is focused in the Ecumenical Center sponsored by twelve Protestant denominations, the Roman Catholic church and Cnesses Israel synagogue. Through its programs and two full-time campus ministers, Father Dick Mauthe and the Rev. Dave Steffenson, the center ministers to 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 or a world hunger task group.

A special concern has been developing a process for career and life planning. Help in this area is provided through special courses and other informal 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.

Studio Arts



ADMISSIONS, EXPENSES, AND FINANCIAL AIDS

ADMISSIONS PHILOSOPHY

While UWGB has basic admission requirements, it is guided by a philosophy of "personalized admissions" 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 admissions philosophy are encouraged to apply.

Admissions 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.

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 as follows:

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

If you do not meet requirements 1, 2, or 3 above, you may apply and will be considered. Entrance examination (ACT or SAT) scores are *not* required for admission but all students are required to submit this information. Both admissions counselors and academic advisers will use this information in order to assist you in your 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 and certify as to his/her honorable dismissal. 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. If you took general education and/or liberal arts courses from such institutions, you are encouraged to seek credit through examination at UWGB.

Credit Evaluation

UWGB is flexible in regard to the transfer of credits from other accredited colleges and universities. An official credit evaluation will show you what courses and credits have been accepted to fulfill UWGB requirements. The accreditation status of your previous institution or institutions and the quality of your achievement are determining factors for course and credit transferability.

Your credit evaluation will be started after all of your transcripts have arrived at UWGB and you have been admitted. If you are currently enrolled at another college when you are accepted, your evaluation will be held until a transcript showing grades from your last term is received. Your evaluation will then be completed and mailed directly to you.

If you would like to receive a *tentative* evaluation before the end of your last term, make a written request to the office of Admissions *after you have been accepted*. If you have taken independent study courses, you must supply titles and descriptions for these courses when you apply so that these can be evaluated for you.

If you transfer to UWGB with fewer than 42 credits you must fulfill all requirements of the University and your major. Exception: the freshman Liberal Education Seminars (LES) will be waived for students who have earned six credits of English composition.

If you transfer with 42 credits or more you must take intermediate and senior LES; normally, you will be given credit for having met the UWGB distribution requirement.

If you hold an Associate in Arts degree from an accredited college or university or have satisfied the basic degree requirements of the college or university from which you are transferring, you may substitute those requirements for UWGB's distribution requirement.

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.

Current information on resident requirements and graduation procedures can be found in the *Timetable* published for each semester.

Incoming transfer students are encouraged to meet with a general adviser in the office of Academic Advising to have their initial questions answered about credit evaluation and standing with respect to general requirements for a degree. This adviser can refer you to a faculty adviser in the concentration of your choice or to advisers in several concentrations if you are undecided about your choice of major. If you are interested in disciplinary and/or professional programs, you will be referred to faculty members who can advise you on course selection in these areas.

Academic Plan Form

The academic plan form is your 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 your high school record, social maturity and educational plans. Scholastic ability is measured by your high school record with emphasis on your grades and the subjects you have taken. A student seeking early admission must have completed the 11th grade. Consideration is given to the recommendations of your 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 courses may require that you obtain the permission of the instructor. Contact an admissions 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 carry 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 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 index for additional information on summer session.)

Educational Opportunities Program

A limited number of students who do not meet normal entrance requirements may be admitted to the University under the Educational Opportunities 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 General Information section of this catalog.

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. 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. See the index and the *Graduate Student Handbook* for further information about the graduate program.

International Student Admission

UWGB presently enrolls students from more than 25 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.

EXPENSES

Semester Fees and Tuition

Legal residents of Wisconsin, with certain exceptions, are charged fees only. Nonresidents are charged a combination of fees and tuition. 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* 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 1975-76, Wisconsin undergraduate students paid $26, and graduate level students paid $40.50 per credit. Nonresident undergraduate students paid $85.50 and graduate level students paid

$118.25 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.

1975-76 Semester Fees for Full-Time Students

Level	Wis. Res.	Non Res.
Undergraduate	312	1025
Graduate	366	1065

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 appropriate summer session publications.

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 will provide detailed information and special forms required for certain aid programs.

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	$ 170	$ 170
Room and Board	$ 410 (board only)	$1395
Travel and Miscellaneous	$ 815	$ 680
Total costs to be added to tuition	$1396	$2245

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 three forms: the application for admission to UWGB; the Wisconsin Financial Aid Form; and the Basic Educational Opportunity Grant application.

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 Admissions office.

2. All schools in Wisconsin have recently adopted the "Wisconsin Financial Aid Form" (FAF), processed by College Scholarship Service, as the primary document used to determine financial need. 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 by the state agency and for aid administered by the University financial aid office.

3. The Basic Educational Grant Application (BEOG) must also be completed by all undergraduate aid applicants in order to be considered for the main federal grant program. As with the Wisconsin Higher Education grant, an outside agency determines student eligibility for the Basic Grant. The BEOG filer 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. Students applying after the priority date will be notified of their awards as soon as they can be processed.

Wisconsin Financial Aid Form. 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 of their income, assets, and liabilities. 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 ($400 to $600) 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.

Types of Financial Aid. In general, financial aid can be divided into three main categories: scholarships and grants, student loans, and employment. More detailed information on each aid program is provided below.

Scholarships

Scholarships are awarded on the basis of academic ability and financial need. Students do not have to apply for a specific scholarship; each applicant who applies on time will be considered for whatever aid program she/he may qualify.

UWGB Nonresident Fee Remission Scholarship. Partial or total remission of the nonresident portion of fees at the University. Not a cash award. 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.

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. Made available through private donations and awarded on the basis of scholastic ability and financial need.

The principal UWGB scholarship funds follow. (Please note that students applying for general financial aid are automatically considered for these scholarships. A separate application is not needed.)

Green Bay Engineering Club Scholarship
Lucy Peckham Gfroerer Scholarship
Margaret and Oliver Trampe Scholarship
William Goldberg — Shopko Scholarship

Wisconsin Rural Rehabilitation Corp. Scholarship

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 through a special application procedure. Grants range from $50 to $1,400 (determined by a federal schedule). Intended to serve as the "foundation" for other aid awards. Students who wish to apply for any financial aid are *required* to apply for these grants. Forms are available from financial aid and high school counselors' offices.

Supplemental Educational Opportunity Grants (SEOG). Federally funded grants to students who have exceptional financial need. To accept SEOG, the student must also accept an equal or greater amount of aid from other categories offered. 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. Do not have to be repaid or matched by other aid. Students must file the Wisconsin Financial Aid Form to apply for this grant.

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. May be received for up to five years of study.

Wisconsin Talent Incentive Grants. A limited number of awards determined by the Wisconsin Education Opportunity Center may be used for up to two years by students who are considered nontraditional or disadvantaged. Based upon financial need. 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, 550 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. The Education Amendment of 1972, provides students in good standing and with financial need a National Direct Student Loan. An undergraduate may borrow a total of $2,500 during the first two years of school. Students who have not previously borrowed during the first two years, may borrow a total of $5,000 during the last two years. Maximum accumulation is $5,000 during the undergraduate program.

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. Repayments with interest of 3 percent a year begin nine months after a student receives a degree or permanently leaves the institution. The University bills on a quarterly basis with a minimum yearly repayment of $180 plus interest.

For loans taken out after July, 1972, 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 preschool teachers in Head Start programs. Deferments of up to three years may be obtained while serving as a Peace Corps/Vista volunteer or on active duty in the Armed Forces of the United States.

Wisconsin State Student Loans. Wisconsin residents with financial need may be eligible to borrow from this program. To receive this loan the student must pay an insurance fee equal to .5 percent of the amount requested. The State Higher Educational Aids Board automatically deducts the fee from the amount.

Undergraduates may borrow up to $2,500 per fiscal year with a maximum accumulation of $7,500. 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 simple interest per year 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.

Students whose family adjusted income is less than $15,000 automatically qualify for up to $2,000 per year without filing a parents' financial statement or paying interest while enrolled at least half time. Only for larger loans or for interest benefits to families with adjusted incomes greater than $15,000 is a demonstration of financial need required.

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 only to full-time students 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.

The emergency loan funds are provided from the following memorials and donations:

Ben J. Rosenberg Student Loan Fund
Robert P. Brebner Memorial Student Loan Fund
L.G. Wood Memorial Student Loan Fund
The Honorable William J. Duffy Student Loan Fund
UWGB Alumni Association Student Loan Fund
UWGB Faculty-Staff Student Loan Fund
UWGB University League-Thelma DuChaine Student Loan Fund

University Commons

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 by 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 $2.20 to $3.30 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 $2.20/hr:

10 hours	$748
12 hours	$897
15 hours	$1122

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.

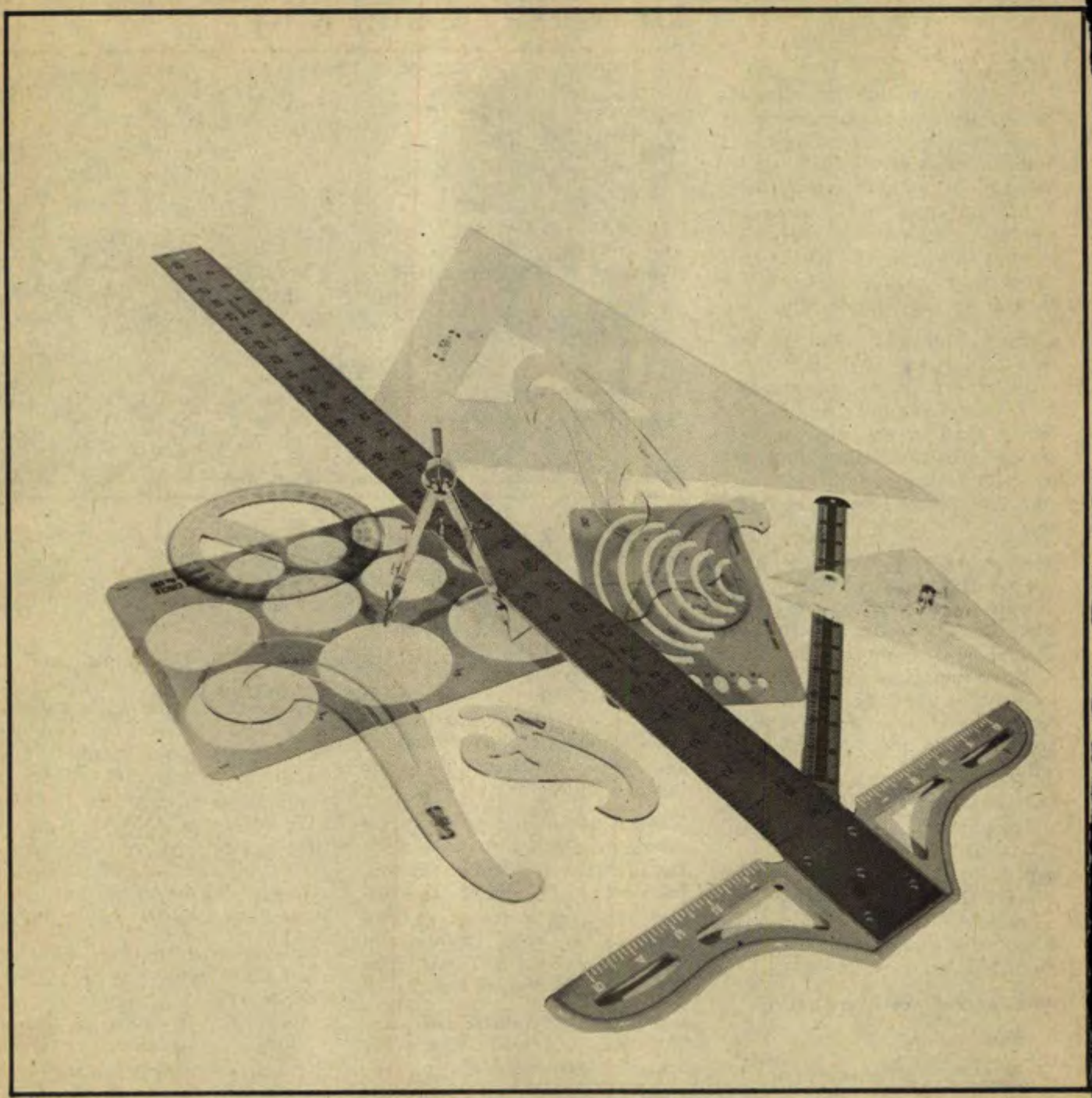
Veterans should submit the Certificate of Eligibility to the office of the Registrar for enrollment certification and transmittal to the Veterans Administration regional office. A special section on the final registration form must be completed to be certified for benefits for the ensuing term.

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, 1940.

Financial Aid for Graduate Students. Financial aid in the form of teaching assistantships, which carry a stipend of about $3,180 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 and 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.

PROGRAMS OF STUDY



The section that follows is easily the most important one in this catalog, for it describes the programs of study and tells you how to select one or combine several into a plan that will meet your needs and start you toward a career goal.

Some of the other sections tell you ways you can enrich your academic program, and your life, but this section contains the basics:

What is a major?
How can I combine a major with a disciplinary and/or professional program?
What courses are required?
How can I prepare myself for further study or a job upon graduation?

This section also tells you a little about the way the UWGB academic plan is organized. This information is probably not essential to your academic career, but it will help you make the best use of the resources of the University so that you can plan a study program that completely meets your needs.

One piece of information that appears frequently throughout this catalog is worth repeating here, and that is the opportunity to individualize your study plan. This does not mean that there are no paths to follow. Many programs have fairly rigid requirements and all have developed recommended lists of courses or typical plans followed by large numbers of their majors. What it means is that you are free to focus your program in virtually any direction you wish it to take. Required and recommended courses will form the core around which you can build your own plan. Most of our students like this flexibility because it gives them the opportunity to combine areas of study that would not be possible at most other universities — music and business, for example — and provide themselves with whatever technical and professional expertise they desire.

Students have used this flexibility to develop many ingenious study plans to meet their personal career goals. For a look at what some of them are doing in the world of work, and some career ideas you may not have thought of, send for our booklet, *Yes You Can*, which describes career preparation at UWGB. It's available from the office of Admissions.

Your academic program will most likely follow one of four basic formulas, described at the right. Other plans, such as a double major, also are possible, but the majority of our students select one of these four.

SELECTING A MAJOR

Plan I: The Concentration

The concentration is at the core of the UWGB academic plan. It is like a major at other universities except that it generally provides the student with more depth. This is done in several ways. First, the concentration groups several subject areas together to study a problem of contemporary interest and concern. UWGB calls this an "interdisciplinary problem focus." What this means to students is that they learn to study a problem from all relevant points of view, which provides them with tools for solving the problem in the most creative way possible. At the same time, they gain basic knowledge in the subject areas involved and acquire skills they will find useful in facing future live decisions. One of the most important of these skills is the ability to see a project through to its conclusion; in other words, students learn how to get something done.

Most students select one of the eleven formally constructed concentrations as their major. Basically, they fall into the following areas of study: humanities, social sciences, life sciences, physical sciences, and business and management. Overlapping among these areas is both permitted and encouraged. Several programs combine the resources of more than one concentration and are called interconcentration programs. For students who find that none of the formal concentrations meet their needs, the possibility of developing a personal concentration exists. Each of these programs is described in some detail on the pages that follow.

The concentration major requires 30 credits of junior-senior level courses selected from among those identified by the concentration as providing the necessary interdisciplinary, problem-solving focus. The suggested plans of study described in this catalog only scratch the surface of the possibilities that exist. Each concentration has faculty advisers to help students develop complete programs. Many have their own publications that go into far greater course-planning detail than is possible here. Students should not hesitate to seek this advice.

Plan II: The Concentration/Discipline

While the concentration integrates several subject-matter areas to focus on solutions to one or more of the important problems facing people today, the discipline provides depth of knowledge in a specific field. Students who desire this kind of focus select a disciplinary program co-major.

Requirements are 12 credits in the concentration and an additional 24 in the discipline, all at the junior-senior level. The plan of study usually is worked out with the advice and approval of both the concentration adviser and the discipline chairperson.

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 Analysis concentration/sociology disciplinary program).

Plan III: The Concentration/ Professional Program

Another way to achieve specific depth and/or career preparation is with courses that provide professional competency and knowledge that can be applied directly to a career. UWGB students do this by adding a professional program to their concentration. The most common use of this device is 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 or government with a professional program in environmental administration, or for careers in leisure sciences or social services.

Most of the professional programs require 18 hours of coursework in addition to the concentration requirements (30 credits). 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 to problem solving, gives a specific disciplinary focus, and, finally, adds professional-specialist expertise. The professional program requires 18 credits of coursework (except in education), 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. Such students usually obtain a bachelor's degree from UWGB because most of these professional programs require such a degree for entry. Any UWGB major provides appropriate preparation for a related graduate program. And because more and more graduate programs recognize the advantages of interdisciplinary preparation, UWGB students find they are particularly well prepared for graduate study in a variety of areas. Many have been accepted at leading graduate 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 of his/her choice 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.

All-University Requirements

Requirements that all UWGB students must meet to obtain a degree are few. Only two requirements involve coursework; a third involves residency. The coursework requirements exist to ensure that students develop their processes of thinking as broadly as possible. UWGB believes that this kind of training will enable them to adjust to future life situations with as little trauma and disruption as possible. Statistics indicate that the average worker changes jobs a number of times during his or her working lifespan. Being able to adjust to such changes, and to anticipate them, is an important skill to acquire. All-University requirements also are designed to enable students to review and reinforce their values and their sense of commitment. These goals are accomplished through a series of seminars and through selected coursework that provides basic knowledge in each area of the liberal arts and sciences.

Firmly required courses are few in number, however, and most can be taken on a pass-no credit basis, except the University Seminars and those used to meet requirements of the major. The all-University requirements are described in detail below.

University Seminars

The University Seminars constitute a core program for the undergraduate experience at UWGB. Within the program, each student chooses a variety of learning experiences which relate classic and modern notions of values to contemporary problems and continuing human concerns.

As a freshman, the student chooses four seven-week modules from a list of topics such as the human condition in world perspective, technology and human values, resource utilization and the American character, crises in communication, contemporary moral problems, and others. By the end of the year, the student has become acquainted with several faculty members and their perspectives on human affairs, has had an opportunity to explore something of the range and complexity of issues facing us as persons and as a nation, and has had a chance to sort out some personal intersts in regard to his or her own education.

During the intermediate years (sophomore and junior), the student has the opportunity to become usefully involved in the community and in other cultures. Usually there is a project associated with this portion of the Seminars, and the learner is its designer — taking major responsibility for the content and for developing skills in working with other persons and groups outside the University.

Besides the project in the region or community, students become significantly involved with a culture other than their own. For some students, this can mean travel and study elsewhere in the United States or overseas.

At the senior level, and after a great deal of learning experience within one of the concentrations, the student has a chance to integrate his/her knowledge and experiences with those of students from other concentrations. Working with themes such as science and futurity; madness, insight, and creativity; American minds in modern society; and others, the student can apply what he or she has learned to continuing issues in our culture and the world.

In the senior program, students begin by analyzing common values and assumptions and synthesizing them into a generalized conceptual overview; return to the concrete by

applying such conceptualizations to the theme; and, finally, go beyond prior assumptions by examining the nature and quality of the human condition from new perspectives.

University Seminars are an 18 credit required program. The credits are distributed as follows: freshman — 6 credits (two semesters); intermediate — 9 credits (thematic packages, usually running two semesters plus January); senior — 3 credits (one semester).

The Seminars exist to ensure that the student doesn't settle too quickly for viewing things in life from only one perspective. Educated persons are all expected to make some contribution to the world, and to do so with knowledge and skill. In a traditional university, that knowledge and skill would be gained primarily through one department and discipline.

At UWGB, the student works within a concentration, which already brings several disciplines to bear upon a cluster of problems within one area of life. This interdisciplinary approach to education is made even broader in the University Seminars. The kinds of complex issues facing us do not find solution from narrow perspectives. In order to be effective citizens, we need as wide a range of awareness and sensitivity to human affairs as we can get. University Seminars help the student gain that kind of awareness.

Moreover, the Seminars involve good reading and careful writing, critical thinking and creative imagination, thoughtful listening and articulate speaking — intellectual and social skills a person needs no matter what he or she does after graduation from college.

All 18 credits of the University Seminars program must be taken for letter grades. Students are referred to the sub-program handbooks for a full listing of freshman modules, intermediate packages, and senior seminars, foreign travel programs, and other details.

Distribution

A man or woman educated for today's world has broad intellectual interests and some background, at least, in a variety of problems and disciplines. At UWGB, intellectual breadth is encouraged in a number of ways. Each of the theme colleges is broadly interdisciplinary. The University Seminars bring together students and professors from all theme colleges in their consideration of a broad range of problems. And students may freely elect any course for which they are qualified.

To encourage as much breadth as possible in undergraduate education, UWGB requires a student to earn a minimum of five credits in each of the four theme colleges. Basically, these areas cover humanities, social sciences, life sciences, and physical sciences. Concentration and disciplinary courses may be used to fulfill the distribution requirement (see the note preceding the course listings). Any course for which the student is qualified may be chosen, although some areas offer courses that are particularly appropriate. Distribution courses may be taken on a pass-no credit basis. Alternatively, part of the requirement can be satisfied by examination.

Courses taken for distribution can be chosen to directly relate to work in the student's major. Academic advisers can help identify and take advantage of such relationships.

Residence Requirements

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. Also required are at least the intermediate and senior Seminars.

The residence requirement does not imply that a student must live in Green Bay or must 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 the military, 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 student transferring to UWGB with fewer than 42 credits usually must meet all the requirements of the University. Any student transferring to UWGB with 42 credits or more is required to complete the intermediate and senior University Seminars.

HUMANITIES

The College of Creative Communication involves the creative, the analytic, the historic, and the experiential aspects of humanity's arts and ideas. Different but closely related approaches are represented by its two concentrations: Communication-Action and Humanism and Cultural Change.

Communication-Action generally directs its attention toward creativity, aesthetics, design, and performance, while Humanism and Cultural Change tends to be more concerned with intellectual and value orientations. But the principal focus of both concentrations is humanistic, that is involved with the quality of human life and culture. Students who wish to focus their studies in the humanities usually take courses in both concentrations. The major study programs of each are described on the following pages.

A number of disciplinary programs draw their main support from the two concentrations within the College of Creative Communication: music, visual arts, theater, communication processes, literature and language (including foreign language), philosophy, and history. The disciplinary program section of this catalog tells students how to integrate these studies into their college plans.

Communication-Action

Professors: B. Grimes, R. Bauer, W. Prevetti, M. Kazar.
Associate Professors: J. Abraham, T. Chavez, A. Cohrs, D. Damkoehler, J. Frisch, L. Ives, W. Jaeckel, D. Larmouth (chairperson), A. Matulis, D. O'Brien, R. Pum, R. Sherrell, J. Veilleux.
Assistant Professors: C. Abbott, W. Burnett, E. Lauter, N. Makaroff, C. Nelson-Cole, T. O'Grady.

The concentration in Communication-Action is concerned with the roles and effects of all kinds of communications in the human environment, especially the backgrounds, practice, and applications of such areas as language, music, mass media, theater, photography, design, graphics, interpersonal communications, and visual arts.

At present, the concentration offers three major directions of study, all of which can be pursued as single programs of study or associated with disciplinary programs in communications, music, theater, creative writing, and visual arts. The concentration offers a unique program in *Aesthetic Awareness and Expressive Traditions* which includes coursework in aesthetics and perception as well as courses in styles, criticism, art history, theater history, music history, and other expressive modes. Many students have combined this program with disciplinary studies in the fine arts, which has resulted in the design of a teacher certification program in aesthetic education coupled with certification programs in art, music, and English-communication arts. Such preparation in broad-field studies in aesthetics and expressive traditions is also designed to support preparation for graduate study in the fine arts.

The concentration also supports a program in *Design Processes and Environmental Problems*, an interdisciplinary program involving students and faculty in design, urban planning, social psychology, and engineering. Most students have pursued the environmental design program as a single major, but several have associated it with

TYPICAL PROGRAMS OF STUDY

A great majority of Communication-Action students combine their course work in the concentration with a disciplinary program in music, art, theater, or communications. Many also seek professional training, particularly in education and business. Typical programs of study for such students follow.

Music

Background Courses

242-121 Masters and Masterpieces of Music I
242-261 Foundations of Aesthetic Experience

Concentration Core

242-310 Criticism of the Performing Arts
242-329 Cross-Cultural Communication: Jazz History
242-361 Increasing Aesthetic Awareness
242-372 The Phenomenon of Style I: Traditional Styles

The student associates this or a similar group of courses with a four-year program in music, including music theory and history, sight singing, musicianship, conducting, applied study, keyboard, ensemble performance, arranging, and composition.

Professional courses in education are taken by the student who wants certification for teaching; environmental administration courses prepare students for careers in music business; careers in social work are possible with courses in social services. Students emphasizing applied performance include independent study in counterpoint and music history as well as additional course work in applied study and ensemble performance.

Visual Arts

Background Courses

242-100 Understanding the Visual Arts
242-200 History of the Visual Arts I: Ancient and Medieval
242-201 History of the Visual Arts II: Renaissance to Modern

disciplinary studies in communications or visual arts and professional courses in environmental administration. Like the program in aesthetic awareness, environmental design has very few national precedents and has attracted considerable attention, particularly because students and faculty have made major contributions to solutions of environmental problems in the community and to the development of design procedures in the field.

The concentration also offers a program emphasis on broad-field *Communications,* including popular media, linguistics, interpersonal communications, and mass communications. It is usually taken in association with disciplinary programs in communication processes, literature and language, and psychology, though several other combinations are possible and have been pursued, including anthropology, political science, sociology, and mathematics, among others. These programs of study have often included professional courses in environmental administration, social services, or education.

These three areas of emphasis, coupled with disciplinary studies and professional programs, have led to many different career opportunities for Communication-Action graduates, including teaching, public relations, graphic arts, government service, community service, publishing, music performance, theater performance, art, design and planning, and communications. Students also can prepare for graduate study in communications, design, aesthetics, and the fine arts.

Personal and professional goals have much to do with the way the individual student organizes his or her plan of study. A minimum of six credits of skills development courses which are individually planned and negotiated is required. Some students complete the major with concentration courses in environmental design, aesthetic awareness, or communications. Most, however, combine a more limited program in one of these areas with disciplinary

Concentration Core

242-361 Increasing Aesthetic Awareness
242-362 Processes and Systems of Aesthetic Evaluation
242-370 Modern American Culture
242-363 Psychology of Aesthetic Perception

Disciplinary work usually takes the form of studio course work in design and drawing, painting, sculpture, ceramics, art metal, fabrics, watercolor, relief printing, intaglio, photography, lithography, and/or serigraphy.

A frequent goal is teacher certification in art education, which is possible with professional courses in education.

Theater

Background Courses

242-241, 242 Introduction to Theater History I and II
242-261 Foundations of Aesthetic Experience

Concentration Core

242-310 Criticism of the Performing Arts
242-329 Cross-Cultural Communication: American Show Music
242-361 Increasing Aesthetic Awareness
242-373 The Phenomenon of Style II: Avant-garde Styles

Disciplinary work includes acting, directing, dance, voice and speech, theater history, technical theater, and performance. The theater program has two major tracks — acting and directing and technical theater — and students in technical theater often gain business skill with professional coursework in environmental administration.

Communications

Program directions in communications include graphics, linguistics, interpersonal communications, electronic media, journalism, public relations, design, photography, and composition. This diversity is reflected in the course selection of students, which varies according to their interests. The following is typical for the student whose major interest is mass communications, public relations, or journalism.

specialization in such areas as music, theater, visual arts, communication processes, psychology, literature and language, mathematics, etc. A large number of students have recognized the need for professional training, adding to their program courses in environmental administration, leisure sciences, social services, or education. This provides teacher certification in a number of areas and career opportunities in such fields as management, administration, public relations, graphic arts, social service, and public service.

Some typical programs of study are shown at the right. Because of the variety of possible combinations among disciplinary, interdisciplinary, and professional studies, students are urged to consult with an adviser as early as possible in their academic careers to negotiate suitable programs of study.

Background Courses

242-160 Introduction to Language
485-105 Introduction to Expository Writing

Concentration Core

242-323 Language and Human Conflict
242-324 Psycholinguistics
242-370 Modern American Culture
246-431 Mass Media and Society

The following concentration program would be typical for those interested in graphic communications (photography, design and drawing, composition, studio graphics).

Background Courses

242-100 Understanding the Visual Arts
242-271 Introduction to Environmental Design Methods
485-105 Introduction to Expository Writing

Concentration Core

242-361 Increasing Aesthetic Awareness
242-370 Modern American Culture
242-373 The Phenomenon of Style II: Avant-garde Styles
246-431 Mass Media and Society

For a linguistics or bilingual/bicultural emphasis, the following would be appropriate.

Background Courses

242-160 Introduction to Language
Foreign language, two years

Concentration Core

242-301 Communication-Action Projects in the Community
242-323 Language and Human Conflict
242-324 Psycholinguistics
242-395 Biological Aspects of Language

Disciplinary coursework typically would be in theoretical linguistics, sociolinguistics, applied linguistics, semantics, and supporting courses in anthropology, psychology, computer science, or foreign languages.

Humanism and Cultural Change

Professors: J. Clifton, E. Havens, F. Kersten, I. Korner, I. Sonenfield (chairperson), L. Witherell.
Associate Professors: P. Abrahams, T. Churchill, O. Clark, C. Crandall, T. Daniels, K. Fleurant, D. Galaty, N. Gaworek, G. Greif, W. Herrscher, M. Murphy, T. Tasch, M. Thron, M. Wallach.
Assistant Professors: G. Null, J. Rodesch, P. Stambler.
Instructor: H. Geppert.

The faculty of Humanism and Cultural Change encompasses a wide variety of skills and expertise. It includes representatives from the areas of history, philosophy, literature, creative writing, foreign language, cultural anthropology, psychology, women's studies, Native American studies, theater, music, and visual art. HCC combines specialized training in traditional disciplines with new approaches to human problems, leading to integrated perspectives of life, experience, and values.

The humanities deal with what it means to be human, and how this human-ness, in all its variety, has been aspired to, developed, and expressed. The humanist believes in education, critical inquiry, and enlightenment, rejecting those views that subordinate human life to special dogmas or orthodoxies.

Our culture, like our land, is subject not only to change, but to defacement and exploitation. The humanities act to conserve what is best in this culture, and in defining what is best in it, compel us to apply standards and ideals to the quality of present life.

TYPICAL PROGRAMS OF STUDY

Students are generally expected to organize their programs with either a *Humanism Emphasis* or a *Cultural Change Emphasis*. Typical study plans for each category are shown. Students frequently combine their concentration work with disciplinary study in such areas as literature and language, history, and philosophy and/or with professional courses in education, leading to teacher certification, or social work. Faculty advisers in the disciplinary and professional programs can assist with appropriate course selection.

Required Background Courses

485-101 Introduction to Humanistic Ideas I: Music and Art in Western Civilization
485-102 Introduction to Humanistic Ideas II: Philosophy, History, and Literature
485-105 Introduction to Expository Writing (strongly recommended)

Suggested Upper-Level Courses

Students are expected to take at least one course from each of four historical categories: ancient, classical, medieval; Renaissance to Rationalism; Romanticism; and the modern period. Courses from other areas may sometimes be used to meet concentration requirements. Students should consult with faculty advisers for approval.

Humanism Emphasis

Group I: Humanistic and Cultural Values in Historical Perspective

485-311 Visions of Man I: Mythology*
485-311 Visions of Man I: Renaissance to Rationalism*
485-312 Visions of Man II: Romanticism*
485-312 Visions of Man II: The Modern Period*
485-325 Western Christianity
485-429 Utopia and Anti-Utopia: Atlantis to America*
705-351,352 Literature and Styles in Music III and IV

* May be repeated for credit when subject matter is different.

Students with a great diversity of vocational and intellectual interests have found that Humanism and Cultural Change can orient and organize their study at UWGB. The related disciplinary programs in literature-language (including creative writing and foreign language), history, and philosophy offer skills supporting the concentration studies which investigate themes and problems in broadly humanistic terms. Students in many other fields, such as psychology, the Action program, social services, and education have found the humanities a meaningful context for their work. Some students in Managerial Systems may wish to combine their education in business with a humanities background. Other combinations might include areas such as music or art history, and some aspects of theater. Students frequently devise combinations adapted to their own special needs. The HCC concentration adviser is available to discuss individual interests with students.

The post graduate careers of Humanism and Cultural Change majors 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.

Group II: Humanistic and Cultural Values in the Arts and Sciences

242-310 Criticism of the Performing Arts
242-311 Criticism of the Visual Arts
242-328, 329 Cross Cultural Communication I and II
242-362 Processes and Systems of Aesthetic Evaluation
242-372, 373 The Phenomenon of Style I and II
485-307, 308 Other Cultures Through Humanistic Studies I and II
485-315 Psychological Theories of Creativity
485-495 Symposium on Structure and Order: The Human Form, Architecture, and Landscape
485-xxx The Ascent of Man

Cultural Change Emphasis

Group I: Humanistic and Cultural Values in Historical Perspective

485-375 Wealth, Culture and Society: Pre-industrial*
485-375 Wealth, Culture, and Society: Post-industrial*
485-390 War, Violence, Revolution, and Society
485-429 Utopia and Anti-Utopia: From the New World to the Brave New World*
485-430 Art, Ideas, Society, and the Quality of Life

Group II: Cultural and Social Problems

242-323 Language and Human Conflict
242-324 Psycholinguistics
485-301 Projects in the Community
485-302 Human Identity
485-303 Action Training
485-369 Women: Crisis in Society
485-370 Women: Skills for Change
485-374 Wisconsin's Indians: Historical and Cultural Perspectives
485-376 Human Contrast
485-474 The Native Americans: Emergence of Pan-Indian Cultures

*May be repeated for credit when subject matter is different.

SOCIAL SCIENCES

The College of Community Sciences offers programs focusing upon the role of men and women in the social environment and the processes by which they modify it. The college accents those areas of understanding and perception that serve to prepare contemporary students for effective careers and citizen participation in communities at all levels from the local to the international.

Programs within the college draw support from the various social sciences, as well as other areas, to analyze and compare aspects of the social environment of the Northern Great Lakes region and other parts of the nation and the world.

Programs of the concentrations within the College of Community Sciences — Modernization Processes, Regional Analysis, and Urban Analysis — are described on the following pages.

Modernization Processes

Associate Professors: B. Baker, A. Galt (chairperson), M. Greenberg, E. Haney, J. Kolka (on leave), H. Kolshus (on leave), C. Pollis.
Assistant Professors: J. Brickley, C. Lockard, L. Nesberg, D. Rosenberg, L. Smith, P. Wallach.

The concentration in Modernization Processes is concerned with the processes of social change and social interaction. The emphasis is on identifying and analyzing social problems as well as developing the practical skills which will help resolve these problems. Courses stress development of outlooks from which one can view society; techniques of individual adjustment to deal with the problems of social change and social interaction, and the ability to analyze contemporary movements and institutions.

The concentration's faculty strives to fulfill the personal objectives of students and contribute to skill capabilities and perspectives for work in social change organizations, governmental institutions, law, private and public agencies, social work, and business in the United States and abroad.

Flexibility is stressed through individual development of perspectives on social issues. The perspectives grow from the interaction of experience, course work, work and career goals, off-campus projects, and individual inclinations. Students and faculty work together in continual evaluation and development of curricular materials.

A six-credit core unit, 662-360, 361, Concepts and Process of Modernization, is required of all majors. Development of a skill that relates to individual student interests, such as foreign language, social science statistics, or logic, also is required. Students complete requirements for the major with a selection of courses that meet their individual needs, interests, and goals. Faculty advisers are

SOME SAMPLE PROGRAMS

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
662-290 Power and Change in America
736-100 Ethics
736-111 Elementary Logic
778-207 Macropolitics
778-208 Micropolitics

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
662-320 Law, the Constitution, and American Development
662-360, 361 Concepts and Process of Modernization
662-400 Environmental Law
662-425 The Legal Role in Social Maintenance and Change

Women's Studies

(Recommended in combination with a professional program.)

Freshman and Sophomore Years

156-100 Varieties of World Culture
662-241 Women and Changing Values
900-203 Minority Groups
900-204 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
662-301 Action Projects in the Community: Work in a Women's Center
662-342 Women, Myth, and Identity
662-360, 361 Concepts and Process of Modernization

available to assist in making appropriate selections from Modernization Processes and other areas. Students may combine the major with a disciplinary program to give their studies specific depth. Professional courses in education, business, and other areas also are available. Sample programs of some typical areas of study are given at the right. They do not include courses needed to meet all-University requirements (described elsewhere). Faculty advisers can suggest appropriate selections.

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
662-290 Power and Change in America
778-207 Macropolitics
778-208 Micropolitics
820-102 The Behavior and Experiences of Man

Junior and Senior Years

662-301 Action Projects in the Community
662-320 Law, the Constitution, and American Development
662-360, 361 Concepts and Process of Modernization
662-371 Motivation and Social Change
662-385 Dynamics of Revolutionary Change
662-xxx The Organizational Weapon
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, 1800-Present
736-104 Freedom and Individuality
778-207 Macropolitics

Junior and Senior Years

298-403 International Trade
298-406 Comparative Economic Systems and Institutions
662-360, 361 Concepts and Process of Modernization
662-425 The Legal Role in Social Maintenance and Change
662-460 Modernization of the Peasantry and Other Marginal Societies
778-304 Comparative Political Systems
778-403 Foundations and Problems of International Relations
900-406 Comparative Social Systems

Regional Analysis

Professors: D. Gandre (chairperson), J. Murray, W. Smith.
Associate Professors: W. Kuepper, W. Laatsch, I. Shariff.
Assistant Professors: L. Gorder, A. Rahmaan, P. West.

Regional Analysis provides the student with a base of knowledge that makes it possible to better understand problems involving people and their environment. These problems do not exist in isolation but are interdependent, interacting with and having an impact on other components of the area in which they are found as well as on other areas. Through a clear understanding of the character of such relationships, problem solving can be more effective. This focus is reflected in the following programs within Regional Analysis.

The **General Program** is broad in scope and enables the student to obtain knowledge in a variety of conceptual areas of specific regions and provides a base of studies needed as the foundation for a university degree in the arts, letters, and sciences. Graduates have been employed in a variety of occupations in business, industry, and by governmental agencies at various levels. In addition, this program has aided students in preparation for teaching careers and for graduate programs.

Students completing the program in **Land Use Planning** will have a fundamental knowledge of land use and land use research techniques. They will also be able to appreciate land use and related problems at a variety of scales: local, regional, national, and international. Employment opportunities for graduates include positions with public planning agencies at various levels and with private consulting firms. This program also provides a good basis for students who wish to pursue a graduate degree in regional planning.

SAMPLE PLANS OF STUDY

Required Courses
(Usually taken in the freshman and sophomore years.)

834-320 Introduction to Regional Analysis
834-372 Analysis of the Great Lakes Region of North America

One of the following:
834-362 Analysis of the Great Lakes Region of Africa
834-377 Analysis of Northern Lands
834-382 Regional Analysis of Northwest Europe
834-392 Analysis of South Asia

General Program — Freshman Year

298-102 Economics and the Modern World **or**
298-202 Macro Economic Analysis **or**
298-203 Micro Economic Analysis
416-102 The Regions of the Earth **or**
416-202 Introduction to Cultural Geography **or**
416-215 Economic Geography

Sophomore Year

255-205 Social Science Statistics **or**
600-251 Computer Science **or**
600-260 Elementary Statistics
416-250 Maps and Air Photos
820-202 Social Psychology
834-222 Man and the Ocean of Air **or**
834-235 Wisconsin Landscapes and Regions
900-202 Introduction to Sociological Analysis

Junior and Senior Years

(Courses from this list)
298-401 Regional Economic Analysis
532-403 Recreation Supply and Demand Analysis
532-410 Recreation Resource Planning in the Great Lakes Region
532-415 Outdoor Recreation Planning Practicum
834-325 Human Living Space I
834-335 Transport Systems in Selected World Regions
834-345 Regional Sociology of Man and Environment
834-385 The Land Surface System of Man
834-420 Regional Planning
834-427 Man in Thinly Populated Regions I

The **Regional Outdoor Recreation Planning** emphasis provides an understanding of the interdisciplinary social scientific and ecological analysis of regions and regional outdoor recreation areas and behavior. Students will have the opportunity to apply these understandings to planning through actual "hands on" recreation planning projects in the community. Students pursuing this program would qualify for employment as a regional recreation planner in federal agencies like the Bureau of Outdoor Recreation; state, county, and municipal planning agencies; regional planning commissions; private consulting work; tourism development firms; and other related positions in government and business. It is suggested that students interested in this area consider combining it with a professional program in leisure sciences.

Students pursuing the program in **Transportation** will gain an understanding of the development and character of the intercity transport network of the United States and other selected countries. Problems are identified and analyzed with a view toward possible solutions. Students completing this program would qualify for employment 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.

In addition to providing a student with the basic understanding of regions, the program in **Regional Economic Development** adds a good background on how our economy works. It also includes courses which prepare the student for some practical applications of this knowledge. In addition to offering insights into the system and all of its problems, this program provides an intellectual and technical base for people who want to help improve the quality of life in the locales where most people function, namely in communities and regions. Thus, it includes courses on how people behave in social groups, how political systems operate, how business decisions are made, and how to interpret or influence the decisions being made in these settings.

Land Use Planning — Freshman Year

296-202 The Earth's Physical Environment
298-202 Macro Economic Analysis
416-202 Introduction to Cultural Geography

Sophomore Year

416-215 Economic Geography
416-250 Maps and Air Photos
600-260 Elementary Statistics **or**
255-205 Social Science Statistics
862-284 Husbandry of the Land

Junior and Senior Years

(Courses from this list)
834-385 The Land Surface System of Man
834-420 Regional Planning
834-472 Senior Seminar in Regional Analysis

(Recommended related courses)
298-305 Natural Resources Economic Policy
298-401 Regional Economic Analysis
416-351 Elements of Cartography
416-353 Air Photo Interpretation
662-400 Environmental Law
779-480 Biogeography
834-345 Regional Sociology of Man and Environment
834-357 Field Methods in Regional Analysis
834-421 Techniques and Methods in Regional Planning Analysis
862-420 Soil Classification and Geography
938-421 Urban Planning I

Regional Outdoor Planning — Freshman Year

416-250 Maps and Air Photos
834-235 Wisconsin Landscapes and Regions
862-284 Husbandry of the Land
900-202 Introduction to Sociological Analysis

Sophomore Year

296-202 The Earth's Physical Environment
298-202 Macro Economic Analysis
416-202 Introduction to Cultural Geography
600-251 Computer Science
862-286 Forest Vegetation of Wisconsin
862-288 Man and Wildlife

Students pursuing this program would qualify for employment as an economic development specialist 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 would also be suitable undergraduate preparation for pursuit of a graduate degree in economics, regional science, or planning.

The **Individualized Program** can be designed to focus on a problem area within the scope of Regional Analysis not considered in the preceding programs. As an example, the character of human behavior, health, and well-being might be considered in a regional context.

Sample programs for the major areas of study within Regional Analysis are presented at the right. Courses needed to fulfill all-University requirements (described elsewhere) and electives are not included. For further information and to aid in the development of a program of study, a faculty adviser in Regional Analysis should be consulted. The concentration also publishes its own program planning booklet, which goes into more detail than is possible in this catalog.

Junior and Senior Years

(Courses from this list)
532-410 Recreation Resource Planning in the Great Lakes Region
532-415 Outdoor Recreation Planning Practicum
834-472 Senior Seminar in Regional Analysis

(Recommended related courses)
298-305 Natural Resources Economic Policy
416-351 Elements of Cartography
416-401 Regional Economic Analysis
532-302 Sociology of Leisure
532-310 Formulating and Administering Recreation Programs
532-315 Philosophy of Work and Leisure
532-403 Recreation Supply and Demand Analysis
532-404 Public Park and Recreation Systems
575-425 Promotional Strategies
575-486 Small Business Feasibility Analysis
834-325 Human Living Space I
834-345 Regional Sociology of Man and Environment
834-356 Environmental Impact Analysis
834-357 Field Methods in Regional Analysis
834-420 Regional Planning
834-421 Techniques and Methods of Planning Analysis
862-302 Principles of Ecology
862-303 Conservation of Natural Resources
862-420 Soil Classification and Geography
938-421 Urban Planning I

Transportation — Freshman Year

298-202 Macro Economic Analysis
416-215 Economic Geography

Sophomore Year

298-203 Micro Economic Analysis
416-250 Maps and Air Photos
600-260 Elementary Statistics
255-205 Social Science Statistics

Junior and Senior Years

(Courses from this list)
835-335 Transport Systems in Selected Work Regions
834-420 Regional Planning
834-472 Senior Seminar in Regional Analysis

(Recommended related courses)
298-401 Regional Economic Analysis
298-403 International Trade
575-331 Management of Transportation Systems and their Interaction with the Environment
575-332 An International Program in Transportation Systems
575-333 Analysis of Environmental Factors in Transportation Systems Planning
575-427 International Distribution and Marketing
834-421 Techniques and Methods of Planning Analysis
938-351 Transportation and the City
938-421 Urban Planning I

Regional Economic Development — Freshman Year

298-202 Macro Economic Analysis
416-215 Economic Geography
820-202 Introduction to Social Psychology
900-202 Introduction to Sociological Analysis

Sophomore Year

298-203 Micro Economic Analysis
575-204 Introductory Accounting
575-216 Accounting for Administrators
600-251 Computer Science
600-260 Elementary Statistics **or**
255-205 Social Science Statistics

Junior and Senior Years

(Courses from this list)
298-401 Regional Economic Analysis
834-420 Regional Planning
834-472 Senior Seminar in Regional Analysis

(Recommended Related Courses)
298-403 International Trade
298-404 Economics of Developing Areas
575-386 Small Business Management
575-425 Promotional Strategy
575-486 Small Business Feasibility Analysis
778-400 Intergovernmental Relations in the United States
834-335 Transport Systems in Selected World Regions
834-345 Regional Sociology of Man and Environment

Urban Analysis

Professor: N. Pollis.
Associate Professors: F. Armstrong, R. Baba, L. Chenoweth, P. Johnsen (chairperson), E. Knowles, L. Lackey (on leave 1976-77), C. Matter, R. Mendelsohn, E. Swinerton (on leave 1976-77), C. J. Yarbrough.
Assistant Professors: S. Bremer, W. Haney, P. Kellogg (on leave Sem. 1, 1976-77), D. Littig, T. Nichols.
Instructor: J. Gould.

The major in Urban Analysis applies social scientific, humanitarian, and preprofessional perspectives to examine the nature of urban life. Since the city is a complex but interrelated whole, made up of linked systems of people, resources, values, and styles of life, the program encourages a variety of perspectives and techniques to arrive at an integrated understanding of urban people and their environment. Different parts of the curriculum focus on and offer the opportunity to investigate such topical areas as the nature of the urban system, the effects of urbanization on the individual, social groups, and culture, and strategies for managing and improving urban places.

Throughout human history, the city has been identified with civilization itself — the words city and civilization, in fact, both come from the same Latin word — civitas. Today, almost 75 percent of the population of the United States lives in cities. This fact alone illustrates how profoundly our modern urban culture affects the psychological, social, cultural, and physical aspects of our lives. Nor does its influence stop at the city limits, for the problems, priorities, and policies of the city vitally concern both urban and rural residents, in the United States and abroad.

SUGGESTED STUDY PLANS

The curriculum tracks developed by Urban Analysis contain the following elements: recommended background courses; skills development courses; core courses, including an exposure to the diversity of perspectives available in Urban Analysis; and related courses. While students in the concentration are encouraged to tie their program of study to one of the identified tracks, individual students may develop personal tracks in consultation with the concentration adviser. The following tracks currently are offered.

Concentration Tracks

Urban Analysis
American Studies
Urban Public Policy and Minority Groups
Urban Services and Minority Groups
Urban Planning
Environmental Design
Environment and Behavior
Urban Human Services
Modern American History

Concentration-Discipline Tracks

Political Science
Psychology
Sociology

Concentration-Professional Tracks

Public Policy Analysis
Public Systems Planning and Management
Urban Management

Environment and Behavior

Courses typically taken by students in the Environment and Behavior track are shown below as an example. Courses appropriate for other tracks are available from the Urban Analysis concentration or the office of Academic Advising.

Background Courses (strongly recommended)

242-101 Man's Visual Images: The Modern Arts
298-202 Macro Economic Analysis
778-208 Micropolitics
820-102 Introduction to Psychology
820-202 Introduction to Social Psychology
900-202 Introduction to Sociological Analysis
900-203 Minority Groups

The Urban Analysis faculty is drawn from a variety of disciplinary backgrounds, including psychology, political science, architecture, literature, sociology, history, computer science, and city planning. A focus upon the urban culture that defines our contemporary civilization provides an excellent way to give coherence to an interdisciplinary liberal education. The concentration organizes knowledge derived from the traditional disciplines in a way that makes it more accessible and functional.

Students in Urban Analysis can prepare for careers in city planning, administration, social service, law, communications, and education, as well as for less specialized careers in the private sector of the economy. They may also obtain a solid foundation for graduate work in the fields of psychology, sociology, history, political science, planning, and architecture.

The curriculum in Urban Analysis incorporates a diversity of perspectives which can be combined into a wide variety of programs of study, some of which have been identified as "tracks." Tracks are intended to provide students with cohesive programs of study. Some tracks emphasize disciplinary approaches in the context of Urban Analysis, while others adopt a more interdisciplinary or professional orientation. Tracks have been developed for the student who desires to major in Urban Analysis alone, or to combine it with a disciplinary program, or with professional courses in business, education, or other areas.

Skills Development Courses (at least two)

255-205 Social Science Statistics
255-305 Foundations of Social Research
600-251 Computer Science
600-260 Elementary Statistics
820-300 Experimental Psychology

Core Courses (18 credits required)

834-325, 326 Human Living Space I and II (6 cr.)
938-312 Human Uses of Urban Areas
938-xxx Concept of Community in American Society
938-360 New Communities
938-440 Social Dynamics of Urban Life

Related Courses (12 credits required)

242-401, 402 Designing the Environment I and II
820-333 Social Behavior Dynamics
820-438 Group Dynamics
938-313 The City Through Time and Space
938-353 Community Noise
938-401, 402; 242-471, 472 Environmental Design Workshop I-IV
938-430 Urban Aesthetics
938-435 Sociocultural Aspects of Urban Stress
938-xxx Environmental Design Practicum
005-xxx, xxx Urban Ecosystems I and II

LIFE SCIENCES

Professors: H. Benham, H. Guilford, W. Kaufman.
Associate Professors: D. Deese, J. Falk, C. Ihrke, E. McIntosh (chairperson, Human Biology; acting chairperson of CHB concentrations), T. Mowbray, R. Stevens.
Assistant Professors: N. Durham, A. Griffith, F. Hughes, R. Logan, J. McAuley, D. Sager, J. Sorce.
Instructor: D. Randall.
Lecturers: T. Hogan, J. Westphal.

Human biology is the study of the distinctive features of the human animal, both as an individual and in populations, which have a biological basis. It involves the description and function of these features, their growth and development, their evolution, and their interaction with the environment.

The goals of the programs within the College of Human Biology are to provide students with an understanding of the nature of the human organism as well as the ability to communicate that understanding to others; to provide an appreciation of the nature of human health and disease, both of body and mind; to provide a thorough awareness of the theories, issues, and methodologies used in the biological sciences; and to provide students with the skills and background necessary to prepare them for careers in the fields encompassed by human biology.

The College of Human Biology currently offers concentration programs in Growth and Development, Human Adaptability, Nutritional Sciences, and Population Dynamics, described on the following pages. A merger of these four concentrations is being considered and is expected to result in stronger interrelationships among the existing programs, with the possibility for developing new curricular tracks in response to the changing needs of society.

Growth and Development

The Growth and Development concentration is concerned with processes of human development over the life span within the ever-widening and changing conditions of the human physical, social, cultural, and psychological worlds. The program provides basic understanding of changes and crises that occur throughout the human life span, as well as of factors that promote both optimum development and deviations from normal development.

The Growth and Development faculty are trained in child development, early childhood education, life-span developmental psychology, life-span social anthropology, social gerontology, and psychological assessment of human development.

Course offerings provide basic information on the characteristics of human development and on human needs at different ages. 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 research careers in human development, frequently decide upon a Growth and Development major.

For students planning careers in education, Growth and Development provides a preprofessional program that includes basic understanding of research concerning development, with training in the skills of observing and recording behavior objectively, of relating observed behavior to the developmental norms, and of identifying deviations from the norms. Students who desire state certification in early childhood education will take most of their professional coursework within the Concentration. Students who desire elementary education certification will fulfill professional course requirements through the education program. All students desiring certification are advised to obtain the *Handbook of Teacher Certification,* which sets forth requirements of the State Department of Public Instruction for certification in all teaching programs at UWGB.

SUGGESTED STUDY PLANS

Some specific background courses are required and should be taken in the freshman and sophomore years. A core of upper-level courses is required of all majors. Additional requirements in the two education tracks are listed with each group. Recommended courses to go along with the core requirements are listed for the other two groups.

To obtain the greatest benefit from their education, students are strongly advised to take the required background courses as early as possible, to honor the prerequisites given in the catalog descriptions, and to take courses in the recommended order.

Required Background Courses

3 credits in statistics, preferrably
255-205 Social Science Statisitics

3 credits in psychology, from one of these or an equivalent:
426-210 Introduction to Human Development and Learning
820-102 The Behavior and Experiences of Man

3 credits in biology, one of these preferred:
478-102 Introduction to Human Biology
478-320 Human Growth, Development, and Senescence

Required Core Courses

426-331 Human Development I: Infancy and Early Childhood
426-332 Human Development II: Middle Childhood and Adolescence
426-433 Observation and Interpretation of Child Behavior

Students interested in caseworker positions in social service agencies may combine a Growth and Development major with sociology or social services. A Growth and Development major provides basic information on individual development, on developmental guidance, and on problems of meeting individual needs over the life span, and is an appropriate preprofessional major for students planning to work primarily in agencies providing individualized client-centered services. Students are advised that advancement in the field of social work will require a Master of Social Work degree.

Students interested in psychological services would typically take either a Growth and Development major with selected psychology courses or a combined concentration-discipline. The program would vary, depending upon whether the student was interested in developmental, clinical, or counseling psychology or in biopsychology. Graduate school is mandatory for students planning careers in psychology; they should begin to meet graduate school requirements and prepare for graduate entrance examinations as early as possible.

The concentration has developed tracks for students following the four most frequently expressed vocational goals: early childhood education, elementary education, clinical and counseling psychology, and social work. Courses typically taken by each of these groups are listed at the right.

The lists show only how programs might be structured to meet these specific educational goals and should be considered as suggestions only. They should not be substituted for face-to-face academic counseling. Programs will vary according to individual needs and with changing requirements and course offerings. Other programs can be written to satisfy other vocational interests. Prospective majors should seek academic counseling from a faculty member in their particular area of interest. A list of such advisers is available from the Growth and Development office.

Required for Early Childhood Education

Growth and Development sequence: 426-333, 334, 431, 432,* 435, 436, 437*

Also required, but do not count toward major:
694-232 Nutritional Significance of Food
742-116 First Aid Procedures
302-307 Elementary School Teaching Methods in Reading
Growth and Development sequence: 426-441, 442, 444

Required for Elementary Education

Growth and Development sequence: 426-435, 436, 437

426-441 is required for kindergarten teachers, but does not count toward major. The education sequence for elementary teachers also is required, but does not count toward the major. Students in both education tracks should consult the *Handbook on Teacher Certification* for additional state certification requirements.

Recommended for Elementary Education

Growth and Development sequence: 426-336*, 337, 431, 432*

Recommended for Psychology (Make selections from this list)

Growth and Development sequence: 426-337, 429, 431, 435, 436, 437
820-202 Introduction to Social Psychology
820-300 Experimental Psychology
820-306 Psychology of Perception
820-309 Psychology of Motivation
820-337 Social Behavior Dynamics

* Meets a human relations requirement of the Wisconsin Department of Public Instruction.

Recommended for Social Work

255-305 Foundations for Social Research
Growth and Development sequence: 426-336, 435, 436, 437, 438, 439

18 credits in the professional program in social services, or select from this list:

820-202 Introduction to Social Psychology
820-337 Social Behavior Dynamics
820-415 Organization Psychology
900-202 Introduction to Sociological Analysis
900-203 Minority Groups
900-208 Marriage and Family
900-302 Social Stratification

A student planning a social work career would typically take either the professional program in social services or combine Growth and Development with the disciplinary program in sociology, not both.

With the approval of the academic adviser, some courses from other areas can be used to meet the requirements of the major, as long as such courses are in keeping with the student's academic goals and the subject matter of the concentration.

Because some Growth and Development courses are recognized for credit in psychology and sociology, most students can obtain a combination major in these areas with a minimum number of credits.

Human Adaptability

Human Adaptability is concerned with our response to a stress or pressure. When a given response has become stable, we are said to have adapted to a specific stress. Knowledge of our individual and group capabilities to adapt to stress can be systematized. It is this systematization that is the basis for the areas of study in human adaptability.

There are three principal areas of study. The first, *physiology*, is concerned with the responses of the living system itself which arise mainly from pressures of the physical and biological environment. The second, *psychology*, is concerned with the responses of the personality to emotional pressures. The third, *anthropology*, is concerned with our responses to human culture.

The student who majors in Human Adaptability may find careers at all levels of government or industry, in laboratories as a research technician or junior administrator, in agencies for welfare or social work, or in the sales of scientific instruments or books. The concentration also is appropriate for students following premedical, predental, or preveterinary programs and those preparing for entrance to graduate programs in biology, the health-related sciences, and paramedical fields.

SUGGESTED STUDY PLANS

A program of courses that satisfy credit requirements for the major and meet the needs of the individual student can best be developed with the help of a faculty adviser. Typical programs followed by students during their first two years are shown below. They do not include courses that meet all-University requirements, listed in another part of the catalog, or electives, which should be selected with the help of an adviser.

A solid background in communications and mathematics is essential to the student of science. A year of each at the freshman-sophomore level is recommended, with specific course selections made in consultation with a faculty adivser.

Students who plan to complete their education with a bachelor's degree might follow this plan:

Freshman Year

204-202 Biology of Cells
204-203 Biology of Organisms
478-201 Adaptation to the Environment
600-251 Computer Science
736-111 Elementary Logic
779-320 Introduction to Population Dynamics

Sophomore Year

204-303 Human Genetics
416-202 Introduction to Cultural Geography
552-304 Advanced Expository Writing
600-260 Elementary Statistics
694-302 Nutrition and Culture
862-303 Conservation of Natural Resources

The research background of Human Adaptability faculty members is an important resource for students, for the concentration emphasizes the importance of research. Students have the opportunity to participate in research with instructors as well as to design and conduct experiments and projects of their own — projects that will take them out of the normal classroom routine and teach them research and experimentation methods and techniques. This kind of independent study often results in findings of value to the scientific community.

Students may choose to concentrate on any of these facets — physiological, psychological, sociological, or anthropological — but they will be introduced to all concepts fundamental to the adaptation process, thus gaining a broad understanding of the field.

Students who plan to continue their educations in graduate school or with professional training beyond the bachelor's degree might follow this plan:

Freshman Year

204-202 Biology of Cells
204-203 Biology of Organisms
226-223 Principles of Chemistry-Physics: Energetics
226-224 Principles of Chemistry-Physics: Materials
600-202, 203 Calculus and Analytic Geometry I and II

Sophomore Year

226-227 Principles of Chemistry-Physics: Qualitative Analysis
226-228 Principles of Chemistry-Physics: Fields and Relativity
226-302, 304 Organic Chemistry and laboratory
552-304 Advanced Expository Writing
736-111 Elementary Logic
779-342 Human Evolution

The junior and senior years should be planned in consultation with a faculty adviser to meet individual interests, needs, and goals.

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 concentration offers two major emphases: community nutrition and industrial nutrition.

The very existence of widespread malnutrition in the United States, coupled with numerous 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 the secondary and elementary schools when it is combined with professional courses in education. Early consultation with appropriate faculty in community nutrition will facilitate completing the requirements for the special dietetics sub-program. Combinations directed toward social work and communications also are possible.

RECOMMENDED AND REQUIRED COURSES

The Nutritional Sciences major must take appropriate courses to develop skills in deriving and interpreting data and in effective communication. The requirement includes a course in statistics, possibly computer sciences, and one or more courses in communication processes. Candidates who wish to attend graduate school are advised to take calculus and a foreign language.

For distribution requirements, students should select relevant courses in sociology, economics, psychology, political science, history, and voice and speech. Students in both emphases should include Biology 202, 203, 302, and 303; Chemistry-Physics 300, 301 or 303, 305; and Nutritional Sciences 232, 302, 328 and 329.

Students emphasizing community nutrition are strongly advised to include Nutritional Sciences 421, 422.

Students emphasizing industrial nutrition are advised to take Chemistry-Physics 121, 122, 123 (223 required for chemistry co-major and graduate school), 125 (or/and 413) and 311; and Nutritional Sciences 404, 485 or 486. Each student is encouraged also to develop a relevant individualized program in consultation with concentration faculty advisers. A general sample program for each area is given below as a guideline.

The sample programs do not include courses needed to fulfill all-University requirements. These are described in another section. Additional coursework should be arranged to meet individual needs. For example, some students may wish to qualify themselves for teacher certification with professional courses in education; others may wish to develop expertise in a disciplinary subject such as communication processes.

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 serve to fulfill requirements for entrance to graduate programs and also to provide a valuable background for professional schools of medicine, dentistry and pharmacy.

Students can complete one health-related program by combining appropriate courses of the nutrition major with those recommended for the professional co-major in medical technology. Similarly, 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). Other appropriate combinations include chemistry, biology, business management, or communications.

Community Nutrition

Freshman Year

204-202 Biology of Cells
204-203 Biology of Organisms
226-108 General Chemistry
226-300, 301 Bio-Organic Chemistry with laboratory
246-133 Voice and Speech I **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
694-328, 329 Nutritional Biochemistry with laboratory
A second communications course
Selected Nutritional Science course

Junior Year

600-251 Computer Science
694-485, 486 Advanced Human Nutrition I and II
820-102 The Behavior and Experiences of Man
900-202 Introduction to Sociological Analysis 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**
820-415 Organization Psychology

Industrial Nutrition

Freshman Year

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

Sophomore Year

226-123 Energy and Power
226-125 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
694-328, 329 Nutritional Biochemistry with laboratory
694-404 Food Science
Selected Nutritional Science course

Senior Year

226-320 Thermodynamics and Kinetics
226-321 Physical Chemistry
226-413 Instrumental Analysis
478-402 Human Physiology
694-485, 486 Advanced Human Nutrition I and II

Population Dynamics

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

Continued, uncontrolled population growth could be considered the root of many environmental problems presently besetting our 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, apathy, and similar social ills.

Overpopulation is not only a problem of humans, but of animal and other organic populations. To deal with these and other problems related to or caused by growing populations, we need individuals 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 mission of the concentration in Population Dynamics is to give people 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.

The study of Population Dynamics involves social, behavioral, and biological factors affecting the numbers and composition of humans or organisms in a region, and the processes and consequences of population distribution and change. Depending upon the courses selected, the program can be given either a biological or a sociological emphasis.

REQUIRED AND RECOMMENDED COURSES

Students in Population Dynamics should begin by developing certain skills during their freshman and sophomore years. Usually this includes basic computer science and elementary statistics. Those who plan to go to graduate school should also take chemistry-physics, a foreign language, and mathematics through calculus.

Four basic courses are prerequisites for many advanced courses in Population Dynamics and should be taken during the first two years. These are:

204-202 Biology of Cells
204-203 Biology of Organisms
820-202 Introduction to Social Psychology
900-202 Introduction to Sociological Analysis

The following sample program shows how these and other courses can be fitted in. Students round out the first two years of study with courses that meet all-University requirements, described in detail elsewhere, and with electives. The program for the last two years should be developed with the assistance of faculty advisers according to individual needs, interests, and goals.

Freshman Year

204-202 Biology of Cells
204-203 Biology of Organisms
600-251 Computer Science
820-102 The Behavior and Experiences of Man

Sophomore Year

600-260 Elementary Statistics
779-310 Introduction to Human Genetics
779-320 Introduction to Population Dynamics
820-202 Introduction to Social Psychology
900-202 Introduction to Sociological Analysis

Population Dynamics majors often give their studies special emphasis with the disciplinary program in biology. Other appropriate combinations are anthropology, geography, medical technology, psychology, or sociology. Adding professional courses in education prepares students for careers in teaching.

The appropriate selection of courses can fulfill the requirements for entrance to professional schools such as medicine and dentistry. Students who major in Population Dynamics may, if they wish to emphasize the relationship of their studies to human health, complete an interconcentration program in Environmental Health Sciences (described elsewhere).

Population Dynamics prepares students for careers in international, federal, state, and community agencies and foundations concerned with human population growth, its regulation, and its problems; international, federal, state, and private agencies dealing with the analysis, regulation, and management of plant and non-human animal populations; industry (with particular reference to predicting consumer needs and demands and the labor market); and graduate study in the areas of demography, public health, population biology, reproductive physiology, population regulation, and related areas.

PHYSICAL SCIENCES

The College of Environmental Sciences offers programs designed to develop the concept of ecosystems and to provide an understanding of the exchange of materials and energy between living organisms and their physical and chemical environment, the use and management of natural resources, and alterations of ecosystems due to air, water, and soil pollution. These programs seek to prepare students to participate in solving the problems of environmental quality and in managing natural resources.

These programs are offered through the concentration in Science and Environmental Change, which has developed major emphasis areas in theory and technology, resource management and administration, and science communication and interpretation. Study plans for students in each of these areas are outlined on the following pages.

Science and Environmental Change

Professors: H. Day, D. Jowett, T. McIntosh, R. Maier, D. Moore, J. Reed, K. White.
Associate Professors: R. Cook, F. Fischbach, D. Girard, A. Goldsby, R. Lanz, A. Loomer, A. Mehra, J. Moran, M. Morgan, V. Nair, J. Norman, N. Petrakopoulos, C. Rhyner, P. Sager, L. Schwartz, C. Schwintzer, R. Starkey, T. Van Koevering, R. Wenger, J. Wiersma, H. Harris (chairperson).
Assistant Professors: J. Barger, S. Dutch, K. Hafez, S. Randall, N. Sell, R. Simons, R. Stieglitz.

The concentration in Science and Environmental Change provides students with the opportunity to study environmental change from the viewpoint of scientific principles. Emphasis is placed upon providing the essential background for developing a keener awareness and deeper understanding of interrelationships in the natural environment.

Restoring and maintaining the most desirable level of environmental quality has become a major issue in the quest for a better way of life. A better understanding of natural components and processes of the environment and of the impact of human cultural activities on them has thus become essential.

The application of science to problems created by adverse interactions of humans with the natural environment has developed into an exciting challenge and necessary effort. This effort affects individuals from a wide spectrum of life styles and requires involvement by people with a variety of competencies. Informed citizens, scientists, resource managers, administrators, and teachers play important roles individually as well as collectively in formulating and applying sound environmental policies.

SAMPLE STUDY PLANS

The following are typical plans for students in each of the three emphasis areas. The plans do not include all-University requirements (described elsewhere) or electives that will individualize each program. Students should seek the advice of faculty in developing a program that meets their particular interests and needs.

Theory and Technology

Freshman Year

204-202 Biology of Cells
204-203 Biology of Organisms
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
600-321 Linear Algebra

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
862-330 Hydrology
862-403 General Limnology
862-434 Water Chemistry
862-460 Resource Management Strategy
862-xxx Water Supply and Sewage Treatment
862-xxx Computer Programming for Scientists

The concentration program is structured to integrate traditional disciplinary or subject knowledge in the context of an interdisciplinary approach to understanding environmental change as related to natural and human causes. The program also encourages students to develop effective skills in communication and in interpretation, in response to the need for providing people with information required to make wise decisions regarding the use of resources.

As a base for their studies, students will attain certain intellectual skills plus a broad knowledge of fundamental science. The concentration offers three alternative emphasis areas, each with distinct objectives and career opportunities: theory and technology, resource management and administration, and science communication and interpretation. All three emphasis areas have in common a fundamental background in the sciences consisting of 36 to 38 lower level credits in biology, chemistry-physics, earth science, and mathematics and an upper division core of 12 to 14 credits in ecology, environmental management, modeling, and problem solving. Beyond the fundamental sciences and the upper division core students have wide latitude to tailor a program of study to their own interests and career objectives. Following are short descriptions of the three emphasis areas. Each may be pursued in a variety of ways.

Theory and Technology

The theory and technology area is appropriate for students whose aptitudes and interests lead toward developing competencies in rigorous scientific techniques and knowledge useful in analyzing and solving environmental problems. In pursuing this area, many students add a disciplinary program such as biology, chemistry, physics, earth science, or mathematics including statistics and computer science. Other curricular areas which offer supporting courses include economics, regional planning, or geography.

Resource Management and Administration

Freshman Year

204-202 Biology of Cells
204-203 Biology of Organisms
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
600-240 Finite Mathematics
600-260 Elementary Statistics

Junior Year

350-305 Public Regulatory Processes
416-353 Air Photo Interpretation
662-400 Environmental Law
862-320, 321 The Soil Environment and Laboratory
862-322, 323 Ecosystems Analysis I and II
862-342 Environmental Geology
862-350 Meteorology

Senior Year

298-305 Natural Resources Economic Policy
350-401 Public Systems Planning and Management
350-xxx General Systems Theory and Methods
862-460 Resource Management Strategy
862-xxx Water Supply and Sewage Treatment
862-xxx Solid Waste Management
862-xxx Industrial Pollution Control Methods

Resource Management and Administration

The management and administration area combines an understanding of scientific principles with studies in the socio-economic realm. This background is appropriate preparation for responsible decision-making regarding management of the environment, administering policies, and dealing with agencies concerned with the environment. Students who choose this emphasis may wish to combine it with a professional program in environmental administration. Some may choose relevant course work in economics, sociology, political science and related areas.

Communication and Interpretation

Freshman Year

204-202 Biology of Cells
204-203 Biology of Organisms
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 Computer Science
600-260 Elementary Statistics
779-342 Human Evolution
862-331 Introduction to Oceanography
862-302 Principles of Ecology

Junior Year

204-320 Field Botany
204-354 Animal Behavior
204-350 Field Zoology
532-302 Philosophy and Sociology of Leisure
532-310 Formulating and Administering Recreational Programs
532-403 Recreational Supply and Demand Analysis
779-318 Vertebrate Reproduction
862-141 Astronomy
862-403 General Limnology

Senior Year

298-305 Natural Resources Economic Policy
862-320, 321 The Soil Environment with Laboratory
296-350 Field Geology
532-404 Public Parks and Recreational Systems
532-410 Outdoor Recreation and the Natural Environment
600-240 Finite Mathematics
779-402 Population Biology
862-350 Meteorology

Science Communication and Interpretation

This area prepares students to fulfill critical needs in communicating scientific and technological information dealing with the relationship between people and the environment. Course work in leisure sciences and environmental education are important adjuncts to this emphasis. Co-majors in biology and communication processes are particularly appropriate.

January Courses

The extent and variety of courses offered in January by Science and Environmental Change is worthy of note. They fall into three general categories.

Experimental courses are new each January and can be taught only once. They are offered to satisfy new academic interests of students and faculty or to test new approaches to teaching. Courses taught previously include:

Energy Conversion and Energy Storage
Science and Society
Radiation Biology and Micro-organisms

Problem-centered courses are project oriented. The class may embark on an experiment, field experience, community project, or work in individual projects. Courses offered in this category include:

Solid Waste Management
Plants for Enjoyment
Man's Concepts of Infinity
Ecology of Fire
Alternate Sources of Energy
Wildlife in Winter
Chemical Ecology
Industrial Pollution Control Techniques
Ecology of Invasions

Skills oriented courses are offered for those who need to develop strength in specific areas. They may afford the student the opportunity to satisfy the prerequisites of some regular semester course. Courses offered in this category include:

Laboratory Glassblowing
Radiobiology
Differential Equations
Multivariate Calculus
Chemistry-Physics Fundamentals: Atomic and Molecular Structure, Materials, Qualitative Analysis, and Fields and Relativity
Environmental Biogeochemistry
Advanced Physical Laboratory
Biological Microtechnique

Varying degrees of emphasis on interdisciplinary and professional skills depend on aptitudes and career goals. Additional curricular opportunities are available in programs that span two or more concentrations such as Environmental Health Sciences and Environmental Design. Students can obtain preprofessional training in engineering, medicine, dentistry, nursing, pharmacy and veterinary medicine. Clearly, it is advantageous to establish early contact with an SEC faculty adviser and maintain this contact throughout the development of a program. A list of such advisers is available from the concentration office.

To help visualize the variety of career orientations which are possible within the concentration, several sample programs are outlined on pages 83 to 86. The sample plans list courses that might be taken by students with specific interests and career goals. Other plans are, of course, possible. The samples do not include all-University requirements (described elsewhere) or electives.

ALTERNATIVE MAJORS

For students who feel that their educational interests and/or career goals cannot be met through any of the regular concentration programs there are several alternative opportunities for seeking a UWGB degree.

One of these is a personal concentration developed by the student from a variety of resources to meet individual needs. Another is the interconcentration program, which combines coursework and faculty expertise from several concentrations to provide an integrated study program in an area of expressed contemporary relevance. Two such programs have been formally developed: Environmental Design and Environmental Health Sciences. A third pulls together courses from a number of concentrations that deal with a central theme of special interest to the student. Usually the student with this type of program majors in a single concentration but uses courses from several others to satisfy concentration requirements. This requires approval of the concentration chairperson. Students have used this method successfully to develop their own programs in Black Studies, Native American Studies, and Women's Studies, for example.

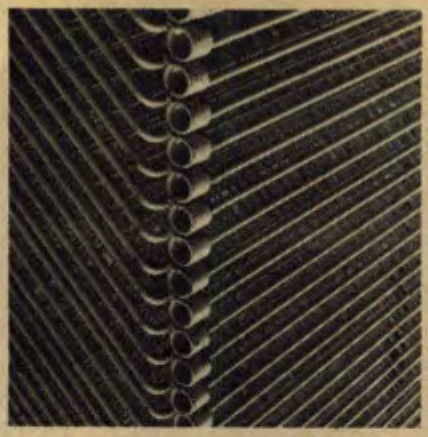
The personal concentration and the interconcentration programs are described on the next few pages. See the index for more information about Black, Native American, and Women's Studies.

Personal Concentration

A personal concentration is a self-designed and written program for students who find their educational objectives and interests direct them toward a problem which does not fit into any one of the existing concentrations.

In keeping with the University's approach based upon the interrelatedness of knowledge, a personal concentration incorporates several academic areas. It may involve solving a problem in a specialized area where several disciplines are combined in reaching a solution. It should be centered around the understanding the student hopes to gain from a personally designed program and the competencies he or she hopes to master.

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. The personal concentration can be organized in any way that makes sense as long as it clearly shows the interrelatedness of the student's proposal.



Students wishing to develop a personal concentration can seek information through the Individualized Learning Programs office. An adviser will help organize the details of the proposal and can suggest faculty members to be consulted for their expertise in the interest areas of the proposal. A final proposal goes to the personal concentration committee for discussion and approval. A personal concentration should be designed during the last semester of the sophomore year or first semester of the junior year. If it is written later, the committee may ask completion of more than the required 124 credits for graduation.

The personal concentration is an alternative for those students whose educational objectives cannot be met by an existing concentration, and may be planned around any theme that is 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.

Environmental Design

Coordinators: R. Baba, D. Damkoehler, P. Johnsen, R. Lanz, W. Smith.

Environmental Design studies 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 focus for the interconcentration program in Environmental Design.

The program uses an interdisciplinary design team to deal with a broad spectrum of problems. This approach allows for the investigation and design of the chair as well as the neighborhood.

Students majoring in any of four concentrations — Communication-Action, Science and Environmental Control, Regional Analysis, or Urban Analysis — receive intensive training in the process of environmental design by selecting appropriate courses and participating in a series of design workshops. Study covers such areas as urban planning, urban technological design, three dimensional design and drawing, properties of building materials, human living space, and designing the environment.

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 an adviser in one of the four participating concentrations.

The program trains students for the emerging fields that relate the built environment to human behavior. Potential employment would be in design, architecture, and urban and 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. A student whose major interests are in Communication-Action might take a program something like the following:

Foundation Courses

242-271 Introduction to Environmental Design Methods
862-102 Elements of Descriptive Geometry

Upper-Level Courses

242-401, 402 Designing the Environment I and II
834-325, 326 Human Living Space I and II
862-327 Urban Technological Design
938-421, 422 Urban Planning I and II
938-430 Urban Aesthetics
938-401, 402; 242-471, 472 Environmental Design Workshop I-IV

Environmental Health Sciences

Environmental Health Sciences offers students an opportunity to gain a rigorous but flexible education in one or more of the basic sciences while preparing for health careers which deal with relationships between environmental factors and human health. Students in the program 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. Thus they are prepared for analyzing health related problems and for effecting community solutions. Four concentrations sponsor the inter-concentration program in Environmental Health Sciences. 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.

Human Adaptability 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 **Nutritional Sciences,** students emphasize the relationship of food and sanitation, especially from the chemical and microbiological point of view. Problems both on the industrial and community level are studied.

Population Dynamics emphasizes population density, location, and structure; its biological and sociological factors; and its impact on human health. Particularly the contributions of population changes to problems of pollution, crowding, mental and physical stress, and the general deterioration of the environment are studied.

No matter which concentration or health-related interest the student chooses, all programs have some features in common. The first year or two involve orientation in the basic sciences and social sciences. The former are prerequisite to intermediate year science courses which include analytical chemistry, microbiology, and others. The 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.

BUSINESS AND EDUCATION

At UWGB, professional education with direct career applications is provided in a variety of ways. Two of the most common areas for students to gain professional training are in the managerial skills required for careers in business and governmental organizations and in education, where requirements are met for teacher certification at the early childhood, elementary, and secondary levels. Programs to meet these needs are described on the following pages.

Students interested in business and government careers, as well as careers in non-profit organizations, typically enroll in the professional concentration in Managerial Systems. This provides them with technical business and management training plus giving them the opportunity to acquire supportive knowledge of an interdisciplinary problem-solving nature that will benefit them in their professional careers.

The professional program in education is designed primarily to enable students to meet teacher certification requirements, but it can also be used to advantage by those whose career interests are in areas related to education. The student in education also enrolls in an interdisciplinary major and often takes a disciplinary program in the subject matter area he or she expects to teach.

Both these programs are regarded as "majors." Managerial Systems is a professional major. Education is a teaching major. Additional professional programs in environmental administration, leisure sciences, and social services can be taken as minors and are described later in this section.

Managerial Systems

Professors: G. Petrie, C. Graham (chairperson).
Associate Professors: H. Jadwani, J. Powers, K. Zehms.
Assistant Professors: R. Batz, J. Imre, R. Obenberger, M. Troyer.
Lecturers: B. Coleman, T. Dedolph, W. Read.

The student wishing to pursue a career in business or administration in private industry, government, or a non-profit organization should select a concentration in Managerial Systems. Programs are offered in accounting, finance, labor and personnel, management, and marketing, and through these, a variety of individual professional programs also may be developed.

Students with majors in other concentrations can complete an 18 to 21 credit program in business and administration with approval of the two concentration chairpersons. Such a program provides business management skills for the student whose major program of study is in other subject matter areas.

The practice of business offers the individual a wide spectrum of challenging opportunities for making a living, self-fulfillment, creativity, and improving the quality of life. Few career pursuits require a broader perception of human needs and wants, levy a greater societal responsibility, or demand higher ethics.

Business and administrative course requirements embrace these general objectives:

TYPICAL PROGRAMS OF STUDY

Required Foundation Courses

Majors in Managerial Systems should complete these courses during their freshman or sophomore years. Waivers or substitutions for any courses on this list must be approved by the student's adviser and the Managerial Systems chairperson.

298-202 Macro Economic Analysis
298-203 Micro Economic Analysis
575-202 Business and Its Environment
575-204 Introductory Accounting
600-251 Computer Science
600-260 Elementary Statistics
575-217 Quantitative Methods in Administration **or**
600-202 Calculus and Analytic Geometry I **or**
600-240 Finite Mathematics
575-101 Effective Business Communications **or**
246-133 Voice and Speech I **or**
485-105 Introduction to Expository Writing

Concentration Core

All Managerial Systems majors must complete
575-305 Business Law I

Accounting students must also complete
298-230 Money and Banking
575-306 Business Law II

Two courses each in four of the following fields:
Accounting and Quantitative Methods
Finance
Labor and Personnel Management
Marketing and Distribution
Organization and Operations (Management)

An additional two to three courses in one of the above five fields.

1. To prepare the student for entry-level positions of responsibility in business, government, and non-profit organizations and access to a wide variety of professional career opportunities.

2. To provide the student with a cohesive interdisciplinary knowledge in the arts and sciences supportive of their career objectives and to assist them in becoming responsible participating members in the complex social and economic systems in which we live.

3. To provide the student with an integrated base of knowledge coupled with an abiding desire to learn and achieve as a foundation for future intellectual growth.

After counseling with a faculty adviser, the student will select an area of study consistent with his/her perceived career objectives. Although the first job after graduation is usually in a position directly related to the primary area of undergraduate emphasis, as the individual gains experience and advances to more responsible positions, the scope of his or her professional interests expands. The student's program is designed to support such advancement.

With the exception of accounting students, all Managerial Systems majors must also complete an 18-credit program in another concentration. Courses should be selected with the help of advisers from Managerial Systems and the other concentration. The requirement represents an opportunity to acquire supportive knowledge of an interdisciplinary problem-solving nature that will benefit the student throughout his/her professional career. Accounting students fulfill the 18-credit requirement by taking upper-level accounting courses designed to prepare them for the Certified Public Accountant examination.

Concentration requirements are shown at the right, along with typical study plans. Students should seek advice from the faculty advisers to individualize their plans to meet personal interests and goals.

General Study Plan

The following is a typical program of course work for the student in general business, finance, labor and personnel management, management, or marketing. This list does not include electives or all-University requirements. Faculty advisers can help plan individual programs.

Freshman Year

600-251 Computer Science

Sophomore Year

298-202 Macro Economics
298-203 Micro Economics
575-202 Business and Its Environment
575-204 Introductory Accounting
575-217 Quantitative Methods
600-260 Elementary Statistics

Junior Year

575-305 Business Law I

Four of these courses:
575-215 Intermediate Accounting
575-216 Accounting for Administrators
575-322 Basic Marketing
575-343 Corporation Finance
575-362 Principles of Personnel Management
575-382 Principles of Management

Senior Year

Four courses from these areas:
Accounting
Marketing
Finance
Personnel Management
Management

Accounting Study Plan

Freshman Year

600-251 Computer Science

Sophomore Year

298-202 Macro Economic Analysis
298-203 Micro Economic Analysis
575-202 Business and Its Environment
575-204 Introductory Accounting
575-215 Intermediate Accounting
575-217 Quantitative Methods
600-260 Elementary Statistics

Junior Year

298-230 Money and Banking
575-305 Business Law I
575-312 Cost Accounting
575-313, 314 Financial Accounting; Theory and Practice I and II
575-322 Basic Marketing
575-343 Corporation Finance
575-345 Principles of Risk Management
575-382 Principles of Management

Senior Year

575-306 Business Law II
575-316 Governmental and Institutional Accounting
575-410 Income Tax Theory and Practice
575-411 Financial Information Systems
575-412 Auditing Standards and Procedures
575-442 Problems of Investment

Plus:
A second marketing course
A second management course

Education

Professors: M. Kazar, G. O'Hearn.
Associate Professors: R. Bruland, D. Bryan, J. Busch (chairperson), R. Presnell, R. Pum, N. Sanders, T. Van Koevering.
Assistant Professors: E. Pfeiffer, P. Thompson.

The professional program in education combines study in education with an interdisciplinary major and/or a disciplinary co-major (e.g. chemistry, music, sociology, etc.) to provide teacher certification or entry into other education related professional areas. Available programs and the requirements for the teacher certification programs approved for UWGB are described at the right.

Although most students who complete a professional program in education are seeking teacher certification, they also may develop a professional application of their studies to career goals that do not require teacher certification. For example, the student interested in a career in a nature center or an environmental studies center might combine education with Science and Environmental Change. Similarly, a person interested in a career in public relations might combine education with work in Communication-Action or Modernization Processes.

TEACHER CERTIFICATION

Teacher Education Programs offered by UWGB are:

Early Childhood Education (nursery-kindergarten):
(See Growth and Development concentration)

Elementary Education:
Grades K-6, 1-6 and/or 4-8

Special Areas:
Aesthetic Education (non-certification program)
Art K-8 or K-12
Music K-8 or K-12
Reading K-8, 7-12 or K-12

Secondary Education:
Anthropology
Art (Visual Arts)
Athletic Coaching
Biology
Chemistry
Communication Arts
Computer Science
Conservation
Drama
Earth Science
Economics
English
Environmental Science
French
General Science
Geography
German
History
Mathematics
Media (Journalism)
Music: Instrumental or Choral
Native American Languages
Physical Science
Physics
Political Science
Psychology
Reading
Social Studies
Sociology
Spanish
Speech

The *Handbook on Teacher Certification*, available from the education faculty office, contains a complete description of these programs.

Students might also want to consider the value of combining education courses with any concentration for a general liberal education as a citizen and/or preparation for parenting.

All UWGB teacher 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 states will automatically grant initial teaching licenses based on completion of a UWGB certification program. In most of the remaining states students who have completed a UWGB certification program would be eligible for certification upon evaluation of their preparation by the Education Department of the state in which certification is being sought.

Any student who is in good standing can complete a teacher certification program as a part of his/her regular degree program. Careful planning is needed to meet all requirements for certification as well as all degree requirements in the most advantageous manner. Students should indicate enrollment in teacher certification on Registration forms and also meet with the education adviser in their program area as soon as they enroll at UWGB. It is also necessary to make formal application during the junior year for admission into student teaching or interning.

Secondary School License

For a secondary school license, an approved program for a teaching major must be completed. Optionally, the student may be certified in additional teaching areas by completing the requirements for one or more additional teaching majors and/or minors. The teaching major or minor in a discipline includes freshman and sophomore work. The student also pursues advanced work with an environmental focus in a concentration. Specific requirements for each teaching major are described in the UWGB *Handbook on Teacher Certification.*

The student should consult with an education faculty adviser in planning the program to meet these requirements.

The following requirements must be completed for secondary school certification:

Professional Education
(A minimum of 18 credits)

1. Educational psychology of teaching and learning, such as Psychology 338 or Growth and Development 210 or 332.

2. The teaching methods course in the appropriate subject area, selected from Education 310, 311, 312, 313, 314, 316, or 317. For the student who desires to be licensed in two majors or a major and a minor in different subject areas, the methods course in each area is required.

3. A minimum of four elective credits selected in consultation with the student's education adviser from education courses approved to meet this requirement.

4. A minimum of eight credits in student teaching (Education 403) or internship at the secondary level in the major teaching area or major and minor teaching areas. (See description of student teaching on the next few pages.)

Teacher preparation is a cooperative responsibility of the education faculty and the various concentrations and disciplinary programs. While pursuing the 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. Certification requirements are described at the right.

Statutory Requirements

Wisconsin Statute 118.19(6) specifies: "In granting certificates for the teaching of courses in economics, social studies, and agriculture, adequate instruction in cooperative marketing and consumers' cooperatives shall be required. In granting certificates for the teaching of courses in science and social studies, adequate instruction in the conservation of natural resources shall be required."

The requirement for instruction in cooperative marketing and consumers' cooperatives may be met by taking Ecomomics 203 or Regional Analysis 205.

The requirement in conservation of natural resources may be met by taking Economics 305, Regional Analysis 410, Science and Environmental Change 302, 303, or 321, 322.

The statutory requirement is in addition to the required 18 credits of professional education.

Tool Subjects
(To meet requirements in human relations and reading)

Human relations. To fulfill the requirements in human relations preparation as specified by the Department of Public Instruction Administrative Code, all candidates for teacher certification at UWGB must complete a program which contains five elements:

1. A foundations course in human relations and institutional racism, sexism, and prejudice (one course).

2. An intensive study of interpersonal dynamics (one course).

3. An intensive study of the values, life styles, and contributions of at least one identifiable subcultural group in American Society (one course).

4. Supervised field experience involving working with a subcultural group other than one's own.

5. Direct study of the reflections of prejudice and ways to deal with those reflections in various instructional materials, which are included in all education methods courses.

A list of the UWGB courses which have been approved to meet the various requirements of this program are published each semester. Because of the variable content of many courses which relate to this program, e.g., umbrella courses, selected topics courses, January Practica, University Seminars, etc., it is imperative that the student consult the approved course list for the semester in which he or she will be enrolled.

Each student must have the record of his or her completion of the human relations requirements approved by an education adviser.

Reading. To meet the requirements of the Department of Public Instruction Administrative Code, Education 318, Reading and Study Skills in the Secondary School, is required of students completing teacher certification at the secondary school level.

The tool subject requirements are in addition to the 18 credits of professional education required for the education collateral.

Elementary School License

Education offers a program preparing teachers for general elementary certification in grades 1-6, which may include kindergarten certification, and another for grades 4-8. An early childhood and kindergarten certification program is offered by the Growth and Development concentration. To be eligible for general elementary school certification, the student must acquire subject matter proficiency in social studies, art, science, mathematics, and music, as well as proficiency in English. The *Handbook on Teacher Certification* contains a description of these requirements. In addition to the required subject matter proficiency, the following requirements must be completed for general elementary school certification:

Professional Education
(A minimum of 29 credits as approved by the Wisconsin Department of Public Instruction)

1. One course in educational psychology of teaching and learning, such as Psychology 338 or Growth and Development 210 or 331.

2. All of the following courses: Education 302, 303, 304, 305, 306, 307, and 309.

3. A minimum of 8 credits of student teaching (Education 402) or internship at the elementary school level.

Tool subjects in human relations as specified for the secondary school license are also required for licensure at the elementary school level.

Candidates for general elementary certification may also be recommended for certification in one or more subject areas by completing the requirements of an approved teaching minor (or major) in that subject area. This is particularly recommended for candidates interested in teaching at the middle school level.

Licensure in Special Areas

To meet the requirements for certification in the special fields programs offered by UWGB (K-8 or K-12), the student must complete the approved teaching major (or certification sequence for reading teacher certification) as described in the *Handbook on Teacher Certification*. Additionally, except for reading teacher certification, the following requirements must be met:

Professional Education
(A minimum of 18 credits)

1. A minimum of one course in the educational psychology of teaching and learning approved for the grade level(s) of certification sought.

2. The teaching methods course in the subject area approved for the grade level(s) of certification sought.

3. A minimum of two to four elective credits selected in consultation with the student's education adviser from the education courses approved to meet this requirement.

4. A minimum of 8 credits in student teaching (Education 402 and/or Education 403) or internship in the subject area of certification. For certification in grades K-12, student teaching at both the elementary and secondary levels are required.

Tool subjects in human relations and reading as specified for secondary certification are required. For students completing specialist certification at the elementary school level only, Education 307 or 318 may be taken to meet the tool subject requirement in reading.

Student Teaching

Student teaching or teacher internship is required for elementary or secondary certification and is customarily taken in the student's senior year. Application for student teaching or for the teacher internship program must be submitted to the director of student teaching by February 15, preceding the academic year in which the student wishes to student teach or intern.

Students should refer to the *Handbook* as well as consult with their faculty advisers in education or the director of student teaching for specific information on these programs and for eligibility requirements. Placement of student teachers may be limited by the availability of supervisory personnel, student teaching positions, or internships. Students who register by the deadline dates are given priority.

Waivers and Pass-No Credit

Waivers of courses in education are seldom possible because the requirements for certification are defined by the Wisconsin Department of Public Instruction. Courses taken for a teaching major or minor as well as the courses in education necessary for certification, other than student teaching, cannot be taken on a pass-no credit basis. Student teaching is offered on a pass-no credit basis only.

OTHER PROFESSIONAL PROGRAMS

While each of the concentrations and disciplinary programs prepare students for various career fields, either directly or through graduate school, there are several professional applications that require specific courses and training. Students interested in any of these areas can select a professional program to supplement their work in a concentration and a disciplinary program, if they choose one.

One of the professional programs — education — is described on the preceding pages. The other three are described below. They are environmental administration, leisure sciences, and social services.

Normally, a professional program requires 18 credits, which are added to the requirements of the major and the co-major. Students interested in a professional program should consult the faculty advisers in their concentrations and disciplines, as well as the professional program adviser, to work out a suitable plan of study.

Environmental Administration

Professors: Arthur Atkisson (chairperson), Robert Maier
Associate Professors: Ronald Baba, Per Johnson
Assistant Professors: David Littig

For all but a few specialties, formal administrative organizations now provide the settings in which most professionals fashion their lifetime careers. Not only do large private, public, and governmental organizations now dominate the labor market, but their decisions, objectives, and operations profoundly influence the characteristics of human environments, the quality of human existence, the strength of our economy, the attributes of our work places, and the satisfaction we derive from our careers. Increasingly, satisfying and successful career performance is dependent on the ability of individuals to understand, function within, and cope with such organizations and their related inter-organizational and internal administrative or policy systems.

Accordingly, students are encouraged to prepare themselves to meet these requirements and qualify themselves for entry into a wide variety of administrative, managerial, planning, policy-making, and specialist careers in government, industry, business, and non-profit enterprises. An appropriate academic route to such preparation is through the professional program in environmental administration.

Drawing upon the resources of the entire University, the faculty in environmental administration is responsible for assisting the student who wishes to develop a career-oriented program of professional administrative or business study. Specific guidance, curriculum recommendations, and program requirements are contained in the *Guides to Student Programs of Professional Study* which are published by this faculty. Ordinarily each study program consists of an appropriate 18-unit group of upper division courses, a set of preparatory lower division courses, and such *elective* classroom, in-the-field, and applied research training as the student may choose. Appropriate programs of study may be constructed from courses offered by any of UWGB's academic units. However, the principal course-sponsoring units are environmental administration, economics, managerial systems, mathematics, political science, psychology, and sociology.

Students who desire only a broad understanding of administration/organizational processes and/or the fields of business or public administration may do so by selecting an approved combination of upper division courses sponsored by the academic units named above. In addition, intensely specialized and career-relevant programs of study may be tailored to the unique needs of individual students. Alternatively, several well-defined study tracks have been designed to prepare students for specific careers within public and private organizations.

Although each of the defined study tracks may be integrated with any major, several tracks are designed for integration with specific concentrations. These tracks are outlined below.

Environmental Administration prepares students for careers involving the planning, initiation, management, and evaluation of environmental research and quality control programs, policies, and organizations. Particularly appropriate for majors in Science and Environmental Change, Urban Analysis, Regional Analysis, and the physical and life sciences.

Environmental Planning emphasizes the methods appropriate to the planning and control of land use; the protection and/or management of land and related resources; the planning and siting of facilities and structures on the land; and the professional operations, decision sequences, and administration routines of planning agencies. Intended for majors in Urban Analysis, Regional Analysis, and Science and Environmental Change.

Public Policy Analysis focuses on the methods of legislative and policy research, the decision sequences associated with the public policy process, the operations and routines associated with each, the relationship between public policies and socioeconomic phenomena, and methods for evaluation of public policy effects. Appropriate for majors in numerous concentrations.

Housing and Community Development is integrated with the concentration in Urban Analysis and the interconcentration program in Environmental Design Processes, and emphasizes means for assessing changes in the housing market; the processes, decision sequences, and operational aspects of the housing delivery system and the neighborhood/community development process.

Urban Management is intended primarily for students majoring in Urban Analysis, and is designed to prepare students for careers leading to appointments as city or county managers. It focuses on the functions of such officers and their principal staff aides and on the relationship between local governmental decision-making and such outcomes as tax burdens, the quality of community environments, and community economic growth. Adequate preparation for entry into this career field requires a carefully constructed program of study in which concentration and professional program plans are properly integrated. Considered as a whole, such an integrated program should involve substantial study in the following areas: geographic, demographic, and social characteristics of urban settlements; problems and problem-causing systems in urban communities; physical environmental characteristics and problems of urban settlements; the planning and management of public systems, policies, and institutions; and quantitative and other skills appropriate to relevant processes of problem definition and solution.

Organization Planning and Development is targeted on the roles, functions, and processes through which job-task hierarchies and organizational systems are designed and changed and through which organizational members are recruited, selected, trained, placed, compensated, and motivated. The track is intended, particularly, to prepare students to function in roles concerned with amelioration of the major human problems associated with the organization and operations of large-scale administrative organizations. It views such organizations as providing life-shaping environments for significant fractions of the human population, and as entities which are, in turn, influenced by a number of important external and internal environmental variables.

Public Regulatory Processes emphasizes preparation of students to participate in and/or cope with those governmentally-sanctioned processes concerned with the regulation of organizational entities, business enterprises, professions, and selected occupations.

In 1975, governmental expenditures in the United States equaled more than 40 percent of all personal family income and approximately one out of every four workers was employed by government. Accordingly, the study track in **Public Systems Management** is focused on preparation of students for career administrative, managerial, supervisory, and organizational staff roles in public and governmental enterprises. The basic perspective of the track is that public systems are environment-modifying and environment-controlling mechanisms in contemporary society and that the planning, implementation, management, and evaluation of such systems is essential to the achievement and maintenance of human physical and socio-economic environments of acceptable quality.

Preparatory Studies

No single combination of lower division courses is recommended, but such studies should include courses which develop the student's skills in communication, logical thinking, social interaction, and problem-solving and develop the understanding of governmental, social and economic systems.

Most students should consider the following:

298-202 Macro Economic Analysis
298-203 Micro Economic Analysis
485-105 Introduction to Expository Writing
600-260 Elementary Statistics
736-100 Ethics
736-111 Elementary Logic
778-207 Macropolitics
778-208 Micropolitics

In addition, students with interests in administrative operations, budgeting, and similar areas should consider these courses:

575-204 Introductory Accounting
575-216 Accounting for Administrators

Students also may wish to participate in the public systems internships and applied research activities sponsored by environmental administration. Faculty members can provide more information.

Leisure Sciences

Assistant Professor: P. West (chairperson)

Leisure Sciences provides both an intellectual problem focus on leisure related issues and preparation for professional work in leisure and recreation related professions.

The program's intellectual problem focus component centers around sociological and philosophical understanding of leisure phenomena and problems as they relate to the problem focuses of various concentrations.

For example, leisure life styles and consumption in leisure are sociologically and philosophically analyzed in relation to several concentrations. For example, a sociological analysis of leisure and aging is related to development of the life cycle which is the central concern of the concentration in Growth and Development.

Core courses in leisure sciences include Sociology of Leisure and Philosophy of Work and Leisure.

The professional preparation component emphasizes regional outdoor recreation planning in conjunction with the Regional Analysis concentration. Professional programs in outdoor recreation area planning and management also are available in conjunction with the Science and Environmental Change and Managerial Systems concentrations.

A program in community and institutional recreation leadership and administration is in the process of being developed. Core courses in this track include Regional Recreation Planning and Outdoor Recreation Area Planning and Management. Students of leisure sciences are encouraged to work in field projects that apply their skills in actual professional planning situations.

Students should seek the advice of the chairperson to develop an appropriate professional program in leisure sciences.

Social Services

Professor: I. Korner (chairperson)
Associate Professors: D. Galaty, R. Mendelsohn
Lecturers: R. Jansen, R. White

The professional program in social services can be combined with a concentration as well as with a disciplinary program (psychology and sociology are especially appropriate) to provide flexibility for the student and encourage competence in a helping job.

This program prepares students to be professional helpers in a variety of public and private settings. Students can qualify for social worker, welfare worker, employment counselor, group worker, street worker, equal opportunity counselor, personnel specialist, social advocate, administrator and consultant, to name some of the possibilities. Students can expect considerable increase in interpersonal understanding and communication skills regardless of their specific vocational application.

The core curriculum consists of three distinct elements: a theory course, a placement in a helping role in a community social service agency, and a methods course wherein theory and field experience are integrated. For greatest learning these three courses are taken simultaneously for two consecutive semesters.

The primary focus is on behavioral dynamics of individuals, groups, and organizations including the dynamics of our own 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. Students are urged to take the introductory course for an overall definition of varieties of settings and methods through which helping occurs. In the core curriculum students will learn to identify in what settings, with what type of clientele, and with which methods and attitudes they can make the most impact as helpers.

Students desiring certification for Social Worker I positions in public agencies in Wisconsin are required to complete the professional program in social services and 18 additional credits of either social service or sociology courses. Selected University Seminars and concentration courses may also be used.

Students entering the collateral soon realize the time demands of three courses which require a total of six hours of classes and ten hours of field experience each week. Three to six additional credits are all that most students carry in addition to the 9 social service credits each of these two semesters.

DISCIPLINARY PROGRAMS

The programs described on the following pages offer the student specific subject-matter depth, whether they provide foundation courses at the freshman-sophomore level or are combined with a concentration in a junior-senior level co-major.

All students are exposed to at least some courses offered by the disciplinary programs. Most beginning level subject matter foundation courses and skills development courses are presented through disciplines to provide the basic knowledge necessary for more advanced and complex coursework.

Students who wish to give their interdisciplinary concentration a specific subject matter focus may do so with a 24-credit co-major in a disciplinary program. These courses at the junior-senior level are added to a minimum of 12 upper-level concentration credits to complete the major.

Some disciplinary programs have specific requirements for co-majors; these are listed with descriptions of the programs on the following pages. Others require only that the student select upper-level courses that meet his/her individual interests, needs, and goals. In all cases, the disciplinary program chairperson and/or faculty adviser should be consulted in planning a co-major program, along with the student's concentration adviser.

Anthropology

Chairperson: Norris M. Durham

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 this field, which ranges from the study of aesthetic systems to the study of human genetics, a co-major in anthropology combines readily with most of UWGB's interdisciplinary majors.

Skills and special perceptions gained through the study of this field 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 work. 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 are becoming widely available. Faculty advisers can offer suggestions about vocationally oriented programs of study combined with the co-major in anthropology.

Students intending to co-major in anthropology should see the chairperson/adviser early in their college careers. Generally an anthropology co-major should be preceded by at least two of the following lower division courses: Anthropology 100, 210, or 215.

The 24 credits which make up the anthropology co-major are drawn from both anthropology listings and courses taught in other departments. Normally this program includes the following as a core.

779-342 Human Evolution
779-364 Human Variability
246-322 Modern Linguistics
156-304 Family, Kin, and Community

The remaining 12 credits are selected from the anthropology course offerings with the approval of a co-major adviser. Credits for work taken in conjunction with the Concourse Museum program are applicable to the co-major. Anthropology students are also 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 co-major; advisers can provide details.

Biology

Chairperson: Robert S. Cook

The purpose of the disciplinary program in biology is to acquaint students with biological problems from a local to global scale, to give them the tools and skills necessary for their particular professions, to help them learn to use these tools at a professional level, and to inspire them to want to solve problems that require expertise in biology.

Biology stresses the relationships of organisms to each other, to their biophysical environments, and as they relate to humans. Emphasis may be directed toward plants, animals, or human biology including microorganisms, plant and animal structure, function, systematics, and evolution.

The program is flexible and provides an excellent disciplinary base for several concentrations. It is particularly appropriate as a co-major with Human Adaptability, Nutritional Sciences, Population Dynamics, Regional Analysis, and Science and Environmental Change, but other combinations might serve special needs. Some suggested courses of study are available from the Academic Advising office.

Biology courses are good preparation for medical, dental, veterinary, or other professional schools, graduate schools, or for careers in medical technology, environmental health, industry, and government.

A biology co-major combined with a concentration and professional study in education qualifies the student for certification as a biology teacher at the secondary school level.

Biology taken with an appropriate concentration and professional study in environmental administration offers another excellent career opportunity in government or private industry.

Twelve of the 24 credits required for a biology co-major must be distributed as follows.

Ecology (minimum 3 credits)
779-402 Population Biology
779-480 Biogeography
862-302 Principles of Ecology
862-322, 323 Ecosystems Analysis I and II
(If 322 is selected, 323 also is required.)
862-403 Limnology

Genetics/Evolution (minimum 3 credits)
204-303 Genetics
779-310 Introduction to Human Genetics
779-312 Evolutionary Processes
779-342 Human Evolution
779-401 Agricultural Genetics

Anatomy/Physiology (minimum 3 credits)
204-317 Structure of Seed Plants
204-340 Comparative Anatomy of Vertebrates
204-347 Developmental Biology
478-302 Comparative Physiology
478-311 Brain Function and Human Behavior
478-402, 403 Human Physiology and Lab
478-413, 414 Neurophysiology and Lab
779-318 Vertebrate Reproduction
862-311 Plant Physiology

Systematics/Classification (minimum 3 credits)
204-306 Ornithology
204-320 Field Botany
204-344 Vertebrate Zoology
204-350 Field Zoology
204-355 Principles of Entomology
204-402 Advanced Microbiology
862-310 Plant Taxonomy
862-312 Mycology

The remainder of the 24 credits may be from the following list or from any of the above. Appropriate January courses and independent study may be used. The 24 credits must include at least one lab *and* one field course.

204-302 Principles of Microbiology
204-345 Animal Behavior
779-412 Parasitology
862-363 Forest and Plant Pathology

All biology faculty members serve as advisers in their areas of specialization. Consult the chairperson for a complete list of advisers.

Chemistry

Adviser: Ronald Starkey

Chemistry is fundamental to the study of the biophysical environment, the dynamics of ecosystems, and the metabolic processes of living organisms. It is a key discipline for understanding the processes that have led to environmental pollution and for developing remedies to restore and maintain the quality of the environment.

Before beginning a 24-credit upper-level co-major in chemistry, students must take 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
226-224 Materials
226-223 Energetics
226-227 Qualitative Analysis

The following are required for the co-major:
226-302, 303, 304, 305 Organic Chemistry I and II with laboratories
226-311 Analytical Chemistry
226-320 Thermodynamics and Kinetics
226-321 Structure of Matter

At least one course must be selected from this list:
226-330 Biochemistry
226-410 Inorganic Chemistry

226-413 Instrumental Analysis
226-417 Nuclear Physics and Radiochemistry

Additional courses that may be used to satisfy the co-major requirements are:
226-322 Thermodynamics and Kinetics Laboratory
226-323 Structure of Matter Laboratory
226-331 Biochemistry Laboratory
226-418 Nuclear Physics and Radiochemistry Laboratory
694-328, 329 Principles of Nutritional Biochemistry with laboratory
694-485, 486 Advanced Human Nutrition
862-422 Environmental Biogeochemistry
862-434 Water Chemistry
862-450 Air Pollution Chemistry and Meteorology

The student should seek the assistance of a chemistry faculty adviser in selecting courses that best meet his or her needs.

Chemistry-Physics

Chairperson: Anjani K. Mehra

Chemistry-Physics is an interdisciplinary program that provides 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 preceed 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
226-224 Materials
226-223 Energetics
226-227 Qualitative Analysis
226-228 Fields and Relativity

Upper division courses must include 862-313, Mechanics I, and at least 2 credits from the following laboratory courses.
226-322 Thermodynamics and Kinetics
226-323 Structure of Matter
226-324 Advanced Physical
226-418 Nuclear Physics and Radiochemistry

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.

Communication Processes

Chairperson: Dean O'Brien

The disciplinary program is designed to improve skills in communicating (face-to-face and through printed, electronic, and photographic media) and to advance understanding of communication and language as social processes. Courses are clustered in three areas — linguistics, media, and interpersonal communications.

The study of linguistics involves a close examination of the structures and functions of language and the dynamics of its social and historical variations. At UWGB, linguistics is linked to studies in mathematics, psychology, sociology, history, biology, communication, education, and other disciplines. It also undertakes special field projects such as those in Oneida and Menominee languages, regional dialectology, and immigrant languages. Linguistics courses listed under the communication processes and Communication-Action and Intermediate University Seminars make it possible for the student to take at least 42 credits in the subject, but they are not all required for an undergraduate program. Ordinarily, the student will earn 12-16 credits in linguistics courses and 9-12 credits in related courses such as computer science, anthropology, sociology, psychology, logic, foreign languages.

Mass communications and photography make up the media cluster. This is NOT a traditional major in journalism or mass communications. It is an alternative preparation for work in public communications. It stresses coursework in the basics of journalism and graphic communication, experience in an ongoing communication enterprise, and a strong background either in some related communication areas or in subjects about which the student plans to communicate. Related communication areas would include theater, music, visual arts, public relations, literature, language, linguistics, speech, and photography. A student interested primarily in photography may approach the medium as social communication, aesthetic communication, and/or as applied photography and enroll supporting courses in communication (electronic media, journalism), in visual arts, and/or areas of application like environmental interpretation or education.

The third cluster, in speech and interpersonal communications, includes the use and training of the human voice, study and practice in public speaking and in oral interpretation, and help for the student in opening up his or her own capabilities for communicating. The courses fit productively into media and linguistics programs and, because oral communication is so important in most fields, the courses serve many students from other concentrations and disciplines. Students who wish to pursue these matters further are urged to sign up for courses in group dynamics, psychology of perception, growth and development, and allied subjects.

Students in communication processes often specialize in linguistics, print journalism, electronic media, photography, and public relations. Much of the coursework also is appropriate for those interested in environmental interpretation, education, advertising and marketing, administration, community science programs, and graphic arts, among other areas.

Earth Science

Chairperson: Thomas H. McIntosh (acting)

Earth science focuses on the physical components of the natural environment and how these abiotic factors influence the ecosystem in which we live. The emerging awareness of the need to use natural non-renewable resources wisely is creating an increasing demand for persons with a knowledge of earth science. Career and professional opportunities for earth scientists exist in education, business, industry, including agriculture, and a variety of governmental agencies. There is a demand for land use planners who have a background in this area of physical science. Greater specialization in one of the components of earth science, mining, energy, hydrology, oceanography, geology, astronomy, meteorology or soils can provide a sound basic educational foundation for entry into graduate school.

Students in earth science should preceed their co-major course work with 296-202, The Earth's Physical Environment. Upper-level work should begin with 296-302, Geologic Evolution of the Earth. The remaining 20 credits needed may be selected from a variety of courses according to career interests. One has the opportunity to broaden or specialize by selection of courses in advanced geology, soils, water, meteorology, physical geography, and marine science. Students should select an adviser within their area of interest early in their academic careers. The adviser will assist in the development of the interest area and in the selection of supporting courses in chemistry, physics, mathematics, or biology that may be necessary for the program.

Co-majors are taken as a supplement to a problem focused concentration. Most students find that earth science best supports concentration programs in Science and Environmental Change or Regional Analysis. Creativity is encouraged and one can develop sound imaginative educational programs with good career potential by combining earth science with concentrations as diverse as Communication-Action or Managerial Systems.

Economics

Chairperson: Michael D. Troyer

Economics is the systematic study of the use of resources and the processes involved in production, distribution, and consumption of 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 regional and community 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 an active role in business, industry, governmental agencies, educational institutions, and a host of community organizations. It also is appropriate law school preparation.

Economics is particularly appropriate when combined with social science concentrations: Modernization Processes, Regional Analysis, and Urban Analysis. But other concentrations can create equally relevant combinations, for example, Humanism and Cultural Change, Science and Environmental Change, Growth and Development, Human Adaptability, or virtually any other. Economics is useful for those seeking teacher certification in some fields.

Economics 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 preceed upper-level co-major work.

Students planning a co-major in economics should consider taking courses in other disciplines or concentrations for economics credit. Any economics option faculty member may approve such an arrangement. Particularly relevant courses may be found in philosophy, history, or the social sciences.

A student with an option 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.

Geography

Chairperson: William G. Laatsch

Geography is the systematic study of the location, variations, and interrelations of natural and cultural features of the earth. As such, geography is one of the disciplines that can effectively examine the world and its problems with a view toward a comprehensive understanding. The comprehensive spatial perspective provided by geography is useful to students with a wide variety of interests and goals. Therefore, geography courses are taken by many students other than those who plan to complete a co-major in geography.

Many courses offered by other units of the University may apply to a geography co-major. These units include Regional Analysis, Earth Science, Science and Environmental Change and Biology.

Students in geography are expected to become skillful in two or three tool subjects. These include maps and air photo interpretation, cartography, computer science, statistics, and field methods.

In addition to being a stimulating and satisfying discipline for study in its own right, geography is particularly relevant in the world today. A co-major in the discipline enables a student to study spatial variation in terms of particular topics, or to consider the interrelationships of physical and human phenomena within a particular region or regions.

At a time when environmental concerns have led to increased awareness of the necessity for planning and concern about resources, many fields need persons with expertise in various aspects of geography. Regional and urban planning are two of the most obvious career fields. Business, industry, agriculture, and government agencies utilize the geographer's skills. Teacher certification is available through the professional program in education. Geography can provide preparation for graduate study. Many geography-related careers require advanced degrees.

The following freshman-sophomore level courses are good preparation for students interested in physical geography:

296-202 The Earth's Physical Environment
416-201 The Regions of the Earth: A Geographic Appraisal of the Human Habitat
416-250 Maps and Air Photos
834-222 Man and the Ocean of Air
834-235 Wisconsin Landscapes and Regions

Students who wish to emphasize human geography, can prepare themselves for co-major work with the following foundation courses:

204-240 Plants and Civilization
416-202 Introduction to Cultural Geography
416-215 Economic Geography
416-250 Maps and Air Photos
478-201 Adaptation to the Environment

History

Chairperson: Paul Abrahams

History endeavors to study systematically the cultural, political, and social aspirations, achievements, and failures of humanity. Through history we increase our understanding of the changes that have occurred in people and societies, and their relationship to the natural environment in which they existed.

History helps us appreciate more keenly the commonality and diversity of culture and society and leads us to a more profound awareness of our own heritage. Since our judgments for acting in the present and planning for the future are invariably based on our 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 student choosing to co-major in history will find its offerings a particularly useful preparation for most of the professions, especially education, law, journalism, theology, politics, government, and the broader aspects of business and social planning. In short, history provides a solid background for thinking about and resolving the problems of society.

Students should consult with a faculty adviser to work out an appropriate program of courses in history and related fields.

Literature and Language

Chairperson: E. Michael Thron

The literature and language disciplinary program is a grouping of the traditional subjects of English, French, German, and Spanish. Freshman and sophomore courses are offered in all these subjects for the student interested in acquiring either a general knowledge of English, American and foreign literatures, or in acquiring speaking and writing skills in English, French, German and Spanish. These same courses offer a good background for a major in any of the languages offered or in English and American literatures.

Junior and senior, as well as lower division, offerings reflect the concern of the faculty for the value and usefulness of clear writing and the careful reading of literature. In fact, the writing and the reading of literature are an essential part of an educated understanding of the past, the present, and the future. Literature reflects and comments upon the world as we live it and, in some cases, literature has transformed the way we live.

It is impossible to understand the richness of our own American past without such books as *Huckleberry Finn, The Red Badge of Courage,* and *Moby Dick;* but it is also difficult to understand another culture without understanding its literature because literature has been and remains one of the most creative and accurate expressions of any society's true worth. The traditional subjects are combined so that students may understand the literature and language of our own particular culture and the cultures America must recognize in the international community.

The faculty provides a writing program in English, both expository prose and creative prose and poetry. In addition, an experimental offering entitled *Student Regional Theater* which allows a student writer to create and produce a play is being developed.

The literature and language program may be practically combined with any concentration for a co-major and provides the basic elements of the Certification Program in Communication Arts offered by the professional program in education. Teaching certificates as well can be obtained in English, French, German and Spanish using our courses plus the required certification courses offered by Education.

Retroactive credit in French, German or Spanish for high school work may be obtained if the student passes 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. Credit will be given for college language courses preceding the one in which the student is enrolled up to a maximum of eleven credits.

Each semester the literature and language faculty publishes an advising booklet to help students plan individual programs. If you wish a current copy, please contact the chairperson.

The literature and language faculty serves the educational careers of students at UWGB, whether they take just one course or a co-major. Most of all, it welcomes those who enjoy reading a good book.

Mathematics

Chairperson: Allison P. Loomer

The 24 credits of upper-level courses required for the mathematics co-major provide the traditional major in mathematics that forms the background for graduate study in universities throughout the nation.

After studying lower-level courses in calculus, linear algebra and differential equations, students choose 24 credits for the co-major from the mathematics courses numbered in the 300's and the 400's. January timetables list additional one-time offerings.

Most of the upper-level courses are given in alternate years, becoming available in either the junior or senior year.

Mathematics may be combined with education courses to gain teacher certification. Completing 24 credits of upper-level courses with faculty advice will more than prepare students for the "teaching major" in mathematics. (By taking more than 10 lower-level credits, it is possible to qualify for the teaching major while not completing the UWGB co-major.)

Many students apply the mathematics co-major to the concentration in Science and Environmental Change. Other appropriate combinations are Population Dynamics, Regional Analysis, Urban Analysis, and Humanism and Cultural Change. A personal concentration also can be created with mathematics courses.

In addition to being of major interest to many students in itself, mathematics also serves as a tool for other areas of investigation. Students enter lower-level courses, and some upper-level courses as well, in order to build skills which they may apply to their own fields of interest. Increasingly, applications for mathematics are being discovered in disciplines which once were thought to be unsuited for quantification.

Mathematics faculty members strive to meet the needs of students with a wide variety of interests and are always ready to counsel with students who want to know how to best profit from the program.

A typical sequence of courses a student might select to produce a co-major in mathematics follows.

Freshman Year

600-202, 203 Calculus and Analytical Geometry I and II

Sophomore Year

600-205 Elementary Differential Equations
600-221 Elementary Linear Algebra
600-209 Multivariate Calculus
600-309 Systems of Ordinary Differential Equations

Junior Year

600-312 Real Analysis
600-328 Introduction to Algebraic Structures
600-311 Advanced Calculus
600-385 College Geometry

Senior Year

600-321 Linear Algebra I
600-410 Complex Analysis
600-382 History of Mathematical Thought

Students interested in statistics could replace some of the above courses with:
600-260 Elementary Statistics
600-360 Theory of Probability
600-361 Theoretical Statistics
600-362 Methods of Statistical Analysis
600-364 Biometrics

Those whose preference is for computer science may select replacements from the following list.
600-150 BASIC: A Time-Sharing Computer Language
600-151 Introduction to COBOL: A Business Data Processing Language
600-152 An Overview of Computing for Non-Scientists
600-251 Computer Science
600-252 Machine Organization
600-350 Numerical Analysis
600-353 Advanced Programming

Students with an interest in the applications of mathematics may select from the following replacement courses.
226-315 Mechanics III
600-416 Orthogonal Functions and Partial Differential Equations
862-318 Engineering Systems and Automatic Control
862-355 Applied Mathematical Optimization
862-495 Mathematical Political Science.

Students are encouraged to seek the assistance of mathematics faculty members in planning a program to meet their individual needs and interests.

Medical Technology

Chairperson: Dorothea Sager

Medical technology is offered in conjunction with affiliated hospitals. It is designed to train technologists to perform an ever-increasing variety of diagnostic laboratory procedures and to improve the technologists' understanding of the complex principles underlying these procedures. The increasing use of clinical laboratory tests in the diagnosis and care of a patient has led to career opportunities for skilled medical technologists in hospitals, clinics, Public Health Service, and medical research laboratories.

Medical technology is offered as a professional co-major with a related problem-oriented concentration (e.g. Population Dynamics, Human Adaptability, Nutritional Sciences). During the first 3 years of study, the student fulfills requirements for the concentration and the co-major and takes the prerequisites necessary for entrance into a one year clinical internship program.

In the fall of the junior year the student applies for the internship training at a hospital affiliated with UWGB (St. Vincent's Hospital, Green Bay; Theda Clark Hospital, Neenah). To be considered for the senior year internship a minimum of 92 credit hours of course work, including specific courses in chemistry, biology, and mathematics (see below) must be completed with at least a 3.0 average grade point.

Successful completion of three years at UWGB plus the one-year clinical internship program qualifies the student for a bachelor's degree and eligibility to take the examination for certification given by the Board of Registry of Medical Technologists of the American Society of Clinical Pathologists.

Since the medical technology program is currently under review, it is especially important that entering students consult with the chairperson before or during registration for further information.

Minimum course requirements to enter the clinical internship include:

Fundamentals of Chemistry-Physics

226-120 Basic Concepts
226-121 Atomic and Molecular Structure
226-122 Fluids and Solutions
226-123 Energy and Power
226-224 Materials

Chemistry

226-300, 301 Bio-Organic Chemistry with laboratory
226-311 Analytical Chemistry

Biology

204-202 Biology of Cells
204-203 Biology of Organisms
204-302 Principles of Microbiology

Plus 4 additional credits in biological sciences, selected from the following:

478-402 Human Physiology
779-310 Introduction to Human Genetics
Introduction to Medical Technology (being developed)

Mathematics

600-260 Elementary Statistics

Other Recommended Courses

478-320 Human Growth, Development, and Senescence
600-251 Computer Science
694-328, 329 Principles of Nutritional Biochemistry with laboratory
779-318 Vertebrate Reproduction
779-412 Principles of Parasitology

A typical program of course work for the student who selects a Population Dynamics concentration with the medical technology co-major is given below. Combinations with other concentrations also are possible, as noted above. The courses listed do not include all-University requirements or electives, which must be added by the student to complete the 124-credit degree requirement. The adviser can assist in making these choices.

Freshman Year

204-202 Biology of Cells
204-203 Biology of Organisms
226-120 Chemistry-Physics: Basic Concepts
226-121 Chemistry-Physics: Atomic and Molecular Structure
226-122 Chemistry-Physics: Fluids and Solutions

Sophomore Year

204-302 Microbiology
226-123 Chemistry-Physics: Energy and Power
226-125 Chemistry-Physics: Basic Instrumentation
226-300, 301 Bio-Organic Chemistry with laboratory
600-260 Elementary Statistics

Junior Year

226-311 Analytic Chemistry
478-402 Human Physiology
694-328, 329 Principles of Nutritional Biochemistry with laboratory
779-310 Introduction to Human Genetics
779-312 Evolutionary Processes
779-318 Vertebrate Reproduction
779-412 Principles of Parasitology

Senior Year

628-400, 401, 402 Internship in Medical Technology

Music

Chairperson: Robert Bauer.

The study of music provides basic technical and theoretical work for students interested in pursuing career goals in teacher certification at the primary and secondary levels, performance, theory/history, composition, or entrance into graduate programs. Professional courses in administration prepares for a career in industry or merchandizing. A curriculum in music therapy also is possible.

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 necessary prerequisite skills are advised to take 705-101, Basic Musicianship, before enrolling in the music theory/literature sequence.

It is recommended that students 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 level to prepare for entrance into many upper-level courses.

All students in music are expected to distribute their courses across several areas, including general liberal education, broad-field studies in aesthetics and expressive traditions, and the general areas within the music curriculum (theory-history, applied performance, conducting, ensemble performance, etc.). Many students also include a professional program in education, social services, or environmental administration, depending upon their career goals.

UWGB's academic units presently support several areas of emphasis within music: music education, applied performance, jazz, and music business. Each of these areas of emphasis also includes interdisciplinary course work in aesthetic awareness and expressive traditions, which reflects our belief that music must interact with other art forms as well as other disciplines outside the traditional fine arts. In the area of music education, this interaction is reflected through certification in aesthetic education and music education, and it is usually developed through the concentration in Communication-Action, an interdisciplinary unit made up of faculty in fine arts, communications, and environmental design. However, combinations with other interdisciplinary programs can also be negotiated. Professional training is obtained through the professional programs in education, social services, leisure sciences, and environmental administration.

The usual credit distribution for music students (not including all-University requirements) is as follows:

- 6 cr. in skills development courses (lower division)
- 12 cr. in advanced courses in aesthetic awareness and expressive traditions
- 24 cr. in music theory and history
- 3 cr. in conducting
- 18 cr. in major and minor applied instruments
- 6 cr. in ensemble performing groups
- 7-9 cr. in electives, determined by career direction
- 20-26 cr. in professional program, if elected

The above credit distribution will vary somewhat for students in particular areas of emphasis in music education, applied performance, or music business, but minimum requirements can usually be met within four academic years if students' programs are carefully planned. Graduation requires a minimum of 124 credits, but teacher certification requirements in Wisconsin usually can only be met with about 140 credits.

UWGB's academic plan enables many unusual and productive combinations of disciplinary and interdisciplinary studies. Students interested in applied performance will concentrate more of their course work in music and develop a strong background in aesthetics, criticism, and history of the arts, while students in music education will distribute their course work across several areas in order to meet certification requirements, including aesthetic

awareness, disciplinary courses in music, educational methods, practice teaching, etc. By adding only four credits beyond minimum requirements, music education students can meet requirements for additional certification in aesthetic education. Students in music business will take professional courses in administration, including accounting, business law, distribution, management, retailing, etc. Students with a major interest in musical theater will include course work in acting, dance and movement, and theater history as part of their programs of study.

UWGB's music programs emphasize quality training in vocal and instrumental music, with a significant number of solo and ensemble performance opportunities, both on campus and in the larger community. Music facilities include two large rehearsal halls, recording facilities, a music library and listening facility, 64 practice rooms, and a substantial inventory of instruments for student use.

All music faculty members serve as advisers to students in their areas of specialty. Students are encouraged to consult with them to develop individual programs to meet interests and career goals.

Philosophy

Chairperson: Orville Clark

The study of philosophy makes students aware of the intellectual structure from which they perceive their world and in terms of which they may seek to live in or change their world. Philosophy begins with an appreciation of the Socratic dictum, "The unexamined life is not worth living," and moves through the critical analysis of ideas to a reflective consideration in depth of contemporary challenges to values, beliefs, being, and systems of thought.

Courses in philosophy include interdisciplinary emphasis on ethics, aesthetics, metaphysics, philosophy of language and literature, philosophy of science, contemporary philosophical movements, and social and political philosophy.

Students choosing to co-major in philosophy will find it useful in the pursuit of many different occupations and a productive dimension of their active participation in University studies and community endeavors. Philosophy is excellent preparation for graduate study in philosophy, law, fine arts, the physical and social sciences, and education.

The following courses are required for a philosophy co-major.
736-302 History of Ancient Philosophy
736-313 History of Medieval and Renaissance Philosophy: Augustine to 1600
736-314 History of Modern Philosophy I: Descartes to 1850
736-324 Contemporary Philosophical Movements

At least one of the following:
736-404 Major Philosophic Figures
736-406 Philosophical Problems in Psychology

Physics

Adviser: Nancy Sell

Physics is the study of the processes and properties of matter and energy. Among the subject areas are atomic and nuclear structure and processes, optics, electricity and magnetism, and instrumentation. Physics plays a fundamental role in basic and applied scientific development. It is central to the related disciplines of chemistry, astronomy, mathematics, and engineering and is an essential complement of earth sciences and biology.

Before beginning a 24-credit upper-level co-major in physics, students must take 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
226-224 Materials
226-223 Energetics
226-228 Fields and Relativity

The following are required for the co-major:
226-321 Structure of Matter
226-404 Electricity and Magnetism
226-417 Nuclear Physics and Radiochemistry
862-313 Mechanics I
862-317 Electromagnetic Radiation

Additional courses that may be used to satisfy the co-major requirements are:
226-315 Mechanics III
226-320 Thermodynamics and Kinetics
226-405 Electronics for Scientists
862-306 Biophysics
862-332 Introduction to Geophysical Fluid Mechanics
862-350 Meteorology

Students should select courses with the assistance of a faculty adviser.

Political Science

Acting Chairperson: David M. Littig

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 co-major 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 co-major for 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 a co-major 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.

Psychology

Chairperson: Bela O. Baker

Psychology involves the scientific and systematic study of human and animal behavior, relating such behavior to both physiological and environmental conditions. It emphasizes human relations and the adjustment of the individual to society, focusing on the understanding, predicting, and influencing of social behavior.

The study of psychology combines well with concentrations in Modernization Processes, Human Adaptability, Humanism and Cultural Change, Population Dynamics, and Communication-Action. It has especially close ties with Growth and Development and most students who choose the psychology co-major will take at least some coursework in that concentration. Teacher certification can be gained in a combination with the professional program in education.

There are no fixed requirements for a psychology co-major, but most students find it necessary to acquire a background in statistics and experimental methods and to complete advance courses in three general areas: Psychological processes such as learning, perception, and thinking; human development; and social behavior.

Psychology helps to deepen understanding of individual and social behavior and provides a good general background for a career in business or government. Graduate degrees are generally required for specialized professional work such as psychological testing, counseling, research directing, and college teaching. Preparation for graduate work should combine an emphasis on research methods with a broad program of liberal arts and a sound background in psychology.

UWGB psychology graduates may find jobs or continue their study in graduate schools in the following special fields: social, counseling, developmental, experimental, educational, physiological, personality, or industrial psychology.

Psychologists are employed in adoption and child care agencies, welfare and social service agencies, business, community organizations, courts and correctional institutions, research institutes and government agencies such as the Public Health Service, Veterans Administration, and Department of Defense.

Sociology

Chairperson: Carol Pollis

Sociology is oriented toward the study of patterns, origins, and consequences of social relationships. It focuses on the organization and functions of society as well as on the structure and operation of the institutional components of society.

The sociologist is concerned with understanding the behavior of human groups; those groups or aggregates may range from the very small to those as large and complex as nations. Because people spend their lives in the context of groups, it is critical to understand the dynamics of those situations if we are to make inroads in comprehending and solving human problems.

Sociology is an appropriate co-major with the social science concentrations: Modernization Processes, Regional Analysis, and Urban Analysis. Other combinations also are relevant. A student in Growth and Development might select a co-major in sociology to explore the behavior of groups of people, for example.

Sociology students can prepare for careers in specialized areas by choosing a professional program in education to provide teacher certification, in social services to work in community or social agencies, or in environmental administration to prepare for administrative positions with public agencies.

Students with bachelor's degrees often find jobs as case workers, interviewers, or research assistants. For higher level positions, including researcher, college professor, administrator, or consultant, an advanced degree usually is necessary.

Jobs may be found in many institutions, for example: adoption and child care agencies, colleges, schools, community organizations (such as recreation departments, YMCA-YWCA's, Boy Scouts, etc.), courts and correctional institutions, government agencies, hospitals, labor unions, personnel departments, and other social service agencies.

An education based on sociology also would form a good basis for careers such as law, journalism, social work, public administration, and politics.

Theater

Chairperson: Jack Frisch

Theater is a communicative exchange between the actor and the audience. This collaboration makes theater unique among the arts, because it makes each performance an individual work of art. An exchange of emotion and ideas develops through performance, making theater the most immediate and participatory of the communicative arts and sharply illuminating social, humanistic, and aesthetic qualities of life.

The theater program is designed to teach students about the nature of theater, to provide professional training for careers in the arts and crafts of the theater, to provide a context in which students can improve the quality of their aesthetic experiences, to prepare students to teach theater, and to contribute to the theatrical awareness of the University and the larger community.

Theater students work under varying degrees of guidance, from rigorous faculty supervision in formal courses and major productions to more independent work in the alternate theater program. They are exposed to the history and literature of the theater, and they are acquainted with the discipline of a professional life in the performing arts.

Although not as intensive or as narrowly focused as a professional school program, the theater program at UWGB includes four major areas of emphasis: acting and directing;

technical theater; dance; and theater history, literature, and criticism. All theater students are involved with all of these areas.

Students pursuing a program in technical theater will take a major program in acting, plus course work in directing, voice and speech, dance, theater history, technical production, and performance.

Students pursuing a program in technical theater will take course work in costume design, scene design, lighting and sound design, properties, technical direction, and theater management, with additional course work in theater history, dance, acting, and directing.

Students in dance will take extensive course work in classical and modern dance, advanced technique, and choreography, coupled with courses in acting, voice, theater history, technical production, and physical activities.

Students in theater history and literature will, in addition, include literature and language, acting, technical production, and performance. Course work in playwriting also is offered and encouraged.

The theater program tries to provide a congenial and lively environment for both established and experimental theatrical forms, learning from the accumulated experience of the past and encouraging experimental ideas from both students and faculty. By offering a diverse range of performance opportunities and course work, the program hopes to offer to faculty, students, and community a quality experience in theater.

Faculty advisers are available to help students plan a program of study in theater that meets their future goals.

Visual Arts

Chairperson: Thomas J. Tasch

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 aesthetic 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 visual arts studios provides the opportunity to develop competencies, skills, and knowledge in varied and diverse art media. Emphasis is directed to both the conceptual and perceptual activities of two and three dimensional media.

Most students choosing visual arts for a co-major will major in Communication-Action or Humanism and Cultural Change, but other concentrations may be equally appropriate, depending upon interests and needs. For example, a student who wants to be a medical artist or illustrator in the biological sciences might combine visual arts with a concentration in Human Adaptability. A combination with the professional program in education provides teacher certification through grade 12.

Career opportunities in fields related to art are diverse. Possibilities include work with advertising departments and firms, architectural firms, art galleries, photography studios, museums, department stores, business corporations and industries, historical societies, publishing companies, community organizations such as recreation departments and YMCA-YWCA's, and film and television industries.

Many combinations of interests are possible and in some cases necessary to prepare a student for careers in the arts. Visual images are used throughout our society, in business, recreation, and education. Often the artists most in demand are those who show a strong background in several areas of art and design, and combine this expertise with other knowledge such as history, journalism, marketing, psychology, or other fields.

PREPROFESSIONAL PROGRAMS

There are basically three kinds of preprofessional opportunities at UWGB. First, fulfilling requirements for virtually any degree program offers appropriate preparation for most graduate professional schools. A UWGB bachelor's degree and appropriate background in the area in which study is to be continued will provide entry into such programs as law, medicine, dentistry, social work, and in subject matter areas in the humanities, social sciences, life sciences, physical sciences, business and management, and education. UWGB graduates are especially well prepared for entry into the increasing number of interdisciplinary graduate programs. Former students have been accepted by, and earned degrees from, many of the country's leading graduate schools.

Another preprofessional program opportunity provides two years of basic, foundation studies in preparation for a technical program such as engineering. Such programs have been developed by UWGB faculty members to serve students who wish to transfer to the school offered the technical degree after two years at UWGB. The third possibility is similar, except that the student spends three years at UWGB and two years at the technical college, earning bachelor's degrees from both.

The following listing is typical of the kinds of preprofessional programs available. It is by no means exhaustive and students may be able to develop other programs to meet their individual needs. The student interested in pursuing a preprofessional program should consult an appropriate adviser.

Agricultural Science

UWGB provides adequate basic preparation for the prospective student in agricultural science. The student would ordinarily take two years at UWGB, transferring at the beginning of the junior year to a school or college of agriculture. In the freshman and sophomore years, such a student is advised to contact the office of Academic Advising which can identify UWGB faculty members with appropriate agriculture backgrounds who can be helpful. UWGB offers basic courses in the physical and life sciences, the social sciences, and humanities that are necessary for entry into a variety of agriculture programs. UWGB has several courses that are directly applicable to agricultural sciences.

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

Graduate professional instruction in city planning and community development is available at many universities. The student is advised to obtain a catalog from the institution of his or her choice, and be guided primarily by its requirements and recommendations.

The degree requirements of UWGB are flexible enough that the student, in consultation with an adviser, may construct a suitable preparatory program. No individual can be expected to master all the subjects and skills desirable in this profession, particularly in an undergraduate program. However, the Urban Analysis program of study in urban planning provides a solid introduction to the fundamental principles and methods of practice in this profession. Among the Urban Analysis courses which are of value to the pre-planning student are 938-421, Urban Planning I, 938-422, Urban Planning II, and 834-325 Human Living Space I.

Students who have enrolled in Urban Planning II have had the opportunity to participate in actual planning projects in the City of Green Bay. These projects have included a comprehensive neighborhood plan, a comprehensive park plan, and a comprehensive neighborhood organization plan for various parts of Green Bay. Thus the preplanning student is advised to consider the concentration in Urban Analysis, disciplinary programs in economics and political science, and a professional program in environmental administration.

College and University Teaching

The teaching profession in institutions of higher learning differs markedly in its education requirements from the teaching profession at the elementary and secondary level. To enter the ranks of the academic profession, emphasis is placed entirely upon mastery of the subject matter field the prospective professor wishes to teach.

There are no professional courses in teaching methods or in practice teaching. Instead, it is expected that the student will obtain a bachelor's degree in the field in which he or she wishes to teach. Subsequently the student enters a graduate school and pursues a program of graduate study leading to the master's or doctoral degree.

While at one time the master's degree was enough, the trend is strongly toward obtaining what is called a terminal degree, which means the highest degree attainable in the field. In most fields, it is the Ph.D. degree, but in some fields, such as fine arts, another degree is considered to be terminal.

For admission to a graduate school, the applicant's credentials are ordinarily examined by a committee of professors in the area the applicant wishes to pursue. In deciding whether or not to admit the applicant, the committee looks primarily to the grade point average he/she has attained.

Excellent grades are especially important in the area of choice. Other things being equal, the student should have taken a considerable amount of work in that area. At UWGB, this means that the student should have chosen a disciplinary or professional program in that discipline or field. A student with an exceptionally high grade point average may be admitted, even though he or she does not have adequate preparation in the discipline, in which case he/she will probably be required to take some undergraduate courses in preparation for graduate work.

The student interested in pursuing an academic career should write to the Educational Testing Service, Princeton, New Jersey 08540, to obtain a copy of the handbook describing the nature and components of the Graduate Record Examination. Almost all graduate schools in the United States require applicants to take this examination. For information on the dates and times when the GRE is given in Northeastern Wisconsin, contact the UWGB director of placement.

Engineering

Students who wish to begin preparation for a career in engineering at UWGB can enroll in a pre-engineering program. In one program (call the 2-2 program) the student obtains a fundamental scientific background for entry into an engineering school. In the other program (called the 2-2 program) the student obtains a degree from UWGB and a degree from an engineering school. Both of these programs are administered by the Science and Environmental Change concentration.

If the student elects the 2-2 program his or her first two years of study will be at UWGB and the last two years of study will be at an engineering school where the degree requirements for graduation at that school will be fulfilled. The result of completing this program will be a degree in engineering from the engineering school attended.

If the student elects the 3-2 program, he or she attends UWGB for three years, fulfilling his or her pre-engineering requirements and UWGB requirements for graduation. He or she then transfers to an engineering school to complete the degree requirements of that school. Completion of this program will result in the awarding of two degrees — one from UWGB and the other from the engineering school.

In either case, a student should select as early as possible the engineering school he or she plans to attend. Then, in consultation with an adviser, the student should adjust his or her program to meet the transfer requirements for the engineering field of his or her choice.

As an aid in helping the engineering student plan an efficient course of study, with either the 2-2 or 3-2 program, the following list of regularly scheduled courses is recommended for students planning a program in one of the engineering disciplines: Agricultural Engineering (Ag. E), Chemical Engineering (Ch. E), Civil Engineering (EC), Electrical Engineering (EE), Engineering Mechanics (EM), Industrial Engineering (IE), Mechanical Engineering (ME), and Metallurgical Engineering (MET).

Courses Applicable to all Engineering Disciplines

226-120 Chemistry Physics: Basic Concepts
226-121 Chemistry-Physics: Atomic and Molecular Structure
226-122 Chemistry-Physics: Fluids and Solutions
226-125 Chemistry-Physics: Basic Instrumentation
226-223 Chemistry-Physics: Energetics
226-224 Chemistry-Physics: Materials
226-227 Chemistry Physics: Qualitative Analysis
226-228 Chemistry-Physics: Fields and Relativity
600-202, 203 Calculus and Analytic Geometry I and II
600-205 Ordinary Differential Equations
600-209 Multivariate Calculus
600-221 Elementary Linear Algebra
600-309 Systems of Differential Equations
862-295 Computer Programming for Scientists
298-203 Micro Economic Analysis

Humanities and Social Science courses such as history, psychology, foreign language, literature, and public speaking also should be included.

Courses Applicable to all Disciplines Except EE:
862-313, 314 Mechanics I and II
862-316 Mechanics of Materials

Courses Applicable to CE, IE, ME, Ch.E, and EE:
600-260 Elementary Statistics

Courses Applicable to AG.E, CE, EM, ME, MET, EE:
862-105 Elements of Descriptive Geometry
862-332 Introduction to Geophysical Fluid Mechanics

Courses Applicable to Ag.E, Ch.E, EE:
Biology — A wide range of courses
Chemistry — A wide range of courses

Courses Applicable to CE:
862-330 Hydrology
862-xxx Water Supply and Sewage Treatment

Students interested in the 3-2 program would take additional courses in biology, chemistry, earth science, and other areas to increase their breadth of education.

Health Professions

Medicine. Although colleges of medicine differ in their specific entrance requirements, all of them emphasize the importance of exceptional ability, high aptitude in science, and outstanding achievement in premedical college education. A student who plans to apply for admission to a particular college of medicine should become familiar with the requirements of that college and make certain that the courses for which he or she registers will meet those requirements.

The minimum requirement for admission to colleges of medicine is 90 credits of college work. However, almost all the leading medical schools require a bachelor's degree, and it is desirable in order to meet the competition presented by well-qualified candidates.

All medical colleges specify certain subjects. The following list is representative, although not applicable in every case: Biology 202 and 203; 6 credits of advanced biology, 15 credits of chemistry-physics, 8 credits of organic chemistry, 4 credits of analytical chemistry, 6 credits of English literature and language, and 6-8 credits of mathematics. Physical chemistry and mathematics through calculus provide a useful background and allow a better understanding of the basic concepts of human biology.

In addition to evidence of academic competence, other qualifications for admission are considered. Special attention is given to letters from college professors, premedical committees, and impressions gained from personal interviews.

Applicants are almost always required to take the Medical College Admissions Test preferably not later than the October preceding the desired year of admission. Students should consult the UWGB premedical adviser regarding the formulation of their programs.

Undergraduates wishing to enter the University of Wisconsin-Madison Medical School after the third year should see the UW catalog, part 1, or consult the premedical adviser.

Dentistry. The minimum requirement for admission to colleges of dentistry is 60 credits of college work. Almost all the leading dental colleges, however, require completion of a minimum of 90 credits. All dental colleges specify certain subjects. A representative list would include Biology 202 and 203, 15 credits of chemistry-physics, 10 creidts of advanced biology and chemistry, and 6 credits of literature and language. In many cases, the student is advised to take more than the minimum amount of work in the subjects represented in the prerequisite sciences.

Electives should emphasize those subjects that will afford the student the broadest possible background. In any case, the student should examine the catalog of the dental school to which he or she plans to seek admission and, with an adviser, formulate a program of courses accordingly.

Nursing. For the student who desires to prepare for a professional career in nursing or nursing science, a choice may be made 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 collaboration 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.

1. The Diploma Program at Bellin Memorial Hospital School of Nursing. This program prepares the student for certification as a registered nurse. In addition to the professional training offered at Bellin, the following university courses or their equivalents are required: 12 credits in biology, 5 credits in general chemistry, 6 credits in psychology, and 3 credits each in growth and development, nutritional sciences, and sociology. The student must also demonstrate proficiency in English composition. Other courses, some of which may be required, bring the total credits earned to 42.

To participate in this program, the student must be admitted both to the Bellin School of Nursing and to the University. Separate application blanks are required by the hospital nursing school and the University. For further information, write to the Director of the Bellin Memorial Hospital School of Nursing, P.O. Box 1700, Green Bay, Wisconsin 54305.

1. The Baccalaureate Program. The schools of nursing of the University of Wisconsin offer programs leading to the bachelor of science degree in nursing and prepare the high school graduate with no previous experience in nursing for registration as a professional nurse. Normally one year may be taken at UWGB; UW-Milwaukee students may take two years. The remainder is offered at the schools of nursing on the Madison, Milwaukee, Eau Claire, and Oshkosh campuses. Under this plan the B.S. degree earned is that awarded by the school of nursing.

Required courses are listed in the catalogs of the respective schools. Each student must apply to the school of nursing which he or she wishes to attend for admission to the last two or three years of the nursing program. Admission is based on qualifications for nursing, grade point average, educational facilities of the school, and other relevant factors.

Registered nurses who wish to obtain a bachelor's degree may be admitted to the program described above. Advanced standing for previous work in a diploma or associate degree program may be earned through examination and satisfactory performance in an introductory required nursing course. The appropriate school of nursing should be consulted early for program planning.

Pharmacy. The University of Wisconsin-Madison pharmacy program offers the bachelor's degree after completion of five years of work — two years of prepharmacy which may be completed at UWGB, and three years in the School of Pharmacy on the Madison campus. Basic requirements of the prepharmacy program are 60 semester hours including Biology 202 and 203; Chemistry-Physics 120, 121, 122, 123, 125; 224 or 227; and 303, 304, and 305; 3 credits in economics; 6 credits in written and oral communications; and 8-9 credits in mathematics, including Mathematics 202.

Veterinary Medicine. A student interested in seeking admission to a professional school of veterinary medicine should consult an adviser as early as possible to work out a preprofessional course program that will satisfy the admission requirements of the school of his/her choice. The University of Wisconsin does not grant a degree in veterinary medicine.

While admission requirements for veterinary schools vary, the following requirements are typical: a minimum of two years (60 credits) of prescribed preprofessional college work is required, in which the student must have attained a stipulated grade point average, which ordinarily is higher than the 2.0 level. Typically, credits earned at UWGB would include Biology 202 and 203; Chemistry-Physics 120, 121, 122, 123, 125, 302, 303 with lab; 6 credits in written and oral communication; 4-6 credits of calculus or college algebra and trigonometry; and 3 credits of introductory economics.

Because of limited facilities, admission to a college of veterinary medicine is on a competitive and selective basis. A pre-admission conference with members of the veterinary faculty or admissions committee is usually required. High school records, scholastic attainment in preprofessional course studies, aptitude, character, and personality are given preference.

A student in veterinary medicine who wishes to receive both the degrees of doctor of veterinary medicine and bachelor of science must take at least three years of work in the curriculum at UWGB. The student's program must have the approval of the dean of the colleges and preliminary approval of the veterinary medical school of his or her choice. The professional curriculum extends over a period of four years and leads to a degree of doctor of veterinary medicine.

Home Economics

The student interested in obtaining a bachelor's degree in home economics may usually attend UWGB during the freshman and sophomore years, transferring to a school of home economics at the beginning of the junior year. The preprofessional student in home economics should obtain a copy of the catalog of the school of his or her choice and plan the first two years with a faculty adviser. The following freshman and sophomore courses are typically required: Chemistry-Physics 108, Economics 102, Human Adaptability 104, Nutritional Sciences 232, Psychology 102, Sociology 202, 18 credits of literature and other humanities, and one semester of physical education.

Law

Graduation from an approved college is a prerequisite for admission to virtually every law school. Occasionally admission is granted to exceptional students who have completed at least the first three years of work leading to a bachelor's degree and whose academic record and aptitude for law study are especially promising.

In the words of the Law School of the University of Wisconsin-Madison, "it is impossible to recommend a precise course of study or list of courses for all persons intending to study law. In fact, since law touches every facet of human life, the law school looks for diversity in educational background . . ."

The Association of American Law Schools has the following observations concerning desirable areas of pre-law study. The lawyer must be able to communicate effectively in oral and written expression. The mastery of logic should be pursued. Courses in the social sciences, history, physical sciences, philosophy, and accounting also are recommended.

Finally, law schools recommend that attention be paid to three principles: excellence of instruction, which means studying under the best teachers; pleasure, which means studying those subjects the student will like when he or she has worked hard at them; and depth, particularly if this involves a major writing project.

The pre-law student is urged to purchase the handbook entitled "Law Study and Practice in the United States," which may be ordered from the publisher, West Publishing Company, St. Paul, Minnesota 55102. After studying the handbook, the student should plan a program with a faculty adviser.

The practice of law requires a clear perception of an issue, the analysis of its components, and the ability to pursue its resolution. For this purpose, a problem oriented education such as is offered at UWGB is especially appropriate.

Several concentrations provide the opportunity to develop these capabilities. The Modernization Processes concentration has developed several courses especially oriented toward pre-law students.

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.

Undergraduate preparation at UWGB for a master of social work should include work in the social services professional program (21 credits), courses in the Growth and Development concentration (6 credits), and the course in social science statistics (3 credits). The student's concentration should provide exposure to at least two of these major or disciplinary areas: Urban Analysis, Modernization Processes, Growth and Development, anthropology, economics, political science, sociology, and history. At least one course in ethnic or minority studies would be useful.

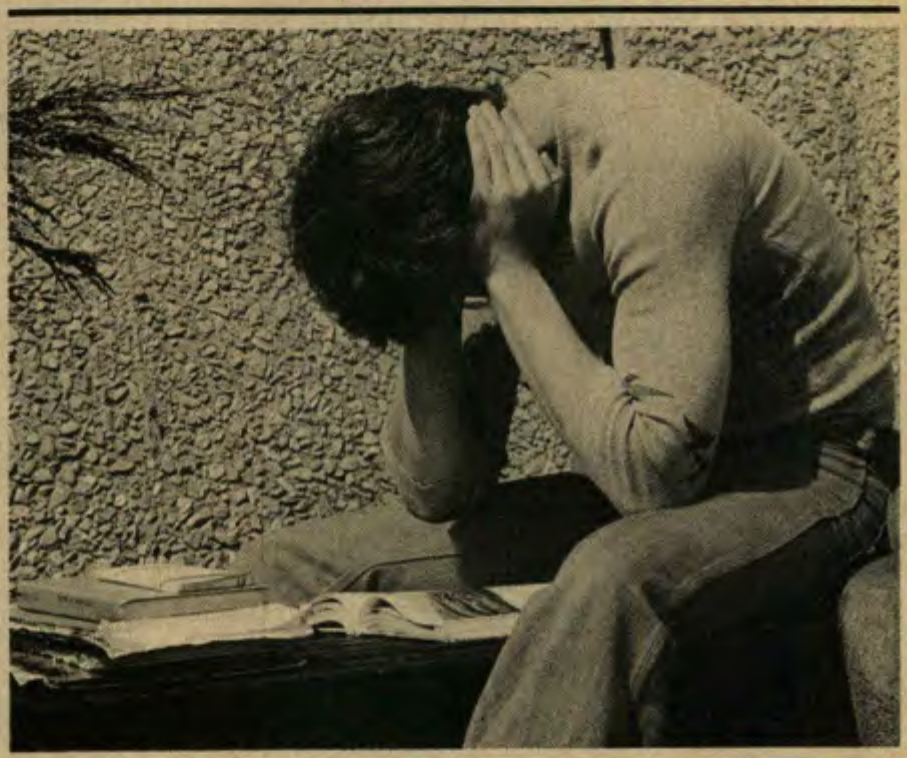
It is strongly urged that students considering a future in social work contact a social services program adviser for help in planning their programs.

Theology

All accredited theological seminaries and divinity schools require the bachelor's degree or its equivalent for admission. The American Association of Theological Schools, the accrediting agency, strongly recommends the liberal arts course as the best background for admission,

and suggests the following undergraduate courses: 18 credits of literature and composition; 15 credits each of philosophy, religion, and history; 6 credits of natural science; 12 credits of social science; and reading knowledge of a foreign language.

The pretheology student will find that satisfying the general degree requirements at UWGB will almost automatically fulfill admissions requirements for graduate schools in theology, with the exception of the course work in religion.



Water Resources and Hydrology

The Science and Environmental Change concentration provides the basic background required for entry into graduate hydrology programs. The student, with the help of an adviser, can build a program which will focus on his/her special interests. Such a pregraduate hydrology program can relate to geology, engineering, soils, meteorology, economics, or administration.

GRADUATE PROGRAM

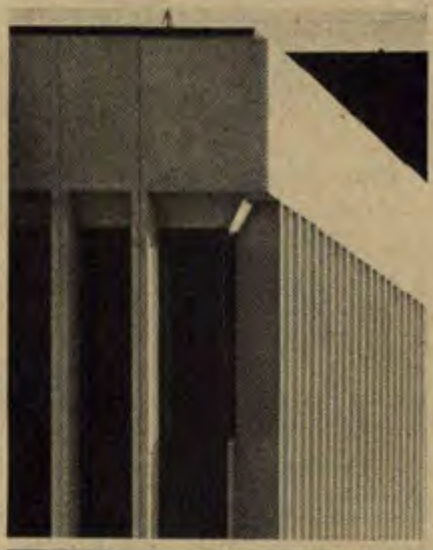
UWGB's new graduate program is as responsive to the variety of human talent as it is to the work that men and women engage in.

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 communiation all deal with the precious, controversial links between the person and the environment, both synthetic and natural.

At the present time, the graduate program has identified six tracks or areas of concentration (two of which have been implemented, two are in the advanced planning stage, and two in the preliminary discussion stage) related to ecology and the environment.



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 resources mix.

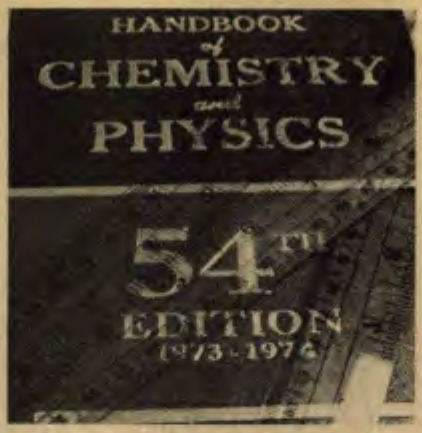
The goal of the graduate track in **Environmental Administration** is to assist governmental and non-governmental career professionals (and prospective professionals) to meet the complex demands of high-level organizational positions in the field of environmental planning and management.

At the present time, a large number of working elementary and secondary teachers are enrolled in the graduate program, and the **Education** faculty is completing the design of a unique, inter-disciplinary track to service their needs and the needs of future students.

Community Psychology will emphasize psychological services in the Northeastern Wisconsin region, and is in the advanced planning stage. Students will learn to be trained and 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.

Planning, now in a preliminary discussion stage, will address itself to regional planning issues and problems not treated by the Environmental Administration track. Indeed, the two tracks will be designed to complement one another.

While **The Humanities** track is in the planning stage, faculty and courses in support of graduate work combining specialized and interdisciplinary studies in the arts and humanities are currently available, leading to individualized degrees.



In addition, a student may design his or her own personalized track 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 graduates.

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:

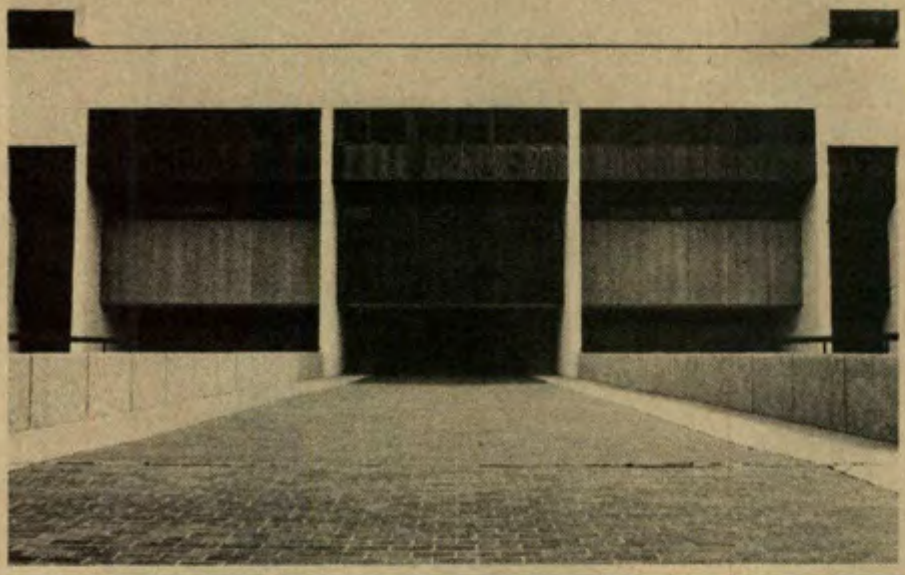
Formal coursework	12-15 credits
Assigned study	9-12 credits
Thesis	6 credits
Total	30 credits

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 only limitation is that the graduate committee and the graduate actions committee of the Graduate Faculty Council agree.

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.

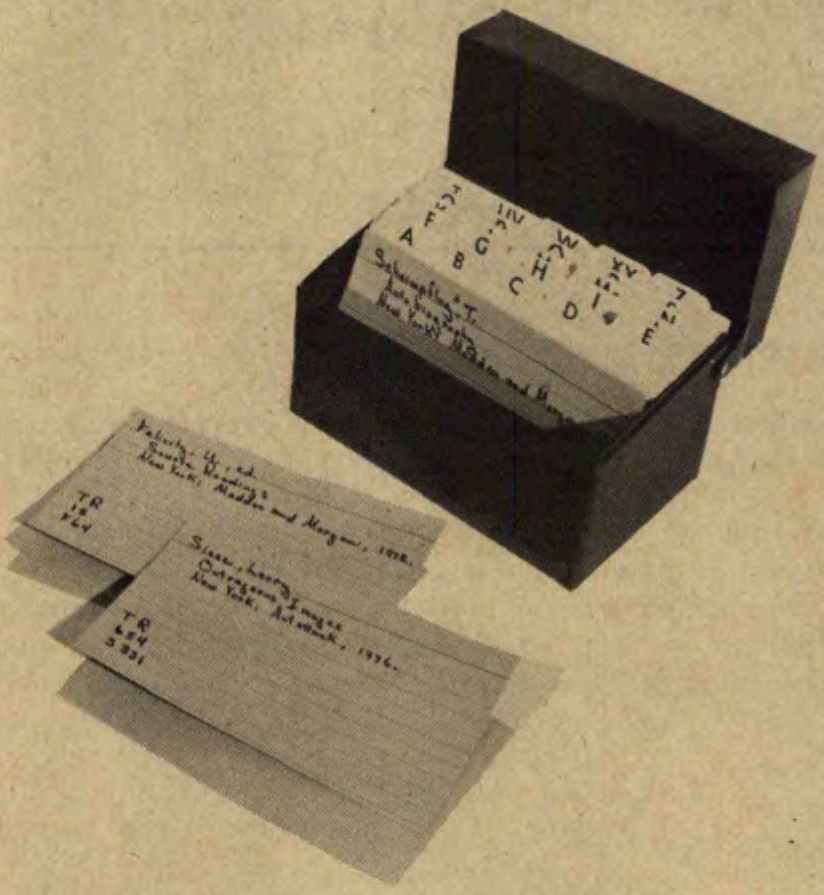
Laboratory Sciences



The University also encourages the appointment of a non-UWGB member on a student's graduate committee. Such a member might be a representative of local commerce or industry, a local educator, a member of a state agency, a faculty member from another university, or simply a concerned citizen.

Basic admission requirements and information on expenses and financial aids available to graduate students can be found in the appropriate section later in this catalog. The graduate program is described in detail in a separate publication. For additional information, please write to the Director of Graduate Studies.

COURSE DESCRIPTIONS



COURSE DESCRIPTIONS

This chapter gives descriptions of all courses currently offered at UWGB. Not all courses are offered every semester. The list is alphabetical, with the following categories being used for headings: theme colleges, concentrations, disciplinary programs, professional programs, Liberal Education Seminars, January Practica, and physical education. The following abbreviations are commonly used throughout:

Abbreviations

cr	credits
P	prerequisite(s)
fr	freshman
soph	sophomore
jr	junior
sr	senior
st	standing
cons inst	consent of instructor
CCC	College of Creative Communication
CCS	College of Community Sciences
CES	College of Environmental Sciences
CHB	College of Human Biology
SPS	School of Professional Studies

The abbreviation listed with each category indicates the college or school within which it is housed and/or the grouping of courses for purposes of the distribution requirement.

Courses are not normally cross-listed. Furthermore, the cross-listing of a few courses should not lead the student to conclude that other courses cannot be suitably worked into a program of study.

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. The instructor's opinion is advisory only, but should be useful in assisting the student to make a decision.

Curriculum Area Numbers

The curriculum area number listed with each category 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 following section, as well as in the Current *Timetable*, which publishes which courses are being offered each semester and for the January and summer sessions. The *Timetable* also tells when the course is scheduled and, in most cases, who will be teaching it. Descriptions for variable content courses are provided, along with those for courses offered during the period covered. Other sections are devoted to student rules and regulations.

A list of curriculum area numbers follows:

156 Anthropology (CCS)
204 Biology (CHB)
226 Chemistry-Physics (CES)
242 Communication-Action (CCC)
246 Communication Processes (CCC)
255 Community Sciences (CCS)
296 Earth Science (CES)
298 Economics (CCS)
302 Education (SPS)
350 Environmental Administration (SPS)
416 Geography (CCS)
426 Growth and Development (CHB)
448 History (CCC)
478 Human Adaptability (CHB)
480 Human Biology (CHB)
485 Humanism and Cultural Change (CCC)
510 January Interim Period
532 Leisure Sciences (SPS)
538 Liberal Education Seminars
552 Literature and Language: English-American (CCC)
553 Skills Learning Program — English
554 Literature and Language: French (CCC)
556 Literature and Language: German (CCC)
558 Literature and Language: Spanish (CCC)
575 Managerial Systems (SPS)
600 Mathematics (CES)
601 Skills Learning Program — Mathematics
628 Medical Technology
662 Modernization Processes (CCS)
694 Nutritional Sciences (CHB)
705 Performing Arts: Music (CCC)
707 Performing Arts: Music-Applied (CCC)
709 Performing Arts: Theater (CCC)
736 Philosophy (CCC)
742 Physical Education: Coed (CHB)
778 Political Science (CCS)
779 Population Dynamics (CHB)
820 Psychology (CCS)
834 Regional Analysis (CCS)
862 Science and Environmental Change (CES)
892 Social Services (SPS)
900 Sociology (CCS)
930 University Without Walls
938 Urban Analysis (CCS)
957 Visual Arts (CCC)

COURSES WITH VARIABLE CONTENT

Many academic divisions of the University offer courses with variable content to provide the student with opportunities for individual work and the 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 the 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 collateral 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 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 of the theme colleges and several units of the School of Professional Studies 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.

√156 ANTHROPOLOGY (CCS)

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 Analysis 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 Prehistoric Man and His Surroundings 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, 156-100, 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 hunting, agricultural, and industrial societies use in adapting to the physical environment are studied. P: jr st.

156-304 Family, Kin, and Community 3 cr.
A cross-cultural comparison of the form and function of such social institutions as marriage and the family; age, sex, and kin groups; task groups; caste and class. P: jr st.

156-310 Culture and Personality 3 cr.
A critical survey of the field of culture and personality and 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 Expressive Culture 3 cr.
A critical analysis of the meanings and functions of such expressive cultural 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.

156-402 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.

204 BIOLOGY (CHB)

204-202 Biology of Cells 4 cr.
An introduction to biological principles; cells as the fundamental units of living organisms. Includes laboratories.

204-203 Biology of Organisms 4 cr.
An introduction to biological principles; structure and function of organisms and their relationship to the environment. Includes laboratories.

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 226-108 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.

204-306 Ornithology 3 cr.
An overview of avian biology, including systematics, behavior, ecology, anatomy, and adaptations of birds. Laboratory work includes examination of prepared specimans and field study of local avifauna. P: 204-203.

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.

204-344 Vertebrate Zoology 3 cr.
The taxonomy, general biology, ecology, behavior, and special adaptations of chordate animals. P: 204-203.

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

204-347 Developmental Biology 4 cr.
Principles of development including gametogenesis, fertilization, gastrulation, organogensis, 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.

See also relevant courses in other areas including:

478-301 Adaptive Mechanisms 3 cr.
478-302 Comparative Physiology 4 cr.
478-320 Human Growth, Development, and Senescence 3 cr.
478-402, 403 Human Physiology 5 cr.
478-413, 414 Neurophysiology 5 cr.
478-430 Environmental Physiology 2 cr.
779-312 Evolutionary Processes 3 cr.
779-318 Vertebrate Reproduction 3 cr.
779-330 Biological History of Wisconsin 2 cr.
779-342 Human Evolution 3 cr.
779-401 Agricultural Genetics and World Food Production 3 cr.
779-402 Population Biology 4 cr.
779-480 Biogeography 3 cr.
862-302 Principles of Ecology 3 cr.
862-303 Conservation of Natural Resources 3 cr.
862-310 Plant Taxonomy 3 cr.
862-311 Plant Physiology 4 cr.
862-312 Mycology 3 cr.
862-363 Plants and Forest Pathology
862-403 General Limnology

CHEMISTRY (CES)

Chemistry courses are listed under Chemistry-Physics (226). Students who wish to pursue a co-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.

226 CHEMISTRY-PHYSICS (CES)

226-108 General Chemistry 5 cr.
Designed as a terminal one-semester general chemistry course. (Full credit will not be given for 226-108 and 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.

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.

141 Astronomy 3 cr.
See 862-141.

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 properties 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.

306 Biophysics 3 cr.
See 862-306.

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 titrations, 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).

313 Mechanics I 3 cr.
See 862-313.

314 Mechanics II 3 cr.
See 862-314.

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.

317 Electromagnetic Radiation
See 862-317.

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 of 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.

328 Nutritional Biochemistry 3 cr.
See 694-328.

329 Nutritional Biochemistry Laborary 1 cr.
See 694-329.

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.

226-331 Biochemistry Laboratory 1 cr.
One three-hour laboratory per week. P: credit or concurrent registration in 226-330.

332 Introduction to Geophysical Fluid Mechanics 3 cr.
See 862-332.

350 Meterology 3 cr.
See 862-350.

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, 600-205, 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.

*Divisional Committee approval is pending.

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.

412 Bioenergetics 3 cr.
See 862-412.

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, electroanalytical 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 228 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.

422 Environmental Biogeochemistry 3 cr.
See 862-422.

434 Water Chemistry 4 cr.
See 862-434.

450 Air Pollution Chemistry and Meteorology 3 cr.
See 862-450.

485 Advanced Human Nutrition 3 cr.
See 694-485.

242 COMMUNICATION-ACTION (CCC)

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.

242-101 Man's Visual Images: The Modern Arts 3 cr.
An examination of the functional contemporary arts, community-planning and architecture, interior design, sculpture, product development, and communication design, with special emphasis on the study of these arts in relation to the creative artist and his/her times. Basic aesthetic and technological concepts are stressed. 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.

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 basic repertoire of musical compositions of various forms and styles.

242-140 Introduction to Theater: Film 3 cr.
Develops an ability to criticize contemporary film. Analysis of film acting, film aesthetics, and the relationship of film to theater production.

242-151, 152 Materials and Values in Music I, II 3, 3 cr.
See 705-151, 152.

242-160 Introduction to Language 3 cr.
Introductory study of language and communication; including structure, social variation, and historical change in language; types of languages in the world; meaning, symbolism, and change of meaning; language and world view; and the use and misuse of language in education, politics, and other areas of discourse.

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.

242-251, 252 Literature and Styles in Music I, II, 4, 4 cr.
See 705-251, 252.

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.

*Divisional Committee approval is pending.

242-271 Introduction to Environmental Design Methods* 3 cr.
An introduction to environmental design methods. Investigation of three-dimensional design as a decision-making and problem solving process bounded by criteria which include: human sensory systems, ergometrics, proxemics, basic structural systems, and materials. Experiences with creativity systems (Gordon's Synectics; Halprin's RSVP Cycles; McKim's, etc., etc.) and various graphic and workshop tools and techniques. No previous studio experience is required.

242-281 Student-Led Courses 1-4 cr.
See page 139.

242-283X Selected Topics in Communication-Action 1-4 cr.
See page 140.

242-298 Directed Study 1-4 cr.
See page 140.

242-301 Communication-Action 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 desirable. P: jr st or cons inst.

242-311 Criticism of the Visual Arts* 3 cr.
The philosophies and approaches which are reflected in contemporary criticism of the visual arts. Students gain practical experience in the criticism of painting, printmaking, photography, sculpture, and architecture. Local exhibits and field trips provide the opportunity to gain experience in these areas. P: background in at least one of the following: art, art history, aesthetics, or criticism of the performing arts.

242-320 Communications: Extensions of Consciousness 3 cr.
Communicative systems as extensions of human consciousness: the analysis of media (e.g., speech, writing, clothing, transportation, housing, mathematics and economics, radio, television, and film) as logical and illogical adaptations of human sensory energy; 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.

242-324 Psycholinguistics 3 cr.
A brief survey of language structures and an 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.

242-328 Cultural Cross-Communication I: Ideology and Values 3 cr.
Cultural conflict and cultural influence and enrichment that arise when differing ideologies and value systems come into contact.

242-329 Cultural Cross-Communication II: Expressive Traditions 3 cr.
Cultural conflict and influence and enrichment that arise when differing traditions of the arts come into contact.

242-351, 352 Literature and Styles in Music III, IV 4, 4 cr.
See 705-351, 352.

*Divisional Committee approval is pending.

242-361 Increasing Aesthetic Awareness* 3 cr.
Concentrates on increasing the total response of each student to symbol systems of the environment. Seeks to develop a vocabulary for various kinds of aesthetic awareness and examines claims that aesthetic awareness differs from ordinary awareness. Heightens and refines awareness in two ways; through full sensory and cognitive exploration of selected works of art, performances, and non-artistic environments; and through laboratory experiences drawn from the arts, the human potential movement, and play therapy.

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

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.

395 The Individual and His Culture: The Filmmaker's View 3 cr.
See 485-395.

242-401 Designing the Environment I 3 cr.
Faculty and students from Urban Analysis, Regional Analysis, Science and Environmental Change, and Communication-Action 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.

242-471 Environmental Design Workshop II 3 cr.**
Analysis and design of group spaces, such as houses, classrooms, waiting rooms, and other spaces intended for occupancy by groups of people. Past design projects have taken the form of designing and producing a book focusing on environmental design of group spaces including sections on case studies conducted by student design teams. The student can expect some major project of this sort in addition to readings, research, and design analyses. Draws support from 834/938-326, Human Living Space II, and 242-402, Designing the Environment II. Students are strongly advised to enroll in at least one of these parallel offerings. P: 938-401 and cons inst.

**Environmental Design Workshops I and III are offered as 938-401, 402. Divisional Committee approval is pending for all four 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 139.

242-483X Selected Topics in Communication-Action 1-4 cr.
See page 140.

242-484 Senior Distinction Project 3 cr.
See page 140.

242-498 Directed Study 1-4 cr.
See page 140.

*Environmental Design Workshops I and III are offered as 938-401, 402. Divisional Committee approval is pending for all four courses.

√246 COMMUNICATION PROCESSES (CCC)

246-133 Voice and Speech I 3 cr.
Problems of voice production, voice quality, enunciation, and articulation.

246-134 Voice and Speech II 3 cr.
Voice production, voice quality, speaker presence, and the basics of public speaking.

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.

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 Media I: 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 Media II: Newswriting Laboratory 3 cr.
Assignments in gathering and writing news; copy editing; emphasis on developing an objective, clear, accurate, and forceful style.

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.

246-320 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.

246-325 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.

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.

246-334 The Oral Tradition 3 cr.
The oral interpretation of literature, especially narrative and lyric. The history, method, and influence of the oral tradition from Homer's Iliad to Bob Dylan and the contemporary folk song. Special attention to the analysis of meaning, metre, and motion, and to the nature of oral language; practice in the presentation of those non-dramatic forms of literature most suited to oral performance.

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

246-402 Television and Radio Internship 3 cr.
Supervised assistance and practice in the production of radio programs and television programs at commerical 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.
242-324 Psycholinguistics 3 cr.
302-318 Reading and Study Skills in the Secondary School 3 cr.
426-431 Cognitive Development and Facilitation in Childhood and Adolescence 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.

*Divisional Committee approval is pending.

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.

✓255 COMMUNITY SCIENCES (CCS)

255-102 Man and His Social Environment 3 cr.
Introduction to concepts and concerns of the community sciences through an interdisciplinary 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 analysis, and modernization processes. 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 intepreting 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 Community Sciences.

✓296 EARTH SCIENCE (CES)

296-200 Basic Earth Science 3 cr.
Introduction to the basic meteorological and geological processes that interact to make earth's physical environment what it is. Studies of rocks and minerals, geologic maps, soils, oceans, and the geology of Wisconsin. Does not satisfy Science and Environmental Change requirements for earth science nor serve as a prerequisite for advanced earth science unless the allied laboratory course is taken at some later time. A student cannot receive credit for both 296-200 and 296-202. Some field trips may be included. Offered only in the summer.

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.

296-302 Geologic Evolution of the Earth 4 cr.
The physical history of the earth during geologic time; the history of plants and animals with particular emphasis given to the adaptations made by earlier life forms to the changing conditions of the physical environment. Field trips. Offered spring semester. P: 296-202 or cons inst.

296-210 Paleobiology 4 cr.
Descriptions are made of the plants and animals that contribute to the many life assemblages in the earth's ancient environments and of the relationship of the biota to the varied facets of the physical-chemical environment. Local field trips. Offered alternate spring semesters. P: 296-302 or cons inst.

296-340 Minerals, Rocks, and Mineral Resources 3 cr.
The descriptions and the classifications of the most important rock-forming minerals and the most commonly occurring rocks are presented. The uses made of these components of the earth's physical environment are emphasized. Local field trips. Offered spring semester. P: 296-202.

296-350 Field Geology 4 cr.
Description of the standard field techniques employed in geologic mapping, measuring sections, and collection of rock and fossil specimens; integrated application of these techniques to the solution of field problems. Offered alternate fall semesters. P: 296-202, 296-302 recommended.

296-366 Deformation of the Earth's Crust* 3 cr.
An application of stress and strain analysis to a study of the genesis of primary and secondary structures of rock materials of the earth's crust. P: 296-302.

296-402 Introduction to Stratigraphy and Sedimentology 3 cr.
Principles of physical stratigraphy including the formation, composition, sequence, and correlation of layered rocks. The methods and techniques employed in the study of sedimentary processes, sedimentary environments, and stratigraphic relationships are discussed and the concepts applied to the interpretation of local exposures and outcrops of stratified rocks. Lectures and one field trip. Offered alternate spring semesters. P: 296-202 and either 296-302 or 862-331.

296-441 Earth Resources I: Minerals 4 cr.
Knowledge of the relationship of mineral structures to energy distribution provides a framework for carrying the study of minerals beyond chemical classification. The relationship of crystallography to minerals; description of the principal rock-forming and ore minerals; recognition of minerals in hand specimens. Offered alternate fall semesters. P: 226-121, 226-122 and 296-202.

296-442 Earth Resources II: Rocks 4 cr.
Study of igneous, sedimentary, and metamorphic rocks related to classification, genesis, distribution; introduction to optical methods of identification; identification of hand specimens and field occurrences. Offered alternate spring semesters. 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. One weekend and one or more local afternoon field trips required. Offered alternate spring semesters. P: 296-202 (302 recommended).

See also relevant courses in other areas, including:
416-351 Elements of Cartography
416-353 Air Photo Interpretation 3 cr.
862-141 Elementary Astronomy 3 cr.
862-303 Conservation of Natural Resources 3 cr.
862-320, 321 The Soil Environment (with laboratory) 3-4 cr.
862-330 Hydrology, 3 cr.
862-331 Introduction to Oceanography 3 cr.
862-332 Introduction to Geophysical Fluid Mechanics 3 cr.
862-342 Environmental Geology 3 cr.
862-350, 351 Meteorology (with laboratory) 3-4 cr.
862-403 General Limnology 3 cr.
862-420 Soil Classification and Geography 3 cr.
862-422 Environmental Biogeochemistry 3 cr.
862-434 Water Chemistry 4 cr.
862-450 Air Pollution Chemistry and Meteorology 3 cr.
862-460 Resource Management Strategy 3 cr.

√298 ECONOMICS (CCS)

298-102 Economics and the Modern World 3 cr.
An introductory study of the economic system; economic institutions; economic growth; emphasizes contemporary problems such as the economics of war and peace, pollution abatement, poverty, etc.

298-202 Macro Economic Analysis 3 cr.
An introduction to the behavior of our economy in the aggregate. Basically focusing upon the process by which the economy achieves a certain level of output and employment.

298-203 Micro Economic Analysis 3 cr.
An introduction to the decision-making process of individuals and business firms associated with the determination of what products will be produced, how they will be produced, and what prices specific goods and services will command. Includes a discussion of the institutional framework within which these decisions are made, for example, proprietorships, partnerships, corporations and cooperatives.

298-230 Money and Banking 3 cr.
An analysis of money as an economic institution, and of the organizational structure of the banking system in the U.S. P: 298-202.

298-303 Money, Income and Prices 3 cr.
An analysis of the process by which the management of money supply influences the allocation of resources. P: jr st and 298-230.

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.

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.

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 and 203.

298-401 Regional Economic Analysis 3 cr.
Basic concepts and problems in the economic study of subregions of an economy, in both an intraregional and interregional context; problems in regional analysis; economic concepts regarding location, spatial organization, and planning for regional development. P: 298-202.

298-402 Resource Economics Analysis 3 cr.
Application of tools and concepts in current economic decision-making with special emphasis upon common property resource 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: sr 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.

302 EDUCATION (SPS)

302-201 Analysis of Learning Environments 2 cr.
An investigation of major variables affecting teaching and learning in the schools: the teacher and his/her teaching behavior, the student, alternative school structures, the curriculum, and instructional processes. Approximately 30 hours are spent in the schools investigating aspects of the learning environment. P: soph st.

302-203 Introduction to Environmental Education in the Schools 2 cr.
The study of environmental education: philosophies, curricular materials, and related instructional strategies. Direct involvement in local schools at the grade level and in subject matter appropriate to the student's area of anticipated certification. P: soph st.

302-204 Values in Conflict: School Experiences 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. The historical and current values and life experiences of several major U.S. minorities (Amerindian, Spanish surname, and Black) are explored and contrasted with the dominant middle class white cultural values. Resultant conflicts are examined. Ethnocentrism and social class bias as reflected in teacher expectations and instructional materials. Students examine their 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 the operation of projecting, recording, and duplicating equipment and on the basic preparation of instructional materials. P: cons inst.

302-281 Student-Led Courses 1-4 cr.
See page 139.

302-283X Selected Topics in Education 1-4 cr.
See page 140.

302-298 Directed Study 1-4 cr.
See page 140.

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. 2
Teaching methods in art. P: jr st.

302-304 Elementary School Teaching Methods in Music* 2 cr.
Teaching methods in music. P: jr st and required competency in music fundamentals.

302-305 Elementary School Teaching Methods in Mathematics and Science* 4 cr.
Teaching methods in mathematics and science. P: jr st, 600-180 recommended.

302-306 Elementary School Teaching Methods in Physical Education* 2 cr.
Teaching methods in physical education. P: jr st.

302-307 Elementary School Teaching Methods in Reading* 3 cr.
Teaching methods in developmental reading. P: jr st.

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

302-308 Children's Literature: Contemporary Practices in the Elementary Schools 3 cr.
Examines practices which produce an effective children's literature program. Analysis of current children's books; development of units of instruction 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 the communication arts, methods and materials, the nature of the secondary school student, evaluation procedures, and the professional responsibilties of the teacher. Required for a license certifying the student 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 license certifying the student to teach a foreign language. P: jr st and appropriate preparation in a foreign language.

302-312 Secondary School Teaching Methods in Social Studies 3 cr.
For students who wish to be licensed in Wisconsin to teach one or more of the social studies in secondary schools. Fields included are history, political science, economics, geography, psychology, sociology, social problems, civics (citizenship), and other social studies. P: jr st and appropriate preparation in social studies.

302-313 Secondary School Teaching Methods in Mathematics 3 cr.
For students who wish to be licensed to teach mathematics in Wisconsin secondary schools. P: jr st and appropriate preparation in mathematics.

302-314 Secondary School Teaching Methods in the Sciences 3 cr.
For students who wish to be licensed to teach one or more of the sciences in Wisconsin secondary schools. Fields included are biology, chemistry, earth science, environmental science, general science, and physics. Appropriate differentiations are provided for the teaching of the several disciplines. P: jr st and appropriate courses in science.

302-316 Secondary School Teaching Methods in Art 3 cr.
For students who wish to be licensed to teach art in Wisconsin secondary schools. Study includes principles of art teaching methods, procedures, and strategies; the 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 2-3 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. Students may take a field tutoring experience for the third credit. 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 programs.

302-321 Teaching and Leadership Strategies for Nurses* 3 cr.
Students will study 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 the 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 which are 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.

*Divisional Committee approval is pending.

302-406 Evaluation and Testing in Education 2-3 cr.
Techniques for construction of tests and measurement systems, statistical procedures applied to classroom data, monitoring and assessment of individual and group learning situations, use and interpretation of 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.
Developing instructional materials and strategies to integrate environmental concepts, problem identification, and problem solving strategies into elementary and secondary programs. A variety of environmental education materials and methods are considered. Emphasis on designing, using, and evaluating instructional materials for children — with children and their teachers in schools. P: jr st.

302-408 Reading Disability: Reading Problems and the Problem Reader 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 a number of related diagnostic instruments, interpret their results, and prescribe instructional procedures. Designed to meet a requirement for reading teacher certificate and to provide additional competency for 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.

302-481 Student-Led Courses 1-4 cr.
See page 139.

302-483X Selected Topics in Education 1-4 cr.
See page 140.

302-498 Directed Study 1-4 cr.
See page 140.

350 ENVIRONMENTAL ADMINISTRATION (SPS)*

350-281 Student-Led Courses 1-4 cr.
See page 139.

350-283X Selected Topics in Environmental Administration 1-4 cr.
See page 140.

350-298 Directed Study 1-4 cr.
See page 140.

350-301 Environmental Administration 3 cr.
Social, economic, and geophysical origins of changing environmental quality; major kinds of environmental problems and the impacts of environmental quality on human health and well-being. Principal institutional, organizational, and public policy approaches to solution of environmental problems, including decision sequences and information systems required for rational environmental management operations. Develops skill in use of methods and models for public and environmental decision-making.

350-305 Public Regulatory Processes 3 cr.
The purposes, structure, principal operational elements, and legal attributes of public regulatory processes in the United States, including ideas, issues, and problems associated with public regulatory policies and practices. Decision-making techniques appropriate for regulatory activities, and the criteria and methods appropriate to design and implement regulatory statutes, ordinances, rules and regulations, orders, inspection and enforcement programs, and other process elements. Case studies and problem-solving exercises concerned with a variety of regulatory processes, especially those concerned with environmental quality control, land use, facility siting, occupational health and safety, public health, product safety, and consumer protection.

*The program in Environmental Administration is currently being developed. These courses have not been officially approved; the following descriptions are therefore examples of the kinds of courses that will be offered by Environmental Administration. They will be offered on the basis of student demand and available University resources.

350-310 Administrative Leadership 3 cr.
The 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. Develops skill in use of methods for the development, management, scheduling, and coordination of project and work group activities.

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

350-415 Administrative Planning, Programming, and Budgetary Systems 3 cr.
The history, philosophy, purposes, attributes, types, and operational elements of public budgetary systems in the United States; the principles and methods utilized in the design and management of public budgetary systems; and the relationship between program planning, policy planning, and budgetary operations. Object, performance, program, and PPB systems and their applicability to various programs, organizations, and governmental jurisdictions. Develops skill in application of analytic and decision-assisting tools to public budgetary operations.

350-421, 422 Planning Processes and Methods I, II 3, 3 cr.
Planning as a generic process emphasizing those operational components of the process which are relevant to land use, community, environmental, health, and facility systems. Criteria and standards restricting public planning operations, the empirical foundations for such restrictions, methods applicable to public planning processes and to preparation of major types of planning studies.

350-423, 424 Housing Systems I, II 3, 3 cr.
Characteristics, decision sequences, operational elements, inter-organizational, and public policy aspects of the housing and neighborhood development-delivery system in the United States. Factors influencing housing supply, housing demand, and the costs and quality of housing and residential environments. Criteria, standards, processes, and methods associated with the planning, design, site location, site preparation and layout, financing, construction, public regulation, sale, and delivery of housing units, subdivisions, and whole neighborhoods. Contemporary concepts for planning and design of residential environments, including a cross-sectional and longitudinal examination of housing conditions, quality, and problems, both intranationally and internationally.

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 Problems in Planning, Administration, and Management 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.

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.
Characteristics, operational elements, and organizational components of U.S. public policy systems and processes. Models, methods, and techniques for critical analysis and rational design of public policies. Principles and techniques appropriate for legislative research, development of legislative histories, preparation of policy-development documents, position papers, staff reports, bills, ordinances, rules, regulations, and legally-enforceable standards.

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 139.

350-483X Selected Topics in Environmental Administration 1-4 cr.
See page 140.

350-490 Management by Objectives 3 cr.
The basic principles of Management by Objectives and its use in profit and non-profit organizations. For the person who wishes to know and to use this managerial approach to improved organizational effectiveness. Application to public sector and other enterprises.

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 operations, decision assisting tools, problems, or public policies associated with contemporary environmental management programs, 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 Management and Administration 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 140.

✓ 416 GEOGRAPHY (CCS)

416-102 The Regions of Earth: A Geographical Appraisal of the Human Habitat 3 cr.
Contemporary geography, its viewpoints and methodology. Geographic reality of the present-day world is analyzed in the form of case studies in which both the regional approach and systematic analysis are used.

416-202 Introduction to Cultural Geography 3 cr.
The impact of culture through time in creating the earth's contrasting landscapes. Emphasis on case studies which often focus on North America.

416-215 Economic Geography 3 cr.
Patterns of economic activities, including agriculture, extractive industries, manufacturing, transportation and trade. Major theories and concepts essential to understanding the location of economic activities are discussed.

416-235 Wisconsin Landscapes and Regions 3 cr.
See 834-235.

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 the presentation of data on medium and large scale maps. P: jr st.

416-353 Air Photo Interpretation 3 cr.
Techniques for the interpretation of the uses humans make of the earth. Vertical, oblique, and infrared aerial photography are used in the analysis of the human use of the earth and its resources. P: jr st.

416-355 Introduction to Quantitative Methods of Spatial Analysis 3 cr.
The scientific approach to geographic problems; basic techniques for the analysis of spatial distributions and spatial relationships. P: a course in statistics.

416-361 Geography of Africa 3 cr.
The broad physical and human patterns of Africa; historical aspects of geography including the imposition of colonial organization on resource use and on indigenous cultures. P: soph st.

416-362 Analysis of the Great Lakes Region of Africa 3 cr.
See 834-362.

416-371 Geography of the United States and Canada 3 cr.
The physical features, resources, people, and economic activities of the United States and Canada. The various regions of the two countries are compared and contrasted. P: soph st.

416-372 Analysis of the Great Lakes Region of North America 3 cr.
See 834-372.

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.
See 834-377.

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.

416-382 Regional Analysis of Northwestern Europe 3 cr.
See 834-382.

426 GROWTH AND DEVELOPMENT (CHB)

426-201 Life and Growth Through Films 2 cr.
A camera's eye view of the process of growth and aging from conception to death, giving an overall view of the life span of our species. Readings and many kinds of films provide material. Credit will not be given for 426-201 and 426-210. No credit granted to GRD concentration majors.

426-205 Challenges to Human Development 3 cr.
The critical problems connected with social, cultural, and psychological aspects of human environments. Topics may include the youth culture, including alienation; the psychological impact of violence and aggression in the mass media; the generation gap; effects of poverty; cultural disparity; and educational relevance. Psychological insights into causes, effects, and solutions. Contributes to human relations skills.

426-210 Introduction to Human Development and Learning 3 cr.
Interdisciplinary approach to human development with emphasis on the learning process in human beings and on the guidance of human learning. The developmental span covered is conception through death. Credit will not be given for 426-210 and 201.

426-281 Student-Led Courses 1-4 cr.
See page 139.

426-283X Selected Topics in Growth and Development 1-4 cr.
See page 140.

426-298 Directed Study 1-4 cr.
See page 140.

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. The interrelationships between the biological, sociocultural, and psychological aspects of development are emphasized. 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 processes. 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. 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.

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.

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 the areas of 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.

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

426-431 Cognitive Development and Facilitation in Childhood and Adolescence 3 cr.
The development of cognitive functioning from infancy through adolescence, with attention to the conditions of learning. Emphasis on the findings of Piaget and other current investigators. Substantive issues involving cognitive growth are examined critically. P: 426-331; 426-332.

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 (values, 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 Later Maturity 3 cr.
Empirical findings concerning developmental processes from the end of adolescence through old age, with emphasis upon the analytical framework of G.H. Mead. Issues of maintenance and decline in old age. P: 426-332.

426-435 Developmental Problems and Deviations 3 cr.
Developmental deviations of constitutional and of social-emotional etiology in childhood and in adulthood. Problems of children with handicaps, signs of coping difficulty. P: 426-332.

426-436 Developmental Guidance with Children and Adolescents 3 cr.
Theory and principles of remediation in developmental problems suitable for teachers and others dealing with children in groups, as well as individually. Problems most relevant to the students' respective interests are selected. Case study approach and practice via simulation techniques. P: 426-435.

426-437 Developmental Guidance with Adults and the Aged 3 cr.
Theories of the goals of counseling, healthy personality development, and several theories and techniques of guidance and counseling. Communication is a major focus. Common concerns and needs of young adults, parents, and the aged are discussed. P: 426-331, 426-332, 426-433 or cons inst.

426-438 Lifetime Needs and Environmental Planning 3 cr.
Problems in providing optimal developmental opportunities for persons of all ages in a complex democratic society. Human needs requiring community collaboration; effective procedures for implementing need-oriented programs; developing humane institutions and supporting services; the organization of the physical and social environments for optimal human development. P: 426-433.

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 are considered within the context of developmental levels and the variety of populations to be served. P: 426-441.

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: 426-441, 442 and cons inst.

426-481 Student-Led Courses 1-4 cr.
See page 139.

426-483X Selected Topics in Growth and Development 1-4 cr.
See page 140.

426-484 Senior Distinction Project 3 cr.
See page 140.

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

426-495 Language Acquisition and Utilization During Childhood 3 cr.
An interdisciplinary approach to language including structural linguistics, biological and physiological aspects, acquisition and psychological development, utilization as a cognitive tool, communication skills, and sociocultural factors. Field experience in the observation and interpretation of child speech behavior. Offered in January.

426-498 Directed Study 1-4 cr.
See page 140.

448 HISTORY (CCC)

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 economics 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, and the French Revolution; beginnings of the industrial revolution in England; appearance of the secular and rational human.

448-204 History of Europe from 1815 to the Present 3 cr.
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.

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.

448-208 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 Asia since the 17th Century 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 334 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.

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, the 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.

448-312 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 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.

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.

448-356, 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. Subdivisions 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.

448-402 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.

Note: Directed study offered by concentrations may be taken for history credit with the approval of the chairperson.

✓478 HUMAN ADAPTABILITY (CHB)

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 stresses brought about by technology and crowding. P: soph st.

478-281 Student-Led Courses 1-4 cr.
See page 139.

478-283X Selected Topics in Human Adaptability 1-4 cr.
See page 140.

***478-298 Directed Study* 1-4 cr.**
See page 140.

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 alternate 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 nineteenth and twentieth 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.
This course 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 socio-psychological 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 the 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 Adaptability 2 cr.
Interdisciplinary and collaborative library research with student reports on selected phenomena and problems in human adaptability. Strongly recommended for majors in the concentration. P: sr st or cons inst.

478-450 Psychological Factors in Human Adaptability 3 cr.
Fundamental concepts and mechanisms of adaptation of the human being to psychological stress. P: jr st.

478-481 Student-Led Courses 1-4 cr.
See page 139.

478-483X Selected Topics in Human Adaptability 1-4 cr.
See page 140.

478-484 Senior Distinction Project 3 cr.
See page 140.

478-498 Directed Study 1-4 cr.
See page 140.

✓485 HUMANISM AND CULTURAL CHANGE (CCC)

485-101 Introduction to Humanistic Ideas I: Music and Art in Western Civilization 3 cr.

The nature of ideas in the fine arts and an approach to aesthetic attitudes and theories, considered in terms of the changing perspectives of history. An introduction to film as an art form. Required for majors in HCC. Recommended to fulfill distribution requirements.

485-102 Introduction to Humanistic Ideas II: Literature, Philosophy, History 3 cr.

How literature, philosophy and history are distinct as ways of knowing and as expressions of the human condition; how these expressions may be inter-related to effect or make possible a distinctive humanistic perspective. Required for majors in HCC. Recommended to fulfill distribution requirement.

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 HCC or for any student seeking training in the fundamentals of writing.

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.

485-274 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 sociocultural 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 139.

485-283X Selected Topics in Humanism and Cultural Change 1-4 cr.
See page 140.

485-298 Directed Study 1-4 cr.
See page 140.

485-301 Humanism and Cultural Change 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: 485-101, 102, 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.
Specific aspects of a given culture are studied in humanistic context by means of a contrastive and structural analysis in order to enrich the student's view of his or her own culture when parallel to a different heritage, ideology, and value system. Can be taken out of sequence. Sections offered in French and Spanish culture.

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

485-311, 312 Visions of Man I, II, 3, 3 cr.
Significant ways in which people, in the past and in the present, have sought to understand themselves, to look at themselves in relation to each other and to their world. These visions are presented by an interdisciplinary faculty in a non-specialized and broadly based way as are sets of ideas, feelings, and aspirations defining the human condition and held in common by a group of artists, writers, and thinkers, either at the same or differing times and places. Individual semesters are devoted to Mythology, Renaissance to Rationalism, Romanticism, or the Modern Period. Each course may be repeated once for credit when the content is different. P: 485-101, 102, jr st, or cons. inst.

485-313 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: 485-101, 102, jr st, or cons inst.

485-315 Psychological 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.

485-325 Western Christianity: Belief and Institutional Structure from the New Testament Era to the Reformation Era 3 cr.
The Christian Church is the human institution which has sought to guide a large portion of the world's population to ultimate felicity. Lectures and readings follow the development of belief, forms, and institutions as they changed in the fifteen hundred years to the close of the Council of Trent.

485-331 Geo-Historical Approaches to the Environment 3 cr.
The interaction between our conception of our environment, our attempts to classify it, and our actions to relate ourselves and our society to it. Important historical examples of the relationship between human behavior and scientific, social, and geographic thought. P: 485-101, 102, 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).

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.

485-375 Wealth, Culture, and Society 3 cr.
An interdisciplinary and cross-cultural study focusing on the economic influences and appearances 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 or cons inst.

485-376 Human Contrast 3 cr.
The cultural contrasts among the African cultural experience, the Native American cultural experience, and the cultural experience of the American ethnic groups of European and/or Asian descent. P: 485-101, 102 jr st, or cons inst.

485-390 War, Violence, Revolution, and Society 3 cr.
The 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.

485-429 Utopia and Anti-Utopia 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: 485-101, 102 jr st, or cons inst.

485-430 Art, Ideas, Society, and the Quality of Life 3 cr.
The interrelations of social value (whether elite or popular values) and the environment of art, ideas, and ideology. Specific topics may vary from semester to semester. For example: art, culture, and pornography; the literature and art of social reform and social reaction; literature, the visual arts, the church, the state, and cosmology of Renaissance Europe. P: 485-101, 102, 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 139.

485-483X Selected Topics in Humanism and Cultural Change 3 cr.
See page 140.

485-484 Senior Distinction Project 3 cr.
See page 140.

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 "Civilization," 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 140.

510 JANUARY INTERIM PERIOD

510-195, 295, 395, 495 January Practicum 1-3 cr.
Special programs designed by the faculty exclusively for presentation during January. Focus is on the extension of theories and concepts studied in classes to relevant and practical conditions. May consist of studies related to a contemporary and relevant theme, on-campus activities for individuals and groups, guided study tours, field trips, as well as such other activities as may be appropriate to the January time period. Credit in a specific area is subject to the approval of the chairperson of the appropriate program. Students ordinarily pursue one activity during the January Interim Period. Specific programs are published in the January Interim Period *Timetable*.

532 LEISURE SCIENCES (SPS)

532-281 Student-Led Courses 1-4 cr.
See page 139.

532-283X Selected Topics in Leisure Sciences 1-4 cr.
See page 140.

532-298 Directed Study 1-4 cr.
See page 140.

532-302 Sociology of Leisure 3 cr.
Sociological determinants of past, present, and future trends in leisure time; impacts of increasing leisure on society and the natural environment. Sociocultural forces affecting attitudes toward work and leisure; functions of leisure; social stratification and leisure; methods for scientific analysis of leisure; applications to community recreation administration and outdoor recreation planning. P: jr st or cons inst.

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. P: 532-302 recommended.

523-315 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.

532-320 Field Practicum 2 cr.
Directed work-study experiences in selected environmental settings in the United States, Canada, or other cultures; available to qualified students between junior and senior years. Oral and written reports are required. P: six cr in leisure sciences.

532-403 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: 532-410 or concurrent registration.

532-404 Public Park and Recreation Systems 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. Lectures and laboratories. P: jr st. Recommended: 532-302 and a background in earth and ecological sciences.

532-410 Recreation Resource Planning in the Great Lakes Region 3 cr.
Resources planning utilizing sociological and ecological principles; issues and dilemmas in outdoor recreation planning; components of regional recreation and open space plan formation and implementation; forecasting demand; standards analysis; resource inventory classification and allocation; economics of outdoor recreation; institutional structure; federal grants and laws; problem orientation to the public lands in the upper Great Lakes region. Work on an actual outdoor recreation and open space plan. P: jr st. Recommended: 532-302.

523-412 Regional Outdoor Recreational Planning* 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 recreation planner; recreation resource analysis techniques and cartography; community-planner relations; inter-agency relations; on the ground process and politics of regional recreation and open space plan formation and implementation; case studies; field trips and community lectures drawing on recreation planning professionals. Continuation of project begun in 532-410. P: 532-410.

532-415 Outdoor Recreation Planning Practicum 3 cr.
Group or individual projects in outdoor recreation planning involving real world planning problems in the region. Advanced students apply knowledge and experience from previous courses to the development of a recreation plan or plan element. Projects are determined on the basis of community need and student interest. P: six cr of leisure sciences.

532-481 Student-Led Courses 1-4 cr.
See page 139.

532-483X Selected Topics in Leisure Sciences 1-4 cr.
See page 140.

532-498 Directed Study 1-4 cr.
See page 140.

*Divisional Committee approval is pending.

538 UNIVERSITY SEMINARS

538-101, 102 Freshman Modules on the Theme: Crises in Belief and Ecology 3, 3 cr.
An introduction to the two central concerns of the University, values and the environment. A choice of topics on human values and their relations to contemporary environmental problems. Studied in modules of 7 weeks duration, with a class size of up to 35 students. Methodology includes critical reading, written and verbal communication, and discussion. The student selects two topics for study each term. Sample topics are the human condition in world perspective; technology and human values; resource utilization and the American character; crises in communication; and contemporary moral problems.

538-301, 302, 303 Intermediate Course Packages 3, 3, 3 cr.
The 9-credit packages integrated around particular themes include elements of off-campus projects, involvement with another culture, and cross-cultural comparison. Significant attention is given to appropriate preparation for the off-campus and other-culture experiences. The packages are also related to travel/study experiences available usually in January. Students are encouraged to select carefully a theme package they will stay with through the 9-credit sequence — indiscriminate transfer among packages is not permitted. Sample themes are native American culture: film and performance; settlements, communities, and new towns; black and white Americans: how we view ourselves and each other; environmental aspects of human settlement; individual and social consequences of sex roles; artists as analysts, prophets, and preachers; the war against hunger; and environmental aspects of aging. P: 538-101, 102.

538-401 or 402 Senior Seminar 3 cr.
An interdisciplinary seminar on selected problems in the natural, social, technological, and cultural environments. Seniors from different concentrations study a complex situation of particular concern to society. Sample seminars are social consciousness and the scientist; images of woman and man; the American mind in modern society; the minorities' view of America; and social consciousness and the scientist. P: 538-301, 302, 303 or cons inst.

553 SKILLS LEARNING PROGRAM — ENGLISH

553-095 Basic English Composition 3 cr.
For students with specific needs or problems in the area of study skills, with emphasis upon writing, comprehension of lectures and reading assignments, and study habits. Work is on a tutorial basis, scheduled at the convenience of the student. Students may be referred through placement tests or on advice of a faculty member or may request services of the staff. Offered on an automatic pass-no credit basis: credits do not count toward graduation.

LITERATURE AND LANGUAGE* (CCC)

552 English-American
554 French
556 German
558 Spanish

102, 103 Introduction to the French, German, Spanish Language 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 102. One year high school, one semester college language study prerequisite for 103. See footnote for possibility of receiving retroactive credit for prior experience.

104 Introduction to Literary Types 3 cr.
A survey of major literary types (epic, lyric, ode, sonnet, ballad, types of the novel, drama, essay) through intensive analysis of literary classics. Significant contemporary works are studied for aesthetic structure and convention.

105 Introduction to Expository Writing 3 cr.
See 485-105.

*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.

106 Great Books 3 cr.
A study of the literary heritage and traditions of world culture, including non-Western expressions. Particularly concerned with non-English works which have been translated.

202, 203 Intermediate French, German, Spanish Language 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 for possibility of receiving retroactive credit for prior experience.

212 Introduction to Creative Writing: Fiction 3 cr.
A first course in the writing, appreciation, understanding, and technique of fiction. May not be repeated.

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

214 Introduction to English Literature 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 compose the major literary heritage of all English-speaking people.

215 Introduction to English Literature 3 cr.
An introductory, chronological survey of English literature from the Romantic movement through the 20th century, including such writers as Wordsworth, Keats, Shelley, Byron, Browning, Tennyson, Arnold, Carlyle, Shaw, Conrad, Joyce, and Lawrence.

216 Introduction to American Literature 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 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.

223 Approaches to Criticism 3 cr.
The analysis of various historical, psychological, and formal approaches to the evaluation of literature. Several works chosen by the instructor are analyzed using different critical methods. No previous work in literature or criticism is necessary.

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 for possibility of receiving retroactive credit for prior experience. P: 203 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. The rudiments of literary criticism. May be taken concurrently with French, Spanish, German 225, 226. See footnote for possibility of receiving retroactive credit for prior experience. P: 203 or equivalent.

302 Fiction Writing Workshop 3 cr.
An advanced course in the practice of writing fiction. Group criticism of student work. P: cons inst. May be repeated once for credit.

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

304 Advanced Expository Writing 3 cr.
Some of the basics of composition as well as more sophisticated approaches such as developmental strategies and stylistic choices.

307, 308 Other Cultures Through Humanistic Studies I, II 3, 3 cr.
See 485-307, 308. May be taken for credit as 552, 554, 556, or 558.

310 Major English Drama 3 cr.
A study of English drama exclusive of Shakespeare either by period or by theme.

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.
A study of English poetry either by period or by theme.

330 Major American Drama 3 cr.
A study of American drama either by period or by theme.

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, Wright, and Bellow are considered.

332 Major American Poetry
A study of American poetry either by period or by theme.

333 Literary Themes 3 cr.
A single theme (such as fantasy, war, revolution, love) is explored through the literature of one or many nations. Study may include prose, poetry, and drama or be limited to one form. Available in American, English, French, German, Spanish or literature in translation.

334 Literary Isms 3 cr.
Prose, drama, or poetry of a significant literary movement such as Romanticism or Realism. Available in American, English, French, German, Spanish, or literature in translation.

335 Literary Eras 3 cr.
Prose, drama, or poetry; the works of a number of writers studied in relation to their time. Available in American, English, French, German, Spanish, or literature in translation.

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. See footnote for possibility of receiving retroactive credit 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. See footnote for possibility of 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 either in the foreign language or in English. See footnote for possibility of receiving retroactive credit for prior experience.

423 Literary Research and Criticism 3 cr.
The principles of literary studies are stated and questioned by exploring the methodology and purposes of bibliography, scholarship, and criticism. The student's participation in literary study and the critical values he/she forms from such participation are emphasized. P: sr st or cons inst.

431 Shakespeare 3 cr.
Shakespeare's plays and poems.

434 A Major British Writer (or Writers) Exclusive of Shakespeare 3 cr.
A study of one or more outstanding figures in British literature. A careful analysis of the important themes, devices, and influences on the specific writer are emphasized.

435 A Major American Writer (or Writers) 3 cr.
A study of one or more outstanding figures in American literature. A careful analysis of the important themes, devices, and influences on the specific writer are emphasized.

436 Major French Writer 3 cr.
A study of an outstanding figure in French literature. A careful analysis of the important themes, devices, and influences on the specific writer are emphasized. See footnote for possibility of receiving retroactive credit for prior experience. May be taken in translation.

437 Major German Writer 3 cr.
A study of an outstanding figure in German literature. A careful analysis of the important themes, devices, and influences on the specific writer are emphasized. See footnote for possibility of receiving retroactive credit for prior experience. May be taken in translation.

438 Major Spanish Writer 3 cr.
A study of an outstanding figure in Spanish literature. A careful analysis of the important themes, devices, and influences on the specific writer are emphasized. See footnote for possibility of receiving retroactive credit for prior experience. May be taken in translation.

493 Seminar in English Literature 3 cr.
A study of a major writer, literary movement, or influence in English literature. Extensive research on the chosen topic is required.

494 Seminar in American Literature 3 cr.
A study of a major writer, literary movement, or influence in American literature. Extensive research on the chosen topic is required.

575 MANAGERIAL SYSTEMS (SPS)

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 of the course 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.

575-202 Business and Its Environment 3 cr.
The major components of the business enterprise and its environments of resources, competition, and regulation are studied by participation in a simulated world of competitive manufacturers who attempt to accomplish appropriate business goals. Pricing, profit, finance planning, controls, ethics, environmental impact, social responsibility, and other important concepts. 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.

575-281 Student-Led Courses 1-4 cr.
See page 139.

575-283X Selected Topics in Managerial Systems 1-4 cr.
See page 140.

575-298 Directed Study 1-4 cr.
See page 140.

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.
The theory and practice of the analysis of published financial statements. Includes a review of the balance sheet and income statement. 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 projection of earnings.

575-481 Student-Led Courses 1-4 cr.
See page 139.

575-483X Selected Topics in Managerial Systems 1-4 cr.
See page 140.

575-484 Senior Distinction Project 3 cr.
See page 140.

575-495 Field Work Applications in Business* 2-6 cr.
Application of the principles, concepts, and ethical codes of business within the environment of an on-going firm. Supervised by a faculty member and a representative of the involved firm. Enrollment subject to availability of positions.

575-498 Directed Study 1-4 cr.
See page 140.

ACCOUNTING AND QUANTITATIVE METHODS

575-215 Intermediate Accounting 4 cr.
Theories underlying financial accounting practice; special problems associated with preparation of the income statement and balance sheet; accounting principles underlying the valuation of cash, receivables, inventories, long-term investments, fixed assets, liabilities, and owners' equity accounts; relevant APB opinions and FASB statements. P: 575-204.

575-216 Accounting for Administrators 3 cr.
Accounting concepts and methods; interpretation and use of accounting reports and analyses for the managerial purposes of planning, coordination, and control: cost-profit-volume relations, budgeting, effects of taxation and price level changes on decision-making. P: 575-204.

575-217 Quantitative Methods for Administrative Decisions 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 600-251.

575-312 Cost Accounting 3 cr.
Principles and procedures utilized in the accumulation of cost data in an organization; the role of cost accounting in management and how cost data are recorded in the accounts; job order and process cost systems; the use of flexible budgeting and standard cost accounting in the overall context of budgetary control; cost-volume-profit planning and the role of cost data in capital budgeting and pricing decisions. 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 2 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: 575-215.

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.

*Divisional Committee approval is pending.

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.

DISTRIBUTION

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.

575-325 Principles of Public Relations 3 cr.
External relations of the business enterprise or governmental unit; attitudes and actions of the public and how they affect internal relations and conduct of the unit.

575-326 Principles of Purchasing 3 cr.
Principles of procurement of materials and goods by business and government. Features purchasing function, organization for purchasing, personnel, E.D.P. in purchasing, standards of quality, inventory management, cost analysis, selection, and evaluation of suppliers, purchasing policies, and ethics of purchasing. P: jr st.

575-331 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.

*Divisional Committee approval is pending.

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.

575-333 Analysis of Environmental Factors in Transportation Systems Planning 3 cr.
Analysis of the internal and environmental factors affecting transportation systems and the effect of such factors on the development and implementation of integrated transport systems. Application of model building, simulation, cost-benefit analysis, and other techniques in the resolution of such problems as congestion; air, water, noise, and visual pollution; economic, social, and institutional constraints on energy optimization in transport; and transportation problems of the rural and urban poor. P: jr st and 575-331.

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, buildings, 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.

575-429 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

575-102 The Consumer Experience 3 cr.
Examines consumer problems by utilizing video tapes, readings, class discussions, and a problem solving case approach. Analyzes alternative economic mechanisms such as cooperatives and consumer financial problems of the young, the aged, and minorities as well as general consumer problems associated with life style and standard of living.

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.

575-363 Personnel Administration in Government 3 cr.
Aspects of personnel management unique to government service: the problem of patronage, civil service rules and regulations, written examinations for recruitment. P: jr st. Not open to persons who have had 575-362.

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.

575-366 Collective Bargaining 3 cr.
Cases of techniques and problems in dealings between organized employees and their employers; industry-wide collective bargaining; constraints in the public service; administration of collective bargaining agreements. P: cons inst.

575-367 Motivation and Leadership* 3 cr.
Current theories of motivating and leading employees. Develops managerial skills. P: jr st.

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: 575-366 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.

575-388 Practice of Public Administration 3 cr.
The management of physical and human resources in the execution of public policy, relationship between policy determination and policy administration; leadership, control, and accountability. P: jr st.

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.

*Divisional Committee approval is pending.

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.

600 MATHEMATICS* (CES)

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.

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.

600-202 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.

600-205 Elementary 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.

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.

600-221 Elementary Linear Algebra 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.

600-240 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 Computer Science 3 cr.
The structure, operations, and programming of a computer; application of data processing to students' areas of interest; logic decision techniques as applied to systems and procedures. Examples are selected appropriate to student needs. P: 600-152.

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

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.

600-309 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: 600-205 and 211.

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

600-311 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 221.

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 221.

600-321 Linear Algebra 3 cr.
Vector spaces; linear transformations; determinants and matrices; eigenvectors; diagonalization; the principal axis theorem. P: 600-203 and 221.

600-328 Introduction to Algebraic Structures 3 cr.
Groups, rings, and fields as organizing ideas. Basic structure theorems. Applications. P: 600-203 and 221.

600-350 Numerical Analysis 3 cr.
Solutions of equations; polynomial approximations; initial value problems for ordinary differential equations; matrix inversion. P: Fortran ability and 600-205.

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.

355 Applied Mathematical Optimization 3 cr.
See 862-355.

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; nonparametric methods; sequential methods. P: 600-221 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.

600-382 History of Mathematical Thought 3 cr.
Provides the secondary teacher with an appreciation of the origins and historical growth of mathematics through an examination of the way in which each age received mathematical ideas from its predecessors, and then transmitted them to those who followed, occasionally losing in the process, but often adding great contributions of its own. P: 600-205, 209, or 221.

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: 600-221.

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: 600-311.

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 variables in various coordinate systems; Dirichlet problem; strings and membranes; heat flow; electricity flow. P: 600-205 and 221.

*Divisional Committee approval is pending.

A maximum of 6 credits from the following list may be used to fulfill the 24 credits required for the mathematics co-major. Several courses offered in January also qualify for mathematics credit.

226-315 Mechanics III 3 cr.
862-272 Introduction to Analog Computer Simulation 1 cr.
862-318 Engineering Systems and Automatic Control 3 cr.
862-495 Mathematical Political Science 1 cr.

601 SKILLS LEARNING PROGRAM — MATHEMATICS

601-094 Elementary Algebra 2 cr.
An audio-tutorial course utilizing individualized instruction for students having no background in algebra. Topics include an introduction to sets, binary operations, variable expressions, factoring, equations of higher degree, fractional equations, absolute value, operations with rational expressions, the solution of inequalities, radicals and fractional exponents, systems of linear equations, and an introduction to functions and relations. Offered on an automatic pass-no credit basis, except by petition. Not offered for degree credit.

628 MEDICAL TECHNOLOGY

628-400, 401, 402 Internship in Medical Technology 32 cr.
Conducted during the senior year at a cooperating hospital. Prepares the student in the theory and practice of numerous specific medical diagnostic procedures required to become a registered medical technologist. Prior to the internship, the student must have completed other UWGB degree requirements. Qualification for a degree and completion of the internship meet the requirements of the American Society of Clinical Pathologists for admission to the Examination for Registry.

662 MODERNIZATION PROCESSES (CCS)

662-241 Women and Changing Values* 3 cr.
An 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.

662-281 Student-Led Courses 1-4 cr.
See page 139.

662-283X Selected Topics in Modernization Processes 1-4 cr.
See page 140.

662-298 Directed Study 1-4 cr.
See page 140.

662-290 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.

662-301 Action Projects in the Community 3 cr.
Modernization credit for participation in the University Year for Action program.

662-320 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 MDP, political science, or history courses.

662-333 Modernization in a Selected Area* 3 cr.
The processes and strategies of modernization in a selected nation or set of nations. Course may be repeated for credit each time it focuses upon a different area.

662-342 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.

662-360 Concepts of Modernization 3 cr.
The value oriented problems of defining modernization. Use and construction of models as analytical tools in the study of modernization. P: concurrent registration in 662-361.

662-361 Process of Modernization 3 cr.
Application of the concepts and models of modernization discussed in 662-360 to the question of the processes of modernization through time. Emphasis on both the historical processes of modernization and on values implicit in them.

662-365 Human Resources and Economic Growth in Poor Countries* 3 cr.
An historical overview of population, technology, and economic development. Survey of the current and projected future situation in terms of population, resources, and socio-economic geography in the world's poor countries. A framework, based upon the concept of human resources (population weighted by "quality" of human potential), for considering the question, "What is the role of population in the economics of poor countries in the world today?" P: 662-360, 361 or 779-320; jr st.

662-370 Strategies of Modernization 3 cr.
Economic, political, and socio-cultural factors in planned change as it occurs in societies at different levels of modernization and an examination of resulting forms and dilemmas exemplified by diverse case studies.

662-371 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 socio-cultural forces in collective phenomena such as social movements, the diffusion of innovations, and generational changes.

662-381 Causes and Consequences of Poverty* 3 cr.
The problem of poverty in different social, political, cultural, and economic contexts. The dynamic processes by which different societies distribute rewards. Understanding mass poverty and residual poverty with a view toward reducing the degree of inequality in the distribution of rewards within societies.

662-385 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.

662-400 Environmental Law 3 cr.
A synthesis of the fragmented collection of court decisions on the 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.

662-410 Alternative Social Environments from Speculative Fiction 3 cr.
An inquiry into our 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 our present social fabric, leading to a better understanding of present social change and its implications for the future.

662-415 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 modern societies.

*Divisional Committee approval is pending.

662-425 The Legal Role in Social Maintenance and Change 3 cr.
The functions and effects of institutional rules and social norms in philosophical and behavioral context. Interchanges between cultural norms, laws, and judicial institutions. Historical and comparative implementation of the law as it effects society.

662-460 Modernization of the Peasantry and Other Marginal Societies 3 cr.
The peasantry of underdeveloped nations and marginal societies within highly industrialized nations. Political, economic, and cultural penetration by more advanced centers and forms of adaptation and resistance to that penetration.

662-470 Senior Seminar in Modernization Processes 3 cr.
A rigorous analysis and synthesis of a central issue in modernization processes chosen for a full-semester study. The emphasis is on intellectual depth; the student applies previously obtained knowledge to a problem and attempts to synthesize realistic alternatives.

662-481 Student-Led Courses 1-4 cr.
See page 139.

662-483X Selected Topics in Modernization Processes 1-4 cr.
See page 140.

662-484 Senior Distinction Project 3 cr.
See page 140. Consult the concentration adviser at the beginning of the senior year.

662-498 Directed Study 1-4 cr.
See page 140.

694 NUTRITIONAL SCIENCES (CHB)

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 nor 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*.

694-232 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.

694-281 Student-Led Courses 1-4 cr.
See page 139.

694-283X Selected Topics in Nutritional Sciences 1-4 cr.
See page 140.

694-298 Directed Study 1-4 cr.
See page 140.

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.

694-328 Principles of Nutritional Biochemistry 3 cr.
Comprehensive survey of metabolism and physiological chemical functions in living organisms. P: 226-300 and 301 or 303.

694-329 Nutritional Biochemistry Laboratory 1 cr.
An optional basic laboratory course to accompany 694-328. P: An organic chemistry laboratory course and credit or concurrent registration in 694-328.

694-404 Food Science 4 cr.
Standards of food quality, food preferences, food assay, food deterioration, adulteration; methods of preservation and distribution. Laboratory includes quantitative analysis of and instrumental procedures for various food components; arranged student visits and/or interaction with specific area food laboratories. Offered in alternate years. P: 226-303 or 694-328.

694-421 Community Nutrition I 2 cr.
Nutritional problems of the individual and family within the context of the larger community — world, 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 139.

694-483X Selected Topics in Nutritional Sciences 1-4 cr.
See page 140.

694-484 Senior Distinction Project 3 cr.
See page 140.

694-485, 486 Advanced Human Nutrition 3, 3 cr.
Physiological and biochemical principles of nutrition; fundamental concepts of human nutrtion and nutritional diseases. P: 204-202 and 203; 226-330 or 694-328.

694-498 Directed Study 1-4 cr.
See page 140.

705 PERFORMING ARTS: MUSIC (CCC)

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 242-151.

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 242-152.

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 performing arts: 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, 252 Literature and Styles in Music I, II 4, 4 cr.
Musical literature and composers seen in historical context. Music and musical attitudes are viewed in the perspective of other arts, as well as in relation to the social and political environment. Students do some "composing" in various styles. P: 705-152.

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: 705-212.

705-316 Instrumental Arranging 2 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: 242-252.

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 318.

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 1 cr.
Lecture and laboratory experience in the performance of string instruments including violin, viola, violin-cello, and string bass. Requirements are performance proficiencies on all instruments and completion of a reference syllabus. P: jr st.

705-344 Choral Techniques 2 cr.
Theory and practice in the fundamentals of singing. P: jr st.

705-345 Percussion Techniques 1 cr.
Lecture and laboratory experience in the performance of percussion instruments including snare drum, bass drum, tympany, xylophone, marimba and all trap 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: 707-042.

705-351, 352 Literature and Styles in Music III, IV 4, 4 cr.
Musical literature and composers seen in historical context. Music and musical attitudes are viewed in the perspective of other arts, as well as in relation to the social and political environment. Students do some "composing" in various styles. P: 705-152.

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: 242-352.

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 PERFORMING ARTS: MUSIC, APPLIED (CCC)

707-001-440 Class and Private Instruction in Instruments and Voice 1-2 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, violin-cello, double bass, and harp is dependent upon available resident music staff and their teaching loads.

All students registered for class and private applied music instruction are assessed the full tuition fee regardless of the total number of credits carried. The prerequisite for courses beyond the "fundamentals" level is successful completion of the preceding course in a sequence and cons inst.

707-241, 441 Concert Band 1 cr.
707-242, 442 Marching Band 2 cr.
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.
707-261, 461 Concert Choir 1 cr.
707-162, 362 Oratorio Choir 1 cr.
707-163, 363 Vocal Ensemble 1 cr.
707-164, 364 University Singers 1 cr.

709 PERFORMING ARTS: THEATER (CCC)

Acting (6 semester sequence)

709-131, 132 Acting I, II 3, 3 cr.
Controlled improvisation, exercises, and simple scenes introduce a basic organic approach to acting technique with such concepts as "action," "objective," "justification." Leads to the development of a vocabulary and skills that allow the student to approach with confidence scene work from contemporary theater literature. The second semester applies principles learned to performing scenes from contemporary American theater literature.

709-231, 232 Acting III, IV 3, 3 cr.
Work in scene study advances into more complex theater literature. Techniques for script analysis introduce the basic problem of characterization. Study of plays from contemporary European theater literature and American Playwrights O'Neill, Williams, Albee, and Miller. P: 709-131, 132.

709-331, 332 Acting V, VI 3, 3 cr.
Problems of characterization; work on contemporary European theater, leading to the study of classical and nonrealistic theater; work that concentrates on each play's position in its social and historical milieu. P: 709-231, 232.

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 swordfighting 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.

*Divisional Committee approval is pending.

Voice and Speech

This is a four-semester sequence of integrated vocal and physical training based upon the principles and techniques of the Lessac system. This system is widely used in actor training and provides the student with a working knowledge of his/her vocal and physical capabilities. The first two semesters can be of value to any theater student, while the last two deal primarily with problems facing the performer. (Voice and Speech I and II are listed as 246-133, 134.)

709-233 Voice and Speech III 3 cr.
Introduction to principles of the Lessac system. Work on breathing, posture, movement training, and basic concepts of vocal life. Development of warm-up procedures.

709-234 Voice and Speech IV 3 cr.
Detailed work in the three energies comprising the Lessac system: structural action, tonal action, and consonant action. Development of key concepts of vocal and physical exploration.

709-333 Voice and Speech V 3 cr.
Application of vocal life to specialized problems facing the performer: control of pitch, rate, and volume; verse speaking; textual analysis; rehearsal procedures.

709-334 Voice and Speech VI 3 cr.
Application of vocal life in the development of technical expertise and specific skills for the performer: dialect work, audition preparation, proper use of voice in moments of heightened emotion.

Dance

As is universally accepted by professional teachers, schools, and dance companies, classical ballet is the primary foundation for all dance technique (however, some modern dance techniques which are based on classical ballet can provide the student with the ability of a professional modern dancer). Therefore, classical ballet technique is the foundation for all dance and movement training at UWGB.

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, 437, 438 Dance V, VI, VII, VIII 3, 3, 3, 3 cr.
Advanced techniques in ballet plus different influences of dance. P: 709-237, 238.

709-439 Advanced Dance Techniques 1-4 cr.
Different influences of dance. Character dance: ethnic and social dances from different periods in a form adapted for the stage. Supported adagio: working with partners in lifts and supports for use in theater, musical theater, or any form of dance. Sur les pointes and jazz. P: cons inst.

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, Erick 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 probe 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

Correlative to the training of the actor and director is the development of the theater technician and designer. Practical training in the visual and plastic arts and in the technology of light and sound are combined by the designer in the creation of the proper visual and aural environment for the finished performance by the actor.

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 a co-major 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. Participation 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 and Sound Design 3 cr.
The aesthetic practice of design of lighting and sound 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.

Theater History/Literature/Criticism

709-225, 226 Intercurricular Theater I, II 3, 3 cr.
A broad-based course designed for the theater major as well as the generalist who enjoys theater and wishes a greater understanding and experience in the several areas of the theater arts. Required of students with a co-major in theater.

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 each.

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."

709-351, 352 Introduction to 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 option 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 is the study of theater of various periods and cultures.

709-341 Shakespeare and Poetic Drama I 3 cr.
Theatrical form through examination of various kinds of poetic drama. Practical application of principles discovered through readings, discussions, films, and activities. Theatrical problems inherent in verse drama of such playwrights as Shakespeare, Moliere, and Ibsen.

709-342 Shakespeare and Poetic Drama II 3 cr.
Theatrical problems in a broad variety of poetic drama, including the Irish playwrights Yeats, Synge, O'Casey, Beckett, as well as contemporary experiments in writing and production. P: 709-341.

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

*Divisional Committee approval is pending.
**Offered when warranted by student demand.

736 PHILOSOPHY (CCC)

736-100 Ethics 3 cr.
Ethical issues in the thought of selected traditional and contemporary thinkers. Some effort made to use case studies to delimit the chief characteristics of ethical concepts.

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 nature of violence and pacifism and their various forms. Some historical treatment is considered in conjunction with contemporary studies, including those of anthropology, to clarify the function of violence and pacifism in the contemporary world.

736-111 Elementary Logic 3 cr.
Deductive and inductive inference, kinds of definition and similar problems are considered.

736-201 Philosophy and Language 3 cr.
A philosophical and historical inquiry into the notion of language as a "natural world concept" and the medium of access to the objective world. Such thinkers as Herder, W. von Humboldt, Dilthey, Scheier, and Cassirer are examined.

207 Philosophy and Literature 3 cr.
See 485-207.

736-208 Science and Ideology 3 cr.
The origins of scientism in the behavioral and natural sciences. Establishment of a philosophical critique of the social and political representations of scientism in the 20th century. P: a course in philosophy or in one of the social sciences.

736-210 Philosophy of Theories of Culture 3 cr.
The dynamics of cultural development, the influence of cultural trends on various activities within a given culture. A critical appraisal of major cultural theories. P: a course in philosophy.

736-211 Philosophy of the Arts 3 cr.
Various fine arts and what they might have in common as art, with attention to the creative activity of the artist. Critical investigation of the significance of the arts for human existence. P: a course in philosophy or in the performing or visual arts.

736-301 The Criticism of Values 3 cr.
An interdisciplinary study of the thought of selected philosophers and nonphilosophers as it represents a critique of the cultural values and institutions of their day. Different thinkers are dealt with at different times. (For example, Marx, Nietzsche, Weber, Kierkegaard, Dostoevsky, Freud, Ibsen, Sartre.) P: jr st and a course in philosophy.

736-302 History of Ancient Philosophy* 3 cr.
Philosophical thought from the pre-Socratics to the time of Augustine, with attention to Plato, Aristotle, the Stoics, and the Epicureans. Emphasis on the relation of that thought to the cultural institutions of the time.

736-304 American Philosophy in Context 3 cr.
An historical and critical survey of the American philosophical tradition, focusing on those elements which are distinctively American (e.g., transcendentalism, pragmatism) and their relevance to present-day problems. P: jr st and a course in philosophy.

736-313 History of Medieval and Renaissance Philosophy: Augustine to 1600 3 cr.
Philosophical thought from Augustine to the time of Descartes, with attention to the Christian, Jewish, and Arabic philosophical traditions and their relation to the cultural institutions of the time. P: 736-213.

736-314 History of Modern Philosophy I: Descartes to 1850 3 cr.
Philosophical thought from Descartes to the time of J.S. Mill. Major figures of the French, German, and English traditions and their cultural impact on modern life. P: 736-313.

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.

736-316 History of Modern Philosophy II: Hegel to the Present 3 cr.
Major figures in the French, English, and German traditions and their cultural impact on modern life. P: 736-314.

736-319 Phenomenology I: German 3 cr.
An introduction to the theory of intentionality in an historical framework. The basic problems of phenomenology centering around the work of Edmund Husserl and its impact on American philosophy. P: two courses in philosophy.

736-320 Phenomenology II: French 3 cr.
An introduction to French phenomenology with reference to its theories of reality, ethics, aesthetics, and psychology. P: 736-319.

736-322 Aesthetics 3 cr.
Contemporary philosophies of art and art criticism, with attention to the central problems of appreciation and evaluation. P: a course in philosophy.

736-324 Contemporary Philosophical Movements 3 cr.
A survey of late 19th century and 20th century philosophical movements in Europe and America (positivism, Marxism, pragmatism, intuitionism, existentialism, analytic philosophy, idealism). P: 736-314.

736-325 Marxist Humanism* 3 cr.
Survey of Marxism and existentialism centered around the problems of people's understanding of their environment. P: a course in philosophy.

736-402 Philosophical Foundations of the Natural Sciences* 3 cr.
The meaning and structure of nature at large; the basic assumptions in the interpretation of nature by physics, biology, mathematics, mechanics, psychology. P: a course in philosophy.

736-404 Major Philosophic 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). P: cons inst.

*Divisional Committee approval is pending.

736-406 Philosophical Problems in Psychology 3 cr.
Philosophical examination of the major psychological theories concerning the fundamental structure of the human individual, the relation of conscious to unconscious mental functions, the possibility of freedom, the role of society in the development of the human individual. P: two courses in philosophy.

742 PHYSICAL EDUCATION

Students should develop physical as well as mental and social capabilities during their collegiate experience. The physical education basic instruction program offers a broad range of courses appealing to the diverse interests of the student body. Each student should find several courses of interest.

These courses help the student learn a new skill, improve ability in a familiar activity, and/or improve one's personal fitness. Associated lectures provide knowledge and insight into the nature of human movement and the physiological effects. Skill and knowledge measurements are utilized to test initial capabilities, progress, and understandings. The development of a relatively high degree of performance in activities provides the confidence and motivation needed to enjoy active participation throughout life.

All courses except First Aid meet the equivalent of two class periods per week. The First Aid class meets three times per week, earning American Red Cross and Medical Self-Help certification.

Students must show evidence of personal fitness for the activity selected via the required University physical examination. Questions regarding this program should be directed to the chairperson of the physical education programs or Student Health Services personnel.

Beginning level courses (100) anticipate novice performers and follow a basic outline:

Introduction — history, kinesthetic and physical aspects, social and recreational values, facilities and equipment, tournament standards.

Conditioning and Safety — healthful and physiological effects, personal lifetime fitness considerations and safety procedures.

Performance — body mechanics, basic skills and drills, competitive strategy and play.

Knowledge — terms and definitions; courtesies and rules of play; officiating, scoring, and timing.

Intermediate level course (200) participants should have some previous training or experience in the skill areas selected. Prerequisites or the consent of the instructor are generally required. Physiological aspects, performance strategy, and compliance with the rules are emphasized. Emphasis is placed upon the efficient application of body mechanics as the individual seeks to perfect technique. Increased opportunity for competitive experience seeks to impart the feeling of competence in a skill area and individual self-confidence.

Advanced level courses (300) are intended for those who desire to pursue interests and develop abilities beyond the average. Prerequisites and/or consent of the instructor are usually required. Individual skills are perfected qualifying the person for a relatively high performance level.

The student should consult the *Timetable* for specific offerings. Selections are made from the following list of courses:

Aquatics: 100 series — swimming; 200 series — swimming, life saving, skin and SCUBA diving, springboard and platform diving; **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 — personal conditioning, weight training, running conditioning, fitness and diet, exercise and aging; 200 series — weight training and slimnastics.

Individual Sports: 100 series — archery, bowling, foil fencing, golf, and horsemanship.

Martial Arts: 100 series — judo, karate, and wrestling; 200 series — judo, karate, personal defense, and wrestling.

Outdoor Activities: Cycling, orienteering, backpacking, boating and canoeing, sailing and outdoor survival skills.

Personal Health: 100 series — first aid; 200 series — first aid; 300 series — emergency medical care.

Racket Skills: 100 series — badminton, tennis, handball, paddleball, and racketball; 200 series — tennis.

Sports Officiating: 100 series — basketball, football, soccer, softball/baseball, volleyball, wrestling, and gymnastics.

Team Sports: 100 series — basketball, field hockey, soccer, softball/baseball, and volleyball.

Tumbling and Gymnastics: 100 series — free exercise, gymnastics and tumbling.

Winter Sports: 100 series — cross country skiing, curling, snowshoeing, and downhill skiing; 200 series — downhill skiing.

The Coaching Certification Program offers the student an opportunity to gain minimal preparation for assuming the responsibility of a coach of athletic activities. Many states, including Wisconsin, require or recommend that all public school coaches be certified in addition to their general teacher certification. The CCP sequence consists of 16 credits and is consistent with the recommendations of the National Council of State High School Coaches, the National Association for Sport and Physical Education, National Association for Girls and Women in Sport and American Alliance of Health, Physical Education and Recreation.

Students are encouraged to initiate this program as early in their course of study as possible to assure normal matriculation. The UWGB Coaching Certification Program has been approved by the Wisconsin Department of Public Instruction.

Courses for this program include:

Required:

478-102 Introduction to Human Biology 3 cr.
742-401 Theory and Philosophy of Athletic Coaching 2 cr. or

742-402 Psychology and Sociology of Sport, 2 cr.
742-403 Organization and Administration of Athletics 2 cr.
742-405 Scientific Conditioning of the Athlete 2 cr.
742-406 Prevention and Treatment of Athletic Injuries 2 cr.
742-XXX Principles of Coaching (Sport)* 2 cr.
742-XXX Field Experiences in Coaching (Sport)* 2 cr.

Elective:

742-XXX Athletic Officiating of (Sport)* 1 cr.
742-116 First Aid Procedures 2 cr.

PHYSICS (CES)

Physics course descriptions are listed under Chemistry-Physics (226) and Science and Environmental Change (862). Students who wish to pursue a co-major 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 Introduction to Geophysical Fluid Mechanics 3 cr.
862-350 Meteorology 3 cr.

*Course number determined by sport selected.

778 POLITICAL SCIENCE (CCS)

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.

778-215 Presidential Elections 3 cr.
The relationship between the electoral system, the conduct of presidential campaigns, and the individual member of the electorate. Students examine their own socialization into politics, the ways in which the campaigns influence voters, and the effect the presidential election system has upon our ability to achieve our individual political goals.

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.

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 662-320.

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 or 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.

778-460 Public Policy Analysis 3 cr.
Description and explanation of the causes and consequences of government activity. Public policy is whatever governments choose to do or not to do. Explanatory power of different analytical models explored with issue areas such as environmental policy, government spending, and welfare. P: jr 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.

✓ 779 POPULATION DYNAMICS (CHB)

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.

779-281 Student-Led Courses 1-4 cr.
See page 139.

779-283X Selected Topics in Population Dynamics 1-4 cr.
See page 140.

778-298 Directed Study 1-4 cr.
See page 140.

779-310 Introduction to Human Genetics 3 cr.
Principles of human and population genetics and the genetic implications of technology. P: 204-202.

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.

779-342 Human Evolution 3 cr.
Phylogenetic history and affinities of Homo sapiens and the evidence on which they are based. Potential effects of technology on future human evolution. P: 779-312 or 204-303.

779-356 Social Demography 3 cr.
Examines social and economic factors related to the size, growth, distribution and dynamics of human populations. Considers theoretical approaches to human population growth as well as the impact of population policy upon demographic trends.

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 will be examined. P: 779-342.

779-365 Human Resources and Economic Growth in Poor Countries* 3 cr.
See 662-365.

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 fissues with emphasis on fixation, staining, and sectioning of materials. Preparation of semipermznent 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 relationships among agricultural technology, population growth, and human nutritional requirements. P: 204-303.

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.

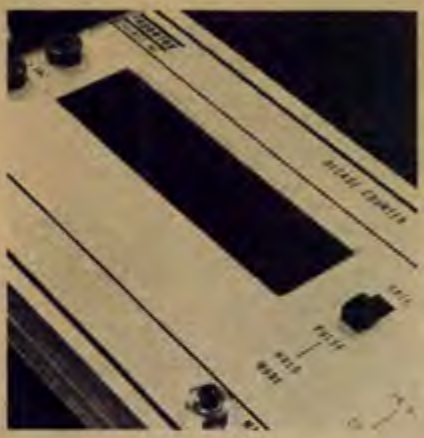
779-412 Principles of Parasitology 3 cr.
Interactions of human populations with parasitic worms, protozoans, and arthropods. Laboratory includes identification and life cycles of parasites. P: 204-203.

779-421 Problems in Population Regulation 3 cr.
Consideration of biological, cultural, and political problems in regulating human populations. P: 779-320.

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.

*Divisional Committee approval is pending.



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 139.

779-483X Selected Topics in Population Dynamics 1-4 cr.
See page 140.

779-484 Senior Distinction Project 3 cr.
See page 140.

779-498 Directed Study 1-4 cr.
See page 140.

820 PSYCHOLOGY (CCS)

820-102 The Behavior and Experiences of Man 3 cr.
Introduction to general psychology and the psychology of individual differences; examination of basic and complex processes; problems in systematic study of objective and subjective data. P: 255-102.

820-202 Introduction to Social Psychology 3 cr.
Introduction to social psychology, including attitude formation and attitude 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, frustration, and conflict; adjustive techniques; analysis and rehabilitation. P: soph st.

820-300 Experimental Psychology 4 cr.
Experimental designs applied to psychological problems; designing, conducting, analyzing, and reporting of research; individual and group laboratory projects; statistics recommended. P: jr st.

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.

820-312 Psychology of Stress* 3 cr.
How today's complex world of rapid change produces stress, tension, and anxiety that may profoundly influence the behaviors of individuals, groups and communities. Environmental factors, physical, physiological and psycho-sociological, that stimulate humans to use adapting and coping responses. Can humans deal adequately with rapid change, or do they adapt too easily and ultimately become victims of their facile adaptability to change?

820-320 Personnel Psychology 3 cr.
Selection, classification, and placement procedures; techniques of employment interviewing, rating methods, industrial tests (mechanical, clerical, trade), job analysis, and occupational description; lecture and laboratory work. P: jr st.

820-335 Psychology of Attitudes 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 phenomena. P: jr st and 820-102 or cons inst.

820-415 Organization Psychology 3 cr.
Relation between social structure and psychological behavior, problems of bureaucracy, leadership styles, communication networks, decision-making processes, 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 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.

834 REGIONAL ANALYSIS (CCS)

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 Man and the Ocean of Air 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 Man and 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.

*Divisional Committee approval is pending.

834-281 Student-Led Courses 1-4 cr.
See page 139.

834-283X Selected Topics in Regional Analysis 1-4 cr.
See page 140.

834-298 Directed Study 1-4 cr.
See page 140.

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.

834-325 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 a 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.

834-345 Regional Sociology of Man and Environment* 3 cr.
The sociological analysis of socio-cultural regions, the interaction of biophysical regions and socio-cultural regions; and applied sociological dimensions of regional natural resource, land use, and environmental problems. A case study approach using in-depth case examples from different regions to illustrate general principles, concepts, and approaches. P: jr st.

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 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 The Land Surface System 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.

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 projections. 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.

*Divisional Committee approval is pending.

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 139.

834-483X Selected Topics in Regional Analysis 1-4 cr.
See page 140.

834-484 Senior Distinction Project 3 cr.
See page 140.

834-498 Directed Study 1-4 cr.
See page 140.

862 SCIENCE AND ENVIRONMENTAL CHANGE (CES)

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. Field trips.

862-202 Environmental Information Sources 1 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.

862-260 Energy, Electric Power and Man 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.

862-272 Introduction to Analog Computer Simulation 2 cr.
Programming and operating an electronic analog computer. Solutions of differential equations. Simulation of linear and nonlinear systems. Automatic control of analog modes with logic signals. P: 600-202.

862-281 Student-Led Courses 1-4 cr.
See page 139.

862-283X Selected Topics in Environmental Control or Ecosystems Analysis 1-4 cr.
See page 140.

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.

862-298 Directed Study 1-4 cr.
See page 140.

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.

862-310 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.

862-318 Engineering Systems and Automatic Control 3 cr.
Basic laws of system components, analogies, system transfer functions, block diagrams, transient and steady state response characteristics, use of analog computer, feedback and automatic control, frequency response, stability. P: 600-205 and 600-309 recommended.

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 between CES, CCC, and CCS 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 Introduction to 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: 204-203, 226-108 or 120, 122, and 296-202.

862-332 Introduction to 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: 226-122 or concurrent registration.

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.
Atmospheric processes, their nature, and their measurement. P: 226-223.

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.

862-355 Applied Mathematical Optimization 3 cr.
Analytical and numerical optimization techniques; linear, non-linear, integer, and dynamic programming. Techniques applied to problems of water, forest, air, and solid waste management. P: 600-203 and 221.

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.

862-403 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.

862-420 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.

862-481 Student-Led Courses 1-4 cr.
See page 139.

862-483X Selected Topics in Environmental Control or Ecosystems Analysis 1-4 cr.
See page 140.

862-484 Senior Distinction Project 1-3 cr.
See page 140.

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.

862-498 Directed Study 1-4 cr.
See page 140.

✓ 892 SOCIAL SERVICES (SPS)

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.

892-281 Student-Led Courses 1-4 cr.
See page 139.

892-283X Selected Topics in Social Services 1-4 cr.
See page 140.

892-298 Directed Study 1-4 cr.
See page 140.

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* 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.

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.
The 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: 892-302.

*Divisional Committee approval is pending.

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 engaging 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 139.

892-483X Selected Topics in Social Services 1-4 cr.
See page 140.

892-498 Directed Study 1-4 cr.
See page 140.

900 SOCIOLOGY (CCS)

900-202 Introduction to Sociological Analysis 3 cr.
Introducton to major sociological theories and their application to contemporary problems of society. P: soph st.

900-203 Minority Groups 3 cr.
Character of racial, religious, and ethnic minority groups; adjustments to society and societal accommodation. P: soph st.

*Divisional Committee approval is pending

900-208 Marriage and Family 3 cr.
Nature of the family; processes of courtship and marriage interaction; correlation of physiological, psychological, economic, and sociological contributions to marriage and family life. P: soph st.

900-302 Social Stratification 3 cr.
Occupation, class, and status as determinants of group interests, ideologies, and struggles; selected international comparisons. P: 900-202 or cons inst.

900-304 Processes of Deviant Behavior 3 cr.
Factors and conditions which underlie disagreement about fundamental values; relation of values to personal and social maladjustment; evaluation of various theories of deviant behavior; deviant behavior in different societies; group approaches to social reintegration. P: 900-202 or cons inst.

900-311 Collective Behavior 3 cr.
Analysis of the dynamics of social movements, mobs, crowds, masses; voluntary and compulsory associations; power structure; group responses to varieties of leadership. P: 900-202 or cons inst.

900-312 Social Change 3 cr.
Social change in community and society with emphasis upon the rate, direction, mechanisms, and planning of change in modern and emerging nations. P: 900-202 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.
Crime as a form of deviant behavior; its relation to societal values and social structure; behavior systems and types of criminal behavior; theories of treatment and control. P: jr st and one sociology course at the 300 level.

900-405 Rural-Urban Interaction 3 cr.
Relationships between rural and urban social patterns; problems of adjustment to city life. P: jr st and one course in sociology at the 300 level.

900-406 Comparative Social Systems 3 cr.
Contemporary social systems; distinctions and broad cross-cultural comparisons between Western and non-Western systems. P: jr st and one sociology course at the 300 level.

900-407 Complex Organization 3 cr.
Major theories relating to structures and processes of large-scale formal organizations; consideration of industrial-commercial, governmental, religious, military, political, and educational organizations. P: jr st and one sociology course at the 300 level.

UNIVERSITY WITHOUT WALLS

930-200, 400 Contract Learning 1-18 cr. ea.
Contract Learning is an agreement made between a student and faculty sponsor on a course of study in which the student works on his/her own in a situation of challenged guidance from the sponsor. Procedures for setting up contracts are quite specific, requiring a syllabus of study to be developed by the student and his/her sponsor which includes the contract title, previous experience in the area, goals to be achieved, methods and resources to be used, and evaluation procedures.

938 URBAN ANALYSIS (CCS)

938-200 The City: An Introduction 3 cr.
The richness and complexity of the human experience in the modern city. The city as an arena in which interrelationships between enduring human concerns and social institutions find articulation. How the city influences these and how the established institutions and concerns influence the city.

938-205 Introduction to Urban Analysis 3 cr.
The physical, economic, political, social, and cultural interaction within urban and urbanizing areas; concepts for evaluation of selected problems and opportunities of urban and urbanizing areas.

938-240 Images of the City in American Literature and the Arts 3 cr.
How American writers have dramatized and symbolized cities in novels, poems, and plays. Visual images of the city in paintings and photographs.

938-281 Student-Led Courses 1-4 cr.
See page 139.

938-283X Selected Topics in Urban Analysis 1-4 cr.
See page 140.

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

938-298 Directed Study 1-4 cr.
See page 140.

938-310 Studies in Urban Culture and Society 3 cr.
The cultural and social dimensions of urban life are explored through case studies. Specific topics vary from year to year. Examples: the political economy of cities, the culture of poverty, urban values, and ethnicity in American cities.

938-311 Studies in Urban Resources 3 cr.
The use of urban space and resources is explored through case studies. Specific topics vary from year to year. Examples: urban environmental policy, housing, and 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: 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.
The 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.

325, 326 Human Living Space I, II. 3, 3 cr.
See 834-325, 326.

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

938-335 Aggressive Behavior: Biological and Psychological Roots 3 cr.
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. Synthesis of these two points of view, with emphasis on the implications for human behavior.

938-336 Research on Aggression 3 cr.
Students examine some aspect of aggressive behavior in animals or humans through guided research based upon a design they submit. 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.
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. Emphasizes the links between theories of causation and theories of control.

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.

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.

938-353 Community Noise: Effects, Assessment and Solutions* 3 cr.
Noise, the most common environmental complaint in urban areas. The physical, physiological, psychological, social, and legal characteristics of the problem and field research on the nature of community noise in the city of Green Bay. Various techniques for the abatement and control of noise.

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.

*Divisional Committee approval is pending.

938-370 Police in Modern Society 3 cr.
The relationship of the police with the environment and what police actually do. 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.
Citizen participation in the urban planning process. The urban planner in the role of community advocate. Topics include a services perspective on urban systems, development of community organizations, analysis of community problems and goals, and design of intervention strategies. Students read broadly and present analyses in class. A journal, an annotated bibliography, and a research paper are required.

938-400 The City as Idea 3 cr.
Attempts to define what a city is have been 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 834-325, 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: 242-271.

**Environmental Design Workshops II and IV are offered as 242-471, 472. Divisional Committee approval is pending for all four courses.

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.
The aspects of urban existence which aid and impede Americans' personal quests for identity. The relationships between urban commercial institutions, recreational facilities, aesthetic conditions, and community structures and the individual's search for significance, control, pleasure, and companionship. The effects of an urban setting on the problems of acculturation, loneliness, helplessness, boredom, apathy, and mental stress. P: jr st.

938-421 Urban Planning I 3 cr.
Planning as a generic process: planning activities in the various delivery systems of the city, 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. P: jr st.

938-422 Urban Planning II: Community Project 6 cr.
Field research on the planning/decision-making processes involved in an ongoing program for the revitalization of a West Green Bay neighborhood. The planning team makes organizational and operational decisions to integrate it into the community program. Areas that may be investigated 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. P: 938-421 and cons inst.

938-430 Urban Aesthetics 3 cr.
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. Mandatory field trips and case studies.

938-432 *Evolutionary Roots of Urban* Behavior 3 cr.
Is human behavior influenced by 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. Draws from human evolution, evolutionary animal behavior, and environmental and comparative psychology to identify those behaviors that warrant study in terms of their evolutionary roots.

938-435 Sociocultural Aspects of Urban Stress 3 cr.
Human adaptation to sociocultural stressors typically prevalent in present-day communal life. Planning and execution of projects concerned with the impact of such stressors on individual experience and behavior and the impact in turn on those adaptive responses upon the nature of the communal environment. P: jr or sr st.

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. Changes in these patterns as America became increasingly industrialized and urbanized; changes produced by counterculture movements.

938-444 National Issues and Community Reform 3 cr.
The effect of national socioeconomic problems on urban concerns; the effect of community reformist action on urban and national governmental policies towards the distribution of wealth and power in urban America. Strategies employed by Americans who have attempted to use community action to cope with urban and national problems. P: sr st.

938-445 Planning in a Simulated Environment 4 cr.
See 862-445.

938-460 The Corporation and the City 3 cr.**
The interrelationship between values, organizational structure and function, and urban sociopolitical life. 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.
Changing concepts of community and consequent difficulties involved in American urbanization and industrialization. The term "community" as a complex concept encompassing a variety of both social structures and cultural paradigms. 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 include the self and social interaction, naturalness and artificiality, freedom and order, spontaneity and organization, changing occupational patterns, family structures, ascribed sex roles, styles of pseudo-communities, folklore and myth, law and art, social science and literature, and philosophy and political theory. 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 139.

938-483X Selected Topics in Urban Analysis 1-4 cr.
See page 140.

938-484 Senior Distinction Project 3 cr.
See page 140.

*Environmental Design Workshops II and IV are offered as 242-471, 472. Divisional Committee approval is pending for all four courses.

**Divisional Committee approval is pending.

938-495 The Urban Experience: A Simulation* 4 cr.
Through simulations, students "become" community influentials and make decisions required in real life. Simulations such as SIMSOC, TRACTS, CLUG, IMPACT, and GHETTO help students experience important parts of the urban existence. Offered in January.

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. Patterns of adjustment and channels for integration are examined in one such migrant population — Southern Appalachian peoples whose movement to northern metropolitan centers has been the result of economic stagnation in their native region. Offered in January.

938-498 Directed Study 1-4 cr.
See page 140.

957 VISUAL ARTS (CCC)

957-102 Design and Drawing Studio I 3 cr.
Introduction to studio art work and to fundamental concepts of art structure and design. Two-dimensional art work employing various drawing techniques in black and white media.

957-103 Design and Drawing Studio II 3 cr.
Introduction to studio art work and to fundamental concepts of art structure and design. Two-dimensional art work in color and design utilizing the elements and principles of design.

957-104 Design and Drawing Studio III 3 cr.
Advanced problems of design and art with emphasis upon three-dimensional design. P: 957-102, 103.

143 Introduction to Creative Photography 3 cr.
See 246-143.

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

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 and 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: 967-201.

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 Oil 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 wheel throwing. 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.

343 Creative Photography II 3 cr.
See 246-343.

957-351, 352 Art Metal and Jewelry Design I, II 3, 3 cr.
Studio work in the creation and design of art metal-jewelry projects utilizing varied metal techniques, processes, and 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 Designer 3 cr.
Investigation of various materials of the designer and techniques of fabrication with these materials. P: two courses in design.

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 consideration 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.

443 Advanced Problems in Creative Photography 3 cr.
See 246-443.

*Divisional Committee approval is pending.

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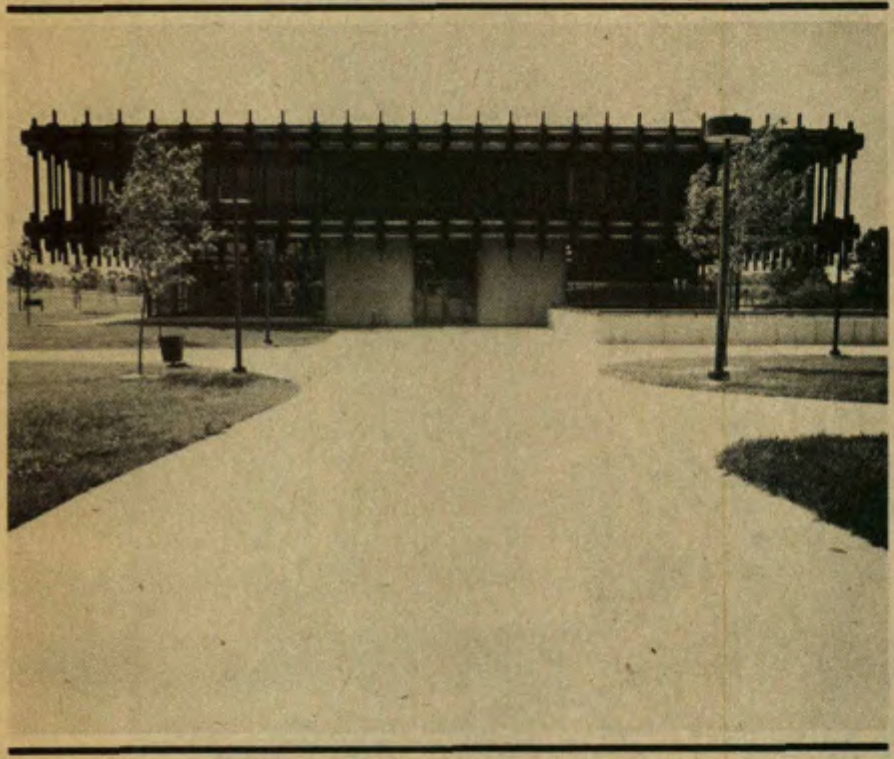
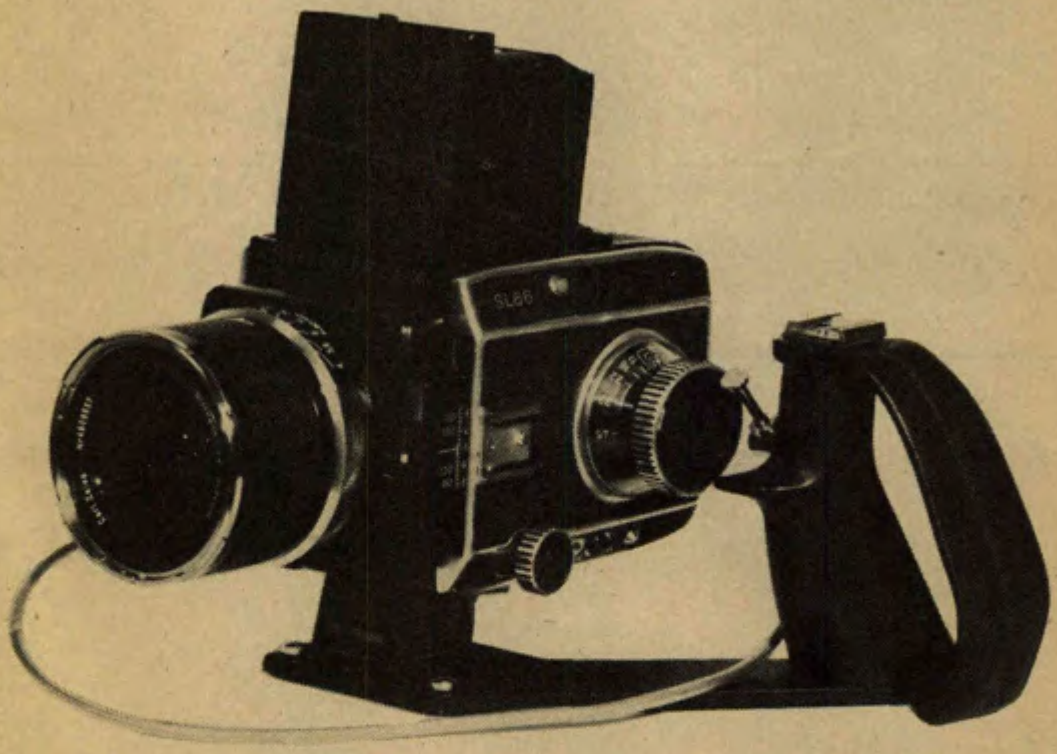
Community Sciences



APPENDICES



Calendar*

Fall Semester	1976-77	1977-78	1978-79
Registration and new student period (or register by mail earlier)	Aug. 30-Sept. 2	Aug. 29-Sept. 1	Aug. 28-31
Classes begin	Sept. 7	Sept. 6	Sept. 5
Thanksgiving recess	Nov. 25-28	Nov. 24-27	Nov. 23-26
Classes end	Dec. 15	Dec. 14	Dec. 13
Final examinations	Dec. 16-22	Dec. 15-21	Dec. 14-20
Commencement	Dec. 19	Dec. 18	Dec. 17
Holiday recess	Dec. 23-Jan. 2	Dec. 22-Jan. 1	Dec. 21-Jan. 1
January Interim Period			
Begins	Jan. 3	Jan. 2	Jan. 2
Ends	Jan. 28	Jan. 27	Jan. 26
Spring Semester			
Registration and new student period (or register by mail earlier)	Jan. 24-27	Jan. 23-26	Jan. 22-25
Winter recess	Jan. 29-Feb. 6	Jan. 28-Feb. 5	Jan. 27-Feb. 4
Classes begin	Feb. 7	Feb. 6	Feb. 5
Spring recess	Apr. 9-17	Mar. 25-Apr. 2	Apr. 14-22
Classes end	May 20	May 19	May 18
Final examinations	May 23-28	May 22-27	May 21-26
Commencement	May 21	May 20	May 19
Summer Session			
Registration and new student period (or register by mail earlier)	June 9-10	June 8-9	June 7-8
Classes begin	June 13	June 12	June 11
Independence Day (holiday)	July 4	July 4	July 4
Classes end (finals)	Aug. 5	Aug. 4	Aug. 3

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

Graduation Requirements

Total
124 credits for graduation

Concentration
30 junior-senior level credits

Or Concentration/Discipline
12 junior-senior level concentration credits and
24 junior-senior level discipline credits

Or Concentration/Professional Program
30 junior-senior level concentration credits and
18-29 professional program credits (programs vary)

Or Concentration/Discipline/Professional Program
12 junior-senior level concentration credits and
24 junior-senior level discipline credits and
18-29 professional program credits (programs vary)

Freshman-Sophomore Requirements
3-36 credits, depending on major

All-University Requirements
University Seminars: 18 credits
Distribution: 20-24 credits (minimum of 5 from each academic area)

Electives
30-50 credits, free choice

Programs at UWGB

To graduate, you must have a concentration or major in one of these areas:

- Communication-Action
- Growth and Development
- Human Adaptability
- Humanism and Cultural Change
- Managerial Systems
- Modernization Processes
- Nutritional Sciences
- Population Dynamics
- Regional Analysis
- Science and Environmental Change
- Urban Analysis

Or, you may select one of these alternatives:

- Personal Concentration
- Environmental Design (combines resources from several concentrations)
- Environmental Health Sciences (combines resources from several concentrations)

To develop a specialized or in-depth background you may elect one or more of these disciplines:

- Anthropology
- Biology
- Chemistry
- Chemistry-Physics
- Communication Processes (media, photography, speech)
- Earth Science (geology)
- Economics
- Geography
- History
- Literature and Language (English-American, French, German, Spanish, creative writing)
- Mathematics
- Music
- Philosophy
- Physics
- Political Science
- Psychology
- Sociology
- Theater
- Visual Arts

You may become professionally qualified in these areas:

- Education
  - early childhood
  - elementary
  - secondary
- Environmental Administration (business and management)
- Leisure Sciences
- Social Services

You may prepare for further professional study in these and other areas:

- Agricultural Science
- Architecture
- City Planning and Community Development
- College and University Teaching
- Engineering
- Health Professions
  - Dentistry
  - Medicine
  - Nursing
  - Pharmacy
  - Veterinary Medicine
- Home Economics
- Law
- Social Work
- Theology
- Water Resources and Hydrology

Course Equivalency Table

UWGB and UW Center System

UWGB ABBREVIATIONS

ANT	Anthropology
ART	Visual Arts
BIO	Biology
BOT	Botany
CHE	Chemistry
COA	Communication-Action
COM	Composition
CPR	Communication Processes
CSC	Community Sciences
EAR	Earth Science
ECO	Economics
EDU	Education
EAD	Environmental Administration
FRE	French
GEO	Geography
GER	German
GRD	Growth and Development
HIS	History
HCC	Humanism and Cultural Change
HUA	Human Adaptability
LEI	Leisure Sciences
LES	University Seminars
L&L	Literature and Language
MGS	Managerial Systems
MAT	Mathematics
MOD	Modernization Processes
MUS	Music
NSC	Nutritional Sciences
PHI	Philosophy
PHY	Physics
POL	Political Science
PSY	Psychology
REA	Regional Analysis
SEC	Science and Environmental Change
SOC	Sociology
SSE	Social Services
SPA	Spanish
THE	Theater
URA	Urban Analysis

Center Course System	UWGB Course
AGRICULTURE AND NATURAL RESOURCES	
AGO 100	BIO electives
DAS 101	No equiv
MAS 101	No equiv
FSC 120	NSC electives
HOR 120	BOT electives
SLS 101	SEC electives
NATURAL RESOURCES	
FOR 120	SEC electives
WIL 140	SEC 288
NAT 170	SEC electives
WAT 180	SEC electives
SLS 260	SEC electives

Center Course System	UWGB Course
ANTHROPOLOGY	
ANT 100	ANT electives
ANT 105	HUA 102
ANT 200	ANT 100
ANT 201	POP electives
ANT 202	ANT 215
ANT 204	ANT 203
ANT 291	Later evaluation
ANT 299	Later evaluation
ANT 314	ANT 301
ART	
ART 101	ART 102 plus electives
ART 102	ART 102 plus electives
ART 103	ART 102 plus electives
ART 111	ART 103
ART 112	ART 104
ART 113	ART electives
ART 121	ART 201
ART 131	ART 203
ART 141	ART electives
ART 151	ART electives
ART 161	ART 143
ART 171	COA electives
ART 173	ART electives (no credit for 103 & 104)
ART 181	COA 200
ART 183	COA 201
ART 185	COA electives
ART 187	COA 100
ART 188	COA 101
ART 191	ART electives (no credit for art students)
ART 192	ART electives (no credit for art students)
ART 193	Later evaluation
ART 201	ART 361
ART 202	ART 362
ART 211	ART electives
ART 212	ART electives
ART 221	ART 303
ART 222	ART 304
ART 223	ART 311
ART 224	ART 312
ART 229	ART electives
ART 231	ART 203
ART 232	ART 321
ART 239	ART electives
ART 241	ART electives
ART 243	ART 307
ART 245	ART electives
ART 247	ART 305
ART 249	ART electives
ART 251	ART 351
ART 252	ART 352
ART 253	ART 202
ART 254	ART 331
ART 259	ART electives
ART 269	ART electives
ART 279	Later evaluation
ASTRONOMY	
AST 100	SEC 141
AST 200	SEC Astronomy

Center Course System	UWGB Course
BIOLOGICAL SCIENCES	
Bacteriology	
BAC 101	BIO 302
BAC 230	BIO electives
Botany	
BOT 100	BOT electives
BOT 107	BIO electives
BOT 109	BIO electives (no full credit for BIO 202 & 203)
BOT 116	BIO electives
BOT 130	BOT electives
BOT 151, 152	BIO 202, 203 if both courses, otherwise electives
BOT 160	BIO electives
BOT 231	BOT electives
BOT 240	BIO 240
BOT 250	SEC 302
BOT 260	BIO 303
BOT 291	Later evaluation
BOT 299	Later evaluation
BOT 400	BIO 320
BOT 450	BIO electives
Physiology	
PHY 101	HUA 102
PHY 104	HUA 104
PHY 105	HUA 104
PHY 106	HUA electives
PHY 170	HUA 104
Zoology	
ZOO 101	BIO 203
ZOO 103	SEC electives
ZOO 105	HUA 102
ZOO 107	BIO electives
ZOO 109	BIO electives
ZOO 116	BIO electives
ZOO 140	SEC 288
ZOO 151, 152	BIO 202, 203 if both courses, otherwise electives
ZOO 160	BIO electives
ZOO 170	HUA 104
ZOO 203	POP 204
ZOO 235	BIO electives
ZOO 237	BIO 344
ZOO 250	SEC 302
ZOO 260	BIO 302
ZOO 277	BIO 306
ZOO 291	Later evaluation
ZOO 299	Later evaluation
ZOO 430	BIO 340
ZOO 505	BIO 350
ZOO 515, 516	SEC 403 if both courses, otherwise SEC electives

Center Course System	UWGB Course
BUSINESS	
BUS 101	MGS 202
BUS 201	MGS 204
BUS 202	MGS 215
BUS 204	MGS 216
BUS 210	MGS 101
BUS 241	MGS electives
BUS 242	MGS electives
BUS 297	Later evaluation
BUS 299	Later evaluation
ECONOMICS	
ECO 101	ECO 102
ECO 203	ECO 202
ECO 204	ECO 203
ECO 230	ECO 230
ECO 241	ECO electives
ECO 250	ECO electives
ECO 271	ECO electives
ECO 297	Later evaluation
ECO 299	Later evaluation
CHEMISTRY	
CHE 100	No transfer
CHE 124	CHE electives
CHE 125	CHE 108
CHE 145	See Chem-Physics table
CHE 155	See Chem-Physics table
CHE 203	CHE 300
CHE 211	CHE 301
CHE 244	CHE 311
CHE 272	Later evaluation
CHE 290	Later evaluation
CHE 343	CHE 302
CHE 352	CHE 304, 305
CHE 363	CHE 303
COMPUTER SCIENCE	
CPS 101	Math electives
CPS 110	MAT 250
CPS 120	MAT 250
CPS 210	MAT 251
CPS 291	Later evaluation
EDUCATION	
EDU 101	EDU electives
EDU 120	Faculty evaluation
EDU 200	Faculty evaluation
EDU 213	GRD 210
EDU 223	Faculty evaluation
EDU 251	Faculty evaluation
EDU 330	Faculty evaluation
EDU 340	GRD 331
EDU 340	GRD 332
EDU 381	Faculty evaluation

Center Course System	UWGB Course
ENGINEERING	
GRA 102	SEC 102
MEC 111	No equivalent
GRA 113	SEC electives
MEC 201	SEC 313
MEC 202	SEC 314
MEC 203	SEC 311
ENGLISH AND LITERATURE	
ENG 101	COM electives
ENG 102	HCC 105
ENG 103	L&L electives
ENG 120	COA 160
ENG 200	L&L 104
ENG 201	L&L electives
ENG 203	L&L 212
ENG 204	L&L 213
ENG 205	L&L electives (no enrollment in 214, 215)
ENG 209	L&L electives
ENG 211	L&L electives (no enrollment in 216, 217)
ENG 213	L&L 214
ENG 214	L&L 215
ENG 215	L&L 216
ENG 216	L&L 217
ENG 217	L&L 218
ENG 218	L&L 219
ENG 219	L&L electives (no enrollment in 218, 219)
ENG 227	L&L 221
ENG 251	L&L 221
ENG 253	L&L 223
ENG 255	L&L 220
ENG 297	Later evaluation
ENG 298	Later evaluation
ENG 299	Later evaluation
FRENCH	
FRE 101	FRE 102
FRE 102	FRE 103
FRE 201	FRE 202
FRE 202	FRE 203
FRE 221, 222, 223,	FRE 227, 228
FRE 225	FRE 225
FRE 226	FRE 226
FRE 275	L&L English electives
FRE 276	L&L English electives
FRE 291	Later evaluation
FRE 299	Later evaluation

Center Course System	UWGB Course
GEOGRAPHY	
GEO 101	GEO 202
GEO 110	GEO 102
GEO 115	GEO 215
GEO 120	GEO elective (no enrollment in Earth Sci 202 or REA 222 for full credit)
GEO 121	GEO electives
GEO 123	REA 222 & REA 223
GEO 124	EAR 202
GEO 125	GEO electives (no enrollment in EAR 202 or REA 222 for credit)
GEO 130	SEC electives
GEO 291	Later evaluation
GEO 300	REA 315
GEO 324	GEO electives
GEO 341	GEO 371
GEO 342	GEO 235
GEO 347	GEO electives
GEO 348	GEO electives
GEO 349	REA 382
GEO 350	SEC 303
GEOLOGY AND METEOROLOGY	
GEO 100	EAR 202 or REA 222 (no credit for 101)
GEO 101	EAR 202 (no credit for 100)
GEO 102	EAR 302
GEO 130	EAR electives
GEO 131	EAR electives
GEO 135	EAR electives
GEO 169	EAR 202
GEO 201	EAR electives
GEO 228	SEC electives
GEO 291	EAR electives
GEO 299	Later evaluation
GEO 306	EAR electives
GEO 314	EAR 350
GEO 350	EAR 340
GEO 409	EAR 360
GEO 443	EAR 470
GERMAN	
GER 101	GER 102
GER 102	GER 103
GER 201	GER 202
GER 202	GER 203
GER 215	GER electives
GER 216	GER electives
GER 221	GER 227
GER 222	GER 228
GER 225	GER 225
GER 226	GER 226
GER 275	L&L English electives
GER 276	L&L English electives
GER 291	Later evaluation
GER 299	Later evaluation

Center Course System	UWGB Course
HISTORY	
HIS 101	HIS 205
HIS 102	HIS 206
HIS 105	HIS electives
HIS 106	HIS electives
HIS 111	HIS 261
HIS 112	HIS 262
HIS 115	HIS electives
HIS 119	HIS 203
HIS 120	HIS 204
HIS 123	HIS electives
HIS 124	HIS electives
HIS 127	HIS electives
HIS 198	HIS electives
HIS 203	HIS electives
HIS 211	HIS electives
HIS 213	HIS electives
HIS 216	HIS electives
HIS 219	HIS electives
HIS 221	HIS 250
HIS 222	HIS electives
HIS 223	HIS electives
HIS 225	HIS electives
HIS 254	HIS electives
HIS 255	HIS electives
HIS 256	HIS electives
HIS 257	HIS electives
HIS 259	HIS electives
HIS 280	HIS electives
HIS 288	HIS electives
HIS 289	HIS electives
HIS 290	HIS electives
HIS 291	HIS electives
HIS 293	HIS electives
HIS 295	HIS electives
HIS 297	HIS electives
HIS 298	HIS electives
HIS 299	Later evaluation
INTERDISCIPLINARY STUDIES	
INT 102	SEC 102
INT 195	MOD electives
INT 197	CPR 143
INT 201	Later evaluation
INT 291	Later evaluation
INT 294	Faculty review
INT 295	Faculty review
INT 296	Faculty review
JOURNALISM	
JOU 100	CPR electives
JOU 201	CPR 202
JOU 202	CPR electives
JOU 203	CPR 203
JOU 204	CPR electives
JOU 206	CPR electives
JOU 299	Later evaluation
LECTURE (UNIVERSITY) FORUM	
LEC 101	Soc. Studies electives
LEC 102	No credit
LEC 103	No credit

Center Course System	UWGB Course
MATHEMATICS	
MAT 081	No transfer
MAT 091	No transfer
MAT 102	General electives
MAT 105	MAT 101
MAT 109	MAT 101
MAT 110	MAT 110 or 113 or 114, electives
MAT 113	MAT 110 and 113, MAT 104
MAT 114	MAT 110 and 114, MAT 104
MAT 117	MAT 260
MAT 118	MAT electives
MAT 119	MAT electives
MAT 124, 125	MAT 104
MAT 130	MAT 180
MAT 131, 132	MAT 181, electives if both courses are taken
MAT 203	MAT electives
MAT 211	MAT 202
MAT 221	MAT 202
MAT 222	MAT 203
MAT 223	MAT 209 and 221
MAT 225	MAT 209 and 211
MAT 232	MAT electives
MAT 240	MAT electives
MAT 262	MAT 221
MAT 271	MAT 205
MAT 299	Later evaluation
MAT 320	MAT 221 and 205
MILITARY SCIENCE	
All Courses	May petition for credit
MUSIC APPLIED (707)	
Class or Private Instruction in Instruments & Voice	Course no. to be determined by level of proficiency
MUS 070	MUS 151
MUS 071	MUS 242
MUS 072	MUS 261
MUS 073	MUS 164
MUS 074	MUS 143
MUS 075	MUS 143
MUS 076	MUS 163
MUS 077	MUS 144
MUS 078	MUS 145
MUS 079	MUS 146, MUS 153
MUSIC (705)	
MUS 107	MUS electives
MUS 115, 121	MUS electives or if both, MUS 341 by petition
MUS 130, 136	MUS electives or if both, MUS 345 by petition (2 cr)
MUS 145, 160	MUS electives or if both, MUS 345 by petition (1 cr)
MUS 148, 154	MUS electives or if both MUS 343 by petition (1 cr)
MUS 170	MUS 101
MUS 171	MUS 151, 115
MUS 172	MUS 152, 116

Center Course System	UWGB Course
MUS 173	COA 120
MUS 174	COA 121
MUS 271	MUS 251
MUS 272	MUS 252
MUS 273	COA electives
MUS 275	MUS 251 (1 cr) elect (2 cr)
MUS 276	MUS 252 (1 cr) elect (2 cr)
MUS 280, 281	MUS electives if one course, MUS 331 or 332 if both courses
MUS 295	Later evaluation
MUS 299	Later evaluation
PHILOSOPHY	
PHI 101	PHI electives
PHI 102	PHI electives
PHI 103	PHI 206
PHI 106	PHI electives
PHI 201	PHI electives
PHI 211	PHI 111
PHI 220	PHI 208
PHI 226	PHI 207
PHI 240	PHI electives
PHI 241	PHI 100
PHI 253	PHI 211
PHI 258	PHI electives
PHI 291	Later evaluation
PHI 299	Later evaluation
PHYSICAL EDUCATION	
PE activities	No credit
PE pro-fessional courses	No credit
PE 119, 120, 121	Electives
PE 206	Electives
PHYSICS	
PHY 103	See Chem-Physics table
PHY 104	See Chem-Physics table
PHY 107	Physical Science elective
PHI 110	Physical Science elective
PHY 120	See Chem-Physics table
PHY 201	See Chem-Physics table
PHY 202	See Chem-Physics table
PHY 205	See Chem-Physics table
PHY 211	See Chem-Physics table
PHY 212	See Chem-Physics table
PHY 213	See Chem-Physics table
PHY 299	Later evaluation
POLITICAL SCIENCE	
POL 101	POL 103
POL 104	POL electives
POL 106	POL electives
POL 116	POL electives
POL 125	POL electives
POL 175	POL electives
POL 185	POL electives
POL 201	POL electives
POL 213	POL electives
POL 222	POL electives
POL 223	Later evaluation
POL 243	POL electives

Center Course System	UWGB Course
POL 253	MGS electives
POL 299	Later evaluation
PSYCHOLOGY	
PSY 201	PSY 102
PSY 202	PSY 102
PSY 203	PSY electives
PSY 204	PSY electives
PSY 205	PSY 205
PSY 210	PSY 210
PSY 213	GRD 210
PSY 225	PSY electives
PSY 251	GRD 210
PSY 254	PSY electives
PSY 299	Later evaluation
PSY 411	Later evaluation
PSY 449	BIO 345
PSY 507	GRD 429
PSY 511	PSY electives
PSY 530	PSY 202
PSY 550	GRD 210
PSY 560	GRD 331
PSY 561	GRD 332
PSY 562	GRD 433
SOCIOLOGY	
SOC 101	SOC 202
SOC 120	SOC 208
SOC 125	SOC electives
SOC 130	SOC electives
SOC 134	SOC 203
SOC 170	POP electives
SOC 291	Later evaluation
SOC 293	Later evaluation
SOC 299	Later evaluation
SOC 357	CSC 305
PSY 530	PSY 202
SPANISH	
SPA 101	SPA 102
SPA 102	SPA 103
SPA 201	SPA 202
SPA 202	SPA 203
SPA 221	SPA 227
SPA 222	SPA 228
SPA 225	SPA 225
SPA 226	SPA 226
SPA 236	Humanities electives
SPA 266	L&L electives
SPA 275	L&L electives
SPA 291	Later evaluation
SPA 299	Later evaluation
SPEECH AND DRAMATIC ARTS	
SPE 101	CPR 166
SPE 102	CPR elective (1 cr/sem)
SPE 103	CPR 134
SPE 130	COA electives
SPE 131	THE 235
SPE 150	COA 140
SPE 160	CPR electives
SPE 201	CPR 202
SPE 220	CPR electives
SPE 230	CPR 234
SPE 231	THE 225
SPE 232	THE 131
SPE 234	THE 221
SPE 266	CPR 266
SPE 267	CPR electives
SPE 268	CPR electives
SPE 298	Later evaluation
SPE 299	Later evaluation
SPE 348	THE electives
SPE 349	THE electives

Chemistry-Physics Transfer Table

Students transferring with credits in chemistry and/or physics will be granted chemistry-physics elective credits and will be restricted from enrolling in specific chemistry-physics modules as outlined in the following chart:

Student transferring in with:	**Will be restricted from enrolling in:**
One semester of chemistry	226-108 and 122
One year of chemistry	226-108, 121, 122, and 127
One semester of physics	226-120
One year of physics	226-120, 125, and 228 (if calculus)
One year of chemistry *and* One year of physics	226-108, 120, 121, 122, 125, 127 and 228 (if calculus)
Any combination of the above	To be determined by the number of credits offered

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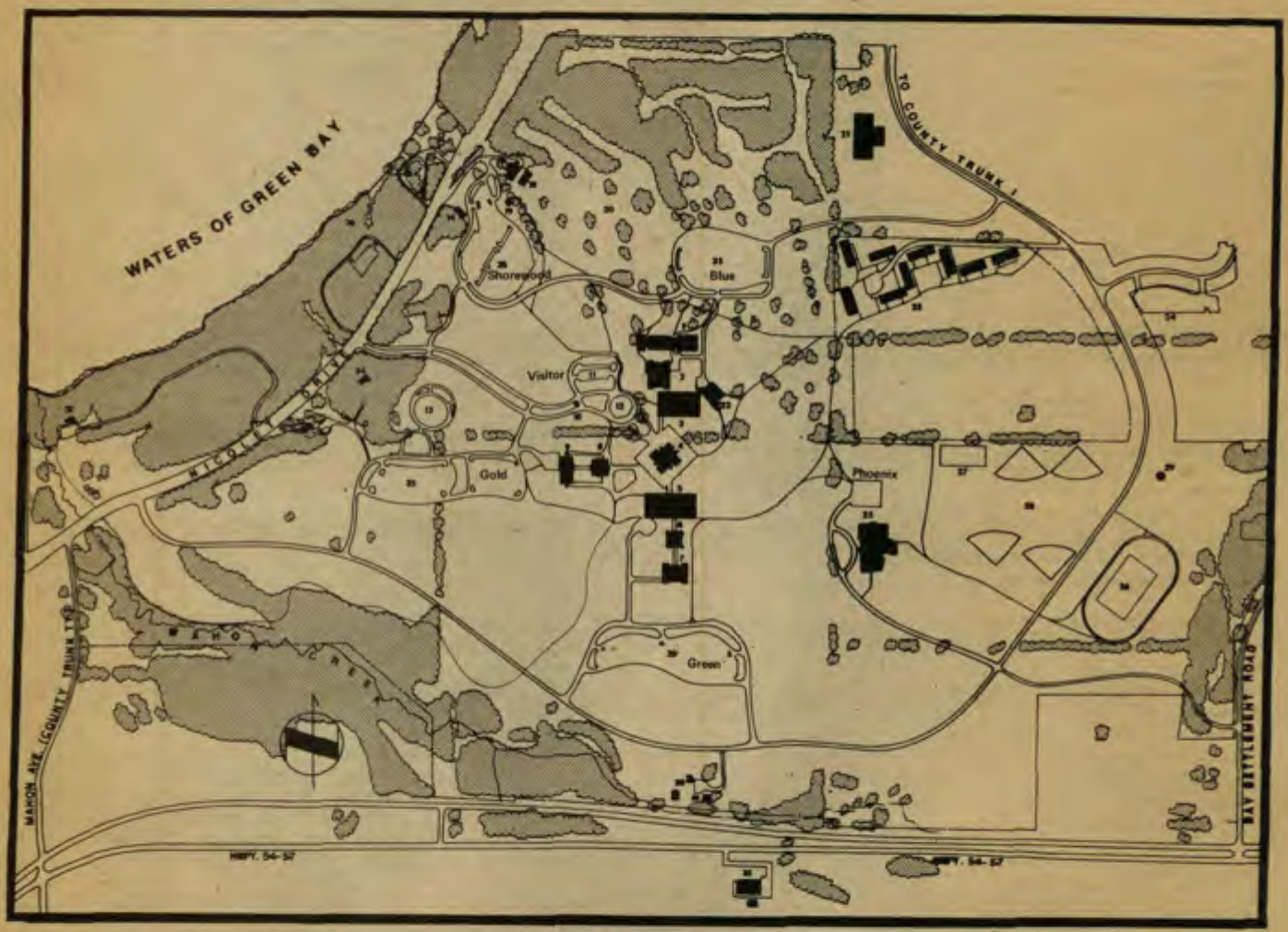
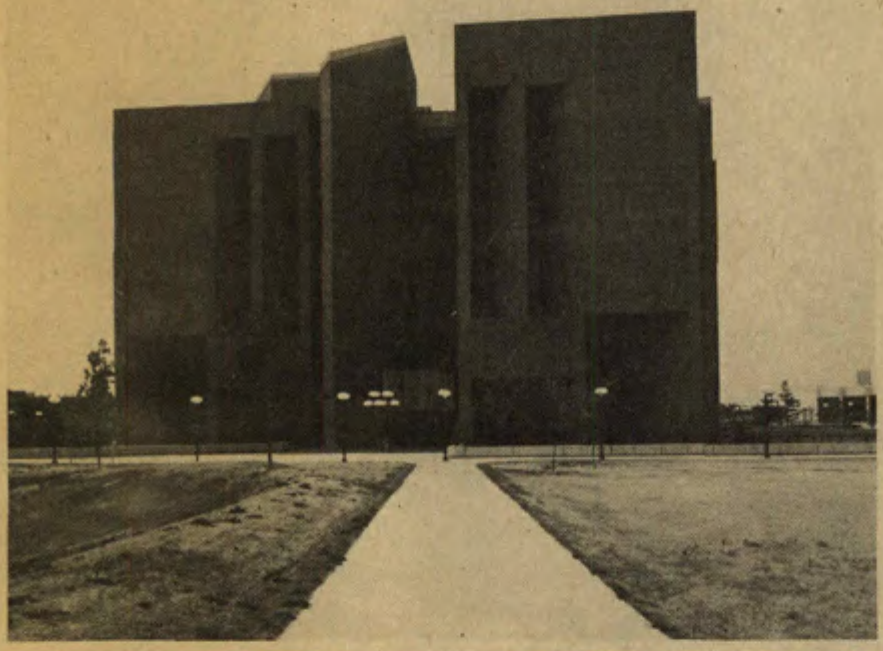
Map



Map Key:

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. Proposed Amphitheater
14. Grounds Equipment
15. Communiversity Park/Picnic Area
16. Outing Center
17. Shorewood Club West
18. Shorewood Club East
19. Pro Shop
20. Golf Course
21. Physical Plant Center (being planned)
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
32. Human Development Center
33. Day Care Center
34. Ecumenical Center
35. Student/Staff Parking

Library Learning Center



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