

**the university of wisconsin-green bay
1972-1973**

THE UNIVERSITY, 1

- An Informal Introduction, 2
- How to Use This Catalog, 6

THE CAMPUSES AND COMMUNITIES, 7

- A Multi-Campus University, 8
- Fox Valley Campus, 10
- Manitowoc County Campus, 12
- Marinette County Campus, 13
- Community Involvement, 13

THE ACADEMIC PLAN, 17

- An Integrated Approach to Knowledge, 18
- All-University Requirements, 18
- Choosing a Major, 22
- Professional Application, 24

THE COLLEGES, 25

- Organization of the University, 26
- College of Community Sciences, 26
- College of Creative Communication, 27
- College of Environmental Sciences, 28
- College of Human Biology, 29
- School of Professional Studies, 29
- Selecting a Program, 29

THE CONCENTRATIONS, 31

- Analysis-Synthesis, 32
- Communication-Action, 35
- Ecosystems Analysis, 36
- Environmental Control, 37
- Growth and Development, 38
- Human Adaptability, 39
- Managerial Systems, 41
- Modernization Processes, 41
- Nutritional Sciences, 43
- Population Dynamics, 44
- Regional Analysis, 45
- Urban Analysis, 46

THE OPTIONS, 47

- Anthropology, 48
- Biology, 49
- Chemistry, 51
- Communication Sciences, 51
- Earth Science, 51
- Economics, 52
- History, 52

Literature and Language, 54

Mathematics, 54

Performing Arts, 55

Philosophy, 57

Physics, 57

Political Science, 57

Psychology, 58

Sociology, 58

Visual Arts, 58

THE COLLATERALS, 59

Environmental Administration, 60

Education, 60

Leisure Sciences, 64

Mass Communications, 64

Social Services, 64

Preprofessional Programs, 64

College and University Teaching, 72

ENRICHMENT AND RESOURCES, 73

A Total Education Experience, 74

Graduation Requirements and Procedures, 75

Academic Calendar, 77

Special Programs, 79

Off-Campus Study, 81

Community Outreach: Continuing Education

Opportunities, 81

Student Life Programs, 86

Resources, 88

ADMISSIONS AND EXPENSES, 91

General Policy, 92

Admission Requirements, 92

Admission Procedures, 92

Expenses, 96

FINANCIAL AIDS, 97

LIST OF COURSES, 103

UNIVERSITY DIRECTORY, 125

INDEX, 137

1972-1974 CALENDAR, 144

CAMPUS MAP, Inside Back Cover

contents

FOR MORE INFORMATION

Inquiries about The University of Wisconsin-Green Bay are welcomed and should be directed to the appropriate office. Unless otherwise listed, the address is The University of Wisconsin-Green Bay, Green Bay, Wisconsin 54302.

Admission information, residency, credit evaluation

Office of Admissions
1567 Deckner Avenue
Green Bay, Wisconsin 54302
414-465-2111

Brochures, applications, student information, catalogs, campus visits, general information

Office of Admissions Advising
414-465-2141

Housing

Office of Housing
414-465-2400

Scholarships and other financial aids

Office of Student Financial Aids
1567 Deckner Avenue
Green Bay, Wisconsin 54302
414-465-2075

Student records, transcripts

Office of the Registrar
1567 Deckner Avenue
Green Bay, Wisconsin 54302
414-465-2055

Academic advising

Office of Academic Advising
414-465-2362

Counseling and Testing

Student Development Center
414-465-2343

Branch Campus Addresses

Academic advising, counseling and housing information are also available from the Office of Student Services at:

Fox Valley Campus

Midway Road
Menasha, Wisconsin 54952
414-734-8731

Manitowoc County Campus

705 Viebahn Street
Manitowoc, Wisconsin 54220
414-682-8251

Marinette County Campus

Bay Shore Road
Marinette, Wisconsin 54143
715-735-7477

Direct bus and air routes connect Green Bay with Chicago, Milwaukee, Madison, Detroit, and Minneapolis. Frequent passenger service is available via Greyhound Bus Lines and North Central Airlines.

EFFECTIVE DATES FOR THIS CATALOG

Students registered during the summer of 1971 or during the 1971-1972 academic year at one of the UWGB campuses may elect to graduate either under the requirements outlined in the 1971-1972 catalog or those in the present document. New or transfer students who first register at a UWGB campus during the summer of 1972 or later must meet the requirements as set forth in this catalog.

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THE UNIVERSITY OF WISCONSIN-GREEN BAY AN INFORMAL INTRODUCTION

(If you are a high school student, this introductory section will be of particular interest to you.)

Everything about The University of Wisconsin-Green Bay is new and exciting.

Our buildings are new and exciting—the first three opened in the fall of 1969; an eight-story library is nearing completion; some five or six other major buildings are in various stages of planning or construction. There is much that is innovative about their design.

Our academic plan is new and exciting—its focus on environmental problems—its emphasis on the social responsibility of each profession and each subject matter—is still unique in higher education, five or six years after we first developed the idea. Many other institutions have been interested in it as a pattern or model, and as a result it receives much national and international attention.

However, UWGB is not content with an unchanging, or rigid, academic plan. Our plan is flexible and adaptable. And because we are a young, developing, and medium-sized institution, we can readily adjust our academic plan from time to time as new ideas or improvements are identified. A comparison of this catalog with the previous three will give you an idea of the way we continue to adapt UWGB to the educational needs and desires of today's students.

Even though this distinctive plan is now (1971-1972) in its third year of operation, this is our fourth catalog. It is designed to be used during the 1972-1973 academic year but we know from experience that its guidelines will be followed by most faculty and students immediately upon publication in the fall of 1971.

Because our program is innovative, we use a few unusual terms. And we use some old words in new ways. At first it may seem a bit strange, but once you have become accustomed to the few new terms we think you will be able to under-

stand what we are trying to do. And we think you will agree that it is important and exciting.

The tone of our catalog is largely formal. In some ways, this formal tone is in direct contrast to the way our programs really operate. The intent of these opening pages, then, is to give you an informal introduction to what you will find more formally stated later in this volume.

The Academic Plan

The central idea at UWGB is our emphasis on man and his environment. Every field of study and every profession has a social responsibility as well as a technical expertise. Too many universities emphasize the latter and forget the former.

At UWGB, there is a broad range of subjects and professions that a student may choose—the mathematical and physical sciences (mathematics, statistics, computer science, chemistry, physics, earth sciences, for example) the biological sciences (botany, zoology, entomology, microbiology, ecology, physiology, for example); the behavioral sciences (political science, sociology, anthropology, economics, geography, psychology, for example); the humanities and fine arts (literature, creative writing, foreign languages, speech, philosophy, history, music, theater arts, visual arts, for example); and many of the professions (business and public administration; early childhood, elementary, and secondary teaching; social work; journalism, radio, and television; conservation, recreation industry, and leisure sciences; medical technology; pre-professional work in law, medicine, dentistry, pharmacy, architecture, engineering, and nursing; or a special nursing program at Bellin Hospital in Green Bay, for example).

Most universities stop at this point. UWGB begins. We try to dramatize the social role and responsibility of each of these subjects and professions by showing how each of them, working with others, can help solve some of the most serious problems facing mankind—those of the environment. We ask each student to be committed to a better world regardless of his

the university

vocational interest. He chooses an environmental problem (there are 11 groups of them, called concentrations) and then relates one or more subjects and/or professions to it. At the same time he becomes more skilled in these subjects or professions.

In the words of John Fischer, who described UWGB as "Survival U" in the February, 1971, issue of *Harper's*, the philosophy goes like this:

"Green Bay is trying to focus all of its studies on a single overriding subject: ecology—that is, the environment we live in, both physical and social. Only recently, and perhaps too late, many of us have begun to realize that this is *the* cardinal subject. For unless we learn, pretty fast, to live on the earth's thin crust without destroying it, all the other subjects—from philosophy to twelve-tone music—will not only be irrelevant, they will simply disappear, along with *homo non-sapiens*."

Our academic plan began taking shape about five years ago, under a group of educators, students, and local citizens headed by UWGB's Chancellor, Edward W. Weldner. Its focus on the environment as the central issue of man's survival was somewhat ahead of its time but is today recognized by nearly everyone—from the first grader who plants a tree on Earth-Day to the senator who opposes production of the SST.

This issue was brought forcefully home to all of us when our astronauts landed on the moon and for the first time we were able to visualize Earth as a closed system—as a limited spaceship that contains all we will ever have to survive.

As Chancellor Weldner has put it, "All of a sudden it was clear that there was not a better world just around the corner or just beyond the horizon. There was no pot of gold at the end of the rainbow. Instead, we on the planet Earth are, in effect, on a spaceship. This spaceship has finite resources that need to be husbanded. Just as on the moon mission, wastes must be recycled so that they can become usable once again."

4 The Academic Plan

A college education that equips students to attack and solve environmental problems, regardless of their favorite subject or chosen profession, is an obvious need. It is what UWGB is all about.

In describing the philosophical aspects of our program, we have created some new words. The most important of these is "communiversity." Chancellor Weidner defines it as "a socially responsible university relating to a socially responsible community." In other words, we believe that a university cannot operate as an ivory tower, aloof and apart from the community in which it exists. To be effective, the learning must be applicable to the community and the community must serve as a university laboratory. UWGB's academic plan combines environmental education and community action in an approach which includes the following aspects:

1. It is oriented toward problems rather than toward disciplines or subject-matter areas for their own sake. All disciplines and all professions must contribute to the identification and solution of problems involving man and his environment.

What this means to you as a student is that you will follow a major based on an environmental problem. For example, if you are interested in attacking the problems of our cities, you will major in urban analysis at UWGB (rather than just in sociology or just in economics). Similarly, if you are interested in controlling the pollution of our rivers and lakes, you will major in environmental control (rather than in only one subject such as chemistry or physics).

UWGB has identified 11 problem area groupings—called concentrations—from which most students select their majors. They cover all aspects of the environment: biophysical environmental analysis and control; human adaptability; nutrition; population; growth and development; modernization; regional and urban development; human identity; and environmental values and their communication. It is also possible for you to design your own major, based on an environmental problem area of special interest to you. The concentrations are described in some detail in the next section of this catalog.

It is possible—even advisable—for you also to study a disciplinary or professional area in some depth at UWGB, and you will do so with special relation to your concentration. Thus if you are especially interested in the economic aspects of the urban crisis, you would emphasize courses in economics in planning your program in the urban analysis concentration. And if you are interested in teaching high school science, you would take education and standard science

courses in connection with an appropriate concentration, such as environmental control. Disciplinary areas, such as chemistry, or French, or political science, are called options at UWGB, and professional study is organized into what we call *collaterals*. These programs are described more fully in the next section.

2. Another major aspect of the UWGB approach to education is its time orientation—toward the present and the future. The traditional education system is fundamentally a past tense system. You study what has happened, the accumulated knowledge of the past. At UWGB, what has already happened, what man has already learned, is important mainly as it relates to the present and helps us to solve the problems of the future.

3. The UWGB approach leads you to familiarize yourself with the ecological problems in your own backyard before branching out into the problems of more distant places. Understanding your own community, how it operates, how its problems developed, and how they might be solved is an important first step toward solving problems on a more remote scale. When you do begin studying other areas of this country and of the world, you will be prepared to relate them to the experiences you found in your own community, rather than viewing them in a vacuum that has no relationship to your other studies. Thus you integrate your entire program of study and gain a better understanding of the world.

4. One of the most important aspects of the UWGB approach is that it encourages you as a student to take the initiative in your own education. Community action and problem solving abilities are not developed by passive note-takers.

This experiential approach gives you an opportunity to get out of the classroom, the library, and the laboratory and into the community. You may find yourself taking water samples from the Fox River to determine the degree of water pollution, or tutoring children in nearby Oneida and Menominee Indian communities, or organizing a community-wide collection for the recycling of used glass containers or paper. These are a few examples of projects that UWGB students already are engaged in.

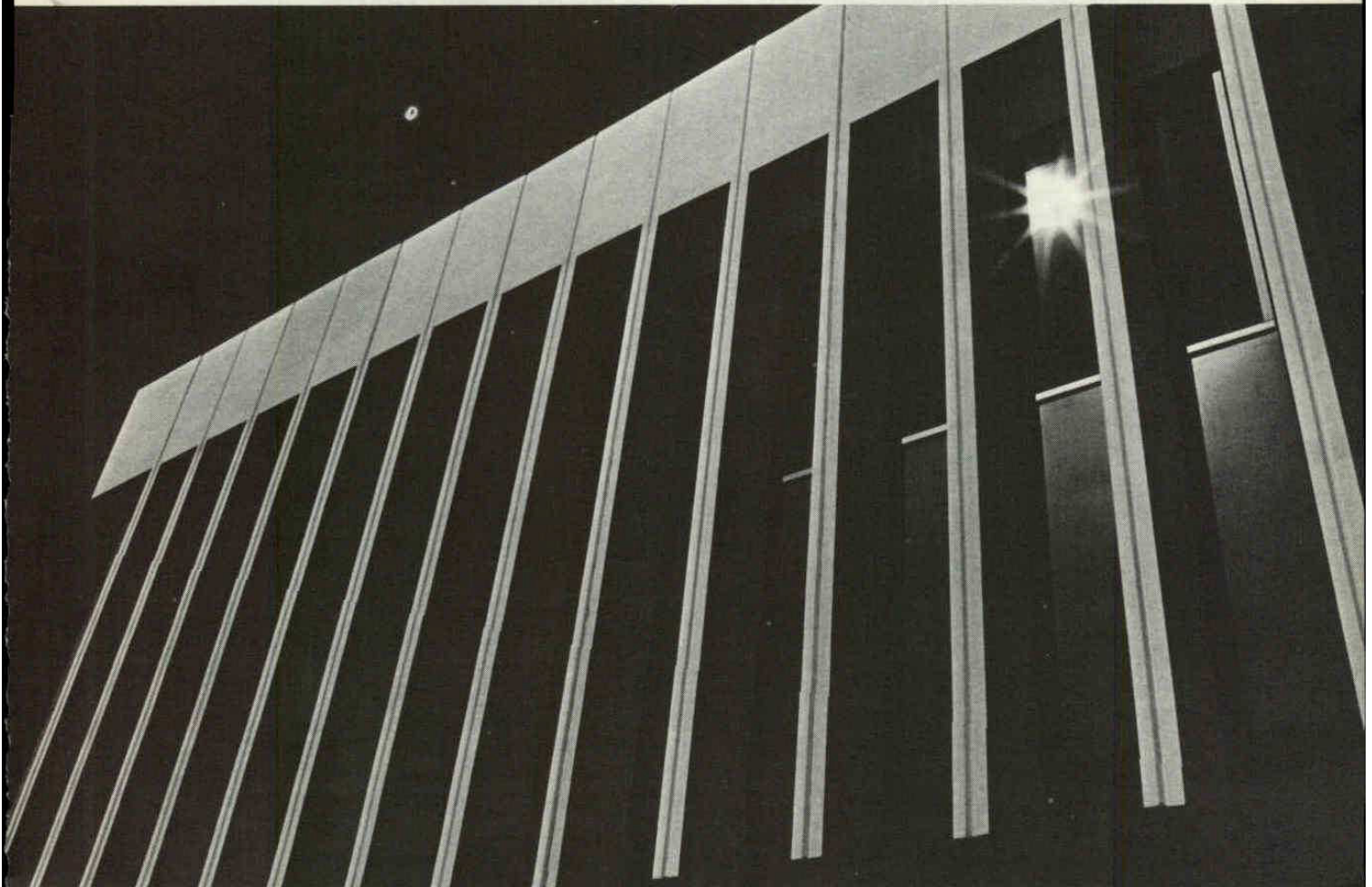
The UWGB approach to education also makes it possible for you to take an active part in developing your own program of study. There are few required courses. Beyond them, you are free to develop the program that best meets your needs. In fact, each student's program can be tailored especially for him and it is unlikely that many students will follow exactly the same plan of study. If you want to develop your own distinctive concentration, you are encouraged to do so. You will receive all the help you need in develop-

ing your program from faculty and staff academic advisers, which brings us to another important aspect of the UWGB approach:

5. Closeness between teacher and student is a necessary part of the environmental education plan. The professor places less emphasis on reciting his knowledge to the passive, note-taking student. He becomes a partner in the educational process by learning and doing alongside the student. They engage in community action and research projects together.

Faculty members at UWGB do not simply teach their classes, hold limited office hours, and then go away to hide in the library. Their office doors are always open to students; their homes are often open too. Many serve as faculty advisers and will help you develop your plan of study. They will also guide you in various Independent study projects outside of your regular classroom work. And they will work with you to develop experimental courses whenever there seems to be a need. Faculty and students are partners in implementing the educational program at UWGB. Together they initiate changes, innovations, and improvements in every area of campus life.

6. The communiversity aspect of the UWGB approach to education works in many ways to bring the campus and the community closer together. In addition to students and faculty working in the community to help it solve its problems,



6 Theme College Organization

members of the community are actively involved in campus life. Community members had a voice in the formation of the academic plan and continue to sit on advisory committees that devote themselves to many aspects of campus life. Members of the community serve as lecturers in some courses and many more join students in classes on a part-time basis.

To sum up the academic philosophy of UWGB, one might say it is devoted to the survival of mankind. To do this, we have oriented ourselves to the future. We have cut across disciplinary and professional barriers and aloofness and set up a problem focus on a transdisciplinary basis to bring an emphasis of social responsibility to every field. It is a sobering and exciting challenge.

Theme College Organization

UWGB has organized its academic units on the basis of its problem focus. The four colleges reflect major environmental themes. Thus, the College of Environmental Sciences is devoted to the biophysical environment, the College of Community Sciences to the social environment, the College of Human Biology to man in relationship to his environment, and the College of Creative Communication to human identity and the attempt to change environmental conditions.

The School of Professional Studies complements the theme colleges, offering students the opportunity to learn professional skills that will augment their concentration work.

Programs offered by the theme colleges and the School of Professional Studies are described in some detail in the next section of this catalog.

HOW TO USE THIS CATALOG

This catalog is not complete in itself. By this we mean that it does not say everything there is to say about our academic program. It is, however, as complete as we can make it at this stage of our development. By its very nature, our academic plan does not lend itself to a catalog that could or would describe everything we do. The content of many of our courses changes frequently. For this reason, only course titles are listed in this catalog and complete descriptions are available in another booklet. While it might be possible for you to plan a program of study using nothing but this catalog and the course description booklet as guides, it is not recommended that you try to do so.

UWGB offers individualized programs of study. That's what we mean by student initiative, by experiential learning. The variety of the possibilities open to you for individualizing your pro-

gram can only be hinted at here in the descriptions of concentrations, options, and collaterals and in the listings of courses that are offered on a formal basis.

As you read further, you will be greeted repeatedly with the phrase, "the student should plan his program in consultation with his faculty advisers." This is not simply an idle suggestion, but a very necessary part of our academic plan—the one that makes it really work.

Academic advisers guide you through every step of your educational program at UWGB and are available whenever you wish to make use of them. You will most likely begin by talking with advisers in the Office of the Assistant to the Dean of the Colleges (especially if you are uncertain of your major) and progress from there to the advisers in the *college* or *school* where you will do your major work and from there to advisers in your major *concentration*. If you select an *option* or a *collateral*, you will also want to discuss your program with faculty members especially equipped to advise you in these areas.

There are no sample plans of study in this catalog. Because your program should be individualized to meet your specific needs, we discourage the use of sample programs. Each concentration has developed guidelines for students who select its environmental problem areas for study. You can obtain these guidelines from the concentration chairmen and their academic advisers. The guidelines contain suggestions for courses to take and recommendations on how to proceed. In your discussions with advisers, you will gain more insight on what is best for you to take and when to take it. In those cases where sample programs are available, remember that they are just that—samples—and are not to be followed blindly.

Of special help will be suggestions on how to fulfill the all-University requirements so that they will be of the most benefit to your own program. The liberal education seminar requirement, for example, can be met in a variety of ways and a special handbook is available to help you select the sections most appropriate for you. Likewise, a *Handbook on Teacher Certification* is available, describing the requirements for teacher certification and how they can be met. Most other academic areas, including the options and collaterals, have similar guides.

The importance of consulting continually with the academic advisers available to you cannot be stressed too heavily. The initiative is yours, not theirs.

This catalog is designed to acquaint you with the basic programs you can study at UWGB. Just how you go about it is pretty much up to you.



A MULTI-CAMPUS UNIVERSITY

UWGB is more than just one campus—constantly growing and changing. It is actually four campuses, all of which had their beginnings as part of the University Extension system which originally brought the educational offerings of The University of Wisconsin to every corner of the state. These campuses were built by the cities and counties in which they are located to offer the first two years of undergraduate education to hometown students at an economical cost. They joined the UW Center System when it was formed in 1964.

In 1968, four of the campuses, located within a sixty-mile radius of Green Bay, joined to form a new degree-granting unit of The University of Wisconsin, the first such institution of higher education in northeastern Wisconsin.

Three of the campuses—the Fox Valley Campus in Menasha, the Manitowoc County Campus, and the Marinette County Campus—continue to offer freshman-sophomore work. With capacities of 500 to 700 students, their enrollments are expected to remain fairly constant.

The new four-year campus is being built centrally between the other three—on the shores of Green Bay just northeast of the city of the same name. A master plan for the campus guides construction as we build toward a projected maximum enrollment of 20,000 students.

The first three buildings opened in the fall of 1969. They are designed as a permanent home for the College of Environmental Sciences but are presently used by all the colleges. Thus, some of the laboratories in the four-story laboratory-classroom building were designed for the study of the biophysical sciences but are currently used as drawing and painting studios. The eight-story library-learning center is being phased into use during the 1971-1972 school year. For some time it will house administrative and faculty offices in addition to the library. This building will remain the central architectural focus of the campus, with college office and classroom buildings grouped in clusters around it.

Next on the construction agenda are three buildings to house the College of Creative Communication, including a theater and studios for the performing and visual arts. These will begin in the fall of 1971. In the spring of 1972, construction will begin on two buildings for the College of Community Sciences. Later, a separate home for the College of Human Biology will be built.

Part of the campus is being built on the site of the former Shorewood Golf Course and a nine-hole course is preserved for use by the public. The former clubhouse and pro shop provide quarters for a student center and student organizations. An addition to the clubhouse was completed in the summer of 1971 and offers expanded food service and space for social activities.

A soccer field to provide a home base for one of UWGB's major intercollegiate sports has been built at the eastern edge of the campus, along with tennis courts, baseball diamonds and other playing fields. Plans are being developed for a gymnasium near these fields to support an extensive intramural program. Home games in basketball, another major varsity sport, are played at the Brown County Veterans Memorial Arena.

The heating-chilling plant is being built south of the campus, across Highways 54-57. Projected future development of the area indicates it will eventually be surrounded by an industrial park.

Private apartments built on land adjacent to the campus provide housing for 567 single students in one- and two-bedroom units. A variety of other apartments or rooms are available in the Green Bay area for students living away from home.

A circular drive, accessible from five entrances on the west, north, and east, rings the campus buildings and provides easy access to peripheral parking lots. Construction is planned in such a way that it does not interfere with existing buildings. But it is easily visible and a favorite pastime of students and faculty is sidewalk

superintending of the ever-changing vista of construction work.

A number of small buildings, including farm houses and summer cottages on the Bay, which were on the land when the University acquired it, are used to house a child development center and the offices of various auxiliary services.

The Ecumenical Center, an interfaith facility which was organized and is supported by the churches of the region, is located on a beautiful tract of private land in the western part of the campus.

The building which formerly housed the Green Bay Center System campus at Deckner Avenue will be used until 1973 as home base for the performing arts and until 1974 for the School of Professional Studies. The Offices of Admissions and Registrar will also be located at the Deckner Avenue campus until 1973.

Free shuttle buses transport students and faculty between classes at the two locations.

The Green Bay Community

The main campus of UWGB is now contributing to the growth of a vigorous community that has an historically interesting past. The campus itself is just a few miles from the spot where Jean Nicolet stepped from his birch bark canoe in 1634 to become the first white man in recorded history to set foot in what became Wisconsin—just 14 years after the Pilgrims landed at Plymouth Rock.

Nicolet's mission for the French government in Quebec was to pacify the Indians, expand the fur trade, and investigate a possible route to the Orient. He was soon followed by fur trappers and missionaries who settled at the mouth of the Fox River, a circumstance that gives Green Bay claim to being the oldest city in Wisconsin.

As fur trading gave way to lumbering, the French settlers made room for new immigrants, many enticed to work in the developing paper mills by the offer of free transportation and two weeks' room and board. Germans, Belgians, Dutch, and

the campuses and communities

10 Fox Valley Campus

Scandinavians came to work in the mills and to farm. The distinctive marks of early settlers and their descendants are still in evidence today.

Green Bay's strategic location dictated its early and continuing development as a trading center connecting the Fox-Wisconsin waterway with the Great Lakes and the world beyond. Railways, highways, and airlines have maintained and increased the importance of trade. The recent renewed interest in Great Lakes shipping brings vessels from around the world to the port of Green Bay.

The manufacture of paper products continues to be Green Bay's largest industry. Other important economic activities include cheese processing; the storage and processing of food; manufacture of such diverse items as clothing and sheet metal, mittens and auto parts, concrete products and mattresses, and office furniture and power shovels.

Green Bay is at the center of a varied recreational area. Lake Michigan and the Door Peninsula to the east and northeast, the Fox River valley to the south, the quiet wilderness streams and woods of North Central Wisconsin to the west and the waters of Green Bay at its doorstep attract visitors from many states. The city's 35 parks and playgrounds offer more than 630 acres of recreational space to residents as well as tourists.

A number of museums and buildings call attention to the history of the city and the nation and are open to the public in the summer months. These include Fort Howard, the Cotton house, the Baird law office, Tank cottage, East Moravian Church, and Hazelwood, all restored and furnished to show how the original residents lived, worshipped, and conducted their business. Also located in Green Bay is the National Railroad Museum, preserving the story of American railroading, and the Neville Public Museum.

Various civic organizations enhance the social, recreational, and cultural life of the community. Chief among these are the Green Bay Symphony Orchestra, Green Bay Community Theater, Civic Music Association, and, for sports fans, the Green Bay Packers football team and the Green Bay Bobcats hockey team. In addition, the Milwaukee Bucks basketball team schedules some games in the Brown County Veterans Memorial Arena, which also serves as home court for the Bobcats and the UWGB basketball team.

The city has three hospitals, excellent public and private counseling services, a growing public library system, churches representing every major denomination, one daily and four weekly news-

papers, three television stations, three radio stations, and excellent YMCA and YWCA facilities. The area supports several business colleges and the publicly-supported Northeast Wisconsin Technical Institute. St. Norbert College, a coeducational Catholic-sponsored, liberal arts college, is in nearby DePere.

FOX VALLEY CAMPUS

Located in Menasha, just 36 miles south of the main campus, the Fox Valley Campus serves the Fox Cities—Kaukauna, Little Chute, Combined Locks, Kimberly, Appleton, Menasha, and Neenah—as well as smaller outlying communities. This area is the home of more than 100,000 people and one of the fastest growing areas in the state.

With a history in the Fox Valley going back more than 30 years, the Fox Valley Campus continues its tradition of providing an excellent two-year college curriculum as an outlying campus of The University of Wisconsin—Green Bay.

The present campus building is just 10 years old. It contains modern science laboratories and equipment, a planetarium and a Fine Arts Theatre seating 350. With recent completion of an addition to the building, the library has been enlarged to twice its original size. A cafeteria and lounge provide opportunity for faculty and students to meet informally in a relaxed atmosphere. Classrooms, offices, art studios and a lecture hall also fit into this well-arranged and efficient plant, all under one roof.

Both intramural and intercollegiate sports are conducted on the campus. A soccer field, baseball diamond and tennis courts are available for outdoor athletics, and students are permitted to use the swimming pool and other facilities of the Appleton YMCA during winter months. A large parking lot accommodates all student and faculty vehicles.

The Fox Valley Campus has many opportunities for community residents to participate in academic life. Adults whose college entry has been delayed, or who have other responsibilities, are welcome to enroll in regular courses, many of which are scheduled for late afternoon and evening. In cooperation with University Extension, the campus offers seminars and institutes in fields ranging from humanities to business.

Because of the make-up of the Fox Cities—a series of interconnected but politically independent small cities—the area serves as a natural and on-the-spot laboratory for students doing research on urban problems and on inter-community and multi-governmental complications. Ecological studies are carried on outside the classroom and laboratory also. An inboard motor



12 Manitowoc County Campus

launch, the Beagle II, is used for aquatic studies on the Fox River and Lake Winnebago. In many other ways Fox Valley Campus students are able to learn and apply their classroom knowledge in the community and surrounding area.

Many and varied cultural programs are available to campus students and local residents through the all-University Lectures and Fine Arts series. The University Players, comprised of student and community talent, present dramatic and musical productions on the campus throughout the year. The campus planetarium serves the community and the campus with "star shows" and formal astronomy courses. And the Fox Valley Symphony rehearses at the campus, making use of campus resources in facilities and personnel. The many communities of the Fox Cities offer an additional source of cultural activities, including the Worcester Art Center at Lawrence University and the Dard Hunter paper museum at the Institute of Paper Chemistry in Appleton and the Bergstrom Art Museum in Neenah.

MANITOWOC COUNTY CAMPUS

Subscribing to an educational philosophy that emphasizes individualized instruction, interdisciplinary learning, and public service goals, the Manitowoc County Campus offers a strong two-year university program in a small campus setting, 40 miles southeast of Green Bay.

A favorable faculty-student ratio at Manitowoc makes it possible for a student to acquire a significant grasp of his culture and to use the basic tools of learning with increased skill. Through this combined experience he develops a sense of personal achievement which gives him confidence and maturity—vital credentials for assuming future responsibilities.

These educational concepts are not a promise; they are a reality at the Manitowoc campus—the fulfillment of a specific part of the campus mission.

In addition to the broad liberal arts and pre-professional curricula, the campus offers environmentally oriented courses for students who choose to continue their education at Green Bay or to transfer to other UW campuses, state universities or private institutions. These educational advantages are open to adults as well as to students of college age, either on a full-time or part-time basis.

Located on the western shore of Lake Michigan and in a county with distinctive natural resources, the campus gives its students many opportunities to study the ecology of nearby forests, marshes, bogs, lakes, and streams. All are natural laboratories for class projects and independent study programs.

Historically, Lake Michigan has stimulated the development of commercial fishing, shipbuilding, wood processing, and water transportation in Manitowoc and its neighboring city, Two Rivers. The lake also provides many recreational activities that have influenced the character of both port cities.

Some of the lore of the past is preserved in the newly established Manitowoc Maritime Museum and in the USS *Cobia*, a submarine temporarily moored in the Manitowoc River as a reminder of the 29 submarines built in Manitowoc from 1940-1945. An historical village is under construction seven miles west of downtown Manitowoc, and plans are near completion for restoring a fishing village in Two Rivers. Additional memorabilia are to be found in the Manitowoc and Two Rivers public libraries and in the Rahr Civic Center.

The total population of the county is over 82,000. The cities of Manitowoc and Two Rivers account for more than half of this number. Manufacturing and industry are also concentrated along the lakeshore, providing a source of strength for both city and campus. Prominent among the products manufactured are aluminumware, cranes, machinery, pleasure craft, plywood, diesel engines, cement, malt, detergents, steel furniture, milk products, electric time controls, and electric housewares.

All resources of the campus are available to county residents to assist them in solving problems related to the *total* environment—physical, social, cultural, industrial. The value of an interdisciplinary approach to learning becomes evident when students and faculty are faced with real problems in a real community. Since no one field of knowledge or discipline can supply all the answers, the interaction of several disciplines provides a more realistic approach to problem-solving. In campus-community relations, a 15-member citizens advisory committee serves as a communication link.

Students, faculty, and area residents combine their interests in initiating progressive community programs. Among these are teaching aide projects in the public schools, YMCA activities, "Hatrack" interpretive reading programs for children and intercurricular theater performances, Bach's Pop and Madrigal Singers concerts for civic groups and public school audiences, scholarship programs, regularly scheduled fine arts events and receptions, and a faculty speakers bureau.

Facilities at the Manitowoc Campus include an instructional building with air-conditioned classrooms, laboratories, and offices. A large cafeteria-lounge, commanding a spectacular view of Lake Michigan, opens on a stone patio and

overlooks a student-built picnic terrace near the beach.

Serving the community as well as UWGB students, the campus library is open to county residents who have special library needs. It has a book and periodical collection of over 14,000 volumes and access to nationwide loan services. Private conference rooms, individual study carrels, listening posts, and lounge areas create a relaxed atmosphere for study and research.

Although its name has undergone several changes over the years, the Manitowoc County Campus has always shared in the prestigious UW tradition. In the early days, university classes were offered through the UW Extension System (1933-1963); later, through the UW Center System (1964-1967). The latest change came in 1968 when Manitowoc became a part of the multi-campus structure of UWGB.

Continuing the Wisconsin tradition, the Manitowoc County Campus strives to provide a strong academic program on an individualized basis while adapting itself to the changing needs of man and his environment.

MARINETTE COUNTY CAMPUS

Located in a stand of pine and hardwoods on the Green Bay shoreline 60 miles north of the main campus, the Marinette County Campus is integrated physically, socially, and by mission definition into its northwoods environment.

Three of the four low-rise structures making up this educational complex overlook the bay. The campus itself encompasses 36 acres left in their natural botanical state, but claims as its laboratory Wisconsin's third largest county, saved from environmental degradation since the late nineteenth century lumbering era.

Thousands of acres of public forest, pure inland lakes, and miles of unpolluted streams have dictated the campus purpose—to develop appreciation for an unspoiled natural habitat, to demonstrate the means to preserve it, and to illustrate non-destructive ways life within it can be fulfilling. Reinforcing these goals is a close alliance of the natural sciences and the arts, ecologically tying together the cultural and physical worlds.

Campus-wide environmental awareness is stimulated by extra-academic research programs conducted with student assistance. Present problem-oriented research is focused on wildlife population, small city urban renewal, and a nationally recognized multidisciplinary study in water quality. Each project has attracted extra-university funding.

Instruction and training to enrich the cultural environment follow the leadership of *Theatre On The Bay*, a hybrid form of community-educational theater. Active year-around, *Theatre On The Bay* takes on the practical characteristics of a professional "straw hat" operation each summer, entertaining its regular audience, tourists and seasonal residents. The demands of a four-performances-each-weekend schedule demonstrate to the community and a broad spectrum of student and regional talent the satisfaction to be gained from theater as a leisure time occupation.

Theatre On The Bay occupies an intimate 395-seat house with an asymmetrical thrust stage. Adjoining it are an art gallery, public rooms, music studio, and art studios completely tooled for sculpture, ceramics, painting, drawing and design. The theater building, forming one corner of the campus educational triangle, is flanked by a library built for a collection of 30,000 volumes and equipped with modern electronic learning devices including the only television interconnect (with Green Bay) between campuses of higher learning in the state. The microwave capabilities bring Green Bay campus cultural and instructional resources northward daily. Telephone interconnection permits discussion between participants on the two campuses.

The main campus building forms the apex of the triangle. Its facilities include science laboratories, filmmaking center, student lounge, cafeteria, classrooms, bookstore and administrative offices. A quarter mile from the bay is the campus gymnasium, adjoined by soccer and other playing fields. The total campus physical plant, designed to accommodate 500 freshman-sophomore students, was completed in 1971.

Student life on and off the campus is merged with the realities of community life. Students live in and are a part of the community. Area businesses and industries freely exchange specialized knowledge with campus scholars and encourage students by providing jobs for 75 percent of the student body. Cultural programming for the university-community is augmented by an annual corporate grant. Banks, businesses, and individuals award scholarships. Boats for recreation and aquatic research, including a 25-foot vessel with bay capabilities, are recent gifts-in-kind. The community good will extends to the classroom where generation lines disappear in academic pursuits, and educational lines are erased by a common concern for maintenance of a unique environment.

COMMUNITY INVOLVEMENT

From its beginning The University of Wisconsin-Green Bay has sought to involve members of its many communities in its development. A number

14 Community Involvement

of community consultants and advisory committees took part in the preparation of the University's academic plan, which emphasizes problems of the Northern Great Lakes region. Because citizens are extremely important to the University's ability to accomplish its objectives, their active participation in the planning and carrying out of its many activities is encouraged and welcomed.

Currently, some 15 advisory committees, on which more than 200 citizens of Northeastern Wisconsin

sit, are in existence. In addition, a number of citizens participate in the educational program as community lecturers, bringing their special interests and knowledge directly to students enrolled in the Liberal Education Seminars at all four campuses.

The typical advisory committee meets two to four times a year with appropriate liaison members of the faculty, staff, and student body. Matters of current concern are discussed and reports are published as needed.



Community participation takes many forms. Some of the advisory committees are purely local in focus. For example, one committee concerns itself with planning and zoning around the Green Bay University site. Other local advisory committees assist in the development and mission of the campuses at Fox Valley, Manitowoc, and Marinette.

Several committees focus on specific aspects of the UWGB academic plan. Each theme college has its own advisory committee and the School of Professional Studies has two, one for education and the other dealing with business and public administration.

Another group of committees concentrates on University-wide concerns. For example, the General University Committee, more or less a steering group, advises on such matters as the university budget, the master building plan, and student discipline. The Lecture and Fine Arts Advisory Committee addresses itself to such matters as improvement in programming quality, the widening of audience participation, and the coordination of community-wide cultural activities.

Joint participation of faculty, student, and community members characterizes such committees as the Green Bay Community-University Relations Committee, the Chancellor's Special Advisory Committee on a Performing Arts Theater, and the Athletic Board.

A notable aspect of community participation is the active, creative, and moving consensus achieved between the community and the University.

The University springs from the community. As a community organization, it has a responsibility to report back to the community and be a part of it. Opening up many avenues of community participation permits a level and a dependability of communication not otherwise possible. The belief that the University's goals can most effectively be achieved through active community participation is basic to the UWGB philosophy.

Community Outreach

UWGB is committed to the further growth of efforts in community relevance and involvement. A central office provides overall leadership, coordination, and policy direction for these community outreach and research efforts, which involve students, faculty, and administrators, as well as the community.

Students are encouraged and assisted to become involved as volunteers in community service activities in Northeastern Wisconsin. Students and faculty are encouraged to work with service organizations, business, industry, government,

and citizen groups in designing mutually beneficial off-campus projects.

The Office of Student Community Outreach serves as an information center for past and present off-campus projects and surveys; helps with procedures, and assists in making arrangements for such activities; maintains lists of community individuals who are willing to be interviewed, and serves as a key source of information for potential student off-campus projects. Faculty and administrators participate in community efforts on air and water pollution, business development, community improvement, transportation improvement, regional planning and development, cultural and aesthetic enhancement, and health service improvement.

Close working relationships also have been established with individual business or industrial firms and governmental units and organizations. Some have provided direct assistance to UWGB through such means as financial support, donations of equipment, availability of equipment and facilities, release of staff members to assist UWGB, advisory assistance, technical support and administrative support. Some have provided information on their history for use by students, have lectured to classes and have conducted tours of facilities for faculty and students.

Still other cooperating firms, agencies, and organizations have received direct assistance from UWGB staff members in such areas as technical information, analyses, and educational efforts. These direct educational services will increase as UWGB undertakes further analyses of off-campus involvement in environmental problems.

As a part of its community outreach efforts, UWGB conducts with community leaders and groups distinctive seminars, workshops, and conferences on various environmental problems and opportunities. It emphasizes opportunities for adults to continue their education through credit and noncredit programs. It schedules late afternoon and evening courses and programs to make educational opportunities more readily available to the working man or woman.

Community Projects

Because UWGB focuses upon man and his environment, a deliberate effort is made to design and conduct cooperative projects and activities that relate the community and university toward specific environmental improvements.

Typical of the volunteer efforts by students are the UWGB tutoring programs with Oneida and Menominee Indians. Another project involves UWGB staff and students who work with the Green Bay public schools in identifying culturally

disadvantaged grade school students. These students then attend three different reading clinics at which UWGB students function as teacher aides.

Community and university join together in activities during April "Environmental Action Month" to focus on such problems as household consumption effects on resources, disposables, and elementary and high school student awareness of problems.

Students under faculty supervision are conducting air sampling analyses in the Green Bay area to determine the lead content in the air. Other students are cooperating with the Green Bay-Brown County Regional Planning Commission to survey noise pollution. Another project in Northeast Wisconsin seeks to correlate size of engine, type of automobile, cost of the auto, and incidence of failure to use antipollution devices. An urban environmental project is analyzing alternatives to current governmental structures in the Green Bay area and Brown County.

A communitary project worthy of scientific publication was the study of the effect of oral contraceptives on the Vitamin B₆ status of women users. A faculty member, a community physician, and several advanced students were involved in the analyses of medical records.

A project in Marinette that involves community leaders, and faculty and students at UWGB is being conducted at Lake Noquebay. The study is designed to develop and demonstrate an action program in watershed management and to test procedures in broadly-based, problem-oriented research.

Another formal project that has been highly successful is an analysis-demonstration project on actual and potential linkages among cities and counties of Northeastern Wisconsin. It has involved faculty, students, and community leaders in a 20-county area.

Research

The encouragement of research is a cardinal point in the University's academic plan.

Research can be broadly defined as the application of human intelligence to problems whose solution is not immediately apparent. In this context, UWGB fosters the problem-solving approach to today's environmental crises and lends its efforts in an interdisciplinary fashion toward their solution.

Included in the research effort are the projects of individual scholars, interdisciplinary team projects, programs for institutional development and innovative educational practices, grants and

awards for undergraduate research training, the acquisition of equipment for certain specific research efforts, and the creation of conditions wherein interdisciplinary research can flourish.

The academic philosophy of the University makes full use of the combination of research and teaching so that the results of research, whether in the Northeastern Wisconsin area or elsewhere, are in fact brought directly into the students' programs. The stimulation of undergraduate research participation and the sophomore Liberal Education Seminar off-campus experience contribute to an early understanding of research objectives in the solution of problems.

At the same time, the involvement of the community in UWGB, in the community outreach dimension, serves to encourage community participation, not just in the results of research, but also in the early planning stages.

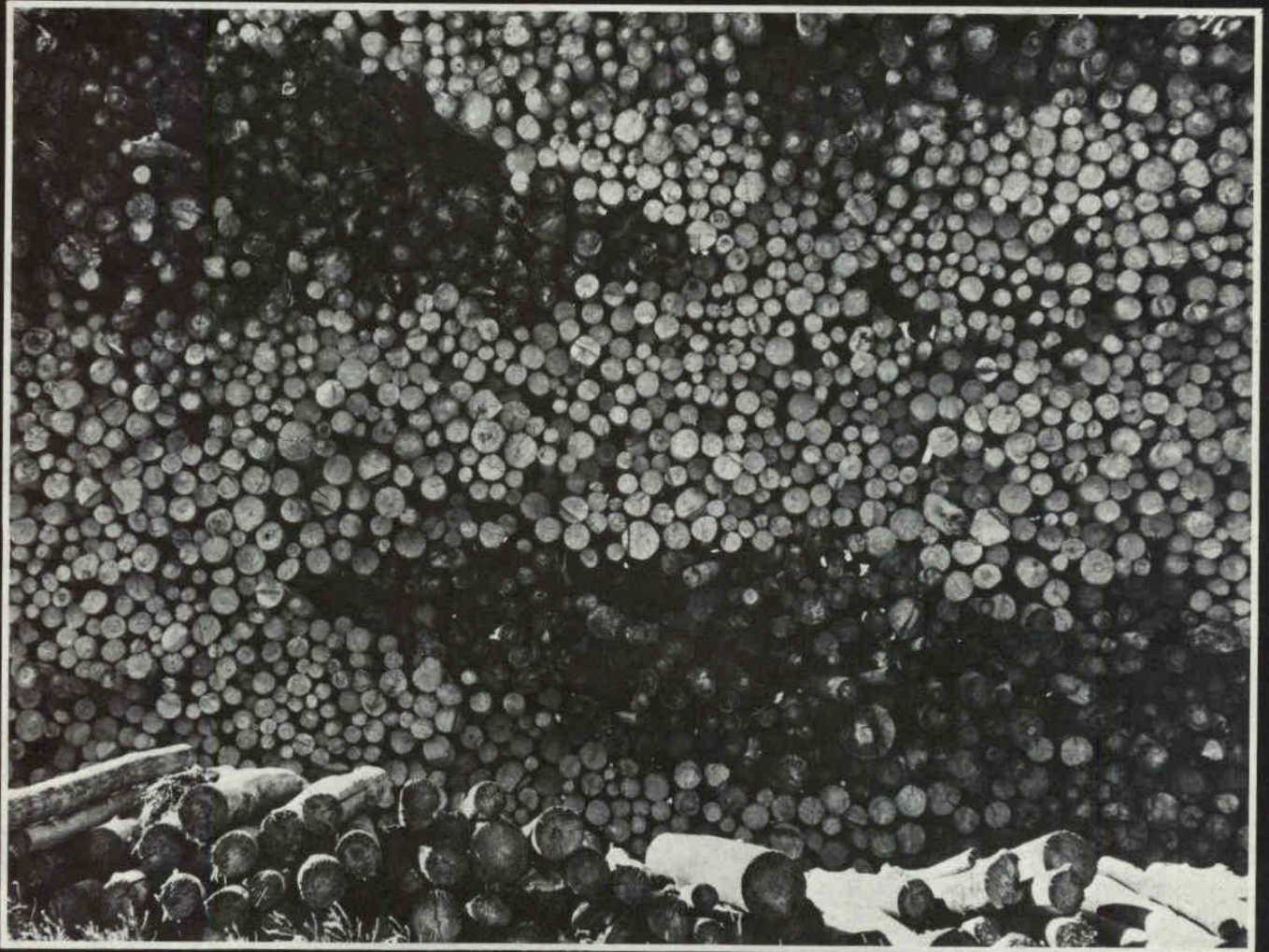
An Office of Grants Administration assists in the development of research programs and support at all levels of University interest.

Partnership with University Extension

The University knows that problems of the environment cannot be studied, nor can solutions to these problems be discovered, in isolation from the society in which the problems exist. To bring to bear most effectively its combined programs of teaching, research, and community outreach on problems of the environment, UWGB has formed a close partnership with University Extension, The University of Wisconsin. Through this partnership, UWGB and Extension faculties work together to identify problems, analyze opportunities, and design and conduct, through the Extension organization, educational and community service efforts. Several faculty members have joint appointments with UWGB and University Extension in the areas of art, music, and recreation.

These joint activities are concerned with the economic, social, and cultural development of the communities of the region and with the career advancement, general educational improvement, and cultural enrichment of individuals throughout the region. Problems given high priority in the UWGB academic plan by community members who helped design it are given high priority in the planning for joint programs between UWGB and University Extension.

The entire University shares in the commitment to ameliorate crises of the environment. The success of UWGB depends in large measure on how this challenge is met. The partnership with the community and University Extension helps assure that it is met in an orderly and effective manner.



AN INTEGRATED APPROACH TO KNOWLEDGE

The ecological focus of The University of Wisconsin-Green Bay provides an integrated approach to knowledge that pervades every facet of campus life. Not only are classroom activities and ideas made relevant for the student, but he also participates in a variety of activities outside the classroom, both on the campus and in the community, that are designed to make his total educational experience more meaningful.

UWGB has organized its colleges around environmental themes, rather than according to traditional disciplines. They are the College of Environmental Sciences, the College of Human Biology, the College of Community Sciences, and the College of Creative Communication. The names reflect the focus of each college and its particular area of teaching, research, and community outreach activity. The School of Professional Studies complements the theme colleges and is responsible for professional programs that relate to them.

Each student at UWGB selects a particular environmental theme to study in depth. Called concentrations, or majors, these areas of study cross disciplinary and college lines. The student also has the opportunity to study a second, more intensified, field when he selects an option along with a concentration. He is expected to relate work in the option—sociology, for example—to the broader area of the concentration—urban analysis, for example. The student who wishes to gain professional competence to complement his concentration or concentration-option has a third choice available in a variety of professional collaterals and preprofessional programs leading to specialized or graduate work.

The first part of this chapter describes in some detail the colleges, concentrations, options, and professional applications and outlines the basic requirements of each. The second part of the chapter is devoted to programs designed to supplement, enrich, and extend the strictly academic life of the student.

ALL-UNIVERSITY REQUIREMENTS

An undergraduate education is a liberating experience. In the context of additional knowledge and experience, the liberating and maturing of students will take place as they develop their processes of thinking and review and reinforce their values and sense of commitment. To this end, The University of Wisconsin-Green Bay has established certain all-University requirements.

It should be noted, however, that firmly required courses are few in number and that even within the general requirements the student is afforded considerable flexibility. The student may take most required courses on a pass-no credit basis, except the four years of the liberal education seminar and those courses that are part of his concentration, option, and/or collateral. He may also be able to satisfy the requirements by special examination.

Prerequisites which indicate the level of proficiency required to carry a course are essentially advisory and will often be waived, allowing the student to register for the course by demonstrating his proficiency and obtaining the consent of the instructor in advance. This procedure affords the student further flexibility in designing his own program of study.

All-University requirements fall into three major categories: liberal education seminar, distribution courses, and tool subjects.

Liberal Education Seminar

The academic core at UWGB is the liberal education seminar, a four-year program through which every student receives the opportunity to relate the classic concepts of values to a present day ecological problem.

As a freshman he is introduced to the concepts of values, ecology and environment. As a sophomore he studies environmental problems of the Great Lakes region, both in the classroom and by means of an off-campus project. As a junior he expands this study to include some other region in the United States or abroad. As a

the academic plan

senior the student integrates what he has learned and explores the possible consequences of present day situations to future generations.

The **Freshman Seminar** introduces the student to the two central concerns of the University: values and ecology. He is offered a choice of topics to be studied in lecture format and in student-directed discussion. The topics emphasize man's values and their relations to contemporary ecological problems. Through lectures, discussions, and assigned readings the student develops competence in critical evaluation and written communication and receives experience in group discussion. Written assignments are considerable and receive consideration equal to that apportioned to understanding of the material and participation in discussion.

Each theme college offers its own program in the **Sophomore Seminar**. The topics are concerned with environmental problems but vary with the theme of the college. The student selects the topic or the problem of greatest interest to him. The theory and methods learned in the first term prepare him for practical application in an off-campus project. He may undertake this project individually, participate in a group studying a particular local environmental problem, or act as a responsible member of a team project. A report of results is required and may be presented orally, in writing, or in other forms which may be suitable to specific situations.

As a junior the student studies an environmental problem in a region other than Northeastern Wisconsin or a culture other than his own. The **Junior Seminar** is under the direction of the college concentrations and may vary widely according to the orientation of the concentration and the interests of the student. Again, the student is afforded a wide choice. The first term is devoted to a formal study of a specific region in preparation for a supervised student project in other areas of the United States or abroad during the second term.

Those students selecting a professional collateral may relate the practicum portion of the junior seminar to it also, thus reducing certain credit

20 Distribution

requirements, provided that the work in the professional collateral (field work, internship, practice teaching, etc.) may properly be identified as other culture experience. Arrangements for this should be made in advance with the liberal education seminar staff.

For students who have participated in VISTA, the Peace Corps, or similar programs, credit may be granted for all or part of the sophomore or junior seminar. Students should consult the liberal education seminar office about other work experience, practice teaching, military service, or residence abroad, which may be considered equivalent to those experiences which form the basis of the second term of the sophomore and junior programs.

Culminating the Liberal Education Seminar, the **Senior Seminar** is considered the capstone of the student's entire interdisciplinary and environmental education. This seminar affords the student the opportunity to integrate the knowledge he has acquired during his college education, and to do so while working in a stimulating context of seniors from different colleges and concentrations. The subjects treated in the numerous sections of the senior seminar vary. However, each seminar section focuses on some aspect of the natural, the social, the technological, or the cultural environment in such a way as to permit the student to explore a complex situation of particular concern to society. The stu-

dent may select the seminar whose subject is most appropriate to his interests. Specially qualified seniors may elect to fulfill the requirement for the senior seminar by participating in the instruction of the freshman seminar.

All four years of the liberal education seminar must be taken for a letter grade. Students are referred to the *Liberal Education Seminar Handbook* for specific information on various aspects of the program, including a full list of freshman and senior topics, specific foreign programs available in any given year, and bases for petition to waive or substitute requirements on evidence of suitable extracurricular experience.

Distribution

A truly educated man or woman has broad intellectual interests and some background, at least, in environmental problems and disciplines. At UWGB, this breadth is encouraged in a number of ways. Each of the theme colleges is broadly interdisciplinary. The liberal education seminar brings together students and professors from all theme colleges in their consideration of man's ecological problems. And students in any theme college may freely elect any courses offered for which they are qualified.

In order to encourage as much breadth as possible in undergraduate education, the University



requires a student to earn a minimum of five credits in each of the four theme colleges. Both concentration courses and option courses may be used to fulfill the distribution requirement (see the note preceding the course listing on page 104 in this catalog). Any course for which the student is qualified may be chosen, although some of the theme colleges offer certain courses that are particularly appropriate. The student can elect to take on a pass-no credit basis those courses which he is using to satisfy the distribution requirement. Alternatively, he can take special examinations to fulfill all or part of the distribution requirement (see the section on credit by examination).

In meeting distribution requirements, the student should recognize that these course experiences can be directly related to work in his concentration or concentration-option. Members of the faculty are available to assist students in developing programs that take advantage of such relationships.

Tool Subjects

A student faces a constant demand throughout his college career to develop his skill in using words. But if he is to pursue knowledge effectively and function well as a citizen he must become familiar with forms of communication and analysis other than his own language. Hence, the student is required to broaden his communication skills by acquiring or demonstrating rudimentary familiarity with at least two communication systems other than his native language. For foreign students this may appropriately include the English language.

To satisfy the tool subject requirement, the student must complete or demonstrate equivalent competence in at least six credits in each of two areas:

1. Quantitative skills, including data processing, statistics, and mathematics, and
2. Arts and foreign languages, including the visual and performing arts and all foreign languages.

A student may demonstrate his competence in any tool subject by taking a special examination or audition. He also has the option of taking any tool subject course on a pass-no credit basis, but in the rare case where such a course might be offered for concentration credit, he should consult his adviser before deciding to do so. Programmed instruction is available for many tool subjects. Interested students should consult the Educational Communications Center.

Many students will be able to attain one or more of the required levels of tool subject capacity before entering the University. Therefore, any

student who is able to write off any requirement is urged to consider the great advantages of attaining necessary capacity in those other areas where he does not have advance preparation.

Common ways of meeting tool subject requirements are described below, but the student who wishes to propose an alternative is encouraged to submit a special petition through the assistant to the dean of the colleges for student advising.

Mathematics (Calculus). A student electing to satisfy part of his tool subject requirement in this area may do so by demonstrating ability in mathematics through one year of college calculus. He may do so by means of a special examination or by enrolling in mathematics courses for credit, under a pass-no credit grading system. A placement examination is given to each student choosing the calculus alternative. He may be exempt from all or part of the requirement, depending on his score.

Courses recommended for fulfilling the tool subject requirement in calculus are Mathematics 202, Calculus and Analytic Geometry I, and either Mathematics 203, Calculus and Analytic Geometry II, or Mathematics 264, Elementary Probability. Each one-semester course provides four credits.

Data Processing. A student who selects data processing to fulfill part of his tool subject requirement may meet it through special examination or by satisfactorily completing two three-credit courses in elementary data processing and computer science. It is recommended that all students take Mathematics 250, Computer Science I, the first semester. This lecture and laboratory course draws on examples that are appropriate to the needs of students in each of the concentrations.

During the second semester the student selects one of the following three-credit courses to complete the data processing requirement: Mathematics 251, Computer Science II; Mathematics 252, Machine Organization; Mathematics 260, Elementary Statistics; Mathematics 353, Advanced Programming; or Community Sciences 205, Social Science Statistics.

Finite Mathematics. A student in the natural or social sciences may find it appropriate to fulfill part of his tool subject requirement with Mathematics 240-241, Finite Mathematics I, II. The student may combine either of these three-credit courses with one semester of calculus or one semester of data processing and computer science to satisfy this requirement.

Foreign Language. A student who selects this tool subject area must demonstrate competence in a foreign language through the second year at

22 Choosing a Major

the college level. Normally, a year's course in high school is equivalent to one semester of college work. Language competence is determined by a placement examination; the student who demonstrates competence through the 203 level of the college sequence in the language of his choice or who has successfully completed four years of one foreign language in high school will be exempt from further language work.

A student who repeats in college a foreign language he has completed in high school must take the repeated course(s) on a pass-no credit basis, unless he requests to take it (them) for a grade on a special petition and has the petition approved by his academic adviser. This pass-no credit policy applies to all foreign language courses that are being taken to meet the tool subject requirement.

The language selected is a matter of student choice, in consultation with his adviser. The choice should be related to his intellectual interests, his plans for an other-culture experience as a junior, and his travel plans as an older adult. It need not be one of the languages regularly taught at the University (such as French, Spanish, or German). A student who wishes to strengthen his competence in a language not regularly taught will be assisted by language instructors and by the Educational Communications Center. Often special summer programs are available at one or more universities to meet such needs. A foreign student may meet the language requirement by certification of competency in English, if it is not his native language.

Visual and Performing Arts. Not only do the visual and performing arts involve an effort at meaningful aesthetic communication; they are also useful in the pursuit of many different occupations. The student who decides to fulfill part of his tool subject requirement with studio experience in the visual and performing arts will find that the skills and capacities he has gained can add a meaningful dimension to his participation in community endeavors.

The student who selects music as his studio experience is required to demonstrate ability equivalent to six credit hours beyond the first year level of applied music (courses numbered 101 to 140). This ability or the six credit hours can be in solo or individual performance areas or in group participation in ensembles or organizations such as band, orchestra, and choral groups. The student must audition before the applied music committee for placement in any of these areas.

The student who selects theater as his studio experience is required to demonstrate ability equivalent to six credit hours beyond the first year level of acting (Performing Arts: Theater 131

and 132, Acting). This ability may be demonstrated through audition or by completion of two additional semesters of acting (Theater 231 and 232), or two semesters of theater techniques (Theater 221 and 222), or two semesters of intercurricular theater (Theater 225 or 226), or any combination of two semesters of these courses.

The student who selects visual arts as his studio experience is required to demonstrate ability equivalent to six credit hours beyond Visual Arts 102 and 103. This ability may be demonstrated by a showing of the student's work or by completion of any two of the following courses: Visual Arts 201, 202, or 203. Also, any 300-level visual arts course for which the student qualifies is acceptable.

The student who selects dance as his studio experience may demonstrate his competency by completing six hours of dance beyond Theater 137 and 138, Dance and Movement. This ability may be demonstrated through audition or by completion of Theater 237 and 238, Dance and Movement.

CHOOSING A MAJOR

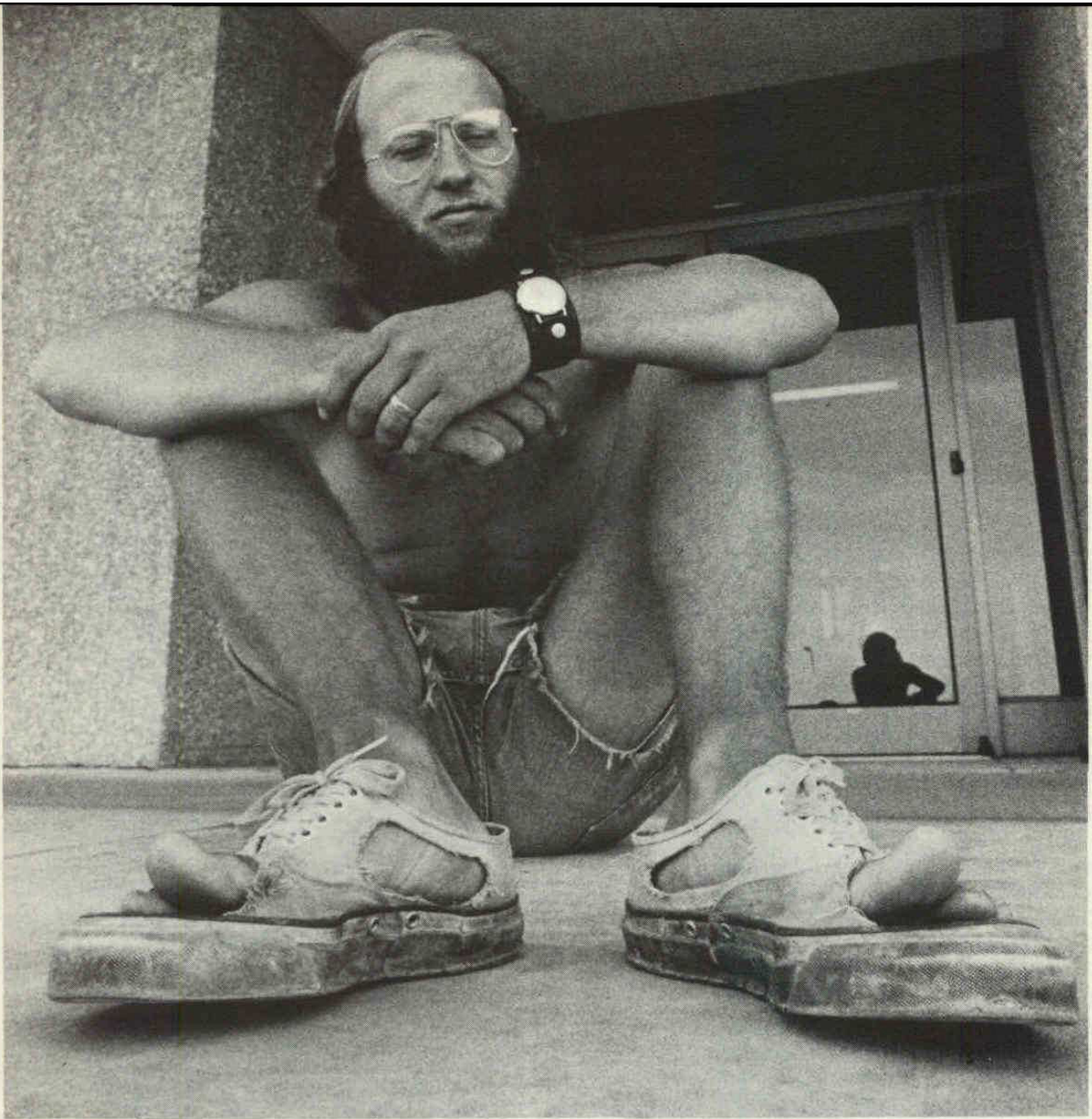
In addition to meeting the all-University requirements of the liberal education seminar (LES), distribution courses, and tool subjects, a student must complete an integrated series of courses constituting a major. A major consists of 30 to 36 credits of work completed at the junior-senior level and organized around an environmental theme. Three types of choices are available. A student may major in a concentration, a concentration-option, or—if no existing program meets his needs—he may design a major of his own in consultation with faculty advisers.

Choice 1—The Concentration

In keeping with the academic focus of UWGB, major programs are designed to give the student pan-disciplinary knowledge that will equip him to deal with various environmental problems. The theme colleges offer 11 such programs, called concentrations, and a professional concentration in managerial systems is offered by the School of Professional Studies. The student who selects this type of major is required to complete 30 credits at the junior-senior level (which may include the junior liberal education seminar) that reflect an interdisciplinary focus on an environmental problem. Programs are formulated and approved by the concentration chairman or his designated concentration adviser.

Choice 2—The Concentration-Option

The student who wishes to relate his concentration with work in some depth in a specific disci-



24 Professional Application

pline, profession, or field of knowledge—called an option—may select a combination major: the concentration-option. In such instances, his program must be approved by both the concentration adviser and the option chairman. He normally is required to take 36 credits at the junior-senior level. At least 12 of these credits must be in the concentration and may include junior LES. The balance of the credits, normally 24, relate the option to the concentration. For example, the student who wishes to study the chemical aspects of water pollution might select a chemistry option to complement his environmental control concentration. Similarly, a student might supplement his urban analysis concentration with an option in sociology. The student who chooses the professional concentration in managerial systems fulfills a cognate, which consists of work drawn from one of the theme college concentrations. These examples are illustrative only and should not be taken as limiting the possibilities for concentration-option combinations. The student is encouraged to design his individual program in consultation with the concentration chairman or his designated concentration adviser.

Choice 3—The Personal Major

While the concentrations provide a wide variety of program emphases, particularly when combined with the options, an occasional student may find that his interests direct him toward a problem which is not represented adequately in any single concentration. Such a student may elect to design an individual program in the spirit of the University's academic plan. Such a program must consist of a minimum of 30 credits at the junior-senior level organized around a clearly defined environmental problem. Normally a personal major includes at least 12 credits drawn from the advanced course offerings of two or more concentrations and a three-credit directed study course during the senior year aimed at integrating the student's work. The remaining credits should be selected to carry out the theme with which the student is concerned. Such programs are administered through the office of the dean of the colleges.

A student who wishes to develop a personal major should consult the associate dean of the colleges, who will aid him in devising a preliminary proposal and identifying an appropriate personal adviser. The student then works with the adviser to develop his program in detail, after which it is submitted by special petition to the dean of the colleges for final approval.

Personal majors may combine course work or Independent study taken under the sponsorship of any of the theme colleges or the School of Professional Studies, so long as they express the major academic concerns of the University: Interdisciplinary education focused on the application of skill and knowledge to the problems of the physical, social, and cultural environments.

PROFESSIONAL APPLICATION

The student may, if he wishes, choose to emphasize professional application of his major by selecting either a collateral or a preprofessional program. These programs can be applied to either the concentration or the concentration-option.

Collaterals

Both types of majors have direct professional applications (i.e., job relevance to a professional school experience). However, there are several special applications that require some additional particular competence. To meet this need, a student may select a professional collateral (or minor) in the School of Professional Studies which supplements his major and provides him with a professional-specialist orientation.

Professional collateral courses are offered in education (leading to teacher certification at the elementary and secondary levels), environmental administration, mass communications, leisure sciences, and social services. In most cases 18 credits are required for a professional collateral, in addition to the 30-credit concentration or the 36-credit concentration-option.

Preprofessional Programs

Three kinds of preprofessional opportunities are present. First, UWGB's regular majors leading to a bachelor's degree offer appropriate preparation for most graduate professional schools such as law, medicine, dentistry, social work, music, and others.

Second, for students desiring a four-year bachelor's degree in engineering, nursing, or certain other applied fields, UWGB offers a special two-year preprofessional program.

Third, a student desiring both a liberal and a technical bachelor's degree can select a 3-2 plan leading to both a bachelor of arts (or science) degree at UWGB and a bachelor of nursing or engineering (or another applied field) at another institution. Normally three years are spent at UWGB, two at the other institution.



ORGANIZATION OF THE UNIVERSITY

The academic program of the University is organized into four colleges and a complementary School of Professional Studies. The focus of each of these units is described below.

The student normally enters the college or school in which he expects to major at the beginning of his sophomore year. By the time he is a junior he should have selected his concentration or concentration-option and his professional collateral, if he plans to pursue one.

Concentration programs are administered by the colleges and school. Options are grouped by colleges only for the purpose of satisfying the all-University distribution requirement. Any option in which the student is interested may be selected to complement his concentration. Collaterals, which provide a professional focus for the student's major program, are housed within the School of Professional Studies.

Students in all colleges and the professional school are expected to meet the all-University requirements, described in a previous section. In addition, some of the colleges have requirements that must be met by all students pursuing concentrations in those colleges. These requirements are described in the individual college sections that follow. Some of the colleges also recommend specific courses that are especially appropriate for fulfilling certain all-University requirements.

Academic advisers are available to help the student plan his program of study.

The College of Community Sciences

The College of Community Sciences offers programs focusing upon the role of man in the social environment and the processes by which man modifies his social environment. The college accents those areas of understanding and perception that serve to prepare contemporary students for effective participation in their community at the local, state, national, and international levels.

Programs emphasize the comparative aspects of the community sciences, relating the modes of analysis characteristic of the community sciences to the Northern Great Lakes region and to other parts of the nation and the world.

Critical exposure to the approach of the community sciences is as necessary for those involved in the environmental sciences, human biology, and creative communication as it is for those who choose concentrations within this college. Similarly, it is vital that students meeting the requirements of one of the concentrations offered in this college come to some basic understanding of the major themes expressed in the programs of the other colleges.

The student takes a core of courses essential for a comprehension of man's role in the social environment and his modifications of that social environment. The student then pursues a major in one of three concentrations:

1. Modernization processes
2. Regional analysis
3. Urban analysis

The following course is required of all students majoring in the College of Community Sciences.

Community Sciences 102, Man and His Social Environment, 3 cr.

The student is required to take one additional introductory course, to be determined in consultation with the appropriate concentration chairman. Suggested courses include:

Anthropology 102, Environmental Anthropology, 3 cr.

Economics 102, Economics and the Modern World, 3 cr.

Geography 202, Introduction to Cultural Geography, 3 cr.

Political Science 103, Introduction to Political Analysis, 3 cr.

Psychology 102, The Behavior and Experiences of Man, 3 cr.

Sociology 202, Introduction to Sociological Analysis, 3 cr.

It is strongly suggested that students of other colleges seeking to meet distribution requirements, or wishing to understand the approach to community sciences characteristic of the College of Community Sciences, also begin their course work in this theme college by taking Community Sciences 102.

The College of Creative Communication

The educational philosophy of UWGB reflects its environmental approach. Because man is a being of many environments, his education should not confine him to a limited view of himself. Man is not only a social creature and an ecological organism, but he is also a seeker after aesthetic, intellectual, and spiritual fulfillment. Man is at the same time both an ape and an angel. More than ever before it behooves him to accept the limitations and challenges of his animal ancestry and his unique self-awareness. UWGB believes that the traditional walls between disciplines, which too often give students narrow conceptions of themselves, are not only artificial and irrelevant but dangerous as well.

The unfortunate results of the traditional compartmentalized education are all around us. For the sake of religious and political man we have exterminated each other. For the sake of economic and technological man we polluted our water, poisoned our air, raped our land, and are well on our way toward annihilating ourselves through our single-minded and arrogant conquest of our natural surroundings.

To the student seeking to avoid a one-dimensional self-identification, the College of Creative Communication offers the dimension of aesthetics and of values and the understanding of the ways in which they are perceived and transmitted. It offers the humane dimension that assigns meaning and significance to our biological, social, and scientific environment. In short, it offers the concepts of unity, truth, and beauty which are, or should be, the words that suggest the ultimate values of our humane dimension.

A student choosing to major within the College of Creative Communication selects one of two

the colleges

28 College of Environmental Sciences

concentrations, both of which place emphasis on an individual's relation and contribution to the cultural environment:

1. Analysis-synthesis
2. Communication-action

The College of Environmental 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.

The student choosing to major within the College of Environmental Sciences takes a core of courses designed to provide a basic knowledge in science which is essential for his comprehension of today's world. Concurrent with or following the sequence of core courses, the student, depending on his interests, majors in one of two environmental science concentrations:

1. Ecosystems analysis
2. Environmental control

The student who selects the concentration-option major will find the following options especially appropriate: chemistry, mathematics, physics,

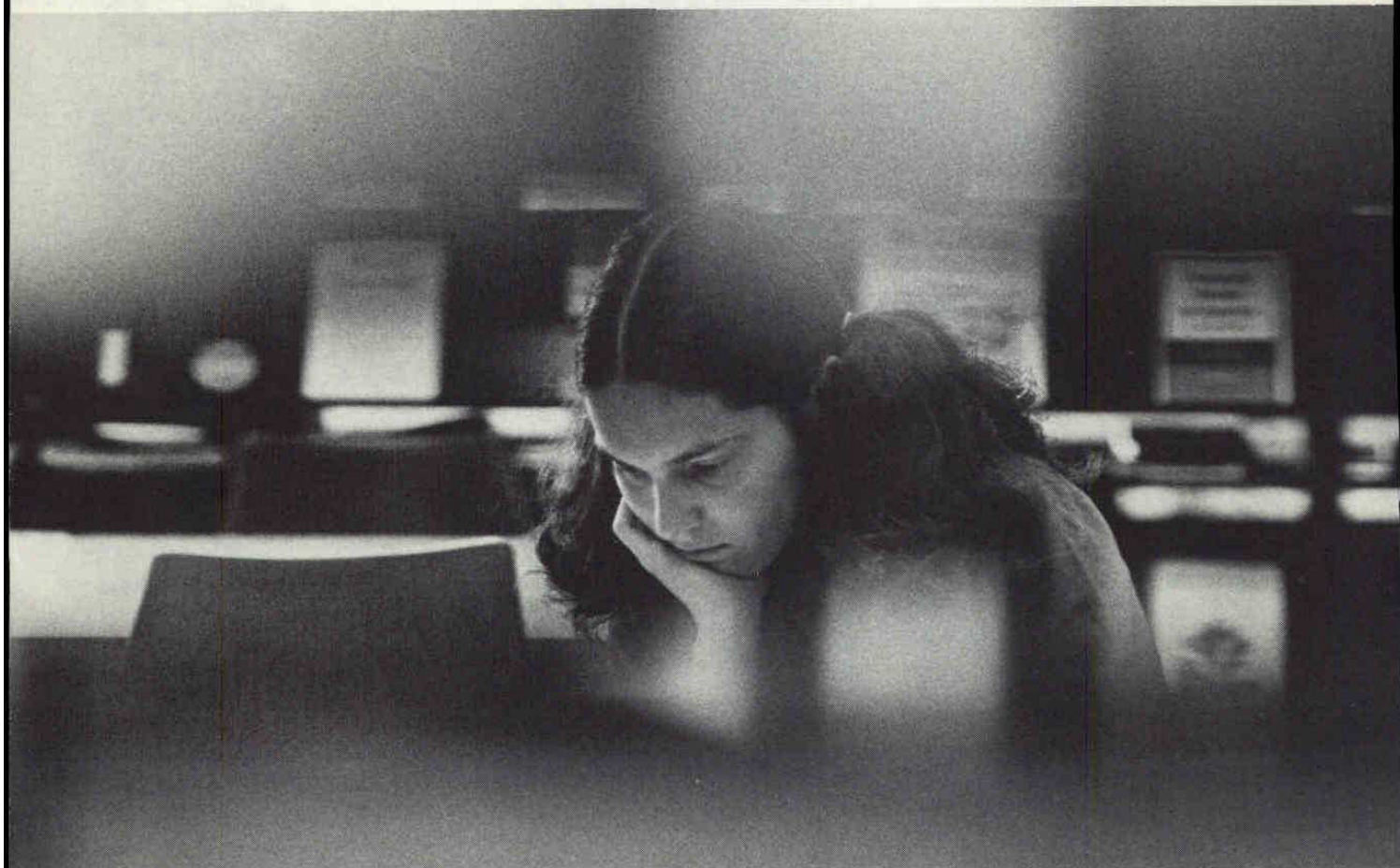
earth science, economics, anthropology, political science, and biology.

The following basic science courses are required of all students majoring within the College of Environmental Sciences:

Biology 202, Biology of Cells, 4 cr.
Biology 203, Biology of Organisms, 4 cr.
Chemistry-Physics 110, 211 and 212, Chemistry-Physics, 5 cr. each (three semesters)*
Earth Science 202, The Earth's Physical Environment, 4 cr.
Environmental Sciences 302, Principles of Ecology, 3 cr.
Mathematics, 8-12 cr.**

*Students in the ecosystems analysis concentration who substitute Chemistry-Physics 111 and 112 for 211 and 212 should be aware that the calculus-based track is required for several courses and options in the College of Environmental Sciences. Often the 211 and 212 track is the only level that may be recognized for entry by transfer into engineering or graduate programs. Only the complete three-semester sequence will be accepted on transfer as equivalent to one year of chemistry and one year of physics.

**Mathematics 203, Calculus and Analytic Geometry II, 4 cr., is required for Chemistry-Physics 212. Students in the environmental control concentration must take Chemistry-Physics 212. Students in ecosystems analysis take four courses in mathematics, one of which must be a course in statistics.



A student desiring to major in CES and take a professional collateral (such as environmental administration) is advised to combine a concentration with a collateral rather than a concentration-option with a collateral. A concentration requires six hours less of junior-senior work than does the concentration-option. In addition, if the student takes advantage of combining the junior liberal education seminar with field work, internship, or practice teaching in the collateral, he should have ample opportunity to meet all requirements within the 124 credits required for graduation.

A student interested in science education may petition to substitute computer science or computer science-statistics for calculus. He may also combine a concentration in the College of Community Sciences or the College of Creative Communication with a science option in addition to the educational collateral.

The College of Human Biology

The programs of the College of Human Biology are concerned with the central theme of man in relation to his environment. In today's society, man does not exist solely as an individual independent of interrelations with others.

Alone, and in populations, man is subjected to many stresses—both biological and behavioral—leading to extensive and serious problems. Stresses include overcrowding, malnutrition, and the achievement of healthy and meaningful growth and development under these conditions. Of utmost concern is the ability of man to adapt to these environmental stresses which, although well-documented, are inadequately understood. Until recently it was considered that these major problem areas were not prevalent in this country, but it is now apparent that they are extensive and will become increasingly important in the future.

The role of the College of Human Biology is to prepare students to work in these areas in response to the needs of our society. This preparation requires an understanding of biology and behavior as they influence the life stages of immaturity, maturity, and decay as determined in part by heredity and in part by environmental experience. Individuals trained to work in the biological and behavioral sciences are in demand; this demand is expected to increase.

Much of the total environment is man-made and man is dependent in large part upon the culture within which he develops. Thus, to consider in breadth the diverse and complex environment of man, the educational programs of the College of

Human Biology are conducted in close collaboration with those of the other colleges of UWGB, particularly with the College of Community Sciences.

The alternatives for concentration in the College of Human Biology are:

1. Growth and development
2. Human adaptability
3. Nutritional sciences
4. Population dynamics

Options especially appropriate with these concentrations include biology, anthropology, chemistry, earth science, psychology, and sociology.

The School of Professional Studies

The School of Professional Studies offers a professional concentration in managerial systems, as an alternative to a theme college concentration. It also offers several professional collaterals to supplement the concentrations in the theme colleges.

The professional concentration in managerial systems is designed for the student who wishes to focus upon the fields of business or public administration.

Teacher certification is available through the professional collateral in education. The combination of this collateral with the appropriate concentration or concentration-option provides a program which results in certification to teach at the elementary or secondary level in the public schools of Wisconsin, and, on a reciprocal basis, in some 40 other states.

Several preprofessional programs are offered through the professional collaterals in environmental administration, mass communications, leisure sciences, and social services. In a sense they are similar to minors, supplementing concentrations or concentration-options, and preparing the student either for graduate professional training or for entry into the appropriate professions on a sub-professional level. Other preprofessional programs are described in a special section later in this chapter.

SELECTING A PROGRAM

The entering freshman is encouraged to take a flexible set of courses. Course choices frequently are made in the following way. First of all, the student selects a course or two in which he is vitally interested. Next he chooses courses he would like to explore in one or two concentrations or options. Finally, it is recommended that

30 Academic Advising

he take Liberal Education Seminar 101, Crises of Bellef and Ecology. Normally four or five courses (12 to 16 credits) are chosen. It is likely that most of the courses chosen for reasons of interest and exploration will help to fulfill either the distribution requirement or the tool subject requirement; thus, progress toward meeting graduation requirements will be made.

Advisers in the Office of the Assistant to the Dean of the Colleges at the Green Bay campus and in the Office of Student Services at the Fox Valley, Manitowoc, and Marinette campuses will assist the student in making course selections and in choosing a theme college or school in which to major.

A student who thinks he may wish to pursue either a major in the College of Environmental Sciences or an elementary teaching certificate should talk to an adviser before registering for the second semester of the freshman year. Otherwise, he runs the risk of having to take extra credits to meet graduation requirements.

Academic Advising

Academic advisers provide each student with the opportunity for ongoing contact with a University staff or faculty member who is qualified to advise him about such matters as selection of courses that are consistent with his educational and/or occupational goals and specific resources that might help him to make decisions and to meet his special needs.

Advisers also inform students about basic degree requirements and how they may be met; assist them with the completion and routing of the academic plan form, general academic petition for transfer students, and/or the special petition, if necessary; and answer questions about academic regulations.

At the Green Bay campus the responsibility for academic advising is shared by the staff of the Office of the Assistant to the Dean of the Colleges and selected staff and faculty members of the various concentrations, options, and collaterals.

Normally, the staff of the assistant to the dean of the colleges advises students who have not chosen a theme college or a concentration and those who are enrolled in preprofessional programs (pre-engineering, for example).

The college assistant deans advise those students who have chosen a theme college but not a concentration.

Advising for the concentrations is done by the concentration chairmen and/or their advising coordinators. Advising for the options is done by

the option chairmen in close collaboration with the concentration advisers.

Students who are pursuing a professional concentration or collateral are advised by the dean and selected faculty members of the School of Professional Studies. A current list of advisers is available in the Office of the Assistant to the Dean of the Colleges, Office of the Registrar and the Information Center.

At the Fox Valley, Manitowoc, and Marinette campuses, academic advising is done by the staff members of the Office of Student Services. They are assisted by the assistant to the dean of the colleges, dean of the School of Professional Studies, concentration chairmen and/or their advising coordinators, and option chairmen, all of whom visit the campuses periodically.

Placement Examinations

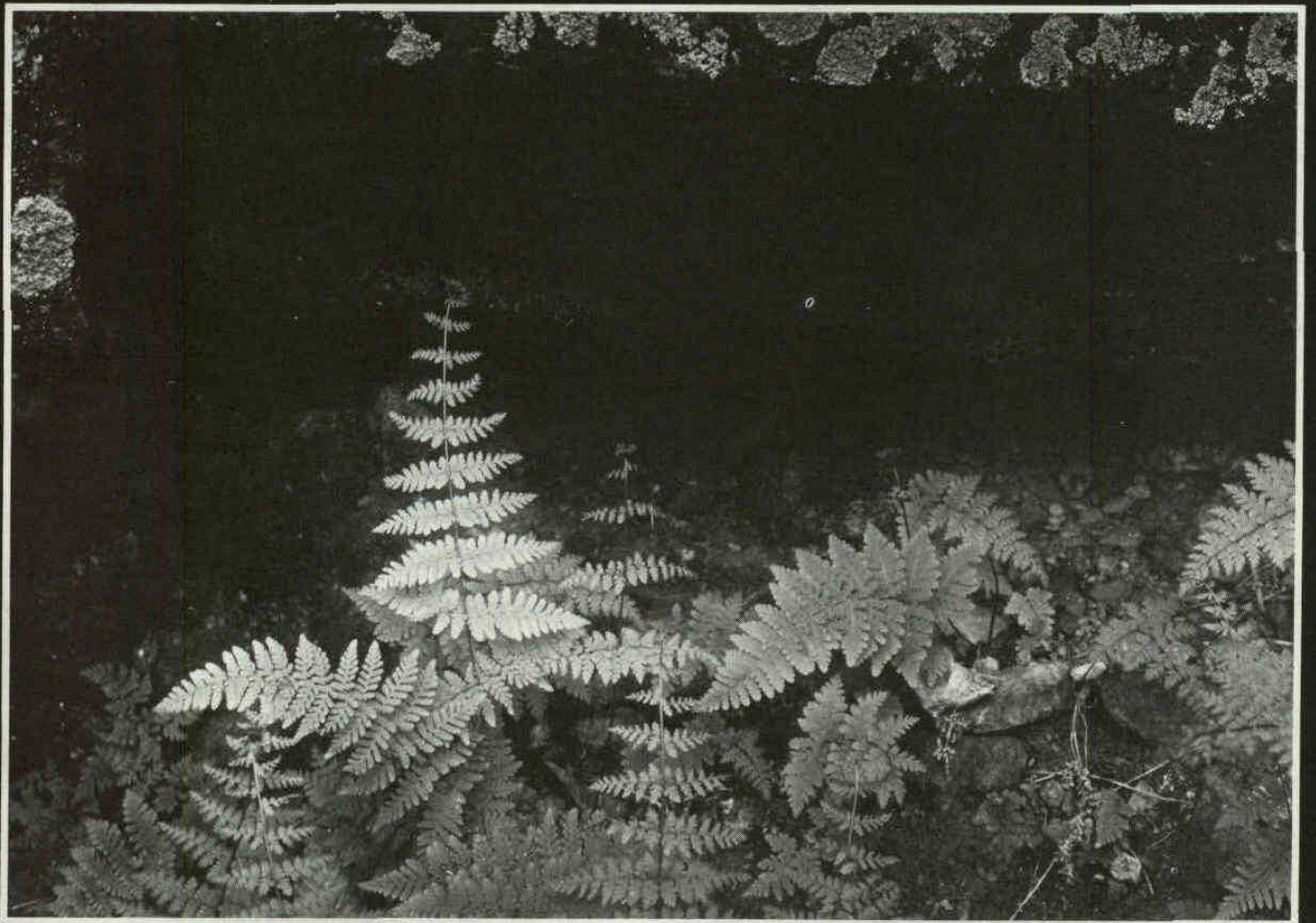
In combination with advising and counseling, testing can be useful in the educational decision-making process. This is another educational resource available to all students.

Voluntary as well as compulsory placement examinations are offered by UWGB in most areas of high school work. Students entering mathematics, biology, chemistry, physics, or foreign language courses for the first time may be required to take a placement examination. Students in history and the social sciences may take such examinations.

Placement examinations can lead to University credit as well as indicating the level of work previously achieved and the course or courses in which to enroll. The results of placement examinations are advisory; a student may enroll in a course more advanced than indicated as desirable by the examination. Normally it is not wise to do so. The examinations may lead to the waiving of certain requirements, however.

Placement examinations may indicate the need for remedial, pre-college level work. Whether as the result of such tests or on his own initiative, a student will find special learning programs (described in a later section) available.

In regard to written and spoken English, the philosophy of UWGB is that effective English should be used at all times and in all courses. Any instructor may refer a student to special learning programs in English composition at any time for extra help. Special attention is given to written English in the freshman sections of the liberal education seminar. English is viewed not as a particular course to be taken and passed, but as a communications skill which must be constantly employed.



THE CONCENTRATIONS

Academic majors at UWGB are designed around environmental problems. Each UWGB student must select one of these programs and build his academic plan of study around it. Eleven such environmental program areas have been formally identified for study within the theme colleges; another is located within the professional school. These programs are called concentrations.

The student has a choice of majoring in a concentration alone or of combining it with an option and/or a collateral to intensify his focus with additional work in a discipline or professional area.

Those who choose the concentration alone must complete 30 credits of work in the concentration at the junior-senior level. Courses are designed to reflect an interdisciplinary focus on an environmental problem.

Concentration programs are outlined on the following pages in alphabetical order. Abbreviations in the headings denote the theme college or school where each concentration is located.

The concentration programs offer the student a generous amount of flexibility in organizing his plan of study. Some of the concentrations recommend that students take certain core courses to fulfill part of the 30-credit requirement; others have no specific requirements. Students taking the concentration-sponsored sections of junior liberal education seminar (also an all-University requirement) may count such work as part of the concentration requirements if they choose to do so; students who wish to count other versions of junior LES must seek permission by filing a special petition.

The student should note that he can also develop his own concentration, focusing upon an environmental problem that is of particular interest to him, with the aid and approval of faculty advisers and the dean of the colleges. (For more information on this personal major, see page 24.)

In formulating his plan of study, the student is encouraged to seek detailed help from the concentration chairman, his designated advising coordinator, and/or the various faculty advisers. Each concentration has prepared suggested plans of study to guide the student in designing his own program, which will be formulated with his individual needs in mind. Once the student has narrowed his choice of concentrations to one or two, he should consult with the appropriate advisers in making his final selection and planning a specific program.

Most students select their theme college or school by the time they are sophomores and select their concentrations by the end of the sophomore year. Each student must meet the general all-University requirements (liberal education seminar, distribution credits, and tool subjects) and the requirements of his theme college, if there are any.

Descriptions of option and collateral programs, which may be used to complement the concentrations, may be found on the pages following the concentration descriptions. A list of courses offered may be found toward the end of the catalog. Specific course descriptions are available in a separate publication, which is available on request.

The Concentration in Analysis-Synthesis (CCC)

Professors: E. Havens (chairman), I. Korner, I. Sonenfield, S. Williams.

Associate Professors: P. Abrahams, C. Crandall, T. Daniels, F. Kersten, T. Tasch, L. Witherell.

Assistant Professors: J. Barger, E. Bottemiller, O. Clark, F. Clements, P. Cooley, N. Gaworek, J. Gerend, G. Greif, W. Herrscher, C. Krog, J. McHale, D. Moews, M. Murphy, E. Pence, C. Richey, J. Rodesch, L. Rudolph, R. Schlueter, J. Shier, W. Simpson, M. Thron, D. Webb, S. Yake.

Instructors: J. Davis, W. Davis, K. Fleurant, D. Galaty, B. Mugane, S. Oredson, D. Sweet, M. Wallach.

Lecturers: H. Gerend, D. Hrubesky, M. Martins.

the concentrations

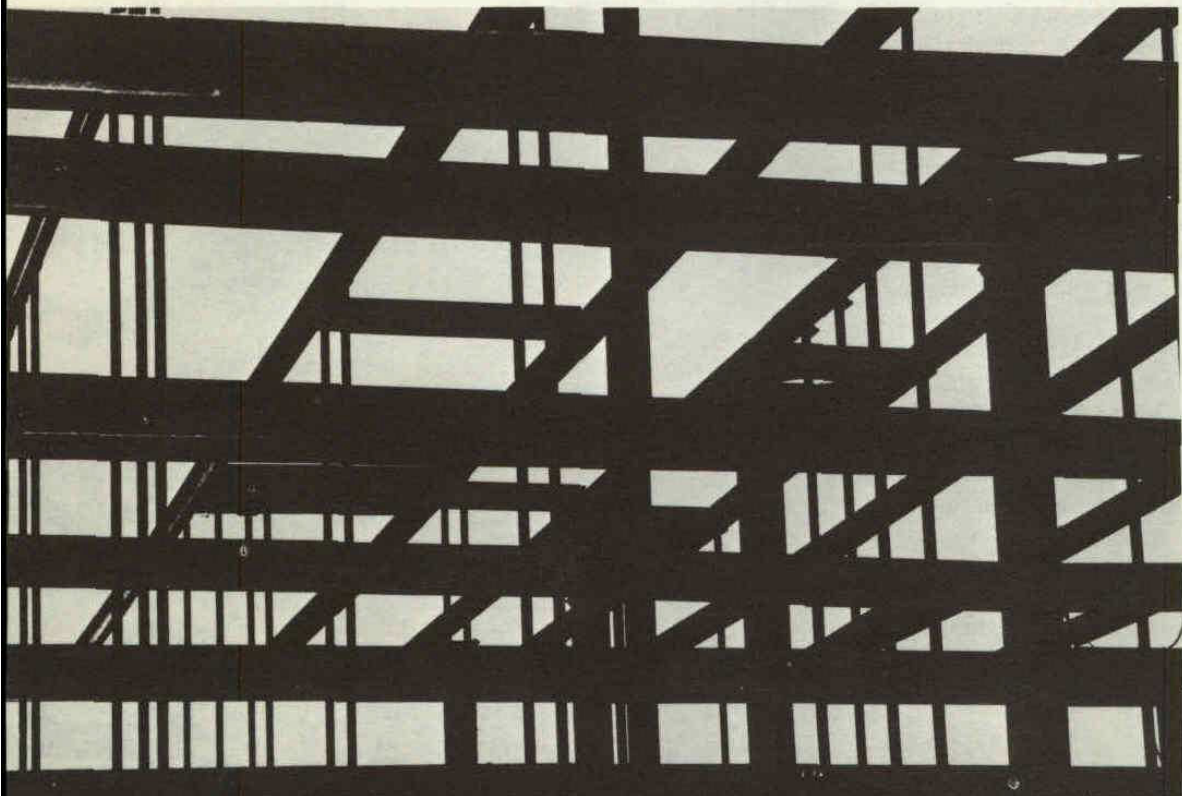
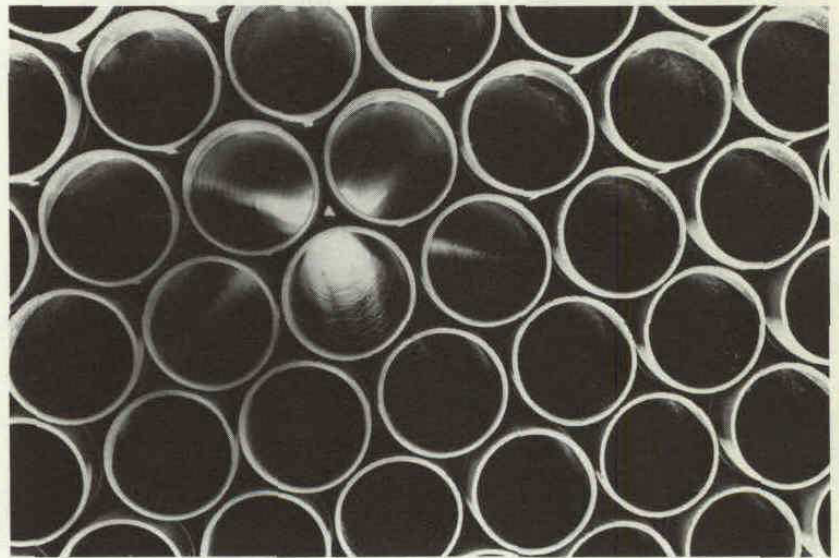
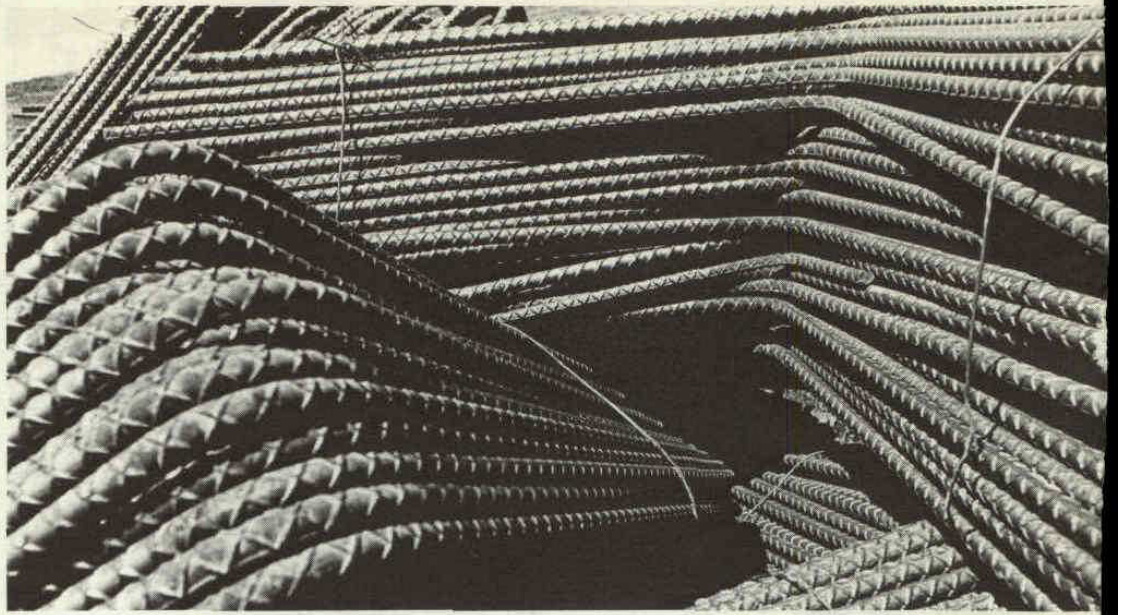
A major objective of the concentration in analysis-synthesis is to offer the modern student a modern style of liberal education. The phrase "liberal education" means "education appropriate for liberated and free men and women"; that is, men and women who have responsibility for their own lives and the life of their society—and, of course, the life of their environment.

The styles of liberal education current in the past are by no means irrelevant today. Yet the human crises of our time have taken some unprecedented forms. It is fitting, therefore, that a modern liberal education should focus on preparing the free and responsible citizen to cope with those new forms. Analysis-synthesis attempts to do this by concentrating on modern man's obligation to be engaged with, and responsible for, his *total* environment: the environment of thought, values, society, technology, and nature.

Liberal education has always been based on the humanistic point of view. But a new style of liberal education requires a new style of humanistic study. Therefore, the concentration in analysis-synthesis seeks in its curriculum to go far beyond the traditional study of the humanities. For example, the analysis-synthesis program is doubly interdisciplinary.

First, it integrates the several traditional humanistic disciplines. In this respect analysis-synthesis courses are organized so that philosophy, history, literature, and the arts are not treated as separate categories, but as parts or extensions of one another.

Second, the analysis-synthesis program seeks to reintegrate the too long separated humanistic and nonhumanistic dimensions of thought and action. It seeks to put back together what have been called "the two cultures," the humanistic and the scientific. In this respect the program examines what the scientist might call "the interface relationships" of the sciences and the humanities; and what the humanist might call the interrelationship of the human, the humane, and the natural.



In order to mount its thrust in these two interdisciplinary directions, the concentration has organized its program around three broad environmental themes or program areas:

Human Values: Their Development Amidst the Collision of the Natural and the Man-Made Environments. These are courses in which the physical sciences, the behavioral sciences, and technology are related to problems involving contemplative thought, ideas of value, and human expression. Emphasis is placed on the integration of the humane and the natural environments.

Ideas of Value: The Quality of the Human Environment as it Influences and Is Influenced by the Creation and Expression of Personal and Social Values. These are courses in which moral and artistic action is seen in the light of social and practical action. Emphasis is placed on the problem of the quality of life.

Structure and Order: The Environments of Ecological Study. These are courses focused on the relationship of the ecological way of thinking and different, often contrary, ways of thinking. Emphasis is placed both on the concept of order as such, and on the conflict of ideas, ideals, and ideologies of order.

The student majoring in analysis-synthesis should begin by choosing the environmental program area on which he wishes to focus his interdisciplinary study. He may do this by selecting one of the program areas listed above, or by defining his own program area in terms appropriate to the analysis-synthesis concentration.

Once he has chosen his program area, the student should consult a faculty member to work out an appropriate plan of course work.

The analysis-synthesis concentration offers a number of courses focused on its three program areas. In addition, there are two categories of concentration-related courses from which the student may choose to fill out his plan of study where necessary. The first category includes all junior-senior level courses taught in the options of history, philosophy, and literature and language.

The second category comprises a wide variety of courses providing analytic or synthetic treatments of issues in the physical, social, and cultural environments. The only limitation on the student's choice is his ability to establish the relevance of the courses to his program area.

For the student who wishes to combine his concentration in analysis-synthesis with an option, three are especially appropriate: history, literature and language, and philosophy.

The Concentration in Communication-Action (CCC)

Professors: M. Kazar, P. Mann, C. Nelson (chairman).

Associate Professors: J. Abraham, R. Bauer, N. Blaisdell, A. Cohrs, J. Frisch, B. Grimes, R. Kersten, W. King, A. Matulis, W. Prevetti.

Assistant Professors: T. Chavez, D. Damkoehler, F. Doverspike, R. Fritz, A. Imber, J. Ivanoff, W. Jaeckel, J. LaMalfa, L. Locksmith, N. Makaroff, R. Pum, R. Williams.

Instructors: K. Anderson, R. Briscoe, P. Kimmell, S. Kovalenko, D. Larmouth, J. McClurg, D. Semmes, B. von Hoffmann, H. Williams.

Lecturers: D. Byrne, L. Ives.

Visiting Artist: O. Kovalenko.

The concentration in communication-action emphasizes the basic processes which allow men to interact. Therefore, the concentration is particularly concerned with the processes which make environmental activity of any kind possible: the processes of message formation, transmission, and reception. In this respect, it is concerned with messages of every kind from uncomplicated informational messages to complex emotional, artistic, theoretical, or ideological messages.

The concentration in communication-action defines the environmental crisis as a crisis in communication: communications in society made ineffective by many kinds of interference or cultural static, and individual expression damaged by various kinds of physical, psychological, and intellectual aphasia. The concentration is interdisciplinary in that it seeks to interrelate the several communications disciplines: the performing and visual arts, linguistics, rhetoric, literature, and the media. It is transdisciplinary in that it is particularly concerned with interrelating its communications definition with other definitions of environmental crisis such as bio-physical or socio-economic definitions.

Programs which inclusively study its vision of environmental crisis, and which will interrelate communications causes with environmental effects are the primary developmental concern of the concentration. Each student is encouraged to develop an individual program and will be assisted in this effort by faculty advisers.

The student may also participate in more formal concentration programs based on such problem areas as artistic action in the total community, politics and the modern communications revolution, the interdependence of the artistic and natural environments, the social and behavioral impact of the arts and media, and the biological and psychological bases of aesthetic needs and desires.

36 Ecosystems Analysis

A student majoring in the communication-action concentration may prepare himself for many careers in teaching, the arts, design fields, government, the media, and business. Besides gaining specific skills and knowledge in the arts and other communication areas, the communication-action student, thanks to his transdisciplinary major, will gain a broad insight into his social responsibilities and the opportunities open to him to improve his own life and the life of his society.

The Concentration in Ecosystems Analysis (CES)

Professors: J. Reed (chairman), K. White.

Associate Professors: F. Fischbach, A. Goldsby, D. Jowett, J. Norman, P. Sager, L. Schwartz, J. Wiersma.

Assistant Professors: D. Girard, H. Harris, H. Huddleston, W. Johnson, A. Loomer, J. Maki, A. Mehra, M. Morgan, E. Robkin, C. Schwintzer, V. Sharma, B. Singh, N. Stahl, R. Starkey, T. Thompson.

Instructors: L. Espenscheid, G. Keepers, R. Simons.

The dynamics of the flows and transactions of energy and materials in the ecosystem and the processes governing the regulation of numbers of organisms must be understood both qualitatively and quantitatively for man to develop a wise strategy for the use and management of natural resources.

With increasing frequency and intensity, man intervenes in the dynamics of ecosystems to increase productivity or to regulate the flows and transactions for his own ends. These alterations include the use of fertilizers and biocides to regulate biological productivity and conscious weather modification to alter the frequency and distribution of precipitation.

These modifications cannot be evaluated intelligently without a full understanding of their impact on the processes of the ecosystem. Inadvertent and unintelligent intervention may produce serious and irreversible changes that outweigh the benefits of ecological manipulation.

The objectives of the concentration in ecosystems analysis are: (1) to prepare individuals to make substantial contributions to the understanding of the dynamics of the ecosystem, (2) to foster awareness and interest in problems related to ecosystems, and (3) to prepare individuals to contribute to problem solving, whether as informed citizens, business managers, politicians, educators, or researchers.

Students concentrating in ecosystems analysis prepare for occupations in any of the following: federal and state natural resource agencies concerned with proper use and development of natural resources; industry with particular refer-

ence to analysis and solution of environmental problems; federal and state park services as interpretive ecologists; regional resource planning agencies; graduate study in biology, chemistry, ecology, earth science, mathematics, physics, regional planning, and land, water, and wildlife management. Taken with a collateral in education, this concentration prepares students for careers in teaching in the above mentioned areas.

The concentration in ecosystems analysis requires the following courses:

Biology 202, Biology of Cells, 4 cr.

Biology 203, Biology of Organisms, 4 cr.

Chemistry-Physics 110; and 111 and 112, or 211 and 212, Chemistry-Physics, 5 cr. each

Earth Science 202, The Earth's Physical Environment, 4 cr.

Environmental Sciences 302, Principles of Ecology, 3 cr.

Students are advised that while either track of chemistry-physics is acceptable for a concentration in ecosystems analysis, those students who select Chemistry-Physics 111 and 112 will reduce their freedom of choice in course selection in the junior and senior years. The options in chemistry and physics require the background provided by Chemistry-Physics 211 and 212. Many graduate programs require a year of calculus and some experience in statistics.

The mathematics requirement for ecosystems analysis can be fulfilled by completing any four courses in mathematics except Mathematics 085, 094, 095, 104, and 180. One of these four must be a course in statistics. Students in the concentration with a collateral in elementary education may include Mathematics 180 as one of the four required courses. Students in ecosystems analysis who satisfy the above requirements will have automatically satisfied the tool subject requirements in mathematics.

It is recommended that the student concentrating in ecosystems analysis include in his program: Environmental Sciences 310, Environmental Measurement; Ecosystems Analysis 412, Bioenergetics; and advanced mathematics courses appropriate to his interests.

Courses are to be selected on the basis of the student's interests and career goals. For example, he might choose to develop a program in systems ecology, population ecology, community ecology, or physiological ecology. A student should work out an appropriate program in consultation with his adviser.

It is recommended that selected courses from other theme colleges or the School of Professional Studies or in such subjects as anthropol-

ogy, economics, regional planning, geography, administration and management, public policy, and political science be used to augment the student's program.

The Concentration in Environmental Control (CES)

Professors: H. Day (chairman), T. McIntosh, D. Moore.

Associate Professors: R. Cook, W. Guither.

Assistant Professors: T. Abeles, A. Bedrosian, L. Corrado, H. Iyengar, R. Lanz, K. Lee, H. Lewis, C. Lindem, V. Nair, J. Pezzetta, S. Randall, C.

Rhyner, W. Riemen, W. Shufeldt, T. Van Koevering, C. Weber, L. Weis, R. Wenger.

Instructors: A. Dickison, R. Grosnick, J. Moran, N. Petrakopoulos, L. Purchatzke, C. Richards, N. Sell.

Lecturers: E. Layton, R. Leuba, R. Sogard.

Among the most pressing problems that face man are those stemming from his use of and impact on natural resources. The problems include environmental pollution from human and industrial wastes; the conservation of resources such as fossil fuels, minerals, and wildlife; and the conflict of interests arising from multiple use of resources.



38 Growth and Development

Environmental pollution and the demands on natural resources threaten the biosphere. Because man depends upon the productivity of the biosphere for his subsistence and upon these resources to sustain his civilization, he must develop an appropriate strategy for the wise use and management of the biological and physical resources. The objective of the concentration in environmental control is to prepare individuals for responsible decision making in regard to management of natural resources—air, water, land, wildlife—and the control of waste disposal and environmental pollution.

The student concentrating in environmental control should complete the College of Environmental Sciences core requirements by the end of the sophomore year.

Also recommended are:

Environmental Sciences 310, Environmental Measurement, 3 cr.

Environmental Control 460, Resource Management Strategy, 3 cr.

Problem areas related to this concentration which may help the student to identify a program include:

1. Identification of the nature and distribution of air, water, and soil quantity and quality.
2. The engineering-oriented analysis of the production and control of our biophysical natural resources.
3. The systems analysis of resource allocation to the rural-urban continuum.

Credits may be elected from groups of courses according to the area in which the student has chosen to concentrate, such as air, water, land, or natural resources. A student should in consultation with his adviser work out the program that best fits his career goals.

Selected courses from other theme colleges or the School of Professional Studies or in such subjects as economics, regional planning, geography, administration and management, public policy, and political science may be used to augment any of the above four areas.

The Concentration in Growth and Development (CHB)

Professor: R. Hartley (chairman).

Assistant Professor: J. Falk.

Instructors: S. Cannizzo, L. Joscelyn.

Lecturers: N. Moore, C. Richter.

Among the major problems currently facing us is that of optimizing the development of individuals. To do so, we must understand the effect of the

transactions between man and his environment, physical and social. The knowledge explosion of recent years makes us aware of effects we did not even suspect a relatively short time ago.

For example, we have become increasingly aware of the problems related to behavioral growth and development. Problems of intellectual development are now demanding attention as well as problems of emotional-social development.

To deal with the problems of mental retardation, learning difficulties associated with various deprivations, socially ineffective and undesirable behavior, and the chronically disabling effects of neuroses and psychoses requires intensive and specific types of training. In addition, we are more and more cognizant of the importance of knowledge about the wellsprings of human functioning for any occupation dealing with people, e.g., teaching, nursing, work with preschool children, social service, recreation, guidance, etc. The purpose of the concentration in growth and development is to begin preparing students to deal effectively with other persons, whatever their level of development.

The concentration in growth and development, along with selected preprofessional courses, can prepare students for the following vocations or activities: early childhood education (nursery school or kindergarten), primary or elementary school teaching, child development specialist, parent education, group work with children and adolescents, counseling with older people, community counseling, and home visitation.

The concentration offers excellent preprofessional preparation for graduate study leading to social work, physical or occupational therapy and rehabilitation, clinical or counseling psychology, student personnel work, marriage counseling, therapeutic work with children, research or college teaching in the area of human development, and public health education.

The concentration is also an appropriate gateway to the teaching of psychology-sociology or family life education at the secondary school level, adult education, extension work, 4-H work, and work with organizations such as the YWCA and YMCA.

Recommended Preparatory Courses

In addition to the junior and senior level courses which make up the concentration, the following lower level courses are recommended:

Nutritional Sciences 232, Nutritional Significance of Food, 3 cr.

Psychology 102, The Behavior and Experiences of Man, 3 cr.

One biology course, chosen in consultation with an adviser.

One course in statistics

The student planning to go on to graduate school should consider the advisability of studying a foreign language.

Candidates for certification in early childhood education would do well to attain simple performance skills in music.

Required and Recommended Upper-Level Concentration Courses

It is the policy of this concentration to design a program for each student which will be most relevant to his interests and vocational objectives. The following courses are required of all students in this concentration:

- Growth and Development 331, Infancy and Early Childhood, 3 cr.
- Growth and Development 332, Middle Childhood and Adolescence, 3 cr.
- Growth and Development 433, Adulthood and Later Maturity, 3 cr.
- Growth and Development 438, Lifetime Needs and Environmental Planning, 3 cr.

(Qualified students would be well advised to complete Growth and Development 331 during the sophomore year.)

The remainder of the required 30 credits of upper level (300 and 400) courses are selected, with the guidance of a qualified faculty adviser within the concentration, to offer that pattern of competencies which best suits the educational objectives of the student.

For example, students planning to enter early childhood education as a vocation would include in their program the following courses, in addition to those required:

- Growth and Development 333, Observation and Interpretation of Child Behavior, 3 cr.
- Growth and Development 334, Play and Creative Activities in Childhood, 3 cr.
- Growth and Development 431, Cognitive Development and Facilitation in Childhood and Adolescence, 3 cr.
- Growth and Development 432, Cultural Impacts on Human Development, 3 cr.
- Growth and Development 435, Developmental Problems and Deviations, 3 cr.
- Growth and Development 441, 442, Guidance and Methods for Preschool and Kindergarten Groups I, II, 3, 3 cr.
- Growth and Development 444, Practicum in Working with Preschool and Kindergarten Groups, 5 cr.

Additional credits could be derived from the

junior liberal education seminar and (if acceptable to the student's adviser and the chairman of the concentration) from among other upper level courses which would fit the student's interests and strengthen relevant competencies.

Students desiring to enter elementary school teaching would take many of the courses listed above, excepting those specifically designed for preschool and kindergarten training.

Those wishing to prepare for community work such as social service or parent education or group work of some kind would include in their programs Growth and Development 336, Sex Role Development in Contemporary Society, and Growth and Development 437, Developmental Guidance with Adults and the Aged.

Students planning to enter graduate school for further work in psychology or in growth and development would take Growth and Development 331, 332, 429, 431, 432, 433, 435, and 438, in combination with courses in experimental and other aspects of psychology and possibly other social sciences.

Special programs combining courses from the growth and development concentration and courses from other concentrations within the College of Human Biology, or courses from options with allied interests (such as those in the social sciences), can also be arranged for students needing such combinations to enter postgraduate professional programs, or to qualify for specific vocational placement.

The Concentration in Human Adaptability (CHB)

Professor: W. Kaufman (chairman).

Assistant Professors: C. Sontag, R. Stevens, R. McRitchie.

Lecturer: E. Langlois.

The concentration in human adaptability is concerned with the adaptability and variability of the individual human being, or group of human beings, which arise in response to a stress or pressure. When this response has become stable man is said to have adapted to the specific stress.

Knowledge of man's individual and group capabilities to adapt to stress can be systematized and it is this systematization that is the basis for the areas of study pursued in the concentration in human adaptability.

The areas of study are of three major categories. The first is concerned with the responses of the living system itself which arise mainly from pressures of the physical and biological environment, *physiology*. The second is concerned with the responses of the living system manifested in the responses of the personality to emotional



pressures, *psychology*. The third area is that of man's culture and these responses are studied in *anthropology*.

The student of human adaptability will pursue studies in physiology, psychology, anthropology, and other fields which may contribute to his progress and interests. He 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, in the sales of scientific instruments or books, or he may prepare for graduate study in medicine, dentistry, the biological sciences, or the health-related sciences and paramedical fields.

The student choosing the concentration in human adaptability is encouraged to join formally the College of Human Biology as soon as he makes a firm decision so that he may take advantage of the personal assistance of an adviser. His selection of courses will vary widely depending on his individual talents and interests. The student selecting human adaptability as a concentration is encouraged to prepare himself for biological study with courses in mathematics, physics, and chemistry.

Three intermingled but distinct plans are offered in the concentration in human adaptability: physiological, socio-psychological, and evolutionary-genetic. Students should consult with the concentration advisers for specific information.

The Professional Concentration in Managerial Systems (SPS)

Professors: G. Petrie, R. Posey (acting chairman).
Assistant Professors: J. Powers, J. Schmitt, D. Ward, K. Zehms.
Senior Lecturer: A. Zander.
Lecturer: F. Waedt.
Visiting Associate Professor: H. Jadwani.

The student who selects the professional concentration in managerial systems normally will enter the School of Professional Studies as a first-semester sophomore and will earn the degree of Bachelor of Arts or Science, Administration.

The student selecting this concentration is required to take the following two courses, normally during the sophomore year.

- Organization and Operations 202, Business and Its Environment, 3 cr.
- Organization and Operations 203, Government and Business, 3 cr.

Next the student chooses six credits in courses in any four of the following five fields:

- Distribution
- Finance

- Labor Relations
- Organization and Operations
- Quantitative Methods

An additional six credits must be taken in any one of the four fields of the student's principal interest. Also required is Quantitative Methods 315, Business Law, 3 cr.

In meeting the all-University distribution and tool subject requirements, the student is urged to take Economics 202 and 203, Macro and Micro Economic Analysis, respectively, for the CCS distribution requirement, and a year of data processing or a semester of data processing plus a semester of statistics, for the mathematics tool subject requirement.

The student pursuing the professional concentration in managerial systems must also fulfill a cognate which consists of 24 credits in one of the theme college concentrations or in public accounting, a cognate designed to help prepare the student for the Certified Public Accountant examination and which conforms as nearly as possible to the statutes and regulations of the State Board of Accountancy.

The choice of a theme college cognate should be made after consultation with an adviser in the concentration from which the cognate is to be drawn. The six credits of the junior liberal education seminar may be counted toward the cognate requirements.

The student selecting the public accounting cognate includes Economics 230, Money and Banking, and Quantitative Methods 315 and 316, Business Law. To prepare for the C.P.A. examination, which is comprehensive in nature, the student is urged to take all of the courses in quantitative methods except 230.

The Concentration in Modernization Processes (CCS)

Professor: J. Clifton.
Assistant Professors: M. Greenberg, E. Haney, K. Kangayappan, J. Kolka, L. Nesberg, C. Pollis (acting chairman), R. Ryali.
Instructors: J. Edelstein, A. Galt, J. Green, H. Kolshus, Leticia Smith, Larry Smith, P. Wallach.
Lecturer: J. Macrae.

Modernization is viewed as a series of ongoing processes of social change operating on various facets of human existence and producing predictable and unpredictable consequences.

These processes are affected by the interaction of multiple factors such as culture, technology, ecology, social organization, and population and can be observed through various inductive and

42 Modernization Processes

deductive means. They operate on a worldwide basis proceeding with different speeds and following different paths.

Modernization processes are found to resolve as well as to create crises such as social inequality, alienation, and protest movements. These environmental and cultural problems occur on local, state, national, and international levels. The emphasis is directed to the theoretical and practical aspects of modernization in a complementary manner. The concentration is oriented towards consequences and problems of modernization as well as their prospective solutions and seeks to give instructional emphasis in the following "problem areas":

1. *Technology and Environmental Encounter.*

The focus for this problem area is based on the assumptions that: (a) the current environmental crisis of a society springs, at least in part, from its structure and values; (b) the society evolves definitions and rules for regulating social relations and cultural perspectives with respect to the environment; and (c) a fundamental attempt at studying and solving environmental problems includes an evaluation of current normative and value frameworks and how they can be changed to implement a more positive relationship between technology and environment. An example of the kind of encounter examined would be conflicts between environmental quality and the prevailing political-economic system in a culture.

2. *Social Conflict and Protest Movements.*

The focus of this problem area is on social and political conflicts attending modernization processes in developing countries, with a comparative analysis of the past and present of industrialized nations. The nature of these conflicts ranges from protests, revival, and reform movements to revolutions, with analysis of them couched in terms of their functions and meanings. An example of a specific problem that can be examined is the analysis of violence in its individual, group, and nation-state dimensions.

3. *International Development and Planning.*

This problem focus comprises the traditional "core" of what is called developmental studies. National planning and community development (economic, technological, political, and socio-cultural) at a comparative level are the central emphases. A variety of courses allows the student to have the opportunity to study such topics as public health, administrative behavior, and education in one or more developmental settings.

4. *Social Inequality.*

Selected aspects of social inequality such as

economic, social, and ethnic stratification are explored as they promote or impede processes of modernization in different countries. Courses within the problem area focus on such topics as poverty and the effects of social and economic deprivation in relation to development and change (e.g., Black Man in White America).

5. *Alternative Futures of Man.*

This problem area examines alternative paths, problems, and prospects for man and his continued survival. Among topics which are given attention are the quality of life in the future, both within the context of given countries and on the world level.

The student entering the concentration in modernization processes will increase his ultimate capacity to function within various kinds of business and governmental agencies. He will find the concentration a useful preparation for professional schools such as law, public administration, business administration, or social work. He will also find it excellent preparation for work with various private and public agencies engaged in community development both here and abroad. The student can begin his preparation while still an undergraduate by adding a disciplinary option and/or professional collateral to the concentration.

Every student who selects the concentration in modernization processes is required to take the following core courses:

Modernization Processes 360, Concepts and Processes of Modernization, 3 cr.

Modernization Processes 370, Strategies of Modernization, 3 cr.

Modernization Processes 460, Ethos, Ecos, and Ethics of Modernization, 3 cr.

Modernization Processes 470, Senior Seminar in Modernization Processes, 3 cr.

The concentration also has developed a number of "problem area" courses which augment the program, but do not supersede or replace the concentration "core" courses. Concentration students are advised to take as many of these problem area courses as they can fit into their programs. Faculty advisers are available to help the student select a concentration "problem area" and to design a program that best meets his needs.

All students should be able to accomplish individualization of their programs with the help of their concentration advisers. They will be advised of appropriate concentration-oriented option offerings to meet the upper-division credit requirements, as well as to help them toward their specific goals.

The Concentration in Nutritional Sciences (CHB)

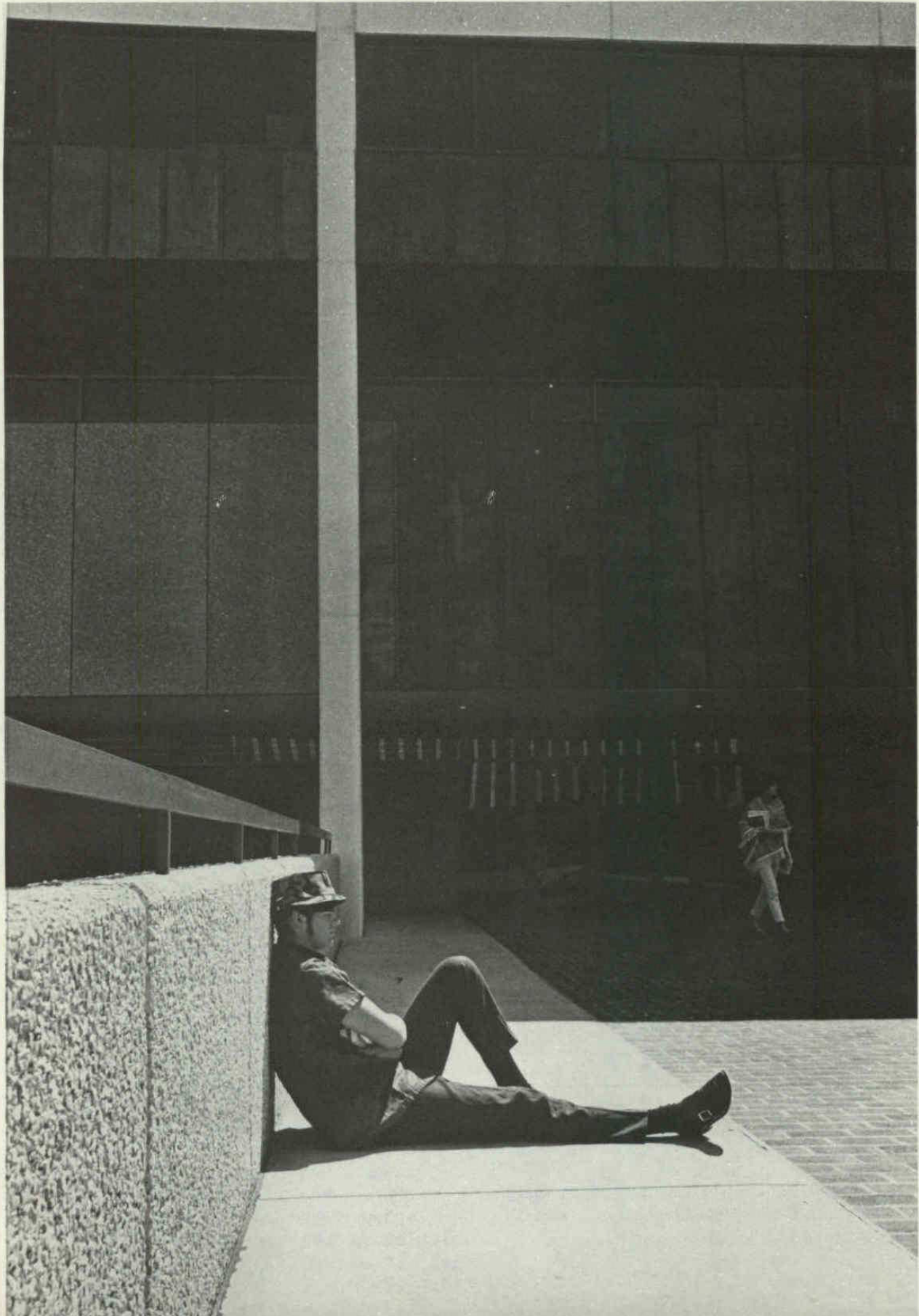
Professor: A. Doberenz.

Associate Professor: D. Deese (acting chairman).

Assistant Professors: E. McIntosh, V. Zehren.

Instructor: D. Randall.

In order that man may 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. Educational programs are needed in all communities to ensure



44 Population Dynamics

that the right kinds of available foods are consumed in the right amounts to secure adequate nutrition for each individual.

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

Community Nutrition

The very existence of widespread malnutrition in the United States, coupled with numerous pleas from federal agencies, international organizations, and foundations, attests to the need for well-trained nutrition workers of a new kind, dedicated to community action. This program is intended to provide 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 when combined with a collateral in education.

Industrial Nutrition

Methods for maximum utilization of the world's food resources must be explored, including improved methods of distribution, preservation, and achievement of greater palatability and nutritional value, particularly of low-cost foods. This emphasis prepares students to work as technicians or scientists in areas of food or nutrition research in university, government, and industrial laboratories. When combined with appropriate courses in communications and social sciences, a program may be developed to prepare students for industrial careers in consumer relations, food evaluation, and product promotion. This emphasis can serve to fulfill requirements for entrance to graduate school and to provide a valuable background for professional schools such as medicine, dentistry, and pharmacy.

It is recommended that the student who selects the nutritional sciences concentration take computer science and a performing art as tool subjects, although intended candidates for graduate school may be advised to undertake calculus and a foreign language.

For distribution requirements, students in this concentration should select relevant courses in sociology, economics, psychology, political science, or anthropology in the social sciences and history and communication-action (Voice and Speech) in the humanities.

Students in both emphases should include:

- Biology 202, Biology of Cells, 4 cr.
- Biology 203, Biology of Organisms, 4 cr.
- Biology 303, Genetics, 3 cr.
- Biology: Microbiology 302, Principles of Microbiology, 4 cr.
- Chemistry 228, Bio-Organic Chemistry, 3 cr., **and**
- Chemistry 229, Bio-Organic Chemistry Laboratory, 1 cr., **or**

Chemistry 303, Organic Chemistry II, 3 cr., **and**
Chemistry 305, Organic Chemistry Laboratory, 1 cr.

Nutritional Sciences 232, Nutritional Significance of Food, 3 cr.

Nutritional Sciences 302, Nutrition and Culture, 3 cr.

Nutritional Sciences 328, Principles of Nutritional Biochemistry, 3 cr.

Nutritional Sciences 329, Nutritional Biochemistry Laboratory, 2 cr.

Students in community nutrition are strongly advised to include:

Nutritional Sciences 421, Community Nutrition I, 2 cr.

Nutritional Sciences 422, Community Nutrition II, 2 cr.

Students emphasizing industrial nutrition are advised to take:

Biology: Botany 240, Plants and Civilization, 2 cr.
Chemistry-Physics 112, Chemistry-Physics (212 for graduate school candidates), 5 cr.

Nutritional Sciences 303, Food Science, 4 cr.

Nutritional Sciences 414, Nutrient Analysis, 4 cr.

Nutritional Sciences 485-486, Advanced Human Nutrition, 3, 3 cr.

Each student is encouraged to develop a relevant program in consultation with an assigned faculty member of the concentration and, where appropriate, with the additional assistance of an auxiliary faculty member. These faculty advisers will help the student to select a program that includes appropriate concentration-related courses that meet his individual needs.

The Concentration in Population Dynamics (CHB)

Professors: H. Guilford, B. Taylor (chairman).
Assistant Professors: C. Ihrke, T. Mowbray, M. Minock.

Instructor: J. Watson.

Lecturers: A. Engelke, D. Sager, J. Snyder.

Perhaps the greatest problem facing mankind today is the rapidly increasing population, popularly referred to as the "population explosion." Although the problems of population in Asian countries and elsewhere in the world are obvious, there is less awareness of these problems in areas of the United States.

Continued population growth contributes to, or causes, many problems, including pollution, crowding, mental and physical stress, malnutrition, and general deterioration of the environment. There is a need to understand the bases of the population growth and their interrelationships and to develop generally effective solutions. Teamwork by individuals trained in biology and in

the student in consultation with the faculty adviser.

The Concentration in Urban Analysis (CCS)

Associate Professor: N. Pollis.

Assistant Professors: F. Armstrong (acting chairman), E. Knowles, R. Jiobu.

Instructors: J. Aaronson, T. Bender, J. Gould, P. Johnsen, R. Klimek, L. Lackey, C. Matter, W. Wagner, J. Yarbrough.

Lecturer: T. Nichols.

Population and technology have combined to make human communities increasingly urban and have changed both the style of life and the nature of problems facing man the world over. The advantages of proximity and variety that make cities attractive and viable are accompanied by problems such as those of distribution, maintenance, and order. Urban analysis is the study of the characteristics of urban areas and the processes—physical and social—by which cities emerge, persist, and change over time.

This concentration studies the nature, organization, quality, and growth of communities. Cities are linked systems of people, resources, and styles of life; they are units that carry on many functions simultaneously, but these functions are intertwined to make each city an organized, interrelated whole.

Urban analysis is not only an area of study; it is also an association of faculty and student scholars who seek to understand man's communities so as to be able to maximize the advantages of urban life while minimizing its disadvantages.

The program of the concentration is organized around three areas of analysis, each essential to an understanding of urban communities:

1. The distribution and development of space and resources.
2. The organization of relationships among people.
3. The nature and quality of urban life.

Each of these three areas represents a focus for study, but it is through their integration that a balanced understanding of urban life is gained.

Students who enter this concentration should share a concern for the quality of life and the relationships among men. This concern will be applied to understanding the varieties of life and the patterns of relationship that exist in the communities of man. With this understanding, tools of analysis, and a feeling for the urban environ-

ment, a student is able to participate more effectively as a member and change agent within his community.

The urban analysis concentration attempts to serve the student by helping him tailor his program to suit his individual educational and intellectual goals. At the same time, however, every student must come to grips with certain essential material. The concentration curriculum has thus been structured around four "core" courses, which each student in the concentration is expected to take:

Urban Analysis 340, Introduction to Urban Analysis, 3 cr.

Urban Analysis 350, The City as Habitat, 3 cr.

Urban Analysis 440, Social Dynamics of Urban Life, 3 cr.

Urban Analysis 450, Senior Seminar, 3 cr.

Students should normally attempt to take these courses in sequence, commencing no later than the beginning of their junior year. Substitutions for one of the core courses may be made if, in the opinion of the student and his concentration adviser, the substitution strengthens the student's academic program.

The rest of the student's academic program is determined through consultation with the student's concentration adviser.

The student who wishes to join the urban analysis concentration should see a concentration adviser as early as possible. The concentration adviser will be able to aid the student in choosing among distribution courses and tool subjects as well as concentration courses. During their first two years, students may well find it beneficial to consider taking courses such as the following, which serve either as prerequisites or as useful preparation for advanced work in concentration-related courses:

Community Sciences 205, Social Science Statistics, 3 cr.

Economics 202, Macro Economic Analysis, 3 cr.

Economics 203, Micro Economic Analysis, 3 cr.

Political Science 213, Urban Politics, 3 cr.

Psychology 202, Introduction to Social Psychology, 3 cr.

Urban Analysis 298, Directed Readings in Urban Analysis, 1-4 cr.

Students have wide latitude to pursue diverse interests in relation to the overall theme of the concentration. For that reason, the criterion for selection of courses which will count toward concentration credit is the applicability of a course to the achievement of the student's overall educational objectives within the concentration.

the social and behavioral sciences is essential. The purpose of this concentration is to prepare individuals who can work toward the understanding and solution of these problems.

Students in this concentration may prepare for any of the following occupations: international, federal, state, and community agencies and foundations concerned with population growth, its regulation, and its problems; industry (with particular reference to predicting consumer needs and demands and the labor market); graduate study in the areas of demography, public health, population biology, reproductive physiology, population regulation, and related problems.

Taken with a collateral in education, this concentration prepares the student for a career in teaching. Similarly, with appropriate selection of courses, this concentration can fulfill the requirements for entrance to professional schools such as medicine and dentistry.

Normally, individualization of programs toward specific career goals takes place in the junior and senior years by careful selection of courses that meet concentration requirements. Faculty advisers are available to help the student plan his concentration program from the variety of courses available.

The Concentration in Regional Analysis (CCS)

Professors: F. Byrne (chairman), J. Murray, G. Petrie.

Associate Professors: D. Gandre, W. Smith.
Assistant Professors: K. Ebisch, L. Gorder, W. Kuepper, C. Mason, I. Shariff.
Instructors: J. Berry, E. James, M. Troyer.
Senior Lecturer: A. Zander.
Lecturers: B. Kale, J. Rorabacher.

Regional analysis focuses the study of the community sciences on the spatial relationships between man and his environment, including his fellow man. The effective application of individual capacities and use of material resources depends upon man's understanding of their regional distribution and interactions. The analysis of a problem is based upon the economic, geographic, political, and social characteristics of the region studied.

The student enrolled in regional analysis develops his ability to work in business organizations or in planning and other governmental agencies. The program offered in this concentration prepares him for more advanced professional studies in business administration, public administration, social work, and law, as well as in regional planning. The student can supplement his concentration by adding a disciplinary option and/or professional collateral to the concentration.

A student in this concentration must take Regional Analysis 320, Introduction to Regional Analysis, preferably during his junior year. Additional courses to meet the concentration or concentration-option requirement are selected by





THE OPTIONS

The student who wishes to relate the environmental problem he is studying in his concentration to work in some depth in a specific discipline, profession, or field of knowledge, may do so by pursuing a combination major—the concentration-option.

This major normally requires 36 credits at the junior-senior level. At least 12 of these credits must be in the concentration and may include the junior sections of the liberal education seminar, if the student chooses the sections sponsored by his concentration. Other versions of LES are counted toward concentration credit only with special approval of the student's concentration chairman.

The remainder of the credits—normally 24—are made up of junior-senior level option or option-related courses. The courses should relate the option to the concentration.

It is recommended that the student consult with faculty advisers in the option and concentration in planning his program. They will be able to make suggestions for courses that meet his particular needs. Because all UWGB programs are designed to be interdisciplinary, the student will find that certain courses outside his selected option often can be used to fulfill the option requirements.

Lists of appropriate option and option-related courses are available from the option advisers. The student is encouraged to study these lists before he formulates his program. Before he begins his concentration-option work, the student needs to obtain approval of his program from the option chairman and the concentration adviser.

Most students enter their chosen theme college or school by the time they are sophomores and select their concentration-options by the end of the sophomore year. The student selecting the combination concentration-option major must meet the general all-University requirements (liberal education seminar, distribution credits,

and tool subjects) and the requirements of his theme college, if there are any.

The student may select any option he believes will relate to the environmental problem he plans to study in his concentration. The option programs available are described on the following pages. Some have specific course requirements; all make recommendations for areas of study that may be appropriate and suggestions that the student can follow up when he works out his individual program with his faculty advisers.

Option in Anthropology

Professor: J. Clifton. *Assistant Professors:* C. Mason, R. Ryali. *Instructors:* A. Galt, J. Green, R. Klimek.

Anthropology is the study of cultural and biological variation among men as members of societies, viewed in both historical and contemporary perspective. Courses in anthropology relate to many problems in the concentrations.

Students in regional analysis, modernization processes, and urban analysis will find that anthropology offers a comparative approach to the many ways men organize their social, political, and economic lives. For those students in growth and development, population dynamics, and human adaptability, anthropology entails analysis of numerous biologically related topics, including human evolution and development, the study of primates, and population genetics (race). Students whose major interests lie in the humanities will find that anthropology takes a broad, comparative approach to human life styles, belief systems, and modes of aesthetic expression.

As an area of study, anthropology emphasizes man's place in the physical universe and the way human cultures make possible communication of the expressive, aesthetic, and pragmatic experiences that define the human condition.

The student who works in the anthropology option will find that skills and capacities gained through the program can be applied to a variety of vocational and professional interests, including

the options

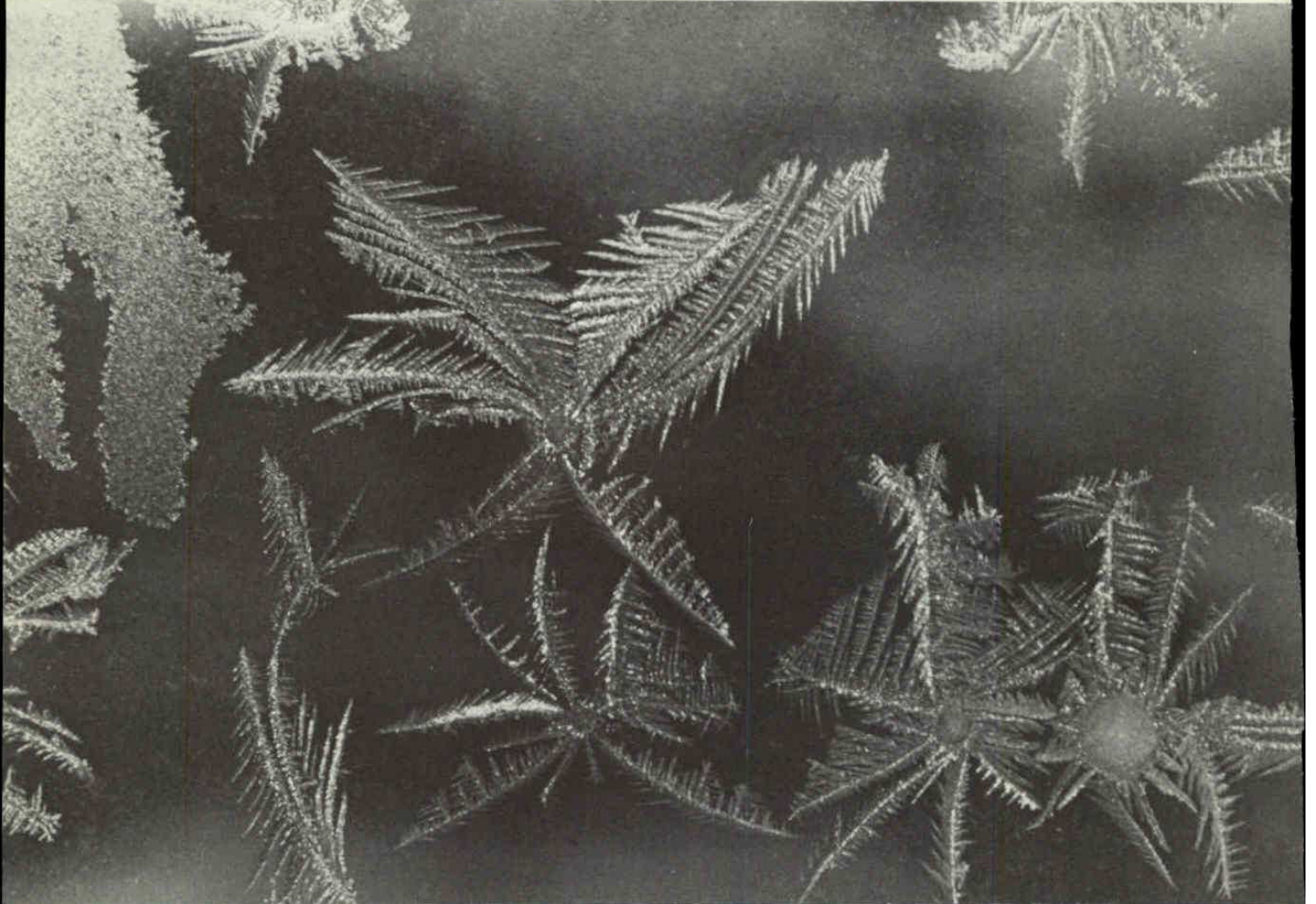
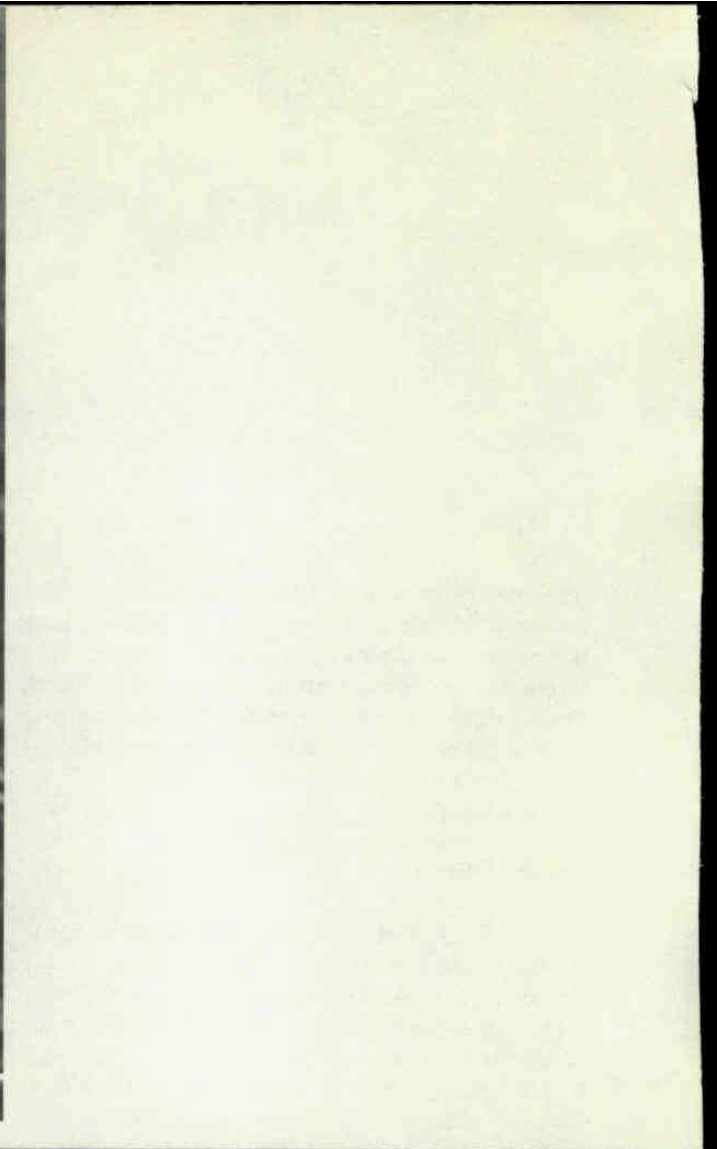
government work at all levels, social service and related professions, and education. Anthropology is also an acceptable background for students interested in graduate study in a variety of fields. The student interested in combining an anthropology option with his concentration should consult with a faculty adviser to work out an appropriate program.

Option in Biology

Professors: A. Doberenz, H. Guilford (chairman), W. Kaufman, J. Reed, B. Taylor, K. White.
Associate Professors: R. Cook, A. Goldsby, P. Sager. *Assistant Professors:* H. Harris, C. Ihrke, W. Johnson, J. Maki, E. McIntosh, R. McRitchie, M. Minock, M. Morgan, T. Mowbray, V. Nair, C. Sontag, R. Stevens, T. Thompson, V. Zehren.
Instructors: J. Watson, A. Engelke. *Lecturers:* G. Hanson, E. Langlois, D. Sager.

The option in biology concerns itself with the student whose interests focus on the biosphere. The study of microorganisms, of plant and animal structure, function and behavior, and resources is essential to the biological understanding of man and his environment. A variety of appropriate biology courses can be combined with concentrations in a concentration-option. The concentration-option can focus on the human aspects or the environmental aspects of biology. In this sense option courses play a significant role in the educational programs of the College of Human Biology and the College of Environmental Sciences.

The student selecting an option in biology together with his concentration must take Biology 202, Biology of Cells, and Biology 203, Biology of Organisms. The biology option appropriately can be combined with any one of several concentrations. For example, a student may combine a biology option with the population dynamics concentration if he is interested in the biological aspects of populations and in their regulation. Those interested in biological adaptation to environmental stresses or in the biological aspects of growth and development, in food, or in ecology, can combine their biology options with the concentrations in human adaptability, growth



and development, nutritional sciences, or ecosystems analysis, respectively.

The student who wishes to enter a field associated with regional planning or urban development will find certain biology courses support aspects of these programs, as combined with concentrations in regional and urban analysis. A student, with the assistance of his faculty adviser, might combine applicable biology courses to concentrations other than those above to formulate a program. Education majors may combine appropriate concentration-option courses and education courses in a program which leads to certification as a biology teacher at the secondary school level.

In addition to the courses listed under biology, certain courses in ecosystems analysis, environmental control, human adaptability, and population dynamics may be used to fulfill biology option requirements. The faculty adviser will help the student with suggestions for appropriate option courses.

Option in Chemistry

Associate Professors: D. Deese, W. Guither, J. Norman, J. Wiersma. *Assistant Professors:* T. Abeles, H. Lewis, S. Randall (chairman), R. Starkey, T. Van Koevering. *Instructors:* L. Purchatzke, D. Randall, C. Richards, N. Sell.

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 for restoring and maintaining the quality of the environment.

The student electing to combine an option in chemistry with his concentration must take the following courses:

Chemistry 302, 303, 304, 305, Organic Chemistry I, II (with laboratory), 9 cr.
 Chemistry 313, Analytical Chemistry, 4 cr.
 Chemistry 321, Physical Chemistry, 3 cr.
 Chemistry-Physics 110, 211, 212, Chemistry-Physics, 15 cr.
 Chemistry-Physics 320, Thermodynamics and Kinetic Theory, 3 cr.

With the assistance of his faculty adviser, the student selects the remainder of his option credits so that they relate to his concentration from among courses in such areas as chemistry, chemistry-physics, ecosystems analysis, and environmental control.

The student desiring to relate an option in chemistry to concentrations in the College of

Human Biology, appropriately might select option courses from related areas such as microbiology and nutritional sciences.

Option in Communication Sciences

The communication sciences option is closely interwoven with the concentrations in the College of Creative Communication: communication-action, especially, in its expression and influence aspect, and analysis-synthesis. In fact, communication sciences courses are grouped in these two categories. Students may elect 24 credits at the junior and senior level from such courses and supporting courses within or outside the College of Creative Communication to fulfill the requirements of the option in communication sciences.

Option in Earth Science

Professors: F. Byrne, T. McIntosh. *Assistant Professors:* A. Bedrosian, H. Huddleston (chairman), J. Pezzetta, L. Weis. *Instructor:* J. Moran.

The option in earth science offers the student a basic program that will develop for him a detailed understanding of the abiotic components of his environment. The option is particularly well suited to concentration-option combinations with the ecosystems analysis and environmental control concentrations. These combinations offer the student a unique opportunity to integrate his knowledge of the earth's physical environment with his knowledge of the biosphere to gain a more complete understanding of ecosystems and their complexities and interactions and of the environments in which man, or other organisms, live and function.

The option is also appropriate for students majoring in regional analysis and urban analysis, as it provides information important for the understanding and inventorying of many natural resources. Such knowledge is especially pertinent to programs that deal with multiple land use planning or planning for wise use of a variety of natural resources.

When combined with foundation courses in chemistry, physics, and mathematics, the option provides a core of courses essential for the student who wishes to pursue a graduate education in one or more of the earth sciences. Undergraduate study in meteorology, marine science, soil science, and geology is available.

Career goals for which the earth science option provides appropriate training and that do not require a graduate degree include jobs in agriculture and related industries, city and county planning, marine technology industries, the Soil Conservation Service, the Forest Service, State and Federal Geological Surveys, State or

National Park Services, petroleum industries, and mining industries. Combination of an earth science option with a collateral in secondary education can lead to certification to teach earth science in secondary schools.

All areas of the option program are built upon the introductory course, Earth Science 202, The Earth's Physical Environment, 4 cr. The student who is interested in a general option curriculum should take at least one course in each area of the earth sciences: general, soils, water, minerals and rocks, and structure and evolution. The student who wishes to concentrate on a single area should select an adviser within that area who will help him develop a program that includes appropriate earth science courses and supporting courses from chemistry, physics, mathematics, and geography. And, the student who is just plain curious about the physical environment in which he lives and works can satisfy that curiosity at almost any level he chooses within the constraints of undergraduate education.

Option in Economics

Professor: J. Murray (chairman). *Assistant Professors:* E. Haney, K. Kangayappan, I. Shariff. *Instructors:* J. Berry, V. Kopitzke, H. Kolshus, L. Smith, M. Troyer.

Economics involves the systematic study of the use of resources and the processes involved in production, distribution, and consumption of goods and services in the American and other economic systems. Undergraduate work in economics involves analysis of how the economy has developed, how it is organized, and how it functions. It involves analysis of the components of the economy such as households, businesses, and governments, as well as the pricing, development, and use of resources, and regional and community development.

Undergraduate education in economics, when related to an appropriate concentration, is oriented toward the analysis of contemporary problems and the determination of alternative economic approaches toward resolving those problems. It prepares students for active roles in business and industry, in governmental agencies, in various educational units, and in a host of community organizations. It is also a very appropriate undergraduate preparation for entry into law schools.

All students pursuing an option in economics are advised to take Economics 202, Macro Economic Analysis, and Economics 203, Micro Economic Analysis, sometime during their first two years before attempting upper division courses in economics. Either or both of these two courses also are recommended for students who wish to

complete their distribution requirement by taking economics courses.

The student who is pursuing one of the concentrations in CCS or the professional concentration in managerial systems will be interested in a wide range of courses in economics. Any student interested in this option should work closely with his faculty adviser in selecting economics courses that most closely relate the option to his chosen concentration.

Option in Geography

Associate Professor: D. Gandre. *Assistant Professors:* K. Ebisch, L. Gorder (chairman), W. Kuepper. *Instructor:* W. Wagner. *Lecturer:* J. Rorabacher.

Geography is concerned with the systematic study of the location, variations, and interrelations of the natural and cultural features of the earth. Such study can be applied to the identification and solution of contemporary problems, inasmuch as the problems of man's life in communities are strongly influenced by the particular features of geographic location. Students choosing to relate a geography option to their concentration are able to study spatial variations in terms of particular topics, or to consider a number of physical and human phenomena within a particular region or regions.

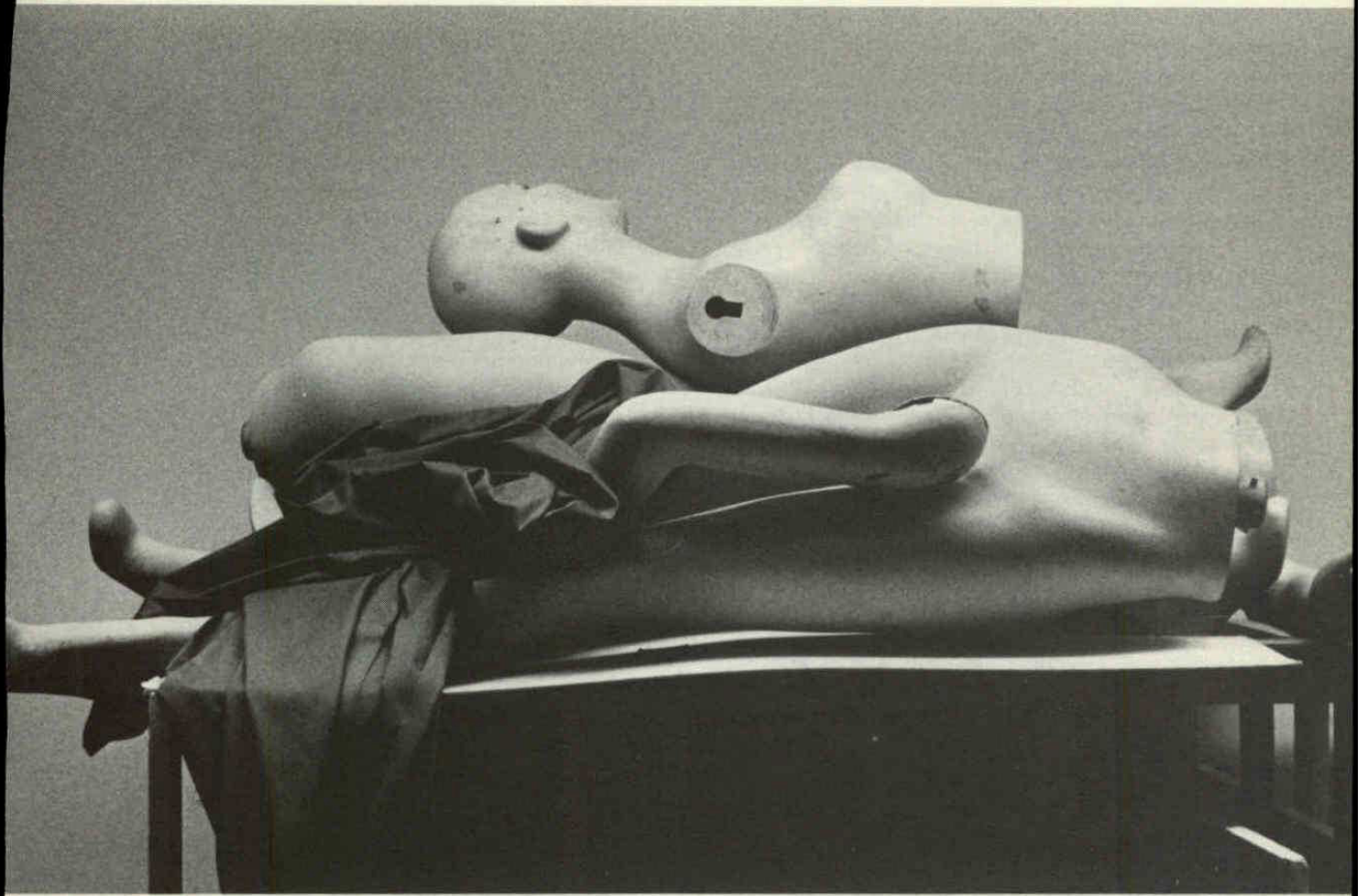
Many careers are open to those who choose the geography option: business; government service at the local, state, and national levels; work with private and public agencies; and education.

A faculty adviser will help the student develop his geography course work so that it relates to his chosen concentration. Courses are typically chosen to relate to such areas of interest as human geography, physical geography, regional geography, and research techniques and methodology. Appropriate courses from other disciplines and from the several concentrations also can be used to satisfy geography option requirements.

Option in History

Professor: S. Williams. *Associate Professor:* P. Abrahams. *Assistant Professors:* T. Bender, L. Chenoweth, H. Cliadakis, N. Gaworek, J. Ivanoff, C. Krog, J. McHale (acting chairman), J. Rodesch. *Instructors:* D. Galaty, B. Mugane.

History is humanity's broadest attempt to understand change in the relationship of man to man, to society, and to nature. As historian, man examines all aspects of his experience, especially his aspirations and achievements, his failures, frustrations, and accidents. By scrutinizing the records—written, oral, artistic, archeological, and technological—man as historian hopes to



explain to himself what he is experiencing in the world.

The student choosing the option 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. An option in history thus could fit well with most of the concentrations offered by the University. In short, history provides a solid background for thinking about and resolving the problems of society.

With the approval of the chairman of the history option and the student's concentration chairman or advising coordinator, a student may combine 24 credits of 300- and 400-level courses in history and related fields into a history option that complements his concentration major.

Option in Literature and Language

Professors: E. Havens, C. Nelson. *Associate Professors:* C. Crandall, T. Daniels (chairman), R. Kersten, A. Matulis, L. Witherell. *Assistant Professors:* F. Clements, P. Cooley, J. Gerend, W. Herrscher, L. Locksmith, D. Moews, M. Murphy, E. Pence, C. Richey, L. Rudolph, R. Schlueter, M. Thron, D. Webb. *Instructors:* J. Davis, W. Davis, K. Fleurant, D. Larmouth, S. Oredson, B. von Hoffmann, M. Wallach. *Lecturers:* H. Gerend, D. Hrubesky, M. Martins.

The literature and language option concerns itself with the literature and languages of the world as they reflect and express the human condition. Inherited literary and linguistic traditions as well as the contemporary order are the concerns of the curriculum.

Literature and language are areas of major importance for teacher certification. In addition, the skills and capacities gained through a program in one or more of these option areas may be applied in a variety of vocations and professions in business, government service, and journalism. They are also appropriate preparations for certain areas of graduate work.

To fulfill option requirements, a student may select 300- and 400-level courses from any of the appropriate categories or specialize in one or two. One of these courses must be a seminar. A student desiring teacher certification in English should combine English-American literature, linguistics, and expressive use of English. A student desiring teacher certification in a foreign language should also combine literature in that language, linguistics, and expressive use of the language. In any event, a student will relate his option to one of the concentrations. In doing so he is encouraged to seek the assistance of an option adviser and an adviser in the School of Professional Studies.

The literature and language curriculum is built on the "umbrella course" concept. This means simply that the faculty, in consultation with the students, determines the specific content for the courses in any given semester. For example, a course titled Literature and Language 334, Literary Isms, may be English Romanticism one semester, and the next semester may be German Expressionism. An abbreviated description of the course will appear in the *Timetable* and also on the student's transcript; a student is allowed, therefore, to take an umbrella course with the same number more than once, as long as the content of the particular courses differs.

Option in Mathematics

Professors: D. Moore, G. Petrie. *Associate Professor:* D. Jowett. *Assistant Professors:* J. Barger, D. Girard, H. Iyengar, K. Lee, A. Loomer (chairman), E. Robkin, B. Singh, N. Stahl, R. Wenger. *Instructors:* L. Espenscheid, R. Grosnick, G. Keepers, R. Simons. *Lecturer:* R. Stumpf.

The mathematics option is most readily useful for the student who has elected to specialize in ecological modeling within the ecosystems analysis concentration. He may already have programmed 18 credits in mathematics offerings at the 300-400 level. Thus only six additional credits in mathematics applicable to systems ecology are necessary to qualify for the concentration-option.

Students in other concentrations may also wish to elect the mathematics option to prepare for graduate study. For example, the environmental control concentration can be strengthened by courses in advanced calculus, differential equations (both ordinary and partial), and computer science, as well as more specialized offerings such as Heaviside calculus.

Alternatively, various concentrations can be combined with the mathematics option to enable the student to gain additional mastery of concepts and techniques in probability, statistics, analysis, and computer science. Finally, because mathematics is an important form of communication, this option can be meaningfully combined with the concentrations in the College of Creative Communication.

The student electing an option in mathematics must take Mathematics 202, 203, and 206, Calculus and Analytic Geometry I, II, and III, and also should include Mathematics 250, Computer Science I. Courses that relate the option to the concentration also should include the following:

- Mathematics 308, Differential Equations and Matrix Algebra, 5 cr.
- Mathematics 311, Advanced Calculus, 3 cr.
- Mathematics 321, Linear Algebra I, 3 cr.
- Mathematics 322, Linear Algebra II, 3 cr.

For the student in the College of Community Sciences electing the mathematics option, the following are also recommended:

Mathematics 360, Theory of Probability, 3 cr.
Mathematics 361, Theoretical Statistics, 3 cr.

The student electing the mathematics option may select Environmental Control 315, Mechanics, and count this course toward the requirement for the mathematics option.

Additional courses are listed elsewhere in the catalog and should be selected with the assistance of the student's adviser.

Option in Performing Arts

Professors: P. Mann (chairman—*theater*), I. Sonenfield. *Associate Professors:* J. Abraham, R. Bauer, N. Blaisdell, A. Cohrs (chairman—*music*), J. Frisch. *Assistant Professors:* T. Chavez, F. Doverspike, W. Jaeckel, N. Makaroff. *Instructors:* K. Anderson, R. Briscoe, S. Kovalenko, D. Semmes, H. Williams. *Lecturer:* L. Ives. *Visiting Artist:* O. Kovalenko.

The performing arts involve an effort at meaningful aesthetic communication between performers and their audiences and dedication to the improvement of man's cultural environment. Courses in the performing arts emphasize dance, music, and theater.

Students choosing the performing arts option will find that the skills and capacities they gain will prove useful in the pursuit of many different occupations, including elementary and secondary teaching. This option also will add a meaningful dimension to their participation in community endeavors.

Courses in the performing arts are arranged in the areas of music and theater, with dance courses listed under theater. Students are encouraged to relate one of these art forms to the others, and they must relate the whole to one of the concentrations.

Dance. At the present time, dance courses are not offered in sufficient number to enable a student to specialize in this area of the performing arts. The courses that are being offered are, however, highly recommended for the student interested in specializing in theater. They can also be useful to the student with special interest in music.

Music. The study of music provides basic technical and theoretical courses for students interested in pursuing career goals in teacher certification at the primary and secondary levels, performance, or entrance into graduate study programs. Music faculty advisers will develop

with the student individual study programs which will be most useful to him in pursuit of his individual career goal.

The student who wishes to specialize in music is given 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 Music 101, Basic Musicianship, before enrolling in the music theory sequence of courses.

It is recommended that the student give special attention to courses at the 100 and 200 level (such as music theory, history, and applied music areas) which serve as prerequisites for entrance into the many 300- and 400-level courses. In formulating his program the student is encouraged to seek the assistance of an option adviser.

Theater. The essence of theater exists before an audience in the person of the actor. In the truest sense, dramatic works are meaningless until performed. Consequently, the education of the actor is of paramount importance to the life of the theater, for without him there is no living theater art.

The program in theater arts begins, then, with the training of the actor, with the objective of developing his latent talents to the fullest. This enables him to fulfill his unique individuality and to develop a view of and relationship to theater as a humanistic, socially contributive art—an art based on cooperation rather than competition, as is the traditional "show-biz" view. The program of study encourages the student to make the most of his talents and individuality while, at the same time, he relates to the group and takes pride in the accomplishments of his colleagues. This cooperation is essential to theater work.

It is deeply important for the theater artist or the teacher of theater to be firmly rooted in the reality of his time and to know as thoroughly as possible his own culture. This is not to suggest that an American student must know only American history and literature, or only American art, music, and theater. Surely he should also be well acquainted with world literature, music, history, art, and theater. But in the deepest sense he must know his own culture, not for any chauvinistic reason, but because this is, or could be, the root of his creative strength, serving to provide him with a more profound insight into other cultures and peoples. His national heritage is made up not only of the conditions of his personal life—his family and friends—but also of the larger environment that includes his street,

his community, his country, and the contributions of his forefathers.

The more keenly and compassionately one comprehends one's national character and the more profoundly one can penetrate into the lives of the peoples of the international community, the more inextricably involved one becomes with all of mankind.

While the student is mastering his craft, he is taught to work as a member of a group, relating his work more and more closely to others to find the connectives that will bring him into harmony with his community. In this way, he may, as a teacher, serve as a catalyst and as a contributor in the various communities where he may work.

The student learns to see his talent as possessing a socially contributive purpose beyond the currently acceptable individualistic, almost anarchistic, status quo goals. Philosophical alternatives are posed which lead and encourage the student to utilize his talents in the theater arts and in the teaching of these arts to extend and deepen what is, by today's commercial standards, considered acceptable. One of the major objectives of the teaching is to help the student learn to gain satisfaction and fulfillment by utilizing his creativity as a contribution to his country and to his fellow man.

The struggle for individual excellence must not be incompatible with concepts of brotherhood or of the essential American ideals, as is so often the case in today's commercial theater. It should



be viewed within the context of the ideals inherent in the essential American historic documents—ideals of Jefferson, Lincoln, Paine, Thoreau—as translated into the distinctly American art of Walt Whitman, Eugene O'Neill, Langston Hughes, Mark Twain, Aaron Copland, Duke Ellington, and Martha Graham.

The student-actor learns to think of himself as a responsible citizen whose function it is, through theater, to entertain, enlighten, educate, and elevate the audience. His training prepares him for a professional graduate theater program in which he may fully equip himself to meet the challenges of contemporary and classic theater and to function in and contribute to the theater of today. As an actor, a director, and, as he acquires sufficient knowledge, as a teacher, he will be competently equipped to influence the direction in which the theater arts develop. In this way, the theater arts program will help to raise the level of teacher training, thus making the certification of teachers more meaningful. It will also help to raise the level of community theater participation.

The director of the theater arts program holds periodic conferences with each student, as well as with the various teachers, to discuss student progress. Instructors hold at least two individual conferences with each of their students each semester. These conferences contribute to a vital student-teacher relationship. Further, they assist the director in evaluating and guiding the student's overall development.

Option in Philosophy

Associate Professor: F. Kersten (chairman).
Assistant Professors: E. Bottemiller, O. Clark, G. Greif, J. Shier, S. Yake. *Instructor:* D. Sweet.

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

Courses in the philosophy option include interdisciplinary emphasis on ethics, aesthetics, metaphysics, philosophy of language and literature, philosophy of science, contemporary philosophical movements, philosophy of religion, and social and political philosophy. The courses are oriented around the immediate challenges of problems and issues, often within historical settings, and are geared toward current concentration programs.

The student choosing to relate the philosophy option to his concentration will find it useful in the pursuit of many different occupations and a productive dimension of his active participation in University studies and community endeavors. This option is excellent preparation for graduate study in philosophy, law, fine arts, the physical and social sciences, and education.

The student selecting a philosophy option should also take the history of philosophy sequence, Philosophy 213, 313, 314, and must take senior level philosophy courses. Each student will be required to emphasize the aspects of philosophy in which he is especially interested. He should work with his faculty adviser in developing the program best suited to his needs.

Option in Physics

Professor: G. O'Hearn. *Associate Professor:* F. Fischbach (chairman). *Assistant Professors:* J. Busch, L. Corrado, R. Lanz, A. Mehra, C. Rhyner, V. Sharma, W. Shufeldt. *Instructors:* A. Dickison, N. Petrakopoulos. *Lecturer:* R. Leuba.

Physics, a science of measurement, experimentation, and systematization of the results of experiments, has played a fundamental role in much basic and applied scientific development. It is central to the related disciplines of engineering, chemistry, astronomy, and applied mathematics and forms an essential complement to the earth sciences and biology. The student electing to relate an option in physics to his concentration must take:

Chemistry-Physics 110, 211, 212, Chemistry-Physics, 5 cr. each
Mathematics 202, 203, Calculus and Analytic Geometry I, II, 4, 4 cr.

The remaining option credits may be chosen, with the help of a faculty adviser, from among the listed physics courses, plus related courses in such areas as chemistry-physics, ecosystems analysis, and environmental control.

Option in Political Science

Assistant Professors: F. Armstrong, M. Greenberg (chairman), J. Kolka. *Instructors:* J. Aaronson, J. Edelstein, P. Wallach, J. Yarbrough. *Senior Lecturer:* A. Zander. *Lecturer:* J. Macrae.

Political science involves the systematic study of political structures, processes, functions, and policies within particular political systems or within the framework of international relations. Undergraduate work in political science involves institutional, behavioral, and philosophical analysis and may focus on particular systems or stress comparative studies.

58 Psychology

Like the other community sciences, political science is oriented to problems and their solutions and seeks to prepare the student either for an active role in administration and government, or for the equally significant role of a well-informed participant in the political process. Courses in political science cover such diverse areas as American political behavior, comparative politics, international politics, political analysis, and public administration.

A wide variety of careers are open to students who choose to relate the political science option to their concentration. These include city management; foreign service; teaching; specialized overseas assignments; work with private and public agencies; and employment with the public services at the city, state, national, and international levels.

A faculty adviser is available to help the student select appropriate political science and other community science courses to best meet his needs and the requirements of the option.

Option in Psychology

Professors: R. Hartley, I. Korner. *Associate Professors:* B. Baker, N. Pollis (chairman), W. Smith. *Assistant Professors:* J. Falk, E. Knowles, C. Matter, L. Nesberg. *Instructors:* S. Cannizzo, E. James, P. Johnsen, L. Joscelyn. *Lecturer:* F. Tate.

Psychology involves the scientific and systematic study of human behavior as well as the behavior of animals. Psychology relates such behavior to both physiological and environmental conditions. As a community science, psychology places a strong emphasis on human relations and the adjustment of the individual to society, focusing on the understanding, predicting, and influencing of social behavior.

Many different career opportunities are open to students who choose to relate the psychology option to their concentration. Business organizations, private and public agencies, and educational institutions seek persons with strong preparation in psychology.

With the approval of his option adviser, a student may select any 300- and 400-level psychology courses to fulfill the option requirements. Most growth and development courses also are applicable to the psychology option and can be substituted for courses specifically labeled as psychology courses. The student should select appropriate courses with the help of his faculty adviser.

Option in Sociology

Assistant Professors: R. Jobu (chairman), C. Pollis. *Instructors:* J. Gould, L. Lackey, L. Smith. *Lecturer:* T. Nichols.

Sociology is concerned with the systematic study of social patterns of human relationships, their origins, and consequences. Within the framework of the community sciences, sociology is oriented toward the study of societal relationships, the institutional and functional framework of social organizations, and the components of personality determined by group membership. The emphasis in sociology is on the working relationships between basic concepts, theory, and research. Courses in sociology concentrate within the fields of demography, deviant behavior, social theory, and social organization.

Many careers are open to those who choose the sociology option, including law, industrial relations, the ministry, education, and journalism.

In relating an option in sociology to his chosen concentration, the student should consult with his faculty adviser in selecting courses in sociology and related fields that best meet his individual needs. Anthropology 310, Culture and Personality, 3 cr., or an upper division social psychology course approved by the option chairman is required.

Option in Visual Arts

Professor: M. Kazar. *Associate Professors:* B. Grimes (chairman), W. King, W. Prevetti, T. Tasch. *Assistant Professors:* D. Damkoehler, R. Fritz, A. Imber, J. LaMalfa, R. Pum, W. Simpson, R. Williams. *Instructor:* J. McClurg.

Man is an image and form maker. From the images on the cave walls of paleolithic man, a record of the visual arts has continued to our own time, and although the motivation for these images appears to change from era to era, there is ample evidence to affirm the need of men to transfer their experiences into visual symbols.

The visual arts involve an effort at meaningful aesthetic communication between the creator and the spectator. Courses in the visual arts include emphasis upon two-dimensional and three-dimensional forms.

The student who chooses to relate the visual arts option to his concentration will find that the skills and capacities he gains will prove to be useful in the pursuit of many different occupations. This option will also add a meaningful dimension to his participation in community endeavors. A faculty adviser is available to help the student make course selections that meet the option requirements.



COLLATERALS (OR PROFESSIONAL MINORS)

While each of the concentrations and options described in this catalog has direct professional applications to job relevance or to a professional school experience, there are several special applications that require additional competence. To meet this need, a student may select a professional collateral (or minor) in the School of Professional Studies which supplements his major concentration or concentration-option and provides him with a professional-specialist orientation.

Professional collateral courses are offered in environmental administration, education (leading to teacher certification at the preschool, elementary, and secondary levels), leisure sciences, mass communications, and social services. Eighteen credits are required for a professional collateral except in elementary education where, by state law, 27 credits are required. The student interested in pursuing a collateral should consult his concentration or concentration-option adviser about these cooperative programs with the School of Professional Studies.

The Collateral in Environmental Administration

Professors: G. Petrie, R. Posey (acting chairman).
Assistant Professors: J. Powers, J. Schmitt, D. Ward, K. Zehms. *Senior Lecturer:* A. Zander.
Lecturer: F. Waedt. *Visiting Associate Professor:* H. Jadwani.

The purpose of this professional collateral is to assist the student who is fulfilling a theme college concentration or concentration-option to study the rudiments of administration applicable to his field of major interest. Thus, this professional collateral is not open to a student following the professional concentration in managerial systems; it is open only to the student following a theme college concentration or concentration-option.

The 18 credits required to fulfill the collateral should include one of the following two introductory courses:

Organization and Operations 202, Business and Its Environment, 3 cr.

Organization and Operations 203, Government and Business, 3 cr.

The following capstone course also is required:

Organization and Operations 450, Policy and Program Implementation, 3 cr.

The remaining 12 credits needed to fulfill the collateral should be selected by the student in consultation with his adviser and should be chosen according to the relevance of the courses to his theme college concentration or concentration-option.

If it develops that a course in the professional collateral also is listed in the student's concentration or concentration-option, one such course can be doubly counted, thus reducing the collateral requirement to 15 credits.

The Collateral in Education— Teacher Certification

Professor: G. O'Hearn. *Associate Professor:* N. Sanders. *Assistant Professors:* R. Bruland, D. Bryan, J. Busch (acting chairman), F. Evans, R. Presnell, P. Thompson, T. Van Koevering.

To obtain a license to teach in the schools of the state of Wisconsin, one must have earned a bachelor's degree and have completed a program of instruction approved by the State Department of Public Instruction. UWGB offers programs approved by the State Department of Public Instruction leading to:

1. Elementary school certification, primary and intermediate grades.
2. Early childhood education, nursery and kindergarten certification. (See growth and development concentration.)
3. Specialist certificates in art K-12 or music K-12.

4. Secondary school certification in areas including:

Art
Biology
Chemistry
Earth Sciences
English
French
Geography
German
History
Mathematics
Mathematics, Computer Emphasis
Music
Physics
Environmental Science, Broad Field
Social Studies, Broad Field
Spanish

The *Handbook on Teacher Certification*, available from the Office of the Faculty in Education, contains a complete description of these programs.

A student who completes one of these programs and who fulfills the general degree requirements of UWGB will be recommended to the Wisconsin Department of Public Instruction for licensing for a three-year term. A permanent license follows after three years of successful teaching.

Admission to the Teacher Certification Program. Teacher certification is carried on cooperatively by each theme college and the School of Professional Studies. The student pursues work on his chosen concentration within a theme college while also completing the collateral work in professional education in the School of Professional Studies. When the student decides to enter the teacher certification program, he should indicate his intentions on the appropriate forms when registering for classes at the beginning of the semester. He should also go to the Office of the Faculty in Education on the Deckner campus where, with the assistance of an adviser, he will fill out a plan for certification. Members of the faculty in education will visit the outlying campuses each semester to provide information to students who are considering entering the education collateral.

the collaterals

62 Education

The faculty in education is in the process of reviewing entrance requirements to the education collateral. Currently there are no mandatory requirements for admission to the program other than being a student in good standing. This may soon be changed. Information on these changes is available from the Faculty in Education office, B-217, Deckner campus, Green Bay.

Secondary School License. For a secondary school license, the student must complete an approved program for that which the State Department of Public Instruction terms a *teaching major*, or a major and a minor, or two majors, or a broad field major. The teaching major in a discipline includes freshman and sophomore work, taken in conjunction with an appropriate concentration. In all cases the student will pursue advanced work with an environmental focus in a concentration. Specific requirements of 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.

In addition to the general requirements listed above, the following professional education requirements, totaling 18 credits, must be completed for secondary school certification:

1. Educational psychology of teaching and learning, such as one of the following courses: Psychology 338, Psychology of Learning, 3 cr. Growth and Development 332, Middle Childhood and Adolescence, 3 cr.
2. At least one methods course in the appropriate teaching area, selected from the following list:
Education 310, Secondary School Teaching Methods in English, 3 cr.
Education 311, Secondary School Teaching Methods in Foreign Language, 3 cr.
Education 312, Secondary School Teaching Methods in Social Studies, 3 cr.
Education 313, Secondary School Teaching Methods in Mathematics, 3 cr.
Education 314, Secondary School Teaching Methods in the Sciences, 3 cr.
Education 316, Secondary School Teaching Methods in Art, 2 cr.
Education 317, Secondary School Teaching Methods in Music, 2 cr.

For the student who desires to be licensed in both a major and a minor or two unrelated majors, a methods course is required in each area.

3. Additional credits in electives relevant to education, such as courses in sociology, history, or philosophy that deal with various aspects of education, or any of the following:

- Education 404, Creative Learning in the Schools, 2 cr.
Education 405, Individualizing Instruction, 2 cr.
Education 406, Evaluation Systems, 2 cr.
Education 498, Directed Study, 1-4 cr.

4. 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.)

5. Wisconsin Statute 118.19(6) requires that "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."

Cooperative marketing and consumers' cooperatives are included in Economics 203, Micro Economic Analysis.

The conservation of natural resources is included in Environmental Sciences 303, Conservation of Natural Resources, or Environmental Sciences 302, Principles of Ecology, or Economics 305, Natural Resources Economic Policy. The statutory requirement is in addition to the 18 credits of professional education.

Elementary School License. The collateral in education offers a certification program for teachers at the primary grade levels, which may include kindergarten certification, and another for the intermediate-upper elementary grade levels. (An early childhood and kindergarten certification program is offered by the growth and development concentration. See page 38.)

To be eligible for 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. Because of its interdisciplinary nature, a concentration is appropriate for students seeking elementary school licensing.

The following program of courses, providing a minimum of 27 credits, is designed to meet the professional education requirements of the Wisconsin state code for elementary certification:

1. Educational psychology of teaching and learning, such as one of the following courses: Psychology 338, Psychology of Learning, 3 cr. Growth and Development 331, Infancy and Early Childhood, 3 cr.

2. All of the following courses:

Education 302, Elementary School Teaching Methods in Social Studies, 3 cr.

Education 303, Elementary School Teaching Methods In Art, 2 cr.

Education 304, Elementary School Teaching Methods in Music, 2 cr.

Education 305, Elementary School Teaching Methods in Mathematics and Science, 4 cr.

Education 306, Elementary School Teaching Methods In Physical Education, 2 cr.

Education 307, Elementary School Teaching Methods In Reading, 3 cr.

3. Eight credits of student teaching (Education 402) or Internship at the elementary school level.

Student Teaching for Elementary or Secondary Certification. Student teaching or teacher internship is required for elementary or secondary certification and is customarily taken in the student's senior year. Application for the teacher



64 Leisure Sciences

Internship program must be submitted to the director of student teaching by February 1, preceding the academic year in which the student wishes to intern. Applications for student teaching are due by April 15, preceding the academic year of the student teaching. 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 for admission to them. 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 will be given priority.

Waivers and Pass-No Credit. Waivers of courses in the education collateral are seldom possible because the requirements for certification are defined by the Wisconsin Department of Public Instruction. Courses in education necessary for certification cannot be taken on a pass-no credit basis.

The Collateral in Leisure Sciences

Associate Professor: T. Goodale. *Assistant Professor:* R. Ditton.

This curriculum provides education for the leisure service professions including management, supervisory, and leadership positions in public park and recreation systems, private agencies and recreational enterprises, and resource planning agencies and firms. The following two courses are required to fulfill the collateral:

Leisure Sciences 302, Philosophy and Sociology of Leisure, 3 cr.

Leisure Sciences 320, Field Practicum, 2 cr.

In consultation with his faculty adviser, the student chooses the remaining credits from among the other leisure sciences course offerings.

The Collateral in Mass Communications

Assistant Professor: D. O'Brien. *Instructor:* K. Anderson. *Lecturers:* S. Lambrecht, D. Otto, R. Woessner.

This field of study is concerned with the application of communications skills and insights into the mass communications media: newspapers, magazines, radio, and television. In consultation with his adviser, the student chooses 12 credits from among the courses in mass communications, and six credits selected from the following:

Administration: Distribution 305, Theory and Practice in Public Relations, 3 cr.

Administration: Distribution 403, Principles of Advertising, 3 cr.

Administration: Distribution 410, Applied Motivational Research, 3 cr.

Psychology 202, Introduction to Social Psychology, 3 cr.

Psychology 309, Psychology of Motivation, 3 cr.

Psychology 335, Psychology of Attitudes and Public Opinion, 3 cr.

The Collateral in Social Services

Professor: I. Korner. *Lecturer:* R. White.

Fulfilling this collateral prepares the student for beginning professional social service in public and private agencies where the master of social work degree is not required or not appropriate. The student, in consultation with his faculty adviser, selects his courses from among the social services offerings. Social Services 202, Introduction to Social Service, 3 cr., is a prerequisite to all other courses in social services.

PREPROFESSIONAL PROGRAMS

Three kinds of preprofessional opportunities exist. First, regular majors and minors leading to a bachelor's degree offer appropriate preparation for most graduate professional schools such as law, medicine, dentistry, social work, and music.

Second, for students desiring a four-year bachelor's degree in engineering, nursing, or certain other applied fields, UWGB offers a special two-year preprofessional program.

Third, students desiring both a liberal and a technical bachelor's degree can select a 3-2 plan leading to both a bachelor of arts (or science) degree at UWGB and a bachelor of nursing or engineering (or another applied field) at another institution. Three years are spent at UWGB, two at the other institution.

The student interested in pursuing a preprofessional program should consult his concentration or concentration-option adviser or advisers.

Agricultural Science

UWGB provides the prospective student in agricultural science with an opportunity to obtain a basic and uniquely appropriate background for entry into the agricultural profession.

The student who desires a degree in agriculture would ordinarily take two years of his program 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 register for courses in biology, nutritional science, earth science, ecosystems analysis, and chemistry-physics.

A strong high school background in science is recommended. In addition, the student should obtain a copy of the catalog of the agricultural college he intends to enter, and be guided by its recommendations for his freshman and sophomore studies.

Architecture

Instruction in architecture is tending more and more to be offered only at the graduate level. Preparation for entering architectural school should be guided mainly by the requirements and recommendations for entry set forth in the catalog of the architectural school of the student's choice. Nevertheless, it may be pointed out that architecture combines the study of science, mathematics, and art. Thus the student who obtains his bachelor's degree from UWGB before entering a school of architecture should work out with his adviser a program that will meet the admission requirements of the architectural school, and that will include work in chemistry, mathematics, physics, and the visual arts. A proper combination of concentrations and options is easily worked out with the student's adviser.

City Planning and Community Development

Graduate professional instruction in city planning and community development is available at many universities in the United States. The student is advised to obtain a catalog describing graduate work in the field in the institution of his choice, and be guided primarily by its requirements and recommendations.

The degree requirements of UWGB are flexible enough that the student, in consultation with his adviser, may construct a program of concentration, option, and professional collateral courses that will be suitable preparation for graduate study. Actually, individuals enter city planning from a wide range of educational backgrounds. Because the range of subject matter and desirable skills in this profession is so broad, no individual can be expected to master them all, particularly in his undergraduate program. Nevertheless the student is advised to consider carefully the concentration in urban analysis in the College of Community Sciences, options in economics and political science, and the professional collateral in environmental administration.

Engineering

UWGB provides the prospective engineering student with an opportunity to obtain a fundamental background for entry into the engineering profession. With the various combinations of theme college concentrations and options available, the student may obtain background

preparation, for example, in administration, natural sciences, communications, economics, or environmental sciences. An integrated basic training is provided in related areas of mathematics, chemistry-physics, and engineering.

The student may follow either of two programs if he plans to transfer to a college of engineering:

1. Under the 2-2 plan he spends two years at UWGB and two years at an engineering school. Upon graduation he receives a bachelor of science degree from the college of engineering.
2. Under the 3-2 plan he spends three years at UWGB and two years at the college of engineering. Upon graduation he receives bachelor of science degrees from both UWGB and the engineering school. Courses accredited by the College of Engineering at The University of Wisconsin-Madison and the University of Wisconsin-Milwaukee are available at UWGB in appropriate option areas.

A student should select the engineering school he plans to attend as early as possible. Then, in consultation with his adviser, he should adjust his program to meet the transfer requirements for the engineering field of his choice. A strong high school background in mathematics and physics is essential. The following courses are recommended for pre-engineering and should be completed by the end of the sophomore year:

Liberal Education Seminar 101, 102, Crises of Belief and Ecology
 Chemistry-Physics 110, 211, 212, Chemistry-Physics
 Mathematics 202, 203, 206, Calculus and Analytic Geometry I, II, and III
 Mathematics 308, Differential Equations and Matrix Algebra

Need for the following courses depends upon the choice of engineering school and field of engineering:

Engineering 102, Elements of Descriptive Geometry
 Engineering 113, General Engineering Graphics
 Engineering 302, Engineering Statics I
 Engineering 303, Engineering Dynamics II
 Modern foreign language

The students studying under the 3-2 plan must take Liberal Education Seminar 215, 216, 315, 316 and meet all the other University requirements for graduation.

The student is encouraged to work closely with a faculty adviser in developing a program that meets his individual needs and satisfies the requirements of the engineering school he plans to attend.

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 familiarize himself with the requirements of that college and make certain that the courses for which he registers will meet those requirements.

The minimum requirement for admission to colleges of medicine is 90 credits of college work in institutions approved by professional accrediting associations. However, almost all the leading medical schools require completion of a bachelor's degree.

All medical colleges specify minimum requirements in certain subjects. The following table of minimal requirements is representative, although not applicable in every case.

Biology 202, Biology of Cells, 4 cr.
 Biology 203, Biology of Organisms, 4 cr.
 Advanced biology, 6 cr.
 Chemistry-physics, 15 cr.
 Organic chemistry with laboratory work, 8 cr.
 Analytical chemistry, 4 cr.

Liberal education seminar or English literature and language, 6 cr.

College level mathematics, 6-8 cr.

Physical chemistry and mathematics through calculus provide a useful background and allow a better understanding of the basic concepts of human biology. Therefore, those subjects are recommended to those students who can fit them into their college experience.

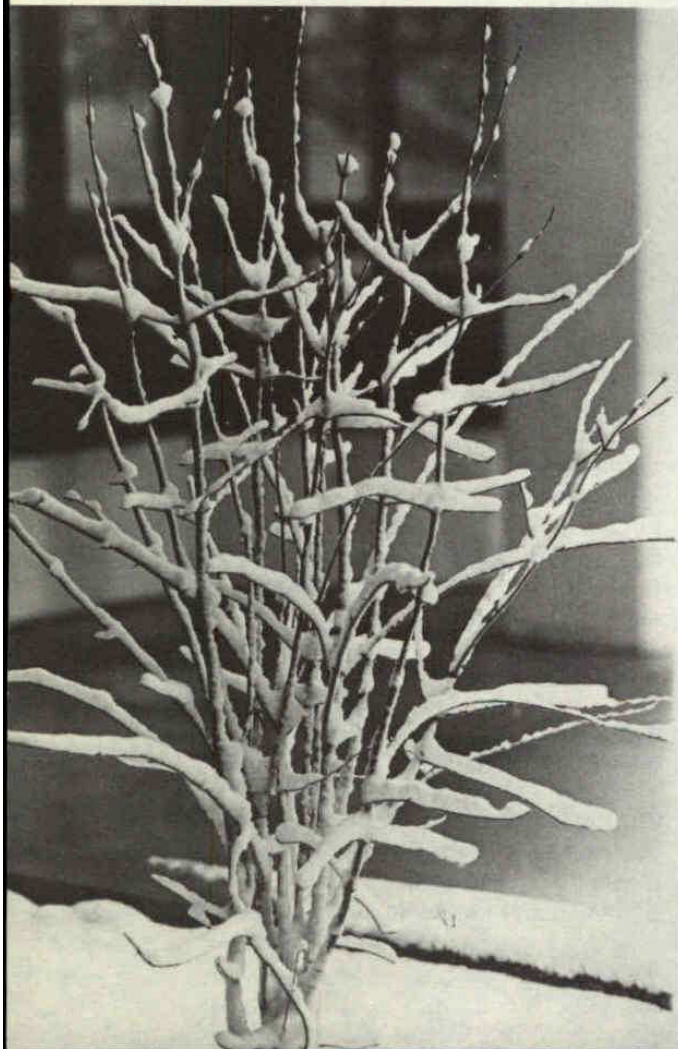
In addition to evidence of academic competence, other qualifications for admission are considered. Special attention is given to letters from college professors, premedical committees, and impressions gained from a personal interview. It is important to point out that completion of a bachelor's degree is desirable and almost essential in order to meet the competition presented by the better-qualified applicants. Students who major in the humanities are given equal consideration with those who major in the sciences providing they show better than average ability to cope with scientific material.

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

Premedical course requirements for The University of Wisconsin Medical School are the following:

1. Chemistry (minimum of 4 semesters)
 - a. General, including qualitative analysis: year course
 - b. Organic, including aliphatic and aromatic compounds with laboratory work: semester course
 - c. Quantitative: semester course. Any other chemistry course with laboratory work may be substituted for quantitative analysis, provided that the student's chemistry program includes adequate experience in quantitative concepts and techniques. A total of two years of chemistry will still be required.
2. Physics: year course
3. Zoology
 - a. General: semester course
 - b. Advanced: semester course (vertebrate embryology is the most desirable advanced course. If it is not available, a course in cytology, cellular physiology, genetics, or comparative anatomy may be substituted.)
4. College mathematics: semester course

College level courses taken in high school or preparatory school may be accepted as satisfying requirements, if the college transcript clearly indicates that the college allows credit for such



courses toward fulfillment of requirements for the bachelor's degree.

The value of a four-year college program rather than a three-year program is recognized and the admissions committee will give preference to applicants planning to graduate from college. However, an undergraduate wishing to enter the Medical School after the third year should see The University of Wisconsin-Madison catalog, part 1, or consult the premedical club adviser.

Dentistry. The minimum requirement for admission to colleges of dentistry is 60 credits of college work in institutions approved by professional accrediting associations. Almost all the leading dental colleges, however, require completion of a minimum of 90 credits. All dental colleges specify minimum requirements in certain subjects. The following table is representative:

Biology 202, Biology of Cells, 4 cr.
 Biology 203, Biology of Organisms, 4 cr.
 Chemistry-physics, 15 cr.
 Advanced courses in biology and chemistry,
 10 cr.
 Liberal education seminar or English literature
 and language, 6 cr.

In many cases, the student is advised to take more than the minimum amount of work in the subjects represented in the prerequisite sciences.

From the available evidence it would appear that the emphasis in the choice of electives should be on those subjects which will afford the student the broadest possible background. Subjects recommended for consideration of elective courses include drawing, economics, English literature and language, government, history, mathematics, philosophy, psychology, sociology, statistics, zoology, and additional courses in physics and in chemistry.

In any case, the student should examine the catalog of the dental school to which he plans to seek admission and, with his adviser, formulate his 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 among three different 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 two, conducted in collaboration with the Schools of Nursing at the Madison and Milwaukee campuses of The University of Wisconsin, lead to the B.S. degree in nursing and certification for the R.N.

1. The Diploma Program at Bellin Memorial Hospital School of Nursing. In cooperation with UWGB, the Bellin Memorial Hospital School of

Nursing in Green Bay offers a program leading to a diploma in nursing and prepares the student for certification as a registered nurse. Interested students must apply both to the hospital and to UWGB.

In addition to the program at Bellin Memorial Hospital School of Nursing, the following university courses or their equivalents are required:

Biology, 18 cr.
 General chemistry, 5 cr.
 Liberal education seminar, 6 cr.
 Psychology, 3 cr.
 Sociology, 3 cr.

To participate in this program, the student must be admitted 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, 733 South Webster Avenue, Green Bay, Wisconsin 54301.

2. The Baccalaureate Programs at UWMSn and UWM (2-2 Plan). The School of Nursing of The University of Wisconsin-Madison and the School of Nursing of The University of Wisconsin-Milwaukee both 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. Each program is four years and two summer sessions in length. One or two years may be taken at UWGB; the remainder is offered at the schools of nursing on the Madison and Milwaukee campuses. Following this option the student is considered to be in the 2-2 plan. Under this plan the B.S. degree earned is that awarded by the School of Nursing.

Required courses at Madison are listed in the School of Nursing bulletin; those required at Milwaukee appear in the UW-Milwaukee catalog. Each student must apply to the school of nursing which he wishes to attend for admission to the last two years of the nursing program. This should be done at the beginning of the sophomore year. Admission to the last two years is based on qualifications for nursing, educational facilities of the school, and other relevant factors.

Registered nurses who wish to obtain a bachelor's degree will be admitted to the programs 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.

3. The Baccalaureate Programs at UWGB, UW-Msn, and UWM (3-2 Plan). The student may undertake preprofessional education in nursing at UWGB in the 3-2 plan. Under this plan, he spends three years at UWGB and two years at the School of Nursing at the Madison or Milwaukee campuses of The University of Wisconsin. Upon graduation the student receives the B.S. degree from UWGB and a B.S. degree in nursing from the School of Nursing at Madison or Milwaukee. Advisers in the College of Human Biology can help the student develop a program that fulfills the UWGB requirements for the 3-2 plan and covers the subjects recommended for transfer to the School of Nursing at Madison or Milwaukee.

Pharmacy. The University of Wisconsin pharmacy program offers the bachelor's degree after completion of five years of work—two years of pre-pharmacy which may be completed at UWGB, and three years in the School of Pharmacy on the Madison campus. Basic requirements of the pre-pharmacy program are 60 semester hours including:

Biology 202, Biology of Cells, 4 cr.
 Biology 203, Biology of Organisms, 4 cr.
 Chemistry 302, 303, 304, 305, Organic Chemistry I, II (with laboratory) 8 cr.
 Chemistry-Physics 110, 111, 112, Chemistry-Physics, 5 cr. each
 Economics, 3 cr.
 Liberal Education Seminar 101, 102, Crises in Belief and Ecology, 3, 3 cr.
 Mathematics courses in college algebra, trigonometry, calculus, and analytic geometry, 8-9 cr.

Medical Technology. A student may complete the first two years of the medical technology program at UWGB. The remaining two years of the special four-year program leading to the B.S. degree may be completed at either the Milwaukee or Madison campus. The medical technology program requires a broad background in the physical and biological sciences. Clinical subjects are taught in the senior year. The student must accumulate 90 credits with a grade point average of 2.3 for admission to the senior year at Madison and 2.0 at Milwaukee. The medical technology program is fully accredited by the Council on Medical Education and Hospitals of the American Medical Association. Upon graduation, the student is eligible to apply for board certification as a medical technologist (ASCP).

During the first two years the student should complete two semesters of a foreign language, or have completed two years of a foreign language in high school; three semesters of chemistry-physics; two semesters of organic chemistry; one semester each of quantitative and physiological chemistry; one semester of human physiology,

zoology, microbiology, microtechnique, and parasitology; two semesters of the liberal education seminar or English; two semesters of English literature and language; one semester of intermediate composition; and one semester of college algebra.

A complete degree program in medical technology also is offered at UWGB. When combined with a concentration, this program prepares the student to perform a technical role in medical laboratories as part of the allied health team.

Concentration programs in human adaptability and nutritional sciences are especially appropriate for medical technology. Three years are spent in residence at UWGB; the fourth year is devoted to work in clinical instruction in an accredited hospital school of medical technology.

Students interested in entering this program should consult with the medical technology adviser from the College of Human Biology before or during the registration period.

Veterinary Medicine. A student interested in seeking admission to a professional school of veterinary medicine should obtain catalogs from the schools to which he might apply. The University of Wisconsin does not grant a degree in veterinary medicine.

The student interested in veterinary medicine should consult his adviser as early as possible to work out a course program that will satisfy the admission requirements of the school of veterinary medicine of his choice. While admission requirements vary, the following requirements are typical.

A minimum of two years of prescribed pre-professional 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. Further, an applicant for admission to a professional college of veterinary medicine presents a total of no less than 60 semester hour credits from an approved college or university. Thus, the future applicant should check with the college of veterinary medicine of his choice, to be sure that preprofessional work at UWGB is approved. Typically, credits include the following:

Biology 202, Biology of Cells, 4 cr.
 Biology 203, Biology of Organisms, 4 cr.
 Chemistry 302, 303, 304, 305, Organic Chemistry I, II (with laboratory), 8 cr.
 Chemistry-Physics 110, 111, 112, Chemistry-Physics, 5 cr. each
 Liberal education seminar or English literature and language, 6 cr.
 Mathematics courses in college algebra and trigonometry, 4-5 cr.



70 Home Economics

Political Science 103, Introduction to Political Analysis, 3 cr.

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 special consideration in the selection of candidates. Other qualifications being equal, residents of the state in which the veterinary school is located 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. His program must have the approval of the dean of the colleges and preliminary approval of the veterinary medical school of his choice. The professional curriculum extends over a period of four years and leads to a degree of doctor of veterinary medicine.

Veterinary Science. Graduate courses in the Department of Veterinary Science at The University of Wisconsin-Madison are designed to give advanced training to graduate veterinarians and other qualified persons interested in research on animal diseases.

Programs leading to the master of science and doctor of philosophy degrees are offered directly by the department, or jointly with related departments. Special work may be taken in bacteriology, immunology, parasitology, pathology, physiology, and virology as applied in the veterinary field. Students majoring in veterinary science may choose a minor in any of the related sciences.

Home Economics

The student interested in obtaining a bachelor's degree in home economics may attend UWGB during his freshman and sophomore years, transferring to The University of Wisconsin-Madison School of Home Economics at the beginning of his junior year. This transfer is not automatic; the student must be admitted by the School of Home Economics. A Wisconsin student must present a grade point average of at least 2.0. A nonresident student must present a 2.5 grade point average. A student transferring from UWGB must meet all the requirements of the School of Home Economics. Substantial equivalents will be accepted for required courses, but no requirements will be waived.

The preprofessional student in home economics should obtain a copy of the catalog of the School

of Home Economics in Madison, and plan the program of his first two years with his faculty adviser. The following freshman and sophomore courses are required:

Chemistry 108, General Chemistry, 5 cr.

Economics 102, Economics and the Modern World, 3 cr.

Human Adaptability 104, Anatomy and Physiology, 4 cr.

Liberal education seminar or English literature and language, 6 cr.

Additional literature and humanities, 12 cr.

Nutritional Sciences 232, Nutritional Significance of Food, 3 cr.

Physical education (one semester), 1 cr.

Psychology 102, The Behavior and Experiences of Man, 3 cr.

Sociology 202, Introduction to Sociological Analysis, 3 cr.

The School of Home Economics offers, through the Graduate School in Madison, programs leading to the master's and doctor's degrees.

Law

Graduation from an approved college, such as UWGB, is a prerequisite for admission to virtually every law school in the United States. In limited cases, however, exceptional students who have completed at least the first three years of work leading to a bachelor's degree at UWGB, and whose academic record and aptitude for law study are especially promising, may be admitted. This exception will be amplified below.

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. . . ."

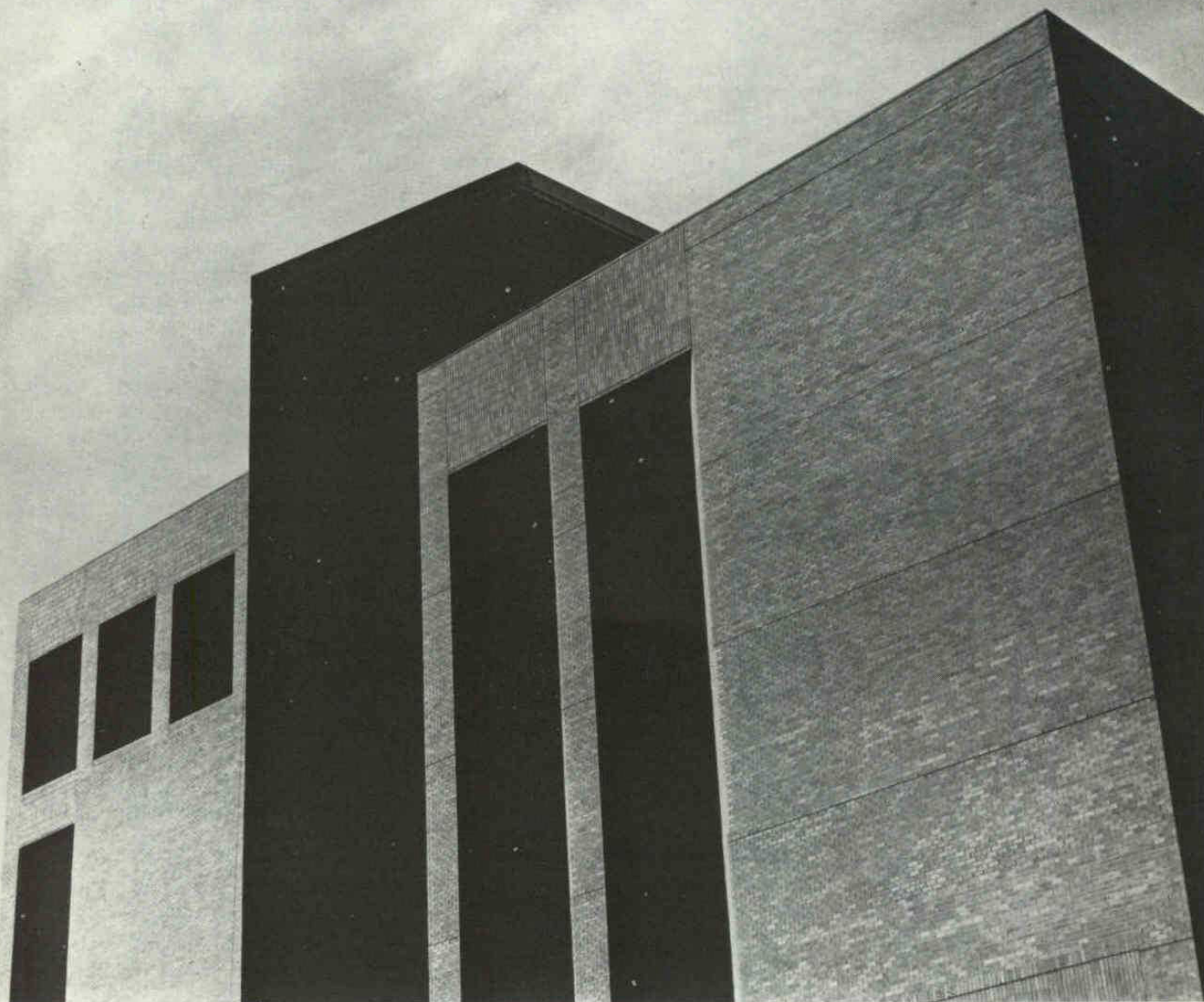
The Association of American Law Schools has the following observations concerning desirable areas of pre-law study. One area is the communication of ideas: the lawyer must be able to communicate effectively in oral and written expression. Logic is a part of a lawyer's necessary equipment, and its mastery should be pursued.

Courses in the social sciences are recommended, for there exists an enormous range of legal issues requiring information from the social sciences for their intelligent resolution. History is recommended, for history relevant to law is the very foundation stone of Western society. Courses in the physical sciences provide a rigor of training and precision which will help the student engage in the rigorous and precise thinking he will need in the practice of law.

The study of philosophy provides training in handling abstractions, and a specific field of philosophy, ethics, is in a sense what law is all about. Accounting is a practical study, the rudiments of which lawyers must know, for accounting is the basic language in business.

Finally, law schools recommend that attention should be paid to three principles: the principle of excellence of instruction, which means studying under the best teachers; the principle of pleasure, which means studying those subjects the student will like when he has worked hard at them; and third, the principle of depth, particularly if this involves a major writing project.

The pre-law student is urged to purchase a copy of a 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 his program at UWGB in conjunction with his faculty adviser.



Undergraduate students with grade point averages well over 3.0 and scores on the Law School Admission Test in the upper tenth percentile may be admitted to a combination program in which the student transfers to the college of law from UWGB at the end of the first three years of work. The exceptional students who have embarked upon this program will obtain a bachelor's degree from UWGB when they satisfactorily complete the requirements for the degree of doctor of law (J.D.).

Social Work

Accredited schools of social work offer a two-year program of graduate study leading to the degree of master of social work (M.S.W.). Admission to the graduate program is based on scholarship and personal qualifications for the profession. At the undergraduate level, eight semester courses in the social sciences are recommended, including such areas as anthropology, business, economics, psychology, geography, history, philosophy, political science, sociology, and the professional collateral in social services.

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 programs:

Liberal education seminar or English, 6 cr.
Literature, composition, and speech, 12 cr.
Philosophy, 9 cr.
Religion, 9 cr.
History, especially ancient and medieval, 9 cr.
Natural science, 6 cr.
Social sciences, 18 cr.
In addition, reading knowledge of a foreign language is advised.

The pre-theology student will find, in working out his course program with his adviser, 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 environmental control and ecosystems analysis concentrations in the College of Environmental Sciences provide the basic background required for entry into graduate hydrology programs. The student, with the advice and approval of his adviser, can build a program with a meaningful combination of courses which will focus on the student's special interests. Such a

pregraduate hydrology program can relate to geology, engineering, soils, meteorology, economics, or administration.

COLLEGE AND UNIVERSITY TEACHING

The teaching profession in institutions of higher learning differs markedly in its educational 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 wishes to teach. Subsequently he 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 in the field a graduate can attain. 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 discipline the applicant wishes to pursue. In deciding whether or not to admit the applicant, the committee looks primarily to the grade point average the student has attained.

Excellent grades are especially important in the discipline of choice. Other things being equal, the student should have taken a considerable amount of work in that discipline. At UWGB, this means that he should have chosen an option or collateral in that discipline or field. A student with an exceptionally high grade point average may be admitted, even though he does not have adequate preparation in the discipline, in which case he will probably be required to take some undergraduate courses in preparation for his 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 the Graduate Record Examination. For information on the dates and times when the GRE examinations will be given in northeastern Wisconsin, contact the director of placement, UWGB.



A TOTAL EDUCATIONAL EXPERIENCE

The educational program at UWGB is a total experience for the student, combining the world of books and instruction with the world outside the classroom in a way that makes him feel his wholeness. The philosophy behind this approach is that what the student is learning and what he is doing have a unity and integrity that validate their relevancy.

Curricular and co-curricular programs, as well as special resources and facilities, combine to enrich and extend the academic plan of UWGB so that the student's involvement is complete and his education is rich and varied.

These programs and resources are designed to meet the needs of a wide and diverse range of students, in addition to providing each individual with the services, activities, and resources he needs to enrich his academic program. Not only do the programs themselves provide flexibility in meeting a wide variety of needs, but the student is allowed maximum flexibility in the selection and use of the resources that most benefit and enhance his particular intellectual, social, and physical needs.

Individualization of Learning

The student at UWGB is given great flexibility in the selection of his program. Firmly required courses are minimal in number and many of the requirements are specifications of competence that can be met by special examination. Most courses taken outside the concentration-option in which a student is majoring can be taken on a pass-no credit basis.

The 298 and 498 series of courses permit individual work for all students. These courses must always be taken for a regular grade (not pass-no credit). Normally, a student cannot take more than one of these directed study courses per semester. The instructor's advance permission is always needed, as well as approval from the student's concentration chairman and the concentration chairman for the course.

A maximum of ten credits can be accumulated in 298 and 498 courses. Students must have a 2.5 cumulative grade point average or higher to take 298 courses. A cumulative grade point average of 2.0 or higher is required for 498 courses.

Selected topics courses, which carry the numbers 283X and 483X, are offered from time to time as a vehicle for experimentation and innovation by the concentrations and by the units of the School of Professional Studies. Students are encouraged to propose topics which might be presented in these series, particularly in the month of January. Any such proposal should be directed to an appropriate concentration chairman, who may ask the initiating student for assistance in estimating the extent of student interest and in planning the course.

All curricula are intended as suggestions only, not as inflexible guides. A student who wishes to propose a major concentration and/or option of his own design may do so. It is subject to the advice and approval of a personal adviser and the dean of the colleges. The student should consider all courses offered by the University as a pool from which he can select those relevant to his objectives. Majors are *normally* interdisciplinary, cutting across college, concentration, and option lines.

The cross-listing of a few courses in this catalog should not lead the student to conclude that other courses cannot be suitably worked into any particular major.

Prerequisites, which are listed in a separate publication with course descriptions, are to be considered as essentially advisory and not as firm requirements. They indicate the level of proficiency required to carry on a course. The student who believes he has the level of proficiency necessary without taking the suggested prerequisite should consult the instructor before entering the course. Changes in prerequisites which are authorized after the printing of the course description booklet may be found in the *Timetable* for the current semester.

enrichment and resources

Credit by Examination

The student who believes he can pass a course successfully without formally registering for it or attending classes may take a special examination to earn credit for the course. He makes arrangements for taking this special examination by contacting the appropriate instructor or his adviser. Names of faculty members who can prepare, administer, and grade these special examinations are available in the offices of the dean of the colleges, dean of the School of Professional Studies, and assistant to the dean of the colleges.

GRADUATION REQUIREMENTS AND PROCEDURES

The University of Wisconsin-Green Bay offers five undergraduate degrees:

- Bachelor of Arts or Science, Environmental Sciences
- Bachelor of Arts or Science, Human Biology
- Bachelor of Arts or Science, Community Sciences
- Bachelor of Arts or Science, Creative Communication
- Bachelor of Arts or Science, Administration

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

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 having a pass-no credit grading system does not count in grade point averages, nor do grades received from institutions outside The University of Wisconsin system.

Residence Requirements

To graduate from The University of Wisconsin-Green Bay, at least one year of residence (31 credits) in the junior or senior years is required at the Green Bay campus. However, a student must take at least half the advanced work in his concentration or concentration-option in residence. And he must take at least two years (four semesters) of the liberal education seminar. Provided they are UWGB administered, all courses count toward residence whether taken at night, during the summer, during the January interim period, or regularly during the two semesters.

The residence requirement does not imply that a student must live in Green Bay or must carry a full-time schedule of courses. He may commute and he may 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 senior year in residence, for reasons of the military draft, marriage, or whatever cause, can graduate from UWGB. He must contact his adviser and, with his approval and that of his theme college or school, work out appropriate courses to be taken at

another university as a substitute for residence at UWGB as a senior.

A student transferring to UWGB as an advanced sophomore (42 credits or less) must meet all the requirements of the University and his theme college, if there are any. Any student transferring to UWGB with more than 42 credits, but less than senior standing is required to complete the junior and senior sections of the liberal education seminar only. Those students transferring to UWGB with senior standing meet the LES requirements by taking the six credits of the senior seminar plus six credits of the sophomore seminar or six credits of the junior LES. A student transferring as a sophomore or a junior will normally be given credit for meeting the distribution and tool subject requirements if he has taken courses that, although not equivalent, meet the spirit of the requirements.

Change of Campus

A student may move freely from one UWGB campus to another. The only procedure necessary is to file a Change of Campus Notification form with the Office of the Registrar. This form is available at the Office of the Registrar on the Green Bay campus and at the Student Services



offices on the Fox Valley, Manitowoc, and Marinette campuses.

Academic Plan Form

During the first semester of the junior year each student must file a form, the Academic Plan, stating how he has met or plans to fulfill all-University degree requirements (liberal education seminar, distribution courses, and tool subjects) as well as requirements for his college, if there are any, and his concentration, concentration-option, and professional collateral, if applicable. This plan should be filed with the Office of the Registrar, where it is used to determine if the student has met all the requirements for graduation. Transfer students provide similar information on another form, Academic Petition for Transfer Students.

Request for Graduation

A student who expects to fulfill degree requirements by the end of the term must file a request for graduation with the senior summary section of the Office of the Registrar. This must be done by the end of the third week of the student's final semester, or by the first week of a summer session for August graduates. The responsibility for filing this request is solely the student's.

Senior Summary

During the semester after a student has accumulated adequate credits for senior standing, 84 or more, he will receive a summary of the courses and credits to be completed prior to certification for graduation. An approved Academic Plan or an Academic Petition for Transfer Students must be on file in the Office of the Registrar before a summary can be issued. Whenever a student modifies his plan or petition, the substitutions must be approved and such approvals filed in writing in the Office of the Registrar.

Early Graduation

The UWGB 4-1-4 semester plan offers the student the opportunity to graduate easily within three years if he wishes. He can do this by taking full course loads during each major fall and spring semester, plus attending the special studies period held each January and the eight-week summer session.

By attending each fall and spring semester and each January interim 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.

Special Petitions

Whenever a student wishes to waive or modify an academic requirement or regulation, his waiver or modification is requested on a Special Petition. The student must state his proposal for waiver or modification clearly and must support his proposal with reasons that are educationally sound.

Special Petitions are available in the offices of the assistant to the dean of the colleges, dean of the School of Professional Studies, the concentration chairmen and/or their advising coordinators, and in the Student Services offices on the Fox Valley, Manitowoc, and Marinette campuses.

When the student has completed the Special Petition and has had it signed by the appropriate adviser(s) and/or dean, it is filed with the Office of the Registrar, where it becomes part of the student's official record.

ACADEMIC CALENDAR

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

January Interim Period

UWGB's 4-1-4 calendar provides a unique one-month period when energies can be concentrated on one of a specially selected set of intensive learning experiences. The keys to UWGB's January interim period programs are relevance, focus, intensive learning, and practical application.

Thus, January course offerings include and emphasize: *practica*—small group programs (in courses numbered 195, 295, 395, and 495) focused on relevant environmental problems and the practical application of skill and knowledge; *special courses*—innovative course offerings (numbered 283X and 483X) designed by faculty and students and emphasizing a variety of ecological themes from interdisciplinary perspectives; *intensive courses*—special on-campus offerings selected and designed to provide students with total immersion learning experiences, as in foreign language speaking skills, for example; *other-culture experiences*—month-long study or research participation 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*—

78 Summer Sessions

especially in mathematics, English skills, foreign languages, particularly for freshmen and sophomores.

From the perspective of the student, the January interim period may be used for numerous purposes. Many UWGB degree candidates complete their second semester sophomore or junior liberal education seminar requirement with participation in a community observatory, an on-campus practicum, or independent research. Many obtain distribution credits by completing special courses. Others broaden their knowledge and skill through independent study, practice, or research with UWGB faculty supervising and evaluating their performances. Others sharpen and advance their skills with advanced work in tool subjects. All may accelerate their college education by accumulating additional credits towards graduation.

Program activities carry from one to four credits. A student preregisters for the January interim period when he preregisters for the fall semester. No additional fees for continuing full-time students or for new full-time second semester registrants are charged for participation in the January interim period. Any student registering only for January interim period credit is charged the regular *per credit* fee. Students are expected to pay their own expenses incurred in any off-campus program. Some financial aids may be available to students for these programs.

A special series of fine arts activities and lectures is sponsored in relation to themes addressed in January. Student organizations and social activities continue during the month with special programs.

Summer Sessions

UWGB's summer sessions are organized around a special set of course offerings in the liberal arts and sciences and professionally oriented courses as well. Most of these courses express UWGB's fundamental environmental and ecological themes, and many of them are expressly selected to meet the educational needs of special groups of potential students. The programs consist of regular academic and special courses, workshops, short courses, clinics, conferences, and in-service professional training programs.

These programs are intended to serve the educational needs of UWGB's own undergraduates, undergraduates regularly enrolled at other institutions, selected high school students, post-graduate students, adults, professionals, and other citizens' groups whose members may not conventionally be thought of as "students." With sufficient lead time, UWGB's faculty will develop a special course offering or workshop in the summer period, so long as it expresses the

University's fundamental capability in environmental and ecological studies and is of high academic merit. Information on special course development can be obtained from the director of summer sessions.

UWGB's summer sessions are conducted within an overall eight-week format. Many courses run the full eight weeks. Others are of six, or four, or three weeks duration, depending on the subject matter and number of credits involved.

Summer session courses are flexibly scheduled so as to make it possible for students to work full time and to earn college credit simultaneously. Many offered are scheduled in late afternoon and evening hours, and some on a two-days-a-week basis.

In addition to UWGB's own undergraduates, many students from other colleges and universities enroll in UWGB's summer session to acquire courses which are available only under its unique academic plan. Others enroll in courses to satisfy graduation requirements at their present institutions. A large number of area adults also take advantage of the summer programs, as do numerous summer residents of the area.

The recent high school graduate will find credit courses and other special programs available to him in the summer. High school students of unusual merit may enroll in selected, appropriate courses and leave their college credits "in escrow" for later use. Recent high school graduates at marginal college entrance level may be allowed to enroll in a "college try-out" program as special students and, if their work is of sufficient quality, be considered for regular admission.

Honors level students in the social and natural sciences will find a special undergraduate research participation program which allows them direct, personalized participation as assistants in significant scholarly and scientific research with environmental foci. Similarly, highly qualified students in humanistic fields and in the arts may be allowed to participate in the creative arts apprenticeship program.

Study skills, student personal development, counseling programs, special learning programs, composition skills, intensive foreign language acceleration programs, basic mathematics, and similar programs are regularly offered. Tutorial assistance and individual guidance or small group programs characterize this aspect of special summer services.

Undergraduate studio experience in a variety of art forms is available at the Peninsula Summer Studios at Fish Creek in Door County, with some courses carrying UWGB credit, others being

offered in cooperation with University Extension and the Peninsula School of Art, Inc.

A highly popular program of theater activities is offered on each campus during the summer session. Marinette's "standing room only" Theatre On The Bay produces a series of dramatic performances throughout the summer season. On all campuses, the participation of residents of the surrounding communities as well as students is encouraged.

Some UWGB course offerings also carry graduate level credit, in cooperation with University Extension, while University Extension also offers advanced graduate courses on the four UWGB campuses.

Liberal education seminar requirements, both on and off campus, can be satisfied in the summer sessions. Cross-cultural practica on both a small group and independent study basis are readily available.

Ample summer housing is available in either the campus residence apartments or in nearby off-campus locations.

For the high school student, clinics and workshops, of one or two weeks in length, are a regular part of the UWGB summer session. Programs in such areas as band and choral music, basketball, soccer, golf, reading skills, and drama are available at various campus locations. While many area students commute to

these clinics and workshops, the availability of campus housing makes it possible for students from greater distances to attend.

Social and cultural activities are planned each summer by a program director at each campus. Students will find many opportunities for fun while they earn credit.

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

Complete information on specific summer programs may be obtained from the director of summer sessions or the director of student services at the campus the student plans to attend. Special publications and announcements about the coming summer's programs are available in advance.

SPECIAL PROGRAMS

UWGB has developed special academic programs to meet the needs of particular students. These programs are described below.

Honors Program

The honors program identifies, rewards, and develops students who exemplify the characteristics stated as the educational goals of the University. The honors student is seen as one who combines high academic achievement with



80 New Opportunities Programs

demonstrated willingness to make enhanced capacities and talents available to other members of the University community. The freshman whose grades place him within the top 10 per cent of the entering class is invited to begin honors work during his freshman year and he may enjoy all the special prerogatives provided for students in the honors program.

The sophomore or junior is invited to become a member of the honors program if he has at least a 3.5 grade point average. The student with a grade point average below 3.5 may also be invited if he has demonstrated outstanding achievement over two semesters of academic work and has demonstrated willingness to participate actively in the life of the University community.

Examples of participation by honors students or prospective honors students include work as resource assistants in the liberal education seminar, tutors in the special learning programs, and counseling assistants in the Office of Student Services. Special prerogatives for honors students include the following:

1. An opportunity, in consultation with theme college or honors advisers, to redefine degree requirements usually imposed upon other undergraduates; specifically, prerequisites for courses and all-University requirements may be waived.
2. An opportunity, in consultation with theme college or honors advisers, to pursue for credit a number of tutorial opportunities with faculty, limited only by the interest of the individual student involved.
3. An opportunity to arrange special lectures, seminars, and colloquia involving guests of the University and limited to honors students.
4. An opportunity to participate in exchange programs with honors programs at other universities.
5. A transcript which notes that the student was a member of the honors program of the University as well as a graduate of a theme college or school.

Graduating With Distinction—Senior Distinction

A student with a cumulative grade point average of 3.25 is qualified to graduate *cum laude*. A student with a cumulative grade point average of 3.5 who has successfully completed a senior distinction project is qualified to graduate *magna cum laude*. With a cumulative grade point of 3.75 and successful completion of a senior distinction project, the student will graduate *summa cum laude*.

Each of the four theme colleges and the School of Professional Studies invites qualified students to undertake senior distinction in their academic program areas. A senior distinction project, normally a senior thesis, a senior research project, or a senior creative project, is related to the student's concentration program. Information on senior distinction is available from the concentration chairmen.

New Opportunities Programs

Two distinct programs have been developed for students seeking new educational opportunities. These programs are designed to make possible undergraduate education for those who do not initially meet the normal entrance requirements of the University.

The new opportunities programs constitute an effort to carry out the following resolution adopted by The University of Wisconsin Board of Regents on May 17, 1968:

Whereas the problem of providing equal educational opportunities is one of the urgent and major crises facing this state and the nation; and

Whereas, by long tradition, this University has devoted its instructional, research and extension efforts to the problems of disadvantaged people whether disadvantaged by economics, geography, cultural deprivation or motivation; and

Whereas the University Faculty Council, the University Faculty Assembly and the University Administration have recommended immediate attention to the problems of equal opportunity for all the citizens of the state,

Be it resolved that the Regents of The University of Wisconsin direct the administration of the University to expand, within the limits of its resources, the University efforts to provide equal opportunity for disadvantaged citizens, with primary emphasis on Wisconsin residents. . . .

Students may seek admission to UWGB under the new opportunities program if they are clearly in need of its special resources. Such need will be verified by consultation with their high school advisers and teachers and religious and community leaders. Special prerogatives for students in the new opportunities program include the following:

1. An opportunity to participate without additional cost in a special learning program for UWGB credit during the month of January before the second semester of the freshman and sophomore years.

2. An opportunity to work with freshman and sophomore students in the new opportunities program upon completion of the first two years of the program.

3. A general opportunity to improve skills and capacities by use of UWGB special learning services, particularly in English composition and mathematics.

4. Close work with program advisers to assure that the student's academic program meets his immediate and long-range needs.

Freshman enrollees in the new opportunities program should be aware that a leading objective of the program is to assure that they will be able to complete the junior and senior years without further special academic assistance.

Special Learning Programs

Special learning programs are designed for the student with specific needs or problems in the areas of study skills, English proficiency, or mathematics. Students may be referred to the program through placement tests or on the advice of a faculty member. Students may also personally request the services of the staff at any time.

All work in the program is on a tutorial basis, scheduled at the convenience of the student. Workshop projects of a noncredit nature on specialized topics of particular interest to the student can be arranged. Participation in the program can be arranged through any special learning programs staff member or through the office of the program director.

OFF-CAMPUS STUDY

It is the philosophy of The University of Wisconsin-Green Bay that man's problems should be observed firsthand and experienced, not just studied through books or in the classroom, laboratory, or studio. Consequently, off-campus experiences for credit and noncredit are available which qualified students are encouraged to elect.

Major opportunities for off-campus study are contained in the sophomore and junior sections of the liberal education seminar. During the sophomore seminar, a special project is done using the Northern Great Lakes Region as a laboratory. The off-campus experience in the junior seminar is in another culture. Opportunities to visit other parts of the United States or abroad are available to qualified students. For students who participate in VISTA, the Peace Corps, or similar programs, credit equivalent to that given for all or part of the sophomore and junior seminars is available. In addition to the seminars, which are required of all students at

the University, other types of off-campus programs for credit include special practica during the January interim period.

A variety of volunteer off-campus opportunities are also available. These normally do not carry academic credit.

COMMUNITY OUTREACH: CONTINUING EDUCATION OPPORTUNITIES

As part of its outreach responsibilities and efforts, UWGB makes its educational programs and academic resources available to the people and communities of Northeastern Wisconsin. Late afternoon and evening courses are scheduled throughout the year and all daytime courses are open to adults who wish to enroll either on a part-time or full-time basis.

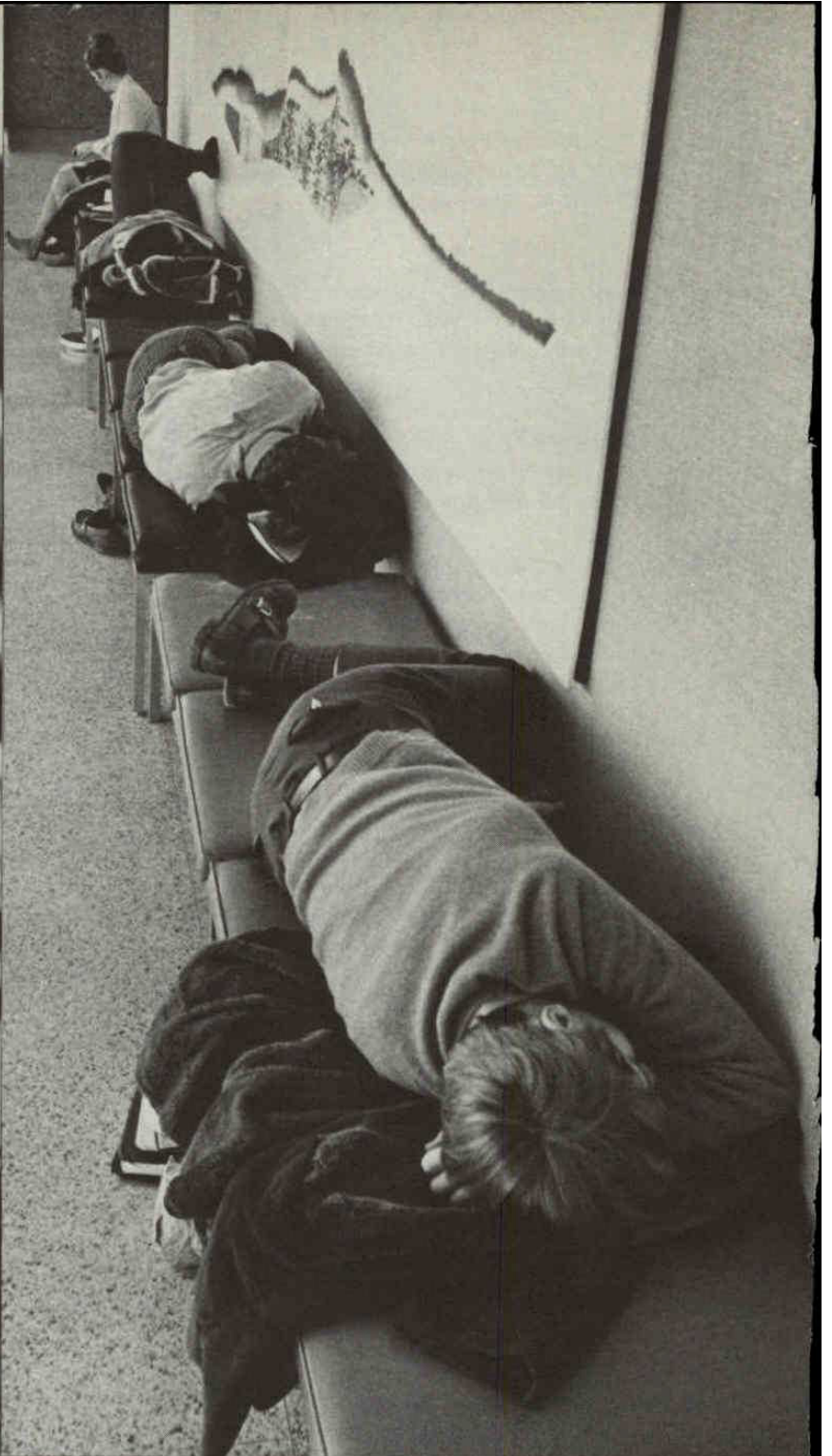
In cooperation with University Extension, UWGB also provides continuing education opportunities through classes, seminars, and workshops for working men or women, retired persons, non-professionals and professionals, young and old, poor and prosperous. These opportunities are scheduled at the campuses in Green Bay, Marinette, Manitowoc, and Menasha and elsewhere at times convenient to those interested in participating.

In this age of rapidly changing technology and increasing educational demands for advancement, more adults are turning to their university campuses for additional education. Some are working toward career goals which include a bachelor of science or arts degree. Others are enrolling in courses for credit that will enhance their educational or professional attainments.

UWGB encourages all adults to begin or continue their higher education. Those who wish to take courses for credit may (1) enroll as regular students on a full-time or part-time basis or (2) enroll as special students who do not choose to obtain degrees. The special student may enroll as a regular student later, if he wishes.

A number of opportunities are open to each adult. Regular daytime courses are available to those who qualify and are able to attend. Late afternoon and evening courses, especially convenient for the man or woman who has a regular daytime employment schedule, are available both during the regular school year and during the summer session.

Adult members of the community register for credit in the same manner as other students. Fees are established on the basis of the number of credit hours taken. The Office of Student Services at each campus can provide specific information and assistance on registration, fees, and related matters. Adults who have questions and special concerns about their educational





84 Seminars and Conferences

plans are encouraged to contact the office of adult education.

Late Afternoon and Evening Course Opportunities

By their nature or content, some of the courses in UWGB's regular academic curriculum are of particular interest to adults and are scheduled for late afternoon or evening.

Community adults who wish to enroll in such courses should consult the current *Timetable* to determine what is available in any given semester. Copies of the *Timetable* are available in advance from the offices of the registrar or adult education at the Green Bay campus or from the Student Services offices on the Fox Valley, Manitowoc, and Marinette campuses.

Individuals interested in having a particular course or group of courses scheduled for late afternoon or evening should make their interests known to the office of adult education.

Noncredit Classes, Workshops, Seminars, and Conferences

UWGB and University Extension cooperate to provide various noncredit offerings that focus on the problems and opportunities of communities, individuals, and families.

Offerings focusing on communities may cover such topics as enhancing environmental quality; community and regional planning and development; economic and social development of Northeastern Wisconsin; business, industry, and labor management; recreation development, including planning and management of facilities and services; conditions of individual, family, and community disadvantage; and cultural development in communities.

Offerings with an individual focus cover a broad array of possibilities, including professional improvement in the fields of education, business management, public administration or governmental services, recreation and leisure use, communications, and social services. Noncredit offerings in literature, history, philosophy, music, theater, dance, and the visual arts may contribute to the general educational advancement or cultural enrichment of the individual.

Distinctive Seminars and Conferences

From its inception, UWGB has conducted special academic seminars and conferences which help to highlight the ecological focus of the University and the unique contributions of its four theme colleges and its School of Professional Studies. Nationally known individuals, as well as leaders from Wisconsin, are involved in these seminars

and conferences. All interested students, faculty, and area citizens are encouraged to participate.

The first of such conferences was the symposium on "Population Growth: Crisis and Challenge," held in January, 1970. Conferences held during the 1970-71 school year included a workshop on environmental education in the primary and secondary schools, a second symposium on population, a conference which studied the effects of various living environments on human behavior, and a conference that explored changing values and conflicts between environmental quality and social responsibility. Conferences of this type are a major instrument by which UWGB can make the general citizenry a complementary part of the student body.

Undergraduate Credit Courses Through University Extension

UWGB, in cooperation with academic departments on the Madison and Milwaukee campuses of The University of Wisconsin and University Extension, encourages some courses for undergraduate credit that otherwise would not be available here. These courses are scheduled at the campuses and at such other places as meet the needs of the residents.

Some summer courses which can be taken by adults are offered cooperatively by University Extension and UWGB. For example, summer courses are offered at Door County in painting and art metal. Summer courses also are offered at the four campuses of UWGB. Most classes are held at times convenient for adults.

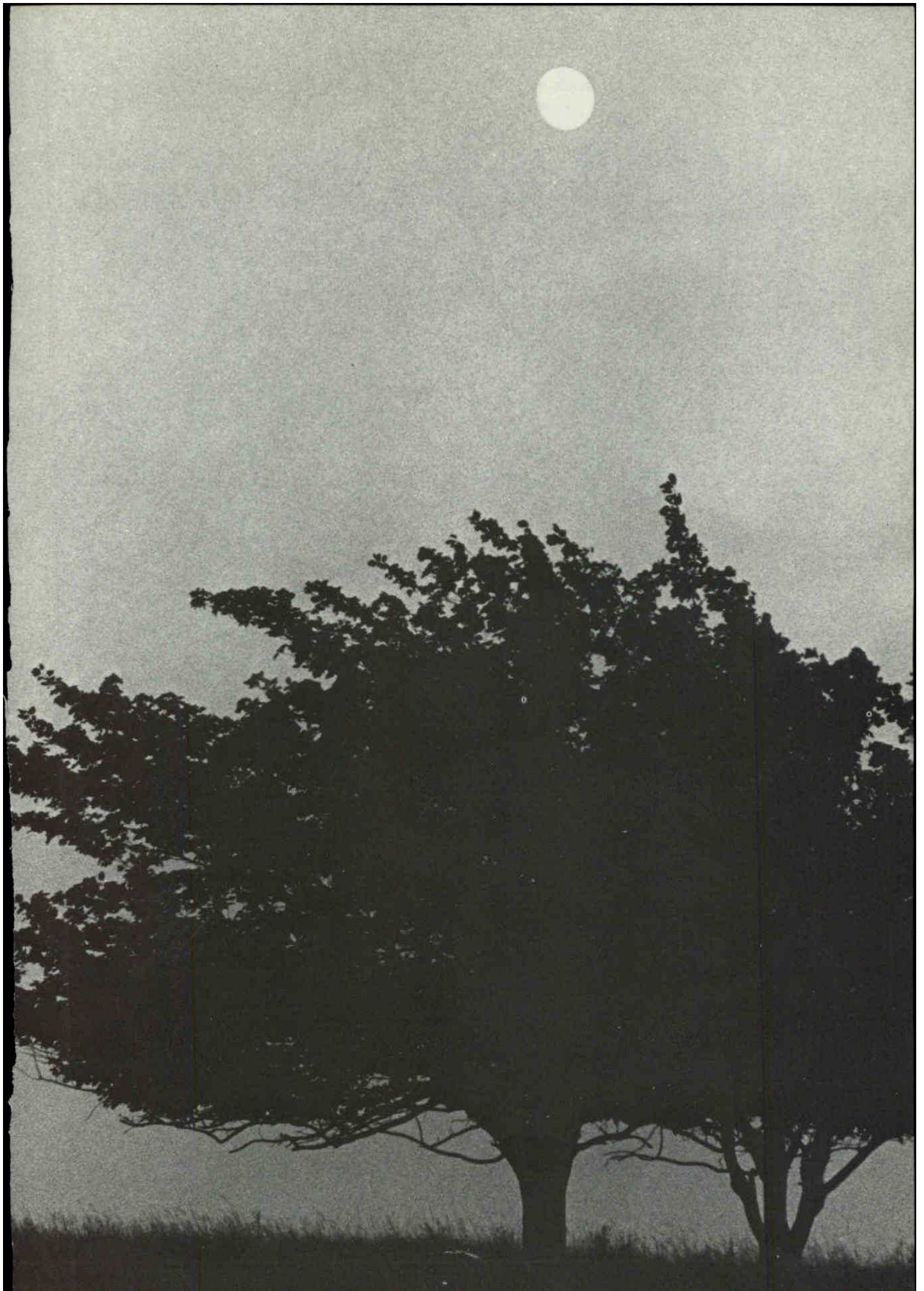
Graduate Credit Courses Through University Extension

In cooperation with academic departments on the Madison and Milwaukee campuses, University Extension offers selected graduate credit courses in Northeastern Wisconsin. Examples of these courses are: The Exceptional Child; Current Topics in Guidance and Counseling; Emotional Health and the Curriculum; Human Behavior and the Social Environment.

Counseling and Advising for Adults

Individuals who wish to make some evaluation of their possible educational objectives or goals can obtain assistance from counselors in the Office of Student Services at any of the UWGB campuses. The office of adult education also serves as an initial contact for adults who have special concerns about their educational plans.

A "Seminar for Women: Exploring Your Future" is scheduled regularly on the Green Bay and Fox Valley campuses. The seminar provides an opportunity for small groups of women to seek



86 Student Life Programs

out a unique life style, to discuss the changing roles of men and women, and to search for self-understanding and self-fulfillment.

Community Outreach Possibilities

Because of its focus on problems of the environment and its mission to help resolve those problems through education, UWGB is particularly responsive to the needs of Northeastern Wisconsin. The following are examples of such opportunities:

A UWGB music faculty member at the Fox Valley campus was instrumental in the organization of the Fox Valley Symphony; the restoration and preservation of an historic fishing village is a communiversity project being undertaken jointly by UWGB, The University of Wisconsin Sea Grant Program, the University Extension Department of Arts, The University of Wisconsin Department of Landscape Design, the State Historical Society, and community leaders of Two Rivers and Manitowoc.

STUDENT LIFE PROGRAMS

Although the major University emphasis is on acquiring intellectual skills, it is important that emotional life and practical experiences not be neglected. It is the goal of co-curricular programs to integrate the intellectual and emotional experiences of the student. Included in this integration are the important tasks of applying newly acquired intellectual skills and acquiring new nonacademic abilities outside the formal classroom.

The most effective co-curricular programs are those initiated by the students themselves. Today's student is in the best position to know his interests and to meet them through a variety of programs. Students have done this by sponsoring speakers, teach-ins, marches, and student organizations. The organizations include Student Government Association, political clubs, environmental action groups, social and service groups, and recreational clubs, such as the Ski Club. The staff of the Office of Student Life Programs is available to consult with and assist these clubs and organizations in their functions or to help in the creation of new organizations where there is interest.

In instances where there may be student interest in an area which is not developed by students, the Student Life Programs office may become more actively involved in initiating programs, both those that are fairly large and those involving only a few students.

Artistic accomplishment, fostered by participation in the University's music, theater, dance, and visual arts programs, is demonstrated by students

participating in band and choral groups, play productions, art fairs, and many other performance activities.

The dynamic relationship between the curriculum and the co-curriculum at UWGB is enhanced by informal individual relations between students and faculty and frequent faculty-student discussion groups meeting in faculty homes.

Volunteer Programs

Students are encouraged to become aware of and involved in the community outside the University, reflecting UWGB's emphasis on the relevance of education and its application to area problems. This is accomplished in part by volunteer programs through which concerned students have an opportunity to apply their skills in tutoring, working in neighborhood centers, working with mentally retarded and emotionally disturbed children, and in other community services. Volunteer programs are coordinated through the Student Life Programs office.

Shorewood Club

The UWGB student union, the Shorewood Club, is situated on a bluff overlooking the waters of Green Bay. It is a place where students, faculty, and staff gather for informal meetings, seminars, and other activities. Dances, receptions, and other more formal activities also are held here. Food service is available during the noon and early evening hours.

The Shorewood Club also provides a center for students who live on campus to meet informally with those who commute. An activities program is planned to bring all students together. The student center is governed by the Shorewood Board, whose members are elected by the student body.

The club facilities were expanded in 1971 to include a new building adjacent to the existing Shorewood Club. This new building is used primarily as a dining and assembly hall, greatly expanding the main campus food service. It also accommodates weekend dances and other activities sponsored by the club.

Housing—Campus Apartments

Privately owned apartment-style residences on private property adjacent to the main campus provide living-learning experiences for UWGB students. The dynamic relationship that exists between the student's academic development and his learning environment is supported by various residence programs based in these housing units.

Student housing is planned so that the program, staff, and facilities complement the academic program. Since the curriculum stresses independent study and small group seminars, the housing units are built with student privacy and opportunities for small group relationships as primary goals. Apartments provide two double bedrooms, a common living-study area, and kitchen facilities for every four students.

Many services for students are offered in the student apartments. These include counseling and tutoring programs and a student-operated food cooperative for the purchase of groceries and other supplies. A coffee house, operated by resident and commuter students, is located in the basement of one of the student apartment buildings. This facility provides an informal meeting place for students and faculty for discussions and entertainment.

The variety of residence programs based on the grouping of students and the uses of staff and facilities include the following possibilities: the living-learning center concept, which emphasizes the grouping of students according to a related or common seminar, possibly including the residency of the seminar leader; special purpose housing, which includes programs of varying lengths and purposes, such as foreign language houses, leadership training, and special learning *program workshops or projects*; students at similar stages of academic progress might share several adjoining apartments while preparing for "off-campus" or "other-culture" experiences.

Off-Campus Housing

UWGB students are not required to live in campus housing. The Fox Valley, Manitowoc, and Marinette campuses are attended primarily by commuting students who live at home or in local *rooms and apartments that are privately owned*. Many students at the main Green Bay campus also live at home or in private residences.

Students who choose to live in private off-campus housing are eligible for and are encouraged to participate in all programs available to on-campus students. The Office of Student Life Programs on the Green Bay campus maintains a current listing of a limited number of private rooms and apartments available to students. Such off-campus listings are maintained by the Office of Student Services on the three two-year campuses.

Intercollegiate Athletics

UWGB's intercollegiate athletic teams presently compete in basketball, golf, soccer, and tennis. All home basketball games are played in the Brown County Veterans Memorial Arena; and beginning with the 1971 fall semester, contests in

golf, soccer, and tennis are being played on the new outdoor facilities at the main campus.

UWGB is not presently a member of any conference or league and thus competes in all athletic contests as an independent. Its schedule includes major four-year institutions from throughout the Midwest and around the country. As a member of the National Association of Intercollegiate Athletics, the University abides by the rules of that body in determining the eligibility of student athletes and the conduct of students in connection with athletic events.

UWGB's two-year campuses located at Manitowoc, Marinette, and Menasha are members of the Wisconsin Collegiate Conference. Their athletic programs include such sports as basketball, cross country, golf, soccer, tennis, and wrestling.

Intramural Activities

UWGB offers a comprehensive program of intramural activities for men and women and encourages each student to participate in one or more such activities. These activities are individual, dual, and team oriented and are co-educational whenever feasible. Intramurals are highly organized with established rosters, schedules, rules, and officials and are promoted in league and/or tournament form. The programs are offered at most hours of the day and days of the week. On-campus sites provide for the majority of the programs but off-campus facilities are occasionally utilized. The emphasis is upon participation, competition, and enjoyment in the following areas:

FALL: Archery, flag football, golf, soccer, speedball, and tennis.

WINTER: Badminton, basketball, bowling, fencing, handball, pocket billiards, swimming, table tennis, volleyball, weight lifting, and wrestling.

SPRING: Golf, softball, tennis, and track and field.

In addition, the four UWGB campuses compete in basketball, bowling, pocket billiards, swimming, table tennis, and volleyball. Other all-UWGB tournaments are conducted at other times of the year. Men's and women's competition is scheduled in these events whenever appropriate.

The intramural program is organized and administered by the Office of Intramural and Recreational Activities and the Intramural Activities Council. The council is composed of team captains, activity representatives, and staff advisers.

Recreational activities, in contrast to intramural activities, are more individual and less organized.

88 Counseling

Their purpose is to prepare students for lifelong participation in activities which they find enjoyable and suitable. On-campus facilities and many items of basic equipment are available for students to use.

Student Development Center

The Student Development Center is an educational resource center designed to help students at UWGB realize their potential, actualize their educational goals, and bring about creative change in themselves. The center tries to be responsive to the needs of all students. Its primary objective is to help facilitate the emotional growth and development of all students and to help them plan and achieve their educational and life goals. A staff of professional counselors and trained resource persons is available for personal counseling, human relations training, advising, and testing.

Counseling

Both individual and group counseling are utilized to help students make decisions that affect their educational, vocational, and personal-social development and adjustment. While most students generally make sound decisions in these areas, the Student Development Center staff members are valuable resource persons for many students who would like some help in making thoughtful and informal decisions. All students using the center are provided with a confidential setting where they can explore their plans and goals. Students requiring long-term counseling or those with severe emotional problems often are helped to find appropriate community resources and agencies.

Human Relations Training

Human relations, self-understanding, human potential, and other counseling groups designed to help students better understand themselves and to improve interpersonal relationships are conducted regularly by the Student Development Center staff for students who wish to have this kind of experience.

Placement and Career Information

The UWGB Placement office provides comprehensive career advisory and placement services. (These services are designed for all UWGB students as well as for alumni desiring new positions.)

The Placement office endeavors to bring to the campus employers from business, industry, government, and education, providing students with a wide range of job opportunities. In addition, a library of up-to-date literature on job opportunities is maintained and career guidance is available to students who request it. Students

are assisted in making contacts and preparing resumes for job interviews.

In conjunction with the Placement office and the Student Development Center, a student can take advantage of individual or group counseling sessions to assist him in reaching a career decision based on a full appreciation of his potential.

The Placement office also provides information and assistance to seniors wishing to continue their education at the graduate level. The Placement library includes graduate school catalogs and information on financial assistance.

RESOURCES

Office of Instructional Services

The responsibility of the Office of Instructional Services is to support the instructional and administrative functions at all campuses of the University through media and audio-visual services, computing and data systems, UWGB libraries, and the work of the curator of art. Incorporation of these services for enrichment of instruction under a single central office helps to assure that the various units of University life will be drawn together into an integral whole and served in the most effective manner possible.

Computing Services

The staff of Computing Services is comprised of consultants, programmers, systems analysts, computer and machine operators, administrative and clerical personnel, and hourly student employees. The staff supports the academic program of UWGB, sponsored and unsponsored research for faculty members, and administrative requirements of University offices.

Consulting services also are offered to students and faculty in such areas as use of facilities, user program design, software availability, program testing, and use of basic machines. A test scoring machine, along with appropriate computer programs to facilitate the scoring and analysis of examinations, also is available.

Capability of the UWGB computer system is multiplied by its link through a computer terminal to the statewide University of Wisconsin computing utility network, permitting programs in a wide choice of computer languages and software. A system of remote terminals is planned for the Green Bay and outlying campuses to further assist administrative and instructional activity.

Curator of Art

The University curator of art serves as custodian of UWGB's art collection, which includes the

contemporary work of artists enjoying national and international reputations, as well as exemplary efforts by outstanding artists residing in the Upper Great Lakes region. Paintings, sculpture, watercolors, prints, drawings, ceramics, and photography comprise the various art forms owned by the University.

The curator of art arranges exhibits at all campuses, conducts a television program entitled "Gallery" which critiques the exhibitions for viewing at the outlying campuses, and acts as liaison to principal museums.

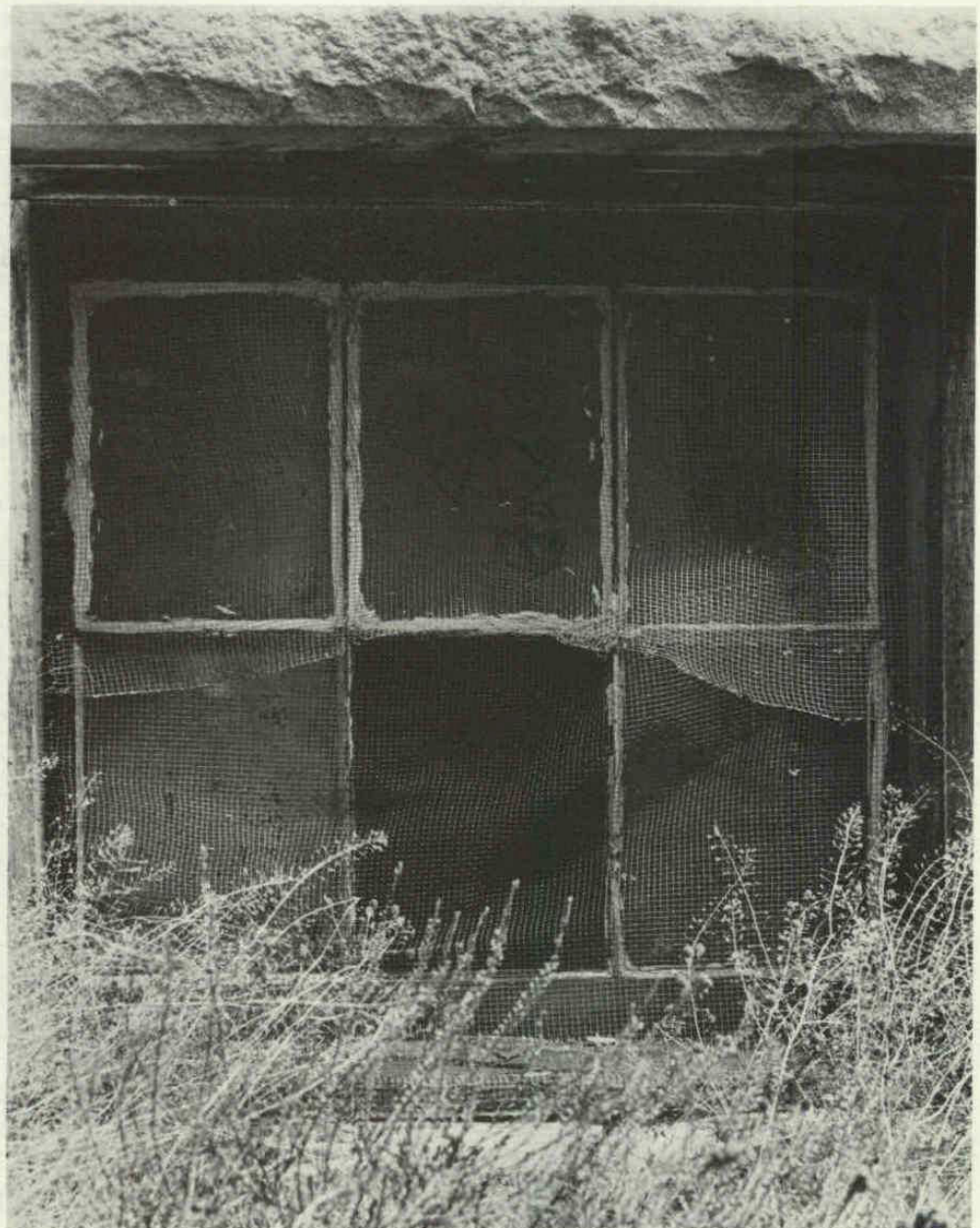
Educational Communications

Innovation, one of UWGB's primary thrusts, has found expression through the distribution of instructional materials over a network of audio and video facilities whose utilization has won national attention. The network is the result of coopera-

tive efforts between faculty members and Instructional Resources staff members.

Microwave transmission, videotape distribution, cassette duplication, and closed circuit distribution combine with television, audio, photo-film, and graphics to create a distinctive instructional program available to all UWGB campuses, answering the demand for practical study tools in the emerging field of ecology. Semester-long courses are transmitted from Green Bay to the Marinette campus via a microwave link and are augmented by an exchange of questions and answers through studio and classroom inter-campus audio facilities. This circuit has also been a means of multiplying the northeastern Wisconsin audience for lectures and concerts, art exhibitions, and governmental deliberations.

Instructional television programs and audio lessons are routed to classrooms and carrels on the



main campus through a multi-channel switching system. Learning carrel installations are strategically located throughout the campus and occupy the entire first floor of the new Library-Learning Center. They are focal points for audio-tutorial instruction in such subjects as algebra and physics at a pace tailored to the individual needs of students.

Photographers and audio production specialists combine their talents with faculty and staff members to develop imaginative slide/tape presentations explaining the University mission and the ecology of northeastern Wisconsin to classroom and community groups. A corps of trained students assists the professional staff of Educational Communications with film and equipment handling, television and audio production duties, and art-photo assignments, while gaining proficiency in skills highly demanded beyond the campus.

UWGB is also the studio home for public television channel 38 serving northeastern Wisconsin and licensed to the Educational Communications Board. This ETV channel is available as a million-watt showcase for the University's finest cultural and instructional efforts in its outreach to the community.

Libraries

The air-conditioned, eight-story Library-Learning Center is thoroughly contemporary in spirit and in utility. Employing the latest developments in library automation and planning; embodying attractive and practical design; centrally located on the campus; providing for the comfort and convenience of its readers and staff; endowed with a warm, pleasant atmosphere which invites students and stimulates learning in its many modes; and stocked with books, periodicals, and a full range of resource materials in all forms, the Library-Learning Center is the intellectual center of the campus.

Use of a computer and the most advanced processing techniques have helped to provide more than 100,000 books, 12,000 reels of microfilm, more than 400,000 microprint cards, and various other types of library material now being used by students. The combined periodical subscription list for all UWGB libraries now totals about 2,600 titles, with back files of most titles available on microfilm.

The library has been designated as a full depository for United States government documents and for Wisconsin documents. The Canadian government recently designated UWGB as one of the few U.S. depositories for Canadian documents. A complete set of United Nations documents and selected documents of foreign countries is maintained on microprint. In addition, the library is a depository for Wisconsin and Michi-

gan maps of the U.S. Geological Survey. Negotiations are being completed to have the library designated as an Area Research Center of the State Historical Society.

A highly trained staff is on hand to assist students and faculty in their work. The library's open stack arrangement brings readers and books together quickly and pleasantly. Carrels, tables, and group study rooms are provided in close proximity to the collection for convenience and uninterrupted study. Resources of the Memorial Library in Madison are made available through weekly truck service to Madison, aided by a microfilm copy of the Memorial Library public catalog. The library is also an active member of NEWIL, an organization of northeastern Wisconsin area libraries sharing resources for better service to patrons. Faculty and students with advanced standing can obtain materials from other libraries throughout the country and the world through the Interlibrary Loan Service.

Libraries containing from 10,000 to 20,000 volumes each are located at the Fox Valley, Manitowoc, and Marinette campuses. Tailored to the unique offerings of each campus, these collections by no means duplicate each other or the main campus collection. Each library is directed by a trained professional librarian who is able to assist students and faculty in using and obtaining materials from all UWGB libraries and from outside sources. A microfilm copy of the union catalog of the holdings of all UWGB libraries is maintained at each branch library for lending purposes. The best available means of communication and daily truck service tie all campus libraries together to make their resources available to all students.

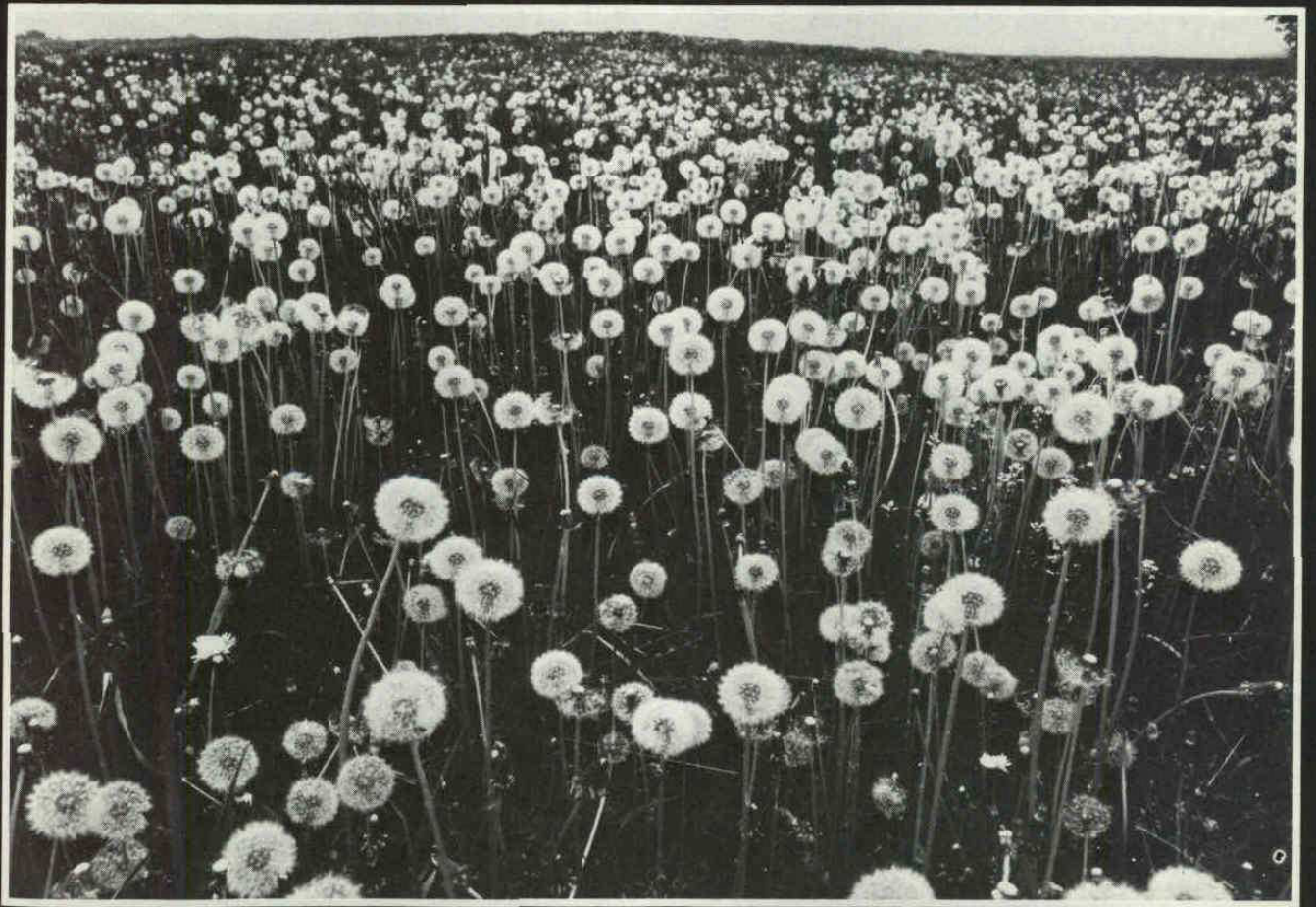
Lectures and Fine Arts

A student-faculty committee and staff coordinator comprise the office of lectures and fine arts. It is the responsibility of the office to "book in" all professional performing arts programs and lectures on all four UWGB campuses.

Guest artists and groups in music, drama, and dance provide opportunities for students to see and hear professional performances, and thus complement the University's instructional program.

The University also has a responsibility to the community. The institution is one of the natural homes of the performing arts, and its cultural community-service role is a proper one.

The office of lectures and fine arts also works closely with the instructional program in lending production support for on-campus shows and events and arranging for tours of University-based performing groups.



GENERAL POLICY

The University of Wisconsin has a uniform admissions policy for all campuses. One application blank is used throughout the University, and every student is expected to meet the same requirements for admission whether he plans to start his college career at one of the campuses of The University of Wisconsin—Green Bay, on the Madison campus, the Milwaukee campus, at UW—Parkside, or at one of the campuses of the Center System.

The University of Wisconsin—Green Bay bases its admissions decisions on the policy of accepting all qualified applicants who seem to have a reasonable chance of meeting academic requirements for graduation from the University.

ADMISSION REQUIREMENTS

A high school graduate who wishes to qualify for admission as a degree candidate should fulfill the following requirements:

1. Rank in the upper half of his high school graduating class. (A resident of a state outside Wisconsin may be expected to rank above this level as measured by his high school record and standardized test scores.)
2. Provide the University with a recommendation from his high school principal or guidance counselor.
3. Take one of two standard tests required for admission: the American College Test (ACT), given by the American College Testing Program, Inc., or the Scholastic Achievement Test (SAT), given by the College Entrance Examination Board. The standardized test score (ACT or SAT) is considered as part of the application for admission, but there is no passing or failing of an entrance examination. The level of achievement indicated by test results will be used by an admissions counselor in carrying out the basic admissions policy.
4. Present 16 units of high school preparation distributed in the following pattern:

	English	3 units
	Algebra	1 unit
	Geometry	1 unit
		5 units
2	Foreign language*	2 units
out of	History and social studies	2 units
3	Natural science	2 units
		4 units
	Academic electives:	
	English	
	Speech	
	Foreign language*	
	Social studies	
	Natural science	
	Algebra	
	Geometry	
	Trigonometry	
	Analytic geometry	
	Calculus	
	Total	3 units
	Other electives**	4 units
		16 units

*Fractional units not accepted
 **Fractional units accepted

ADMISSION PROCEDURES

Prospective Freshmen

A student seeking to enter the University as a freshman should complete an application for admission and take one of the two admissions tests. An application blank may be obtained from the student's high school office or from the admissions office at any University of Wisconsin campus. At the time of the admissions test (ACT or SAT) or later, the student should request that test scores be sent to the UWGB Office of Admissions.

An application should be submitted no later than August 1 for the fall term, December 15 for the spring term, or May 1 for the summer session. A student who does not qualify as a Wisconsin resident must submit a \$10 nonrefundable fee with the application for admission. Wisconsin residents do not pay an application fee.

admissions and expenses

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 the admissions counselor in making the best possible evaluation of their potential for achievement.

Anyone who enters the University as a new student is required to have a physical examination by his own physician, at his own expense. The form to be completed by the physician will be mailed with the authorized permit to register. Results of the physical examination will have no effect on a student's eligibility to enter the University, but will be kept on file as confidential material.

Office of Admissions Advising. If any one office of the University can be identified as existing to serve the high school student, his counselors, and his teachers, it is the Office of Admissions Advising.

The basic goals of this office are twofold: to assist the potential college student in choosing the school he will eventually attend, and to extend University services and programs to the school communities it serves.

Advanced Standing Transfer Students

The student who has attended any kind of school except another UW campus after high school graduation will complete the same application as new freshmen. In addition to the high school record, a transfer student must submit an official transcript from all schools attended since high school graduation and evidence of honorable dismissal in all respects and/or eligibility to continue from each school attended. Included are nursing schools, business schools, vocational and technical schools, as well as other colleges and universities. The student must submit the records whether or not the work was completed and regardless of his desire to claim credit for the courses. The only exception is training schools attended as part of military service.

94 Transfer Students

A student who has completed 15 or more credits at another college or university is not required to submit ACT or SAT scores. Residents of Wisconsin should normally have earned at least a "C" average in all college work; residents of other states should have earned grades averaging at least half "B" and half "C" on all credits carried.

UWGB is flexible regarding the transferability of credits from other institutions. While college credits from all accredited colleges and universities are evaluated, UWGB is concerned mostly with levels of proficiency. Through the use of the College Level Examination Program (CLEP) and other tests the level of proficiency of students with varying kinds of educational experience beyond high school is measured. In some cases UWGB credits are awarded for high placement on these tests.

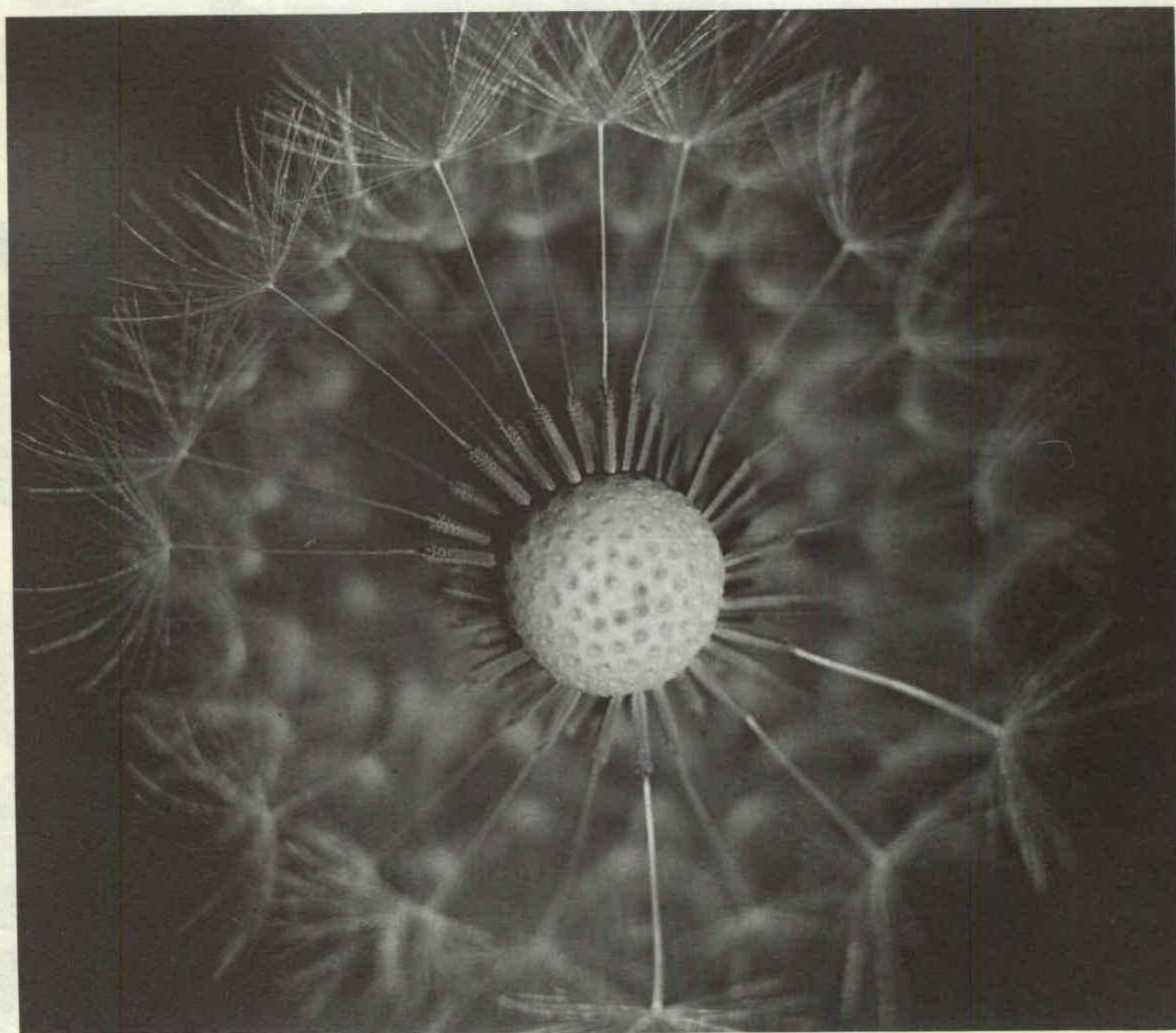
University of Wisconsin Transfer Students

A student who has attended another University of Wisconsin campus will complete the UW Re-entry/Transfer Application. The completed

application should be filed at the Office of the Registrar of the campus last attended. A student must be in good standing and eligible to continue at the UW campus where last enrolled.

A student transferring to UWGB as an advanced sophomore (42 credits or less) must meet all the requirements of the University and his theme college, if there are any. Any student transferring to UWGB with more than 42 credits, but less than senior standing is required to complete the junior and senior sections of the liberal education seminar only. Those students transferring to UWGB with senior standing meet the LES requirements by taking the six credits of the senior seminar plus six credits of the sophomore seminar or six credits of the junior LES. A student transferring as a sophomore or junior will normally be given credit for meeting the distribution and tool subject requirements if he has taken courses that, although not equivalent, meet the spirit of the requirements.

A student may move freely from one to another campus of UWGB. One who does is not considered a transfer student.



Further information regarding residence requirements and graduation procedures can be found in an earlier section of this catalog.

Placement Examinations

The general program of placement examinations is described on page 30. Some of these examinations are required as parts of the admissions procedure and are specified in the application material sent to prospective students.

Credit Evaluation

A student who has attended another college, university, technical school, or nursing school, must submit an official transcript from each institution as part of the requirements for admission. Subsequently, any courses completed or credits earned will be evaluated by the credit evaluators in the Office of the Registrar; an official credit evaluation will be issued to each student indicating the courses and credits accepted to fulfill requirements at UWGB. In general the accreditation status of the previous institution as well as the quality of achievement are the determining factors in course and credit transferability.

Academic Petition for Transfer Students

The student who transfers to UWGB from another UW campus, or from another college or university, must file a form, the Academic Petition for Transfer Students, which is similar to the Academic Plan. The principal difference is that a transfer student may elect to substitute his former basic degree requirements for the all-University requirements of UWGB. The student should file this petition with the Office of the Registrar as soon as possible to ensure good program planning and optimum progress in meeting an approved set of degree and major requirements.

Admission to Summer Session

The following categories have been established for admission to the UWGB summer session.

Temporary UW Inter-Campus Transfers. A student who plans to enroll only for the summer session at one of the UWGB campuses should obtain a Temporary Inter-Campus Transfer form from the Admissions or Registrar's office at his home campus. The completed form should be sent to the UWGB Office of Admissions.

Non-UW Undergraduates. To take work at a UWGB campus as a summer session special student, the applicant must be eligible to continue at the college or university last attended. He is responsible for determining the acceptance of credits by the institution at which he is working

for a degree. Admission as a summer session special student carries no commitment for permission to register in the regular school year at any campus of The University of Wisconsin.

High School Juniors and Seniors. A student who has completed the 10th or 11th grade and is in the upper 10 per cent of his class should discuss his plans for college and obtain written permission to attend from his principal or school head; the permission must accompany the application.

Continuing UWGB Students. A UWGB student enrolled at any campus can preregister for summer session courses during the spring. He does not need to apply for admission to the summer session.

The same academic regulations apply in the summer as during the regular academic year; however, a maximum credit load is 9 credits.

Special Opportunities

The student who qualifies may be permitted to enroll in one or two University subjects while completing high school. Interested students should consult with their principals or guidance counselors before completing an application, since recommendations by these persons are necessary to ensure that the program fits in with high school class schedules.

Early Admission for Superior High School Students. UWGB provides opportunities to permit superior high school students to begin college work at any of the four campuses before graduation. Selection for early admission is based on the individual's high school record, social maturity, educational plans, and the appropriateness of the plan for the particular student. Scholastic ability is measured by the high school record and an ACT or SAT test score which places the student in the top tenth of high school class scores. Major consideration is given to the recommendation of the student's high school principal or his designated representative. A student electing an early admission program should have completed the 11th grade.

Adult Students and Veterans. UWGB provides many opportunities for those who have not pursued higher education and for those who had to interrupt their education to work, raise a family, or fulfill a military obligation. These opportunities take into consideration that some adults in these categories do not qualify for admission on the basis of the requirements listed previously. The adult is well advised to study the continuing education opportunities offered through University Extension (see page 81). Should he wish to take one or two courses to work toward a degree, he is invited to consult an admissions counselor at any of the four UWGB campuses, or write for

information to the UWGB Office of Admissions or Adult Education.

EXPENSES

Semester Fees and Tuition

Legal residents of Wisconsin, with certain exceptions, are charged only fees. 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 each semester currently total approximately \$275 for a student who is classified as a Wisconsin resident by the Office of the Registrar and who is enrolled for 12 or more credits. A nonresident student pays approximately \$950 per semester tuition and fees. A part-time student may register for 11 credits or less on a per credit basis. Wisconsin residents pay an approximate fee of \$25 per credit; nonresident students, approximately \$81 per credit.

Resident status classification is determined by residence examiners in the Office of the Registrar and is governed by Section 36:16, Wisconsin Statutes of 1963. Since the regulations which determine resident status for tuition purposes differ in many respects from resident determination for other purposes, the student whose resident status may be in question is advised to consult the statute specified above or write to the Office of the Registrar. Informal opinions or statements concerning resident status determination by other University personnel are not to be considered official.



Fees and tuition, as well as the application fee, preregistration fee, late payment fee, late registration penalty fee, and the refund schedule are subject to change without notice. Revised schedules are published in the *Timetable* for each semester or term.

Preregistration Fee

When a student confirms his preregistration study list he is required to deposit a nonrefundable preregistration fee of \$50. This deposit is applicable to the regular semester fees when final registration is completed and the balance of the semester fees is paid. The fee is nonrefundable. The preregistration fee is not an additional fee but is a part of the semester fee used as a deposit to reserve a student's place on class rosters up to the first day of classes.

Late Registration and Late Payment Fees

An added fee of \$10 is charged all full-time students, and certain part-time students, who complete final registration after the official registration period.

If fees are paid after the first week of classes, the student will be assessed a late payment penalty according to the following schedule: during the second week of classes, \$25; during the third and fourth week of classes, \$50 penalty.

Refunds

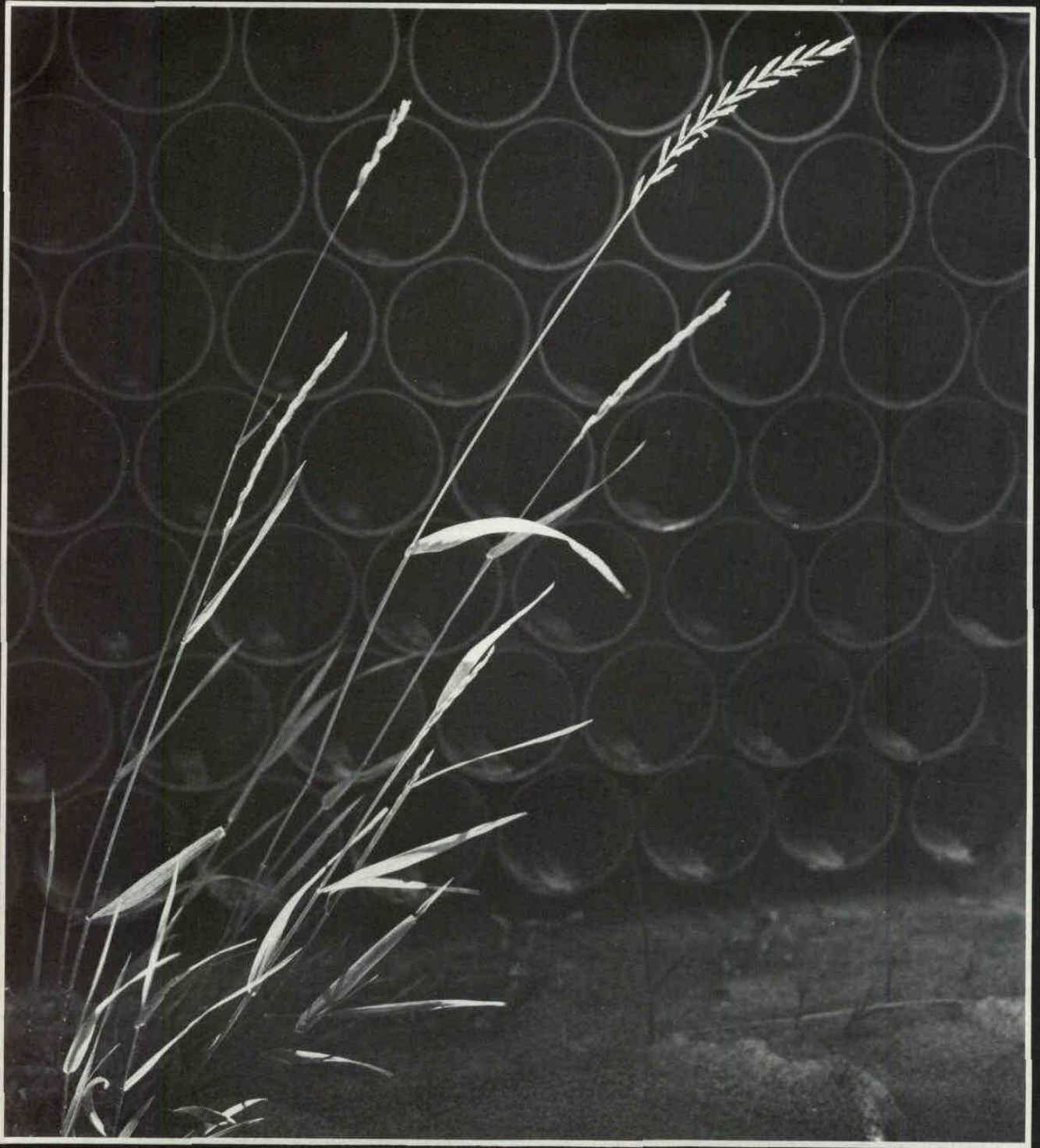
A student who notifies the Office of the Registrar, by filing an official withdrawal form, that he is withdrawing from all classes at the University before the end of the fourth week of classes is entitled to a partial refund of fees and tuition as follows: during the first or second week of classes, 80 per cent; during the third and fourth week of classes, 60 per cent refund; after the fourth week of classes, no refund. The date on which the official Notice of Withdrawal form is submitted to the Office of the Registrar is the date used for authorizing a partial refund.

Students who make substantial credit load reduction adjustments during the first through fourth week may also be eligible for a partial refund of fees and tuition.

All penalties and refunds are subject to change without notice.

Summer Session Fees

Fees for the 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. Fee schedules for the 1972 and 1973 summer sessions will be announced in appropriate summer session publications well in advance.



STUDENT FINANCIAL AIDS

The primary objective of the Office of Student Financial Aids is to assure that no academically qualified student shall ever be denied an education at UWGB because of lack of financial resources. There are many and varied financial aids available to *qualified students who wish to attend any UWGB campus*. Students have the opportunity to draw from the overall University financial aids program. In addition, some campuses have their own special programs. The financial aids office at the campus the student wishes to attend will give him information about financial aid and how he may obtain it.

A Typical Budget

A 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:

	Commuter student living at home	Resident student living on campus
Fees	\$ 550	\$ 550
Books and supplies	\$ 125	\$ 125
Room and board	\$ 450 (board only)	\$1150
Travel and miscellaneous	\$ 525	\$ 475
Totals	\$1650	\$2300

Nonresident students should add \$1350 to this budget for out-of-state tuition. Changes of fees and tuition, which may be made *without notice*, would also change the budget totals.

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 for these items; the only additional costs are for fees and books, a total of \$675. Travel expenses *may be higher than transportation costs* of the student while in high school, depending on

whether the student is a resident of a UWGB community or commutes from a more distant residence.

Financial Aid Application Procedures

Forms. Only one form is required. It is included in an application packet which can be obtained from guidance counselors and principals in Wisconsin high schools, or from the Office of Student Services at any UWGB campus. A student who submits an application is considered for all the types of financial aid for which he is eligible. An application for aid may be filed before the University issues a permit to register, but a student must have his permit before receiving an offer of aid. A Parents' Confidential Statement, completed by the parents of the applicant, must be sent to the agency listed in the instructions.

Deadlines. The application deadline for a scholarship, grant, and/or a combination of assistance is March 1 for high school seniors; February 15 for continuing and transfer students. High school seniors are notified between April 15 and May 15 of action taken on their applications. Continuing and transfer students are notified between May 15 and June 15.

For National Defense student loans, work-study jobs, and State of Wisconsin loans, applications will be accepted throughout the year as long as funds are available. However, all applications filed before April 15 are given first priority. Students who file late applications are taking a risk because the University cannot guarantee loan or job assistance to those applying after the priority date. Students applying after the scholarship deadline dates but before priority dates will be notified of their awards by August 15.

Parents' Confidential Statement. To help the University judge student need and award aid fairly, the University asks parents 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 parent and student can provide and what his education will cost.

financial aids

Some things considered in determining a reasonable parental contribution are salaries of both parents, additional income, net worth of business or farm, real estate holdings, savings, investments, special family circumstances (such as the additional costs of two working parents), number of dependents, student's earnings and assets, extraordinary expenses (such as business or medical), and debts for certain purposes. Circumstances such as job expenses, debts, support of elderly relatives, and having other children in college are also taken into consideration.

Students are expected to commit substantially all of their resources toward educational expenses before they request assistance. For students living on or near the campus, a car is unnecessary and can be a hindrance. Hence, a car often is regarded as an asset which can be sold to help a student meet his educational expenses.

Rarely can a student meet all his expenses through one type of financial aid. Most students can meet only one-third to one-half of their expenses through summer and part-time work. Very few loan or scholarship programs for undergraduate students can pay the total educational bill. This means that assistance generally must come from a combination of these resources. A student may be selected to receive a loan and grant, a scholarship and a loan, a loan and a job, or other combination. He need not accept the whole package to receive part of it.

Awards are based upon 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 financial need, the student must meet certain other eligibility requirements to qualify for various types of financial aid. In most cases he must be a citizen and permanent resident of the United States, must be enrolled as at least a half-time student, and must maintain a satisfactory academic level. To be eligible for Wisconsin loans, the student must also be a resident of Wisconsin.

Types of Financial Aids

Scholarships. Nearly all scholarships are awarded on a merit-need basis. Awards to prospective freshmen will be made on the basis of test scores, high school ratings based on eight selected traits, and rank in class based on high school work. These scholarships are contingent upon continued satisfactory grades in the senior year. A student who does appreciably better during his seventh semester may submit seventh semester grades and have them considered in his scholarship rating.

Awards to continuing and transfer students are made on the basis of the student's college cumulative grade point average.

Educational Opportunity Grants. The Higher Education Act of 1965 created a new federal student assistance program to help students "of exceptional financial need." In general, this means those students whose parents are able to provide only a small portion of the financing of their son's or daughter's education.

Further, the act specified that the institution awarding the federal grant must also offer the student an equal amount of assistance from its own resources. The matching award may be in the form of a job, a loan, or a scholarship. The student must accept the matching award when he accepts the grant. The amount of the grant may equal half of the student's need up to a maximum of \$1,000. This grant is renewable each year up to four years as long as the student continues to make satisfactory progress toward his degree and his financial situation does not change. Grants are considered gift assistance and do not have to be repaid.

Loans. In some cases it is advisable to borrow to finance an education. Caution is advised in borrowing, however, and, generally, a student should not rely primarily on loans to finance his education. A student is usually advised not to borrow more than half of what he needs to meet his expenses.



National Defense Student Loan Program. Under Title II of the National Defense Education Act of 1958, students in good standing and with financial need may apply for National Defense student loan funds. An undergraduate, depending upon his need, may borrow up to \$1,000 during any one fiscal year (July 1-June 30). Accumulated loans may not exceed \$5,000.

A borrower may have up to 10 years and nine months after he ceases to be at least a half-time student to repay a loan. Repayments with interest of 3 per cent a year begin nine months after a student receives a degree or permanently leaves the institution. The University bills on a quarterly basis and a minimum yearly repayment of \$180 is required.

If a borrower becomes a full-time teacher in a public or private nonprofit elementary or secondary school or institution of higher education, or if he accepts active duty in the armed forces, he can arrange to have portions of his loans canceled at the rate of 10 per cent a year for each complete year of teaching service and 12½ per cent for each year in the armed forces. (This provision is subject to change by federal legislation.) The maximum amount which may be canceled for teaching or military service is 50 per cent of the total loan, including interest, unpaid as of the first day of service. Cancellation of 15 per cent a year for up to 100 per cent of the loan amount may be obtained for teaching service in schools for the handicapped or in areas designated by the appropriate state agency as having a high concentration of low income



families. Deferments of up to three years on all interest and repayments may be obtained while on active duty in the Peace Corps or VISTA.

Wisconsin State Student Loans. Residents of Wisconsin may borrow from the State of Wisconsin student loan program. These loans are from funds established by the state, and are administered jointly by the institution the student is



102 Student Employment

attending and the State Higher Educational Aids Board. An undergraduate student may borrow up to \$1,000 per year and has up to 10 years and nine months after he leaves school to repay the loan, at 7 per cent interest. Deferments of up to three years may be obtained for active duty with the armed forces, Peace Corps, or VISTA.

Wisconsin Guaranteed Loan Program. Residents of Wisconsin may also borrow from the Wisconsin guaranteed student loan program established in August of 1967. Loans under this program come 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 Wisconsin State Higher Educational Aids Board, 115 West Wilson Street, Madison, Wisconsin 53703), and the University.

Depending upon the total amount borrowed, the student has up to 10 years to repay the loan, at 7 per cent interest, after he has permanently left school. The undergraduate may borrow up to \$1,000 per fiscal year with an additional \$250 per summer session. Maximum accumulation of loans, including summer session loans, is \$5,000.

University Short-Term Student Loans. These loans are made from funds established by gifts to the University and are generally granted only to full-time students in amounts up to \$250 per academic year. Repayment usually is expected within the same semester that the loan was taken out. Interest rates vary, but the average is 2 to 3 per cent per year. This loan is usually used only for emergency situations.

Veterans Educational Assistance Program. The primary source of information for all 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 now claims residence. He may also seek assistance from the Office of Student Services at the Fox Valley, Manitowoc, and Marinette campuses and at the Office of the Registrar at the Green Bay 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 by every veteran who wishes to be certified for benefits for the ensuing term.

War Orphans Educational Assistance. The War Orphans Educational Assistance Act has been amended to provide educational benefits for children of permanently disabled veterans, as well as children of 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. A student who thinks he may be eligible for such financial assistance should write or call his county Veterans' Service office. Eligible students 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 registration card must be filed by every student who wishes to be certified for benefits for the ensuing term.

Student Employment. All enrolled students and their spouses are eligible to use the employment services of the Office of Student Financial Aids. The student may apply any time during the year but he cannot be referred to a job opening until he arrives on campus.

Many students work on the UWGB campuses and others work in the surrounding communities. In addition, federal funds are available under the work-study program for the employment of full-time students who have substantial financial need. Students generally are able to earn from \$500 to \$700 during the academic year.

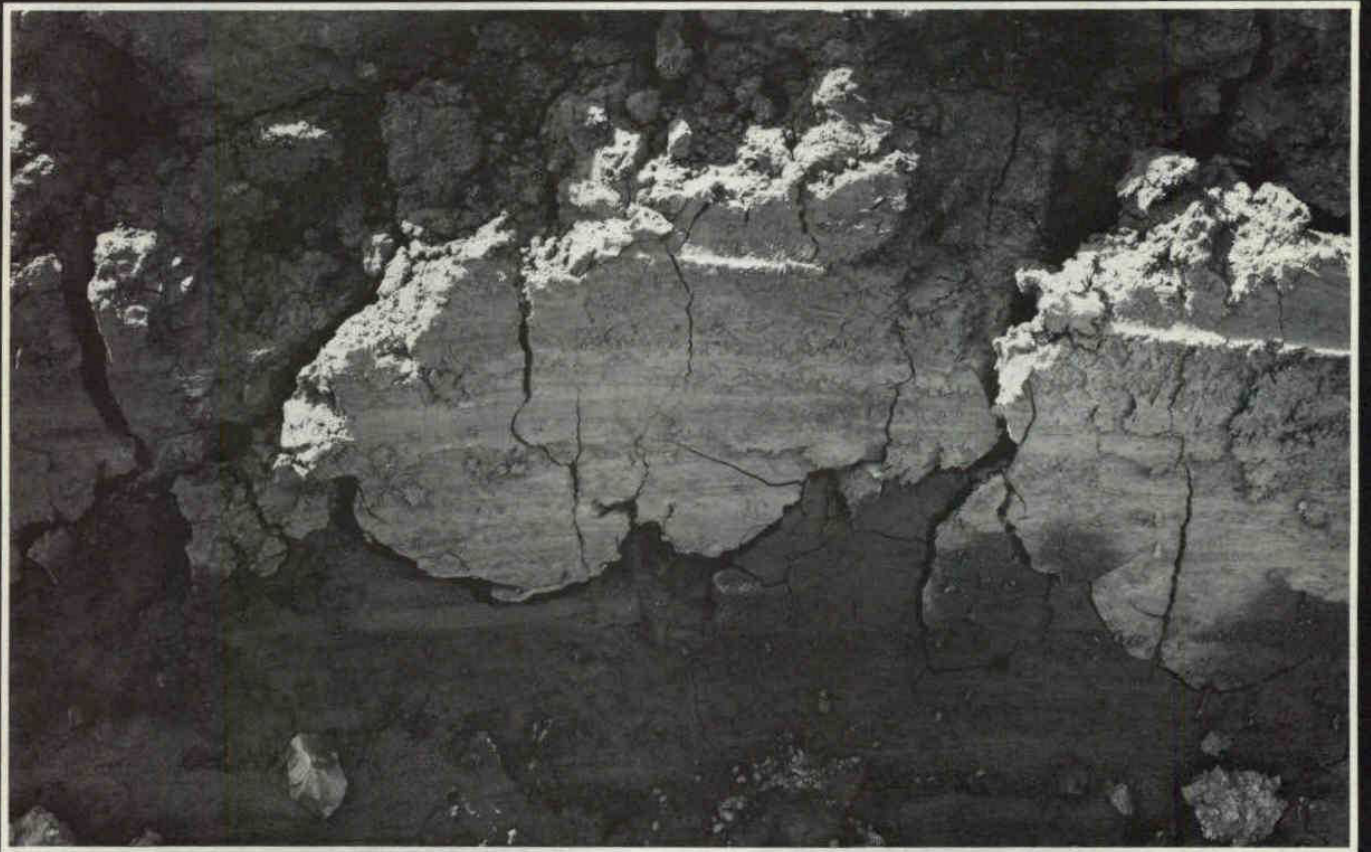
Most academically able students can carry a full load of coursework, while holding a part-time job of 12 to 15 hours a week, without undue strain. Many students find they earn better grades while working part time because they budget their time more wisely.

While previous work experience is taken into account, the possession of needed skills is even more important in obtaining a job. The student who has skills such as typing, shorthand, key-punching, bookkeeping, drafting, carpentry, painting, mechanics, photography, laboratory work, sales, or janitorial work will have a much easier time finding a part-time position. The rate of pay for student jobs on and off campus generally ranges from \$1.60 to \$2.50 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	\$1.60/hour	\$1.75/hour
10	\$544	\$595
12	\$653	\$714
15	\$816	\$893

Financial Aid Counseling

Counseling is available to all students applying for financial assistance at UWGB before and after admission. Financial counseling is also available for married students or those planning marriage. Students who have special problems or questions regarding financial aids are encouraged to make use of this service.



COURSES

The following section lists the titles and number of credits to be earned for all courses currently offered at The University of Wisconsin-Green Bay. The list is alphabetical, with the following categories being used for headings: theme colleges, concentrations, options, disciplines within options (listed alphabetically with the options), collaterals, Liberal Education Seminar, and January Practica. The following abbreviations are commonly used throughout:

Abbreviations

cr	credits
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, except for options, indicates the college or school within which it is housed. Options are not housed within colleges, but the college designation after the option title indicates 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 any particular major.

Prerequisites, which are listed in the separate course description booklet and in the *Timetable*, 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 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.

A complete list of courses, together with descriptions and prerequisites, is available in a

separate publication, which can be obtained upon request from the Office of the Registrar or the Office of Admissions.

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 his registration forms, for example. For record keeping, Biology 303, Genetics, would be listed 203-303. The first three digits refer to the curriculum area; the last three to the course number.

Courses are listed numerically by curriculum areas in the following section, as well as in the current *Timetable*, which publishes courses available each semester and for the summer session. A list of curriculum area numbers follows:

102	Administration: Distribution (SPS)
104	Administration: Finance (SPS)
106	Administration: Labor Relations (SPS)
108	Administration: Organization and Operations (SPS)
109	Administration: Quantitative Methods (SPS)
143	Analysis-Synthesis (CCC)
156	Anthropology (CCS)
203	Biology (CHB)
205	Biology: Botany (CHB)
209	Biology: Entomology (CHB)
211	Biology: Microbiology (CHB)
215	Biology: Zoology (CHB)
224	Chemistry (CES)
226	Chemistry-Physics (CES)
242	Communication-Action (CCC)
255	Community Sciences (CCS)
275	Creative Communication (CCC)
296	Earth Science (CES)
298	Economics (CCS)
301	Ecosystems Analysis (CES)
302	Education (SPS)
325	Engineering (CES)
356	Environmental Control (CES)
362	Environmental Sciences (CES)
416	Geography (CCS)
426	Growth and Development (CHB)
448	History (CCC)

- 478 Human Adaptability (CHB)
- 480 Human Biology (CHB)
- 510 January Practica
- 532 Leisure Sciences (SPS)
- 538 Liberal Education Seminar
- 552 Literature and Language: English-American (CCC)
- 553 Special Learning Programs—English
- 554 Literature and Language: French (CCC)
- 556 Literature and Language: German (CCC)
- 557 Literature and Language: Italian (CCC)
- 558 Literature and Language: Spanish (CCC)
- 559 Literature and Language: Russian (CCC)
- 595 Mass Communications (SPS)
- 600 Mathematics (CES)
- 601 Special Learning Programs—Mathematics
- 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)
- 740 Physical Education: Men (CHB)
- 741 Physical Education: Women (CHB)
- 742 Physical Education: Coed (CHB)
- 754 Physics (CES)
- 778 Political Science (CCS)
- 779 Population Dynamics (CHB)
- 820 Psychology (CCS)
- 834 Regional Analysis (CCS)
- 892 Social Services (SPS)
- 900 Sociology (CCS)
- 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. General descriptions of such courses are provided below and the number and title is listed under each area that offers these variable content courses.

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

Courses and seminars presented by the concentrations of the theme colleges and several units of

list of courses

106 Administration

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 of 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. His adviser can direct him 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 and the School of Professional Studies offer 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 concentration advisers and chairmen. The student is encouraged to register in the first semester of the senior year.

102

ADMINISTRATION: DISTRIBUTION (SPS)

298 Directed Study 1-4 cr.

302 Principles of Distribution 3 cr.

305 Theory and Practice in Public Relations 3 cr.

310 Transportation and Purchasing 3 cr.

402 Retailing and Wholesaling 3 cr.

403 Principles of Advertising 3 cr.

404 Marketing Research 3 cr.

407 International Distribution and Marketing 3 cr.

410 Applied Motivational Research 3 cr.

498 Directed Study 1-4 cr.

104

ADMINISTRATION: FINANCE (SPS)

298 Directed Study 1-4 cr.

303 Corporation Finance 3 cr.

305 Principles of Risk Management 3 cr.

306 Public Finance and Fiscal Policy 3 cr.

402 Problems of Investment 3 cr.

403 Financial Planning and Control 3 cr.

405 International Finance 3 cr.

498 Directed Study 1-4 cr.

106

ADMINISTRATION: LABOR RELATIONS (SPS)

298 Directed Study 1-4 cr.

302 Personnel Administration in Business 3 cr.

303 Personnel Administration in Government 3 cr.

310 Labor Unions in America 3 cr.

312 Collective Bargaining 3 cr.

402 Problems in Labor Relations 3 cr.

403 Labor Legislation and Administration 3 cr.

412 Cases in Collective Bargaining 3 cr.

420 International Labor Relations 3 cr.

498 Directed Study 1-4 cr.

108

ADMINISTRATION: ORGANIZATION AND OPERATIONS (SPS)

110 Effective Business Communication 2 cr.

202 Business and Its Environment 3 cr.

203 Government and Business 3 cr.

283X Selected Topics in Administration 1-4 cr.

298 Directed Study 1-4 cr.

302 Principles of Organization and Operations 3 cr.

304 Industrial Management 3 cr.

310 Small Business Management in the Northern Great Lakes Region 3 cr.

320 Practice of Public Administration 3 cr.

402 Planning, Control, and Routinization 3 cr.

450 Policy and Program Implementation 3 cr.

483X Selected Topics in Administration 1-4 cr.

484 Senior Distinction Project 3 cr.

498 Directed Study 1-4 cr.

109

ADMINISTRATION: QUANTITATIVE METHODS (SPS)

204 Introductory Accounting 3 cr.

205 Intermediate Accounting 3 cr.

206 Accounting for Administrators 3 cr.

230 Quantitative Methods in Administration 3 cr.

251 Computer Science II for Business Students 3 cr.

298 Directed Study 1-4 cr.

302 Cost Accounting 3 cr.

303 Financial Accounting, Theory, and Practice I 3 cr.

304 Financial Accounting, Theory, and Practice II 3 cr.

310 Governmental and Institutional Accounting 2 cr.

315, 316 Business Law I, II 3, 3 cr.

403 Auditing Standards and Procedures 4 cr.

404 Financial Information Systems 3 cr.

410 Income Tax Theory and Practice 3 cr.

498 Directed Study 1-4 cr.

143

ANALYSIS-SYNTHESIS (CCC)

207 Philosophy and Literature 3 cr.

283X Selected Topics in Analysis-Synthesis 1-4 cr.

298 Directed Study 1-4 cr.

302 Human Identity 3 cr.

311, 312 Visions of Man 3, 3 cr.

313 Man, Machines, and the Environment 3 cr.

331 Geo-Historical Approaches to the Environment 3 cr.

Offered jointly by analysis-synthesis and regional analysis.

390 Man's Environment of Violent Change and Revolution 3 cr.

Offered jointly by analysis-synthesis and modernization processes.

423 Literary Research and Criticism 3 cr.

483X Selected Topics in Analysis-Synthesis 3 cr.

484 Senior Distinction Project 3 cr.

498 Directed Study 1-4 cr.

156

ANTHROPOLOGY (CCS)

102 Environmental Anthropology 3 cr.

203 Understanding Changing Cultures 3 cr.

210 Introduction to Cultural Analysis 3 cr.

215 Prehistoric Man and His Surroundings 3 cr.

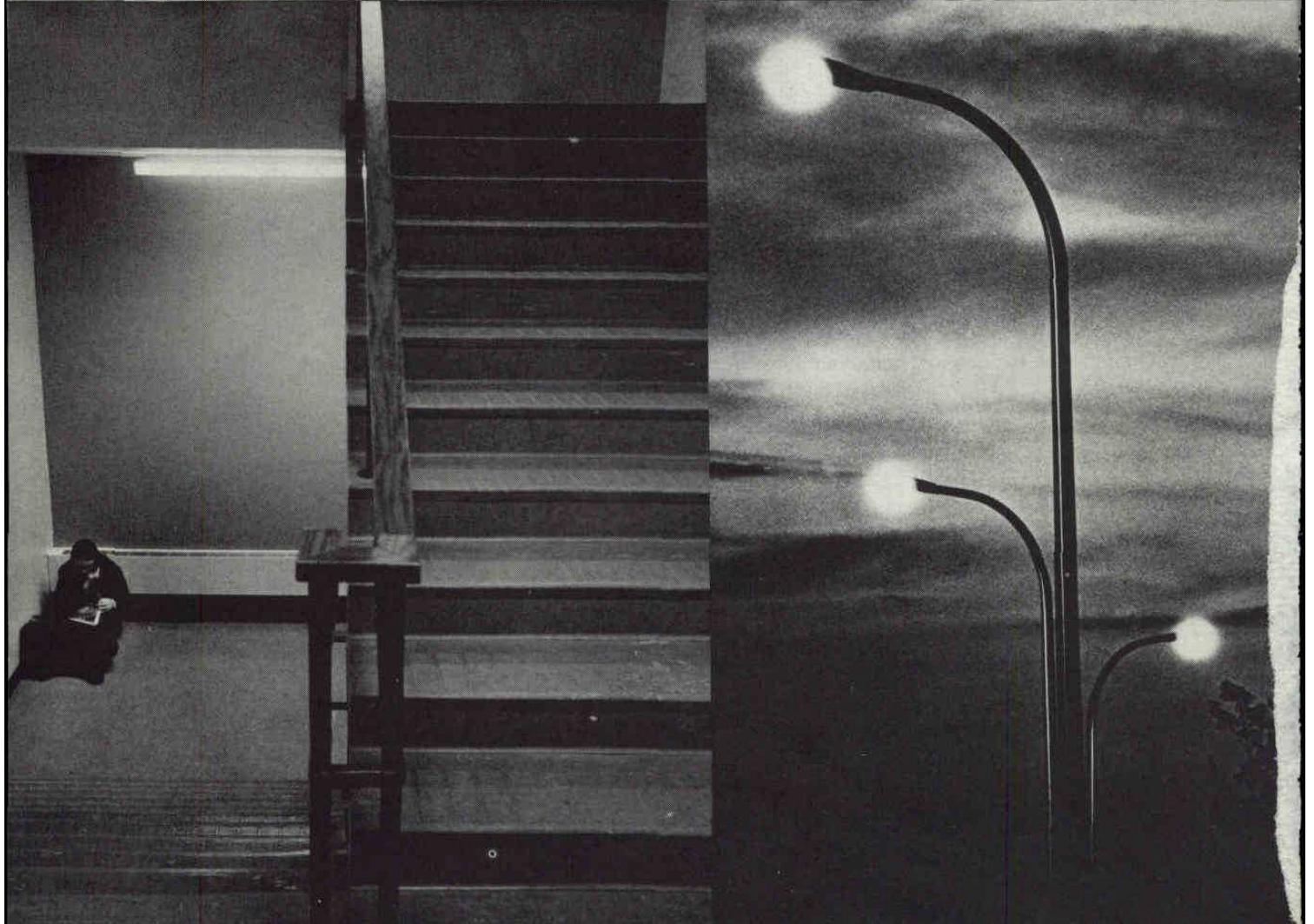
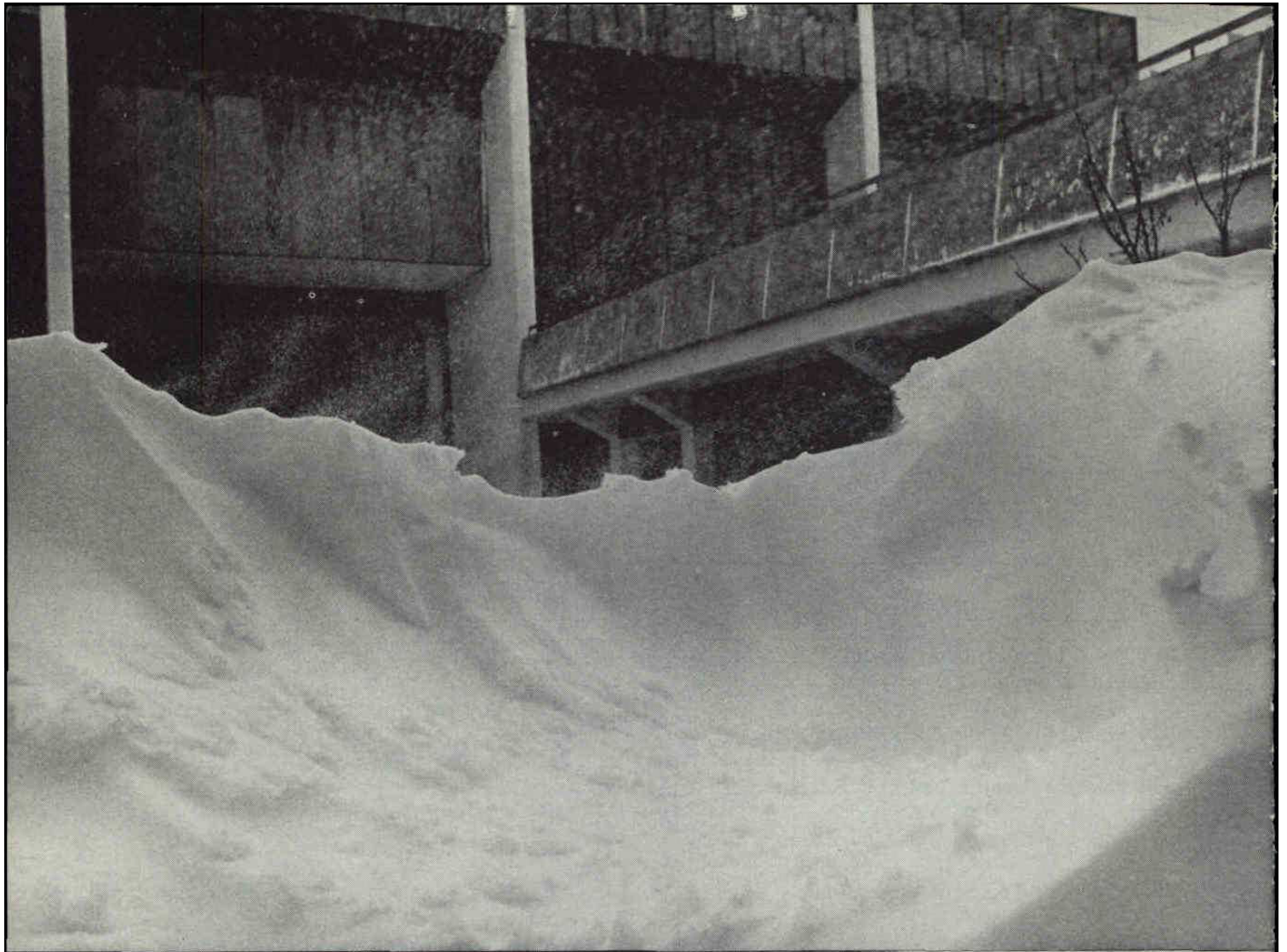
302 Peoples and Cultures of the Northern Great Lakes Region 3 cr.

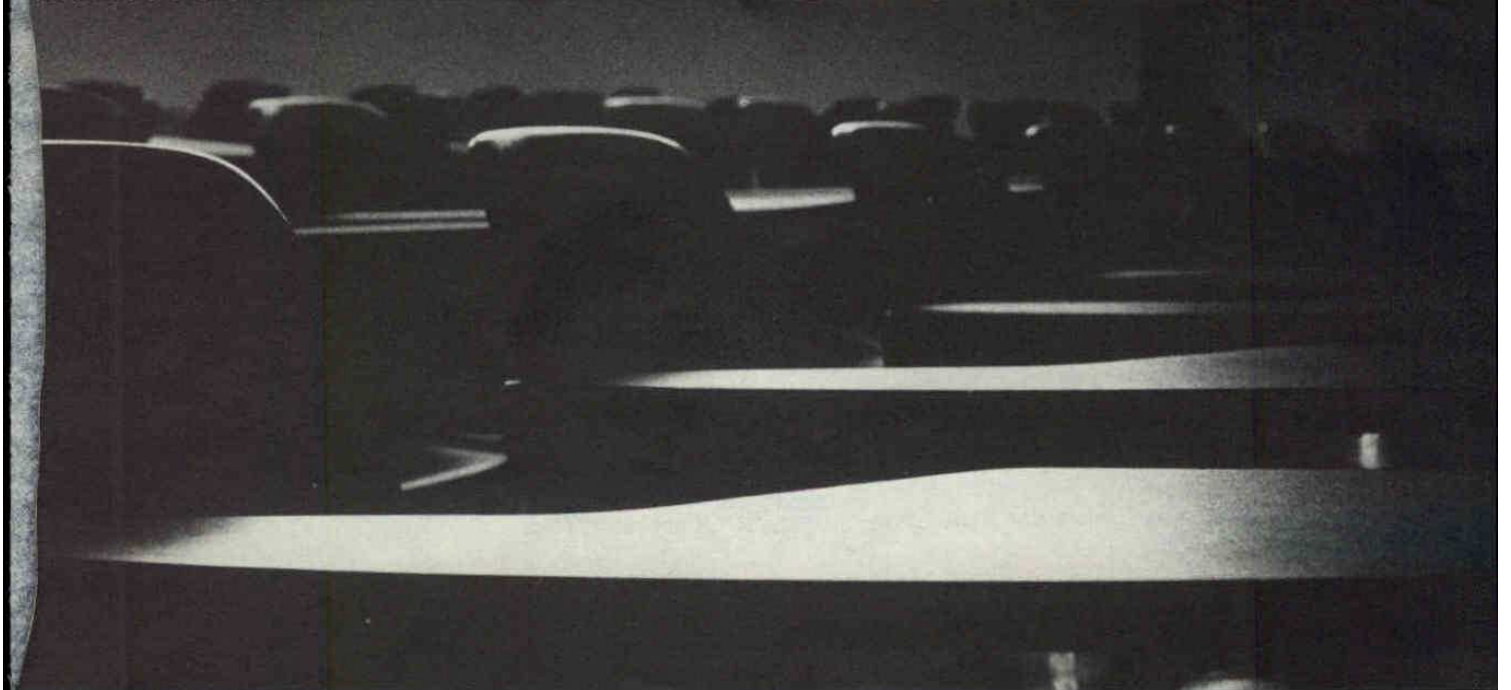
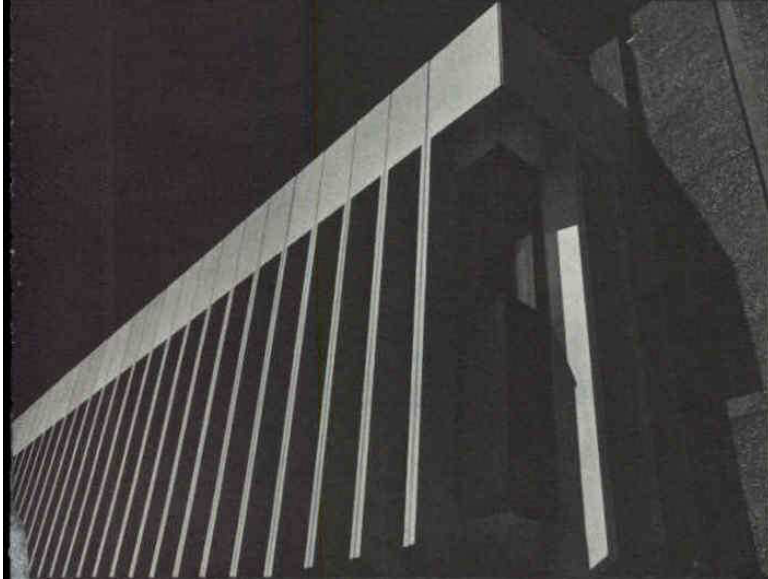
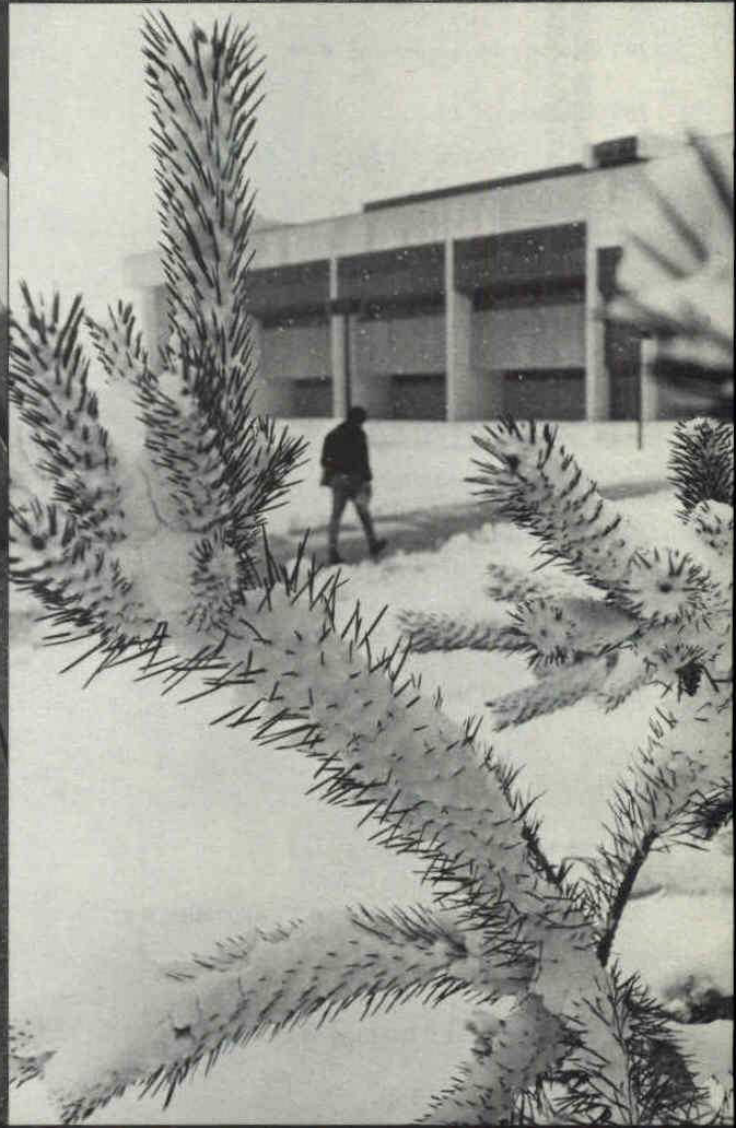
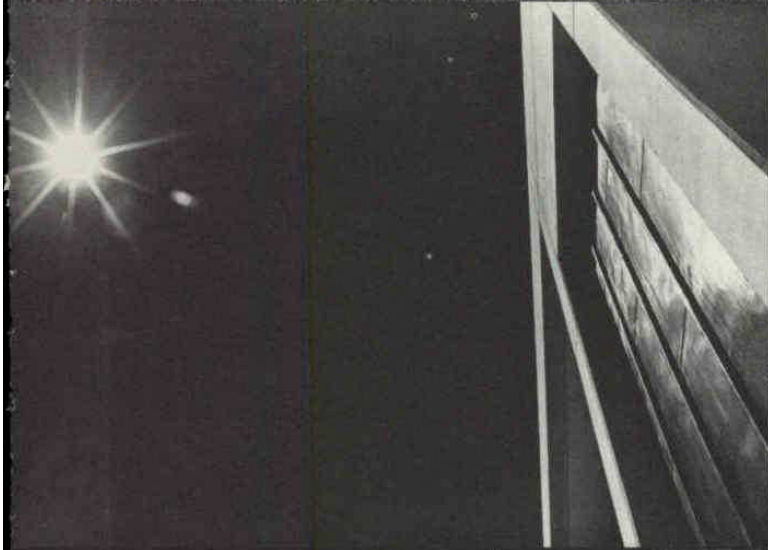
303 Cultural Ecology 3 cr.

304 Family, Kin, and Community 3 cr.

310 Culture and Personality 3 cr.

320 Economic Anthropology 3 cr.





110 Biology
 402 Comparative Social Structures 3 cr.
 403 Race and Genetic Variation of Man 3 cr.

203
BIOLOGY (CHB)

202 Biology of Cells 4 cr.
 203 Biology of Organisms 4 cr.
 303 Genetics 3 cr.

205
BIOLOGY: BOTANY (CHB)

240 Plants and Civilization 2 cr.
 320 Field Botany 3 cr.

209
BIOLOGY: ENTOMOLOGY (CHB)

302 Principles of Entomology 3 cr.

211
BIOLOGY: MICROBIOLOGY (CHB)

302 Principles of Microbiology 4 cr.
 303 Advanced Microbiology 3 cr.

215
BIOLOGY: ZOOLOGY (CHB)

302 Vertebrate Zoology 3 cr.
 303 Comparative Anatomy of Vertebrates 4 cr.
 305 Animal Behavior 3 cr.
 310 Developmental Biology 4 cr.
 320 Field Zoology 3 cr.

224
CHEMISTRY (CES)

108 General Chemistry 5 cr.
 228 Bio-Organic Chemistry 3 cr.
 229 Bio-Organic Chemistry Laboratory 1 cr.
 302 Organic Chemistry I 3 cr.
 303 Organic Chemistry II 3 cr.
 304 Organic Chemistry Laboratory 1 cr.
 305 Organic Chemistry Laboratory 2 cr.
 313 Analytical Chemistry 4 cr.

321 Physical Chemistry 3 cr.
 323 Physical Chemistry Laboratory 1 cr.
 330 Biochemistry 3 cr.
 331 Biochemistry Laboratory 1 cr.
 410 Inorganic Chemistry* 3 cr.
 411 Inorganic Chemistry Laboratory* 1 cr.
 413 Instrumental Analysis* 4 cr.
 422 Protein Chemistry 3 cr.

See also relevant courses in other areas, including:

Chemistry-Physics 110, 111, 112, 211, 212, Chemistry-Physics, 5 cr. each

Chemistry-Physics 317, 318, Nuclear Physics and Radiochemistry (with laboratory), 3-4 cr.

Chemistry-Physics 320, 322, Thermodynamics and Kinetic Theory (with laboratory), 3-4 cr.

Environmental Control 424, Environmental Biochemistry, 3 cr.

Environmental Control 426, Soil Chemistry, 4 cr.

Environmental Control 434, Water Chemistry, 4 cr.

Environmental Control 453, Air Chemistry, 4 cr.

Nutritional Sciences 328, 329, Nutritional Biochemistry (with laboratory), 3-5 cr.

Nutritional Sciences 414, Nutrient Analysis, 4 cr.

Nutritional Sciences 485, 486, Advanced Human Nutrition, 3, 3 cr.

226
CHEMISTRY-PHYSICS (CES)

107 Fundamental Concepts of Chemistry-Physics 1 cr.

110 Chemistry-Physics 5 cr.

111 Chemistry-Physics 5 cr.

112 Chemistry-Physics 5 cr.

211 Chemistry-Physics 5 cr.

212 Chemistry-Physics 5 cr.

317 Nuclear Physics and Radiochemistry* 3 cr.

318 Nuclear Physics and Radiochemistry Laboratory* 1 cr.

320 Thermodynamics and Kinetic Theory 3 cr.

322 Thermodynamics and Kinetic Theory Laboratory 1 cr.

*Not offered in 1972-1973.

242

COMMUNICATION-ACTION (CCC)

133, 134 Voice and Speech I, II 3, 3 cr.

283X Selected Topics in Communication-Action
1-4 cr.

298 Directed Study 1-4 cr.

371 Language and Cultural Divisions 3 cr.

471 Styles of Expression: Man and Technology
3 cr.483X Selected Topics in Communication-Action
1-4 cr.

484 Senior Distinction Project 3 cr.

498 Directed Study 1-4 cr.

255

COMMUNITY SCIENCES (CCS)

102-103 Man and His Social Environment 3, 3 cr.

205 Social Science Statistics 3 cr.

305 Foundations for Social Research 3 cr.

310 Ethnographic Field Research Methods 3 cr.

296

EARTH SCIENCE (CES)

202 The Earth's Physical Environment 4 cr.

302 Geologic Evolution of the Earth 4 cr.

310 Paleobiology* 4 cr.

340 Minerals, Rocks, and Mineral Resources
3 cr.

350 Field Geology* 4 cr.

360 Deformation of the Earth's Crust* 3 cr.

441 Earth Resources I: Minerals* 4 cr.

442 Earth Resources II: Rocks* 4 cr.

470 The Glacial Environment and Chronology*
3 cr.See also relevant courses in other areas, in-
cluding:Ecosystems Analysis 141, Elementary Astronomy,
3 cr.Ecosystems Analysis 331, Introduction to Ocean-
ography, 3 cr.

*Not offered in 1972-1973.

Ecosystems Analysis 350, 351, Meteorology (with
laboratory), 3-4 cr.Ecosystems Analysis 420, Soil Classification and
Geography, 3 cr.Environmental Control 320, 321, The Soil Envi-
ronment (with laboratory), 3-4 cr.

Environmental Control 330, Hydrology, 3 cr.

Environmental Control 402, Introduction to
Stratigraphy and Sedimentology, 3 cr.Environmental Control 432, Surface and Ground
Water, 3 cr.Regional Analysis 222, 223, Man and the Ocean
of Air (with laboratory), 3-4 cr.

298

ECONOMICS (CCS)

102 Economics and the Modern World 3 cr.

202 Macro Economic Analysis 3 cr.

203 Micro Economic Analysis 3 cr.

230 Money and Banking 3 cr.

303 Money, Income and Prices 3 cr.

304 Contemporary Labor Markets 3 cr.

305 Natural Resources Economic Policy 3 cr.

306 Public Finance and Fiscal Policy 3 cr.

307 Sources of Contemporary Economics
Concepts 3 cr.

308 Business Cycles 3 cr.

309 Introduction to Quantitative Economics 3 cr.

401 Regional Economic Analysis 3 cr.

402 Resource Economics Analysis 3 cr.

403 International Trade 3 cr.

404 Economics of Developing Areas 3 cr.

405 International Finance 3 cr.

406 Comparative Economic Systems and
Institutions 3 cr.

112 Ecosystems Analysis

301

ECOSYSTEMS ANALYSIS (CES)

141 Elementary Astronomy 3 cr.

283X Selected Topics in Ecosystems Analysis
1-4 cr.

298 Directed Study 1-4 cr.

303 Electromagnetic Radiation* 4 cr.

306 Biophysics* 3 cr.

310 Plant Ecology 3 cr.

311 Plant Physiology* 4 cr.

312 Productivity of the Ecosystem 3 cr.

313 Dendrology 3 cr.

314 Plant Taxonomy* 3 cr.

315 Mycology* 3 cr.

316 Principles of Plant Distribution* 3 cr.

318 Systematics and Taxonomy* 3 cr.

331 Introduction to Oceanography 3 cr.

350 Meteorology 3 cr.

351 Meteorology Laboratory 1 cr.

403 General Limnology 3 cr.

410 Principles of Human Ecology 3 cr.
(See Population Dynamics 410.)

412 Bioenergetics 3 cr.

420 Soil Classification and Geography* 3 cr.

452 Elements of Biometeorology 3 cr.

472 Systems Simulation* 3 cr.

483X Selected Topics in Ecosystems Analysis
1-4 cr.

484 Senior Distinction Project 3 cr.

498 Directed Study 1-4 cr.

302

EDUCATION (SPS)

244 Analysis of Learning Environments 3 cr.

283X Selected Topics in Education 1-4 cr.

298 Directed Study 1-4 cr.

302 Elementary School Teaching Methods in
Social Studies 3 cr.

303 Elementary School Teaching Methods in Art
2 cr.

304 Elementary School Teaching Methods in
Music 2 cr.

305 Elementary School Teaching Methods in
Mathematics and Science 4 cr.

306 Elementary School Teaching Methods in
Physical Education 2 cr.

307 Elementary School Teaching Methods in
Reading 3 cr.

310 Secondary School Teaching Methods in
English 3 cr.

311 Secondary School Teaching Methods in
Foreign Languages 3 cr.

312 Secondary School Teaching Methods in
Social Studies 3 cr.

313 Secondary School Teaching Methods in
Mathematics 3 cr.

314 Secondary School Teaching Methods in the
Sciences 3 cr.

316 Secondary School Teaching Methods in Art
2 cr.

317 Secondary School Teaching Methods in
Music 2 cr.

318 Reading and Study Skills in the Secondary
School 3 cr.

402 Student Teaching in the Elementary School
4-8 cr.

403 Student Teaching in the Secondary School
4-8 cr.

404 Creative Learning in the Schools 3 cr.

405 Individualizing Instruction 2 cr.

406 Evaluation Systems 2 cr.

483X Selected Topics in Education 1-4 cr.

498 Directed Study 1-4 cr.

*Not offered in 1972-1973.

325
ENGINEERING (CES)

- 102 Elements of Descriptive Geometry 3 cr.
- 113 General Engineering Graphics 3 cr.
- 302 Engineering Statics I 3 cr.
- 303 Engineering Dynamics II 3 cr.

See also relevant courses in other areas, including:

- Environmental Control 311, Mechanics of Materials, 3 cr.
- Environmental Control 318, Engineering Systems and Automatic Control, 3 cr.
- Environmental Control 330, Hydrology, 3 cr.
- Environmental Control 332, Introduction to Geophysical Fluid Mechanics, 3 cr.
- Physics 315, Mechanics, 3 cr.

356
ENVIRONMENTAL CONTROL (CES)

- 283X Selected Topics in Environmental Control 1-4 cr.
- 298 Directed Study 1-4 cr.
- 311 Mechanics of Materials* 3 cr.
- 318 Engineering Systems and Automatic Control 3 cr.
- 320 The Soil Environment 3 cr.
- 321 The Soil Environment Laboratory 1 cr.
- 330 Hydrology 3 cr.
- 332 Introduction to Geophysical Fluid Mechanics 3 cr.
- 363 Forest and Plant Pathology 3 cr.
- 402 Introduction to Stratigraphy and Sedimentology 3 cr.
- 424 Environmental Biochemistry* 3 cr.
- 425 Environmental Biochemistry Laboratory* 1 cr.
- 426 Soil Chemistry 2 cr.
- 428 Soil Physics 2 cr.
- 432 Surface and Ground Water 3 cr.
- 434 Water Chemistry 4 cr.
- 436 Water Quality* 3 cr.

451 Community Air Pollution 3 cr.

453 Air Chemistry* 3 cr.

455 Air Pollution Control* 3 cr.

460 Resource Management Strategy 3 cr.

462 Landscape Ecology* 3 cr.

483X Selected Topics in Environmental Control 1-4 cr.

484 Senior Distinction Project 3 cr.

498 Directed Study 1-4 cr.

See also relevant courses in other areas, including:

- Engineering 302, Statics, 3 cr.
- Engineering 303, Dynamics, 3 cr.
- Physics 315, Mechanics, 3 cr.

362
ENVIRONMENTAL SCIENCES (CES)

- 102 Introduction to Environmental Sciences 3 cr.
- 302 Principles of Ecology 3 cr.
- 303 Conservation of Natural Resources 3 cr.
- 310 Environmental Measurement 3 cr.

416
GEOGRAPHY (CCS)

- 202 Introduction to Cultural Geography 3 cr.
- 215 Economic Geography 3 cr.
- 316 Geography of Transportation and Industrial Location 3 cr.
- 320 Landform Geography: Topics and Regions 3 cr.
- 325 Regional Climatology 3 cr.
- 341 Urban Geography 3 cr.
- 353 Air Photo Interpretation and Use 3 cr.
- 355 Introduction to Quantitative Methods of Spatial Analysis 3 cr.
- 361 Geography of Africa 3 cr.
- 371 Geography of the United States and Canada 3 cr.

*Not offered in 1972-1973.

114 Growth and Development

372 Geography of the Great Lakes Regions of North America 3 cr.

376 Geography of Developing Areas 3 cr.

378 Geography of Tension Areas 3 cr.

See also courses in earth science and regional analysis.

426

GROWTH AND DEVELOPMENT (CHB)

205 Challenges to Human Development 3 cr.

283X Selected Topics in Growth and Development 1-4 cr.

298 Directed Study 1-4 cr.

331 Infancy and Early Childhood 3 cr.

332 Middle Childhood and Adolescence 3 cr.

333 Observation and Interpretation of Child Behavior 3 cr.

334 Play and Creative Activities in Childhood 3 cr.

336 Sex Role Development in Contemporary Society 3 cr.

429 Theories of Personality Development 3 cr.

431 Cognitive Development and Facilitation in Childhood and Adolescence 3 cr.

432 Cultural Impacts on Human Development 3 cr.

433 Adulthood and Later Maturity 3 cr.

435 Developmental Problems and Deviations 3 cr.

436 Developmental Guidance with Children and Adolescents 3 cr.

437 Developmental Guidance with Adults and the Aged 3 cr.

438 Lifetime Needs and Environmental Planning 3 cr.

441 Guidance and Methods for Preschool and Kindergarten Groups I 3 cr.

442 Guidance and Methods for Preschool and Kindergarten Groups II 3 cr.

444 Practicum in Working with Preschool and Kindergarten Groups 5 cr.

483X Selected Topics in Growth and Development 1-4 cr.

484 Senior Distinction Project 3 cr.

498 Directed Study 1-4 cr.

448

HISTORY (CCC)

202 Rise of the International Economy from 1400 to the Present 3 cr.

203 History of Europe from 1300 to 1815 3 cr.

204 History of Europe from 1815 to the Present 3 cr.

205 History of the United States from 1600 to 1865 3 cr.

206 History of the United States from 1865 to the Present 3 cr.

261 Ancient History from the Neolithic Age to 323 B.C. 3 cr.

262 Ancient History, Mediterranean History from 323 B.C. to 334 A.D. 3 cr.



- 302, 303 History of American Thought and Culture 3, 3 cr.
- 304, 305 History of Asian Thought and Culture 3, 3 cr.
- 306, 307 History of European Thought and Culture, 1650 to the Present 3, 3 cr.
- 308, 309 History of Science in Modern Times 3, 3 cr.
- 312 History of the Great Lakes Region from 1600 to the Present 3 cr.
- 314 The Transformation of Imperial Russia from 1850 to 1917 3 cr.
- 315 History of the Soviet Union from 1917 to the Present 3 cr.
- 322 Economic History of the U.S. from 1876 to the Present 3 cr.
- 323, 324 History of American Foreign Relations 3, 3 cr.
- 350 Social History of Europe Since the Industrial Revolution 3 cr.
- 356, 357 History of Africa 3, 3 cr.
- 363 Medieval History from 337 to 1100 A.D. 3 cr.
- 364 Medieval History from 1100 to 1453 A.D. 3 cr.
- 402 Political and Social History of Modern Asia 3 cr.
- 403 Political and Social History of Modern America 3 cr.
- 404 Political and Social History of Modern Europe 3 cr.
- 405 History of Technological Change 3 cr.
- 480 Problems in Historical Causation 3 cr.
- NOTE: Directed study offered by concentrations may be taken for history option credit with the approval of the option chairman.
- 478
HUMAN ADAPTABILITY (CHB)
- 104 Anatomy and Physiology 4 cr.
- 201 Adaptation to the Environment 3 cr.
- 283X Selected Topics in Human Adaptability 1-4 cr.
- 298 Directed Study 1-4 cr.
- 301 Adaptive Mechanisms 3 cr.
- 302 Comparative Physiology 3 cr.
- 303 Laboratory in Comparative Physiology 1 cr.
- 325 Biological Instrumentation 2 cr.
- 402 Human Physiology 3 cr.
- 403 Human Physiology Laboratory 1 cr.
- 413 Neurophysiology 3 cr.
- 414 Neurophysiology Laboratory 1 cr.
- 420 Human Growth, Development and Senescence* 2 cr.
- 430 Environmental Physiology 2 cr.
- 440 Seminar: Topics in Human Adaptability 2 cr.
- 483X Selected Topics in Human Adaptability 1-4 cr.
- 484 Senior Distinction Project 3 cr.
- 498 Directed Study 1-4 cr.
- 480
HUMAN BIOLOGY (CHB)
- 102 Introduction to Human Biology 3 cr.
- 510
JANUARY PRACTICA
- 195, 295, 395, 495 January Practicum 1-3 cr.
- 532
LEISURE SCIENCES (SPS)
- 283X Selected Topics in Leisure Sciences 1-4 cr.
- 302 Philosophy and Sociology of Leisure 3 cr.
- 310 Formulating and Administering Recreation Programs 3 cr.
- 320 Field Practicum 2 cr.
- 403 Recreation Supply and Demand Analysis 3 cr.
- 404 Public Park and Recreation Systems 3 cr.
- 410 Outdoor Recreation and the Natural Environment 3 cr.
- 483X Selected Topics in Leisure Sciences 1-4 cr.

*Not offered in 1972-1973.

116 Literature and Language

498 Directed Study 1-4 cr.

538

LIBERAL EDUCATION SEMINAR

101, 102 Crises of Belief and Ecology 3, 3 cr.

211 Seminar in Creative Communication 3 cr.

212 Seminar in Creative Communication 3 cr.

213 Seminar in Community Sciences 3 cr.

214 Seminar in Community Sciences 3 cr.

215 Seminar in Environmental Sciences 3 cr.

216 Seminar in Environmental Sciences 3 cr.

217 Seminar in Human Biology 3 cr.

218 Seminar in Human Biology 3 cr.

311 Junior Seminar in Creative Communication
3 cr.

313 Junior Seminar in Community Sciences 3 cr.

315 Junior Seminar in Environmental Sciences
3 cr.

317 Junior Seminar in Human Biology 3 cr.

312, 314, 316, 318 Junior Seminar Cross-Cultural
Experience and Project 3 cr. each

401, 402 Senior Seminar 3, 3 cr.

553

SPECIAL LEARNING PROGRAMS—ENGLISH

095 Basic English Composition 3 cr.

552—English-American

554—French

556—German

557—Italian

558—Spanish

559—Russian

LITERATURE AND LANGUAGE* (CCC)

102, 103 Introduction to the French, German,
Russian**, Spanish Language 4 cr.

104 Introduction to Literary Types 3 cr.

105 Introduction to the French, German,
Italian**, Russian, Spanish Language 8 cr.

106 Great Books 3 cr.

202, 203 Introduction to the French, German,
Russian, Spanish Language 3 cr.

207 Philosophy and Literature 3 cr.

212 Introduction to Creative Writing: Fiction 3 cr.

213 Introduction to Creative Writing: Poetry 3 cr.

220 Poetry in Context 3 cr.

221 Drama in Context 3 cr.

222 The Novel in Context 3 cr.

223 Approaches to Criticism 3 cr.

225, 226 French, German, Spanish Composition
and Conversation 3, 3 cr.

227, 228 Introduction to French, German,
Spanish Literature 3, 3 cr.

302 Fiction Writing Workshop 3 cr.

303 Poetry Writing Workshop 3 cr.

310 Major English Drama 3 cr.

311 Applied Linguistics (English) 3 cr.

313 Major English Prose Fiction 3 cr.

314 Major English Poetry 3 cr.

315 History of the English Language 3 cr.

321 Language and Culture 3 cr.

322 Modern Linguistics 3 cr.

330 Major American Drama 3 cr.

331 Major American Prose Fiction 3 cr.

332 Major American Poetry 3 cr.

333 Literary Themes 3 cr.

334 Literary Isms 3 cr.

335 Literary Eras 3 cr.

350 Major Foreign Drama 3 cr.

*Courses in English and American literature carry no prerequisite except consent of the instructor. However, students should enroll in courses appropriate to their class standing. 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. Separate courses are offered in each language.

**Italian and Russian are currently offered on a limited basis only.

- 351 Major Foreign Prose Fiction 3 cr.
- 352 Major Foreign Poetry 3 cr.
- 423 Literary Research and Criticism 3 cr.
- 431, 432 Shakespeare 3, 3 cr.
- 434 A Major British Writer (or Writers)
Exclusive of Shakespeare 3 cr.
- 435 A Major American Writer (or Writers) 3 cr.
- 436 Major French Writer 3 cr.
- 437 Major German Writer 3 cr.
- 438 Major Spanish Writer 3 cr.
- 490 French Seminar 3 cr.
- 493 English Seminar 3 cr.
- 494 Seminar in American Literature 3 cr.
- 595
MASS COMMUNICATIONS (SPS)
- 202 Media I: Introduction to Mass Communica-
tions 3 cr.
- 203 Media II: Newswriting Laboratory 3 cr.
- 283X Selected Topics in Mass Communications
1-4 cr.
- 305 Television and Radio News Writing 3 cr.

- 310 Television Directing and Producing 3 cr.
- 320 Advanced Reporting 3 cr.
- 325 Specialized Writing 3 cr.
- 402 Television and Radio Internship 3 cr.
- 405 Professional Reporting Internship 3 cr.
- 430 Mass Media and Society 3 cr.
- 483X Selected Topics in Mass Communications
1-4 cr.
- 498 Directed Study 1-4 cr.
- 600
MATHEMATICS (CES)
- 104 Elementary Functions: Algebra and Trig-
onometry 4 cr.
- 180 Fundamentals of Arithmetic 4 cr.
- 181 Fundamentals of Elementary Geometry and
Algebra 4 cr.
- 202 Calculus and Analytic Geometry I 4 cr.
- 203 Calculus and Analytic Geometry II 4 cr.
- 206 Calculus and Analytic Geometry III 5 cr.
- 240, 241 Finite Mathematics I, II 3, 3 cr.
- 250, 251 Computer Science I, II 3, 3 cr.



118 Modernization Processes
 252 Machine Organization 3 cr.
 260 Elementary Statistics** 3 cr.
 264 Elementary Probability 4 cr.
 308 Differential Equations and Matrix Algebra
 5 cr.
 311 Advanced Calculus 3 cr.
 312 Real Analysis I 3 cr.
 315 Intermediate Ordinary Differential Equations
 3 cr.
 317 Heaviside Operational Calculus 3 cr.
 318 Engineering Systems and Automatic Control
 3 cr.
 (See Environmental Control 318.)
 321 Linear Algebra I 3 cr.
 322 Linear Algebra II 3 cr.
 328 Introduction to Algebraic Structures 3 cr.
 350 Numerical Analysis 3 cr.
 353 Advanced Programming* 3 cr.
 360 Theory of Probability* 3 cr.
 361 Theoretical Statistics* 3 cr.
 362 Methods of Statistical Analysis 3 cr.
 363 Experimental Designs 3 cr.
 375 Optimization 3 cr.
 376 Theory of Games* 3 cr.
 382 History of Mathematics 3 cr.
 385 College Geometry 3 cr.
 410 Complex Analysis 3 cr.
 412 Real Analysis II 3 cr.
 416 Orthogonal Functions and Partial
 Differential Equations* 3 cr.
 472 Systems Simulation 3 cr.
 (See Ecosystems Analysis 472.)

*Not offered in 1972-1973.

**This course is equivalent to Community
 Sciences 205.

601
 SPECIAL LEARNING PROGRAMS—
 MATHEMATICS

085 Topics in Plane Geometry 1 cr.
 094 Elementary Algebra 2 cr.
 095 Intermediate Algebra 3 cr.
 663
 MODERNIZATION PROCESSES (CCS)
 283X Selected Topics in Modernization Processes
 1-4 cr.
 298 Directed Study 1-4 cr.
 360 Concepts and Processes of Modernization
 3 cr.
 370 Strategies of Modernization 3 cr.
 380 Black Man in White America 3 cr.
 390 Man's Environment of Violent Change 3 cr.
 Offered jointly by analysis-synthesis and modern-
 ization processes.
 415 Development, Technology and Environ-
 mental Quality 3 cr.

435 Agriculture and Development 3 cr.
 445 Health Programs Under Development 3 cr.
 460 Ethos, Ecos, and Ethics of Modernization
 3 cr.
 470 Senior Seminar in Modernization Processes
 3 cr.
 483X Selected Topics in Modernization Pro-
 cesses 1-4 cr.

484 Senior Distinction Project 3 cr.
 498 Directed Study 1-4 cr.

694
 NUTRITIONAL SCIENCES (CHB)

232 Nutritional Significance of Food 3 cr.
 283X Selected Topics in Nutritional Sciences
 1-4 cr.
 298 Directed Study 1-4 cr.
 302 Nutrition and Culture 3 cr.
 303 Food Science 4 cr.
 328 Principles of Nutritional Biochemistry 3 cr.

329 Nutritional Biochemistry Laboratory 2 cr.

414 Nutrient Analysis 4 cr.

421 Community Nutrition I 2 cr.

422 Community Nutrition II 2 cr.

483X Selected Topics in Nutritional Sciences
1-4 cr.

484 Senior Distinction Project 3 cr.

485, 486 Advanced Human Nutrition 3, 3 cr.

498 Directed Study 1-4 cr.

705

PERFORMING ARTS: MUSIC (CCC)

101 Basic Musicianship 2 cr.

111, 112 Beginning Harmony and Counterpoint
3, 3 cr.

211, 212 Intermediate Harmony and Counterpoint
3, 3 cr.

221, 222 Landmarks in Western Music 2, 2 cr.

302 Piano for Elementary Teachers 1 cr.

311, 312 Advanced Harmony and Counterpoint
3, 3 cr.

313, 314 Analysis of Music 3, 3 cr.

315 Choral Arranging 2 cr.

316 Instrumental Arranging 2 cr.

317 Orchestration 2 cr.

318 Choral Literature 2 cr.

321 Bach and His Contemporaries 3 cr.

322 Haydn, Mozart, and Beethoven 3 cr.

331 Choral Conducting 3 cr.

332 Instrumental Conducting 3 cr.

341 Woodwind Techniques 2 cr.

342 Brass Techniques 2 cr.

343 String Techniques 1 cr.

344 Choral Techniques 2 cr.

345 Percussion Techniques 1 cr.

346, 347 Keyboard Accompanying I, II 1, 1 cr.

411, 412 Composition 3, 3 cr.

421 Music of the Nineteenth Century 3 cr.

422 Music of the Twentieth Century 3 cr.

423 Seminar in Music Literature 3 cr.

707

PERFORMING ARTS: MUSIC, APPLIED (CCC)

001-440 Class and Private Instruction in Instru-
ments and Voice 1-2 cr.

142, 342 Marching Band 2 cr.

143, 343 Jazz Ensemble 1 cr.

144, 344 Woodwind Ensemble 1 cr.

145, 345 Brass Ensemble 1 cr.

146, 346 Percussion Ensemble 1 cr.

151, 351 Orchestra 1 cr.

153, 353 String Ensemble 1 cr.

162, 362 Oratorio Choir 1 cr.

163, 363 Vocal Ensemble 1 cr.

164, 364 University Singers 1 cr.

241, 341 Concert Band 1 cr.

261, 461 Concert Choir 1 cr.

709

PERFORMING ARTS: THEATER (CCC)

131, 132 Acting I, II 3, 3 cr.

133, 134 Voice and Speech I, II 3, 3 cr.
(See Communication-Action 133, 134.)

137, 138 Dance and Movement I, II 3, 3 cr.

209, 210 Introduction to Theater History I, II
3, 3 cr.

221, 222 Introduction to Theater Production
Techniques I, II 3, 3 cr.

225, 226 Intercurricular Theater I, II 3, 3 cr.

231, 232 Acting III, IV 3, 3 cr.

233, 234 Voice and Speech III, IV 3, 3 cr.

237, 238 Dance and Movement III, IV 3, 3 cr.

309, 310 Theater History I, II 3, 3 cr.

120 Philosophy

331, 332 Acting V, VI 3, 3 cr.

333, 334 Voice and Speech V, VI 3, 3 cr.

337, 338 Dance and Movement V, VI 3, 3 cr.

351, 352 Introduction to Stage Directing I, II
3, 3 cr.

361, 362 Introduction to Playwriting 3, 3 cr.

403, 404 Seminar in Theater Arts 3, 3 cr.

431, 432 Acting VII, VIII 3, 3 cr.

433, 434 Voice and Speech VII, VIII 3, 3 cr.

437, 438 Dance and Movement VII, VIII 3, 3 cr.

736

PHILOSOPHY (CCC)

100 Ethics 3 cr.

104 Freedom and Individuality 3 cr.

106 Pacifism and Violence 3 cr.

111 Elementary Logic 3 cr.

112 Scientific Methods 3 cr.

201 Philosophy and Language 3 cr.

206 Belief, Knowledge, and Truth 3 cr.

207 Philosophy and Literature 3 cr.

208 Philosophy and Scientism 3 cr.

209 Philosophy of Religious Consciousness 3 cr.

210 Philosophy of Theories of Culture 3 cr.

211 Philosophy of the Arts 3 cr.

213 History of Ancient Philosophy 3 cr.

215 Marxism and Existentialism 3 cr.

301 The Criticism of Values 3 cr.

304 American Philosophy in Context 3 cr.

306 Linguistic Analysis 3 cr.

310 Philosophy of Mind 3 cr.

313 History of Medieval and Renaissance
Philosophy: Augustine to 1600 3 cr.

314 History of Modern Philosophy: Descartes to
1850 3 cr.

315 Philosophy of Work and Leisure 3 cr.

317 The Philosophical Foundations of the Natural
Sciences 3 cr.

319 Phenomenology I: German 3 cr.

320 Phenomenology II: French 3 cr.

322 Aesthetics 3 cr.

324 Contemporary Philosophical Movements
3 cr.

404 Major Philosophic Figures 3 cr.

406 Philosophical Problems in Psychology 3 cr.

740—Men

741—Women

742—Coed

PHYSICAL EDUCATION (CHB)

The physical education basic instructional program encourages *voluntary* student participation by offering a broad range of activities designed to satisfy varied interests.

Beginning Level Courses (100):

Aquatics: swimming.

Dance: folk, modern, social, and square.

Exercise and Fitness: personal conditioning and weight training.

Individual Sports: archery, bowling, fencing, golf, judo, karate, and wrestling.

Personal Health: first aid and fitness and diet.

Racket Skills: badminton, handball, paddleball, racketball, and tennis.

Sports Officiating: basketball, football, soccer, softball/baseball, volleyball, and wrestling.



Team Sports: basketball, field hockey, lacrosse, soccer, softball/baseball, speedball and volleyball.

Tumbling and Gymnastics.

Winter Sports: curling and skiing.

Intermediate Level Courses (200):

Aquatics: swimming, senior life saving, skin diving, SCUBA diving, and sailing.

Exercise and Fitness: weight training.

Racket Skills: tennis.

Advanced Level Courses (300):

Aquatics: water safety instruction (utilizes Red Cross program and standards leading to certification).

754

PHYSICS (CES)

304 Electricity and Magnetism* 4 cr.

305 Electronic Aids to Measurement 4 cr.

310 Modern Physics* 3 cr.

311 Advanced Laboratory Physics* 2 cr.

315 Mechanics 3 cr.

See also relevant courses in other areas, including: Chemistry-Physics 110, 111, 112, 211, and 212, Chemistry-Physics, 5 cr. each.

Chemistry-Physics 317, 318, Nuclear Physics and Radiochemistry (with laboratory), 3-4 cr.

Chemistry-Physics 320, 322, Thermodynamics and Kinetic Theory (with laboratory), 3-4 cr.

Ecosystems Analysis 141, Elementary Astronomy, 3 cr.

Ecosystems Analysis 303, Electromagnetic Radiation, 4 cr.

Ecosystems Analysis 306, Biophysics, 3 cr.

*Not offered in 1972-1973.



122 Political Science

Ecosystems Analysis 350, 351, Meteorology (with laboratory), 3-4 cr.
Environmental Control 332, Introduction to Geophysical Fluid Mechanics, 3 cr.
Environmental Control 428, Soil Physics, 3 cr.

778

POLITICAL SCIENCE (CCS)

103 Introduction to Political Analysis 3 cr.
202 State Government and Public Policy 3 cr.
204 Comparative Bureaucratic Behavior 3 cr.
213 Urban Politics 3 cr.
302 Community Political Behavior 3 cr.
303 Elections and Voting Behavior 3 cr.
304 Comparative Political Systems 3 cr.
305 Political Systems of the Commonwealth 3 cr.
306 International Political Systems and Processes 3 cr.
307 Concepts in Political Theory 3 cr.
350 Political Conflict and Urban Policy 3 cr.
363 Politics of Developing Systems 3 cr.
402 Political Values and Ideologies 3 cr.
403 Foundations and Problems of International Politics 3 cr.
404 American Foreign Economic and Military Policies 3 cr.
405 American Executive Behavior 3 cr.
426 American Legislative Process 3 cr.
450 Political Change 3 cr.
472 Parties and Pressure Groups 3 cr.

779

POPULATION DYNAMICS (CHB)

204 Fertility, Reproduction, and Family Planning 2 cr.
283X Selected Topics in Population Dynamics 1-4 cr.
298 Directed Study 1-4 cr.
310 Introduction to Human Genetics 3 cr.
320 Introduction to Population Dynamics 3 cr.

330 Biological History of Wisconsin 2 cr.

342 Human Evolution 3 cr.

402 Population Biology 3 cr.

410 Principles of Human Ecology 3 cr.

412 Principles of Parasitology 3 cr.

421 Problems in Population Regulation 3 cr.

450 Current Topics in Population Dynamics 2 cr.

460 Principles of Demography 3 cr.

483X Selected Topics in Population Dynamics 1-4 cr.

484 Senior Distinction Project 3 cr.

498 Directed Study 1-4 cr.

820

PSYCHOLOGY (CCS)

102 The Behavior and Experiences of Man 3 cr.
202 Introduction to Social Psychology 3 cr.
205 Psychology of Human Adjustment 3 cr.
206 Experimental Psychology 3 cr.
306 Psychology of Perception 3 cr.
309 Psychology of Motivation 3 cr.
320 Personnel Psychology 3 cr.
335 Psychology of Attitudes and Public Opinion 3 cr.
337 Social Behavior Dynamics 3 cr.
338 Psychology of Learning 3 cr.
415 Organization Psychology 3 cr.
416 Psychology of Intergroup Relations 3 cr.
417 Thinking and Problem Solving 3 cr.
438 Group Dynamics 3 cr.

For developmental psychology, see: **Growth and Development.**

834

REGIONAL ANALYSIS (CCS)

222 Man and the Ocean of Air 3 cr.

223 Man and the Ocean of Air Laboratory 1 cr.

224 The Land Surface: Form and Effects on Man
3 cr.

225 The Land Surface: Form and Effects on Man
Laboratory 1 cr.

283X Selected Topics in Regional Analysis
1-4 cr.

298 Directed Study 1-4 cr.

310 Regional Adaptations to a Changing En-
vironment 3 cr.

320 Introduction to Regional Analysis 3 cr.

325 Human Living Space I 3 cr.

326 Human Living Space II 3 cr.

331 Geo-Historical Approaches to the Environ-
ment 3 cr.
Offered jointly by analysis-synthesis and regional
analysis.

350 Maps and Air Photos 3 cr.

355 Introduction to Quantitative Methods of
Spatial Analysis 3 cr.

362 Analysis of the Great Lakes Region of Africa
3 cr.

372 Analysis of the Great Lakes Region of North
America 3 cr.

377 Geography of Northern Lands 3 cr.

401 Regional Economic Analysis 3 cr.

420 Regional and Urban Planning 3 cr.

472 Planning in the Great Lakes Region of North
America 3 cr.

477 Planning in the Northern Lands 3 cr.

483X Selected Topics in Regional Analysis
1-4 cr.

484 Senior Distinction Project 3 cr.

498 Directed Study 1-4 cr.

892
SOCIAL SERVICES (SPS)

202 Introduction to Social Services 3 cr.



124 Sociology

283X Selected Topics in Social Services 1-4 cr.

302 Methods of Public Welfare Investigation
3 cr.

303 Social Service Programs of the National,
State and Local Government 3 cr.

310 Child Welfare 3 cr.

320 Introduction to the Principles of Casework
3 cr.

402 Field Experience in a Social Service
Agency 3 cr.

405 Probation and Parole 3 cr.

410 Social Programs of the Aged and Infirm 3 cr.

483X Selected Topics in Social Services 1-4 cr.

498 Directed Study 1-4 cr.

900
SOCIOLOGY (CCS)

202 Introduction to Sociological Analysis 3 cr.

203 Minority Groups 3 cr.

208 Marriage and Family 3 cr.

302 Social Stratification 3 cr.

303 Theories of Societal Development and
Change 3 cr.

304, 305 Processes of Deviant Behavior 3, 3 cr.

307 Concepts of Social Analysis 3 cr.

309 The City 3 cr.

311 Collective Behavior 3 cr.

312 Social Change 3 cr.

402 World Population 3 cr.

404 Criminology 3 cr.

405 Rural-Urban Interaction 3 cr.

406 Comparative Social Systems 3 cr.

407 Complex Organization 3 cr.

446 Juvenile Delinquency 3 cr.

938
URBAN ANALYSIS (CCS)

283X Selected Topics in Urban Analysis 1-4 cr.

298 Directed Study 1-4 cr.

340 Introduction to Urban Analysis 3 cr.

350 The City as Habitat 3 cr.

351 Transportation and the City 3 cr.

400 The City as Idea 3 cr.

440 Social Dynamics of Urban Life 3 cr.

450 Senior Seminar 3 cr.

483X Selected Topics in Urban Analysis 1-4 cr.

484 Senior Distinction Project 3 cr.

498 Directed Study 1-4 cr.

957
VISUAL ARTS (CCC)

100 Man's Visual Images I 3 cr.

101 Man's Visual Images II 3 cr.

102 Design and Drawing Studio I 3 cr.

103 Design and Drawing Studio II 3 cr.

201 Introduction to Painting 3 cr.

202 Introduction to Ceramics 3 cr.

203 Introduction to Sculpture 3 cr.

303, 403 Watercolor Painting 3, 3 cr.

305, 405 Graphic Arts: Relief Printing 3, 3 cr.

307, 407 Graphic Arts: Intaglio Printing 3, 3 cr.

311, 412 Oil Painting 3, 3 cr.

321, 421 Sculpture 3, 3 cr.

331, 431 Ceramics 3, 3 cr.

351, 451 Art Metal and Jewelry Design 3, 3 cr.

361 Life Drawing and Anatomy 3 cr.

409 Materials Workshop for the Designer 3 cr.

410 Materials Workshop for the Painter 3 cr.

411 Materials Workshop for the Sculptor 3 cr.

480, 481 Introduction to Environmental Design
3, 3 cr.



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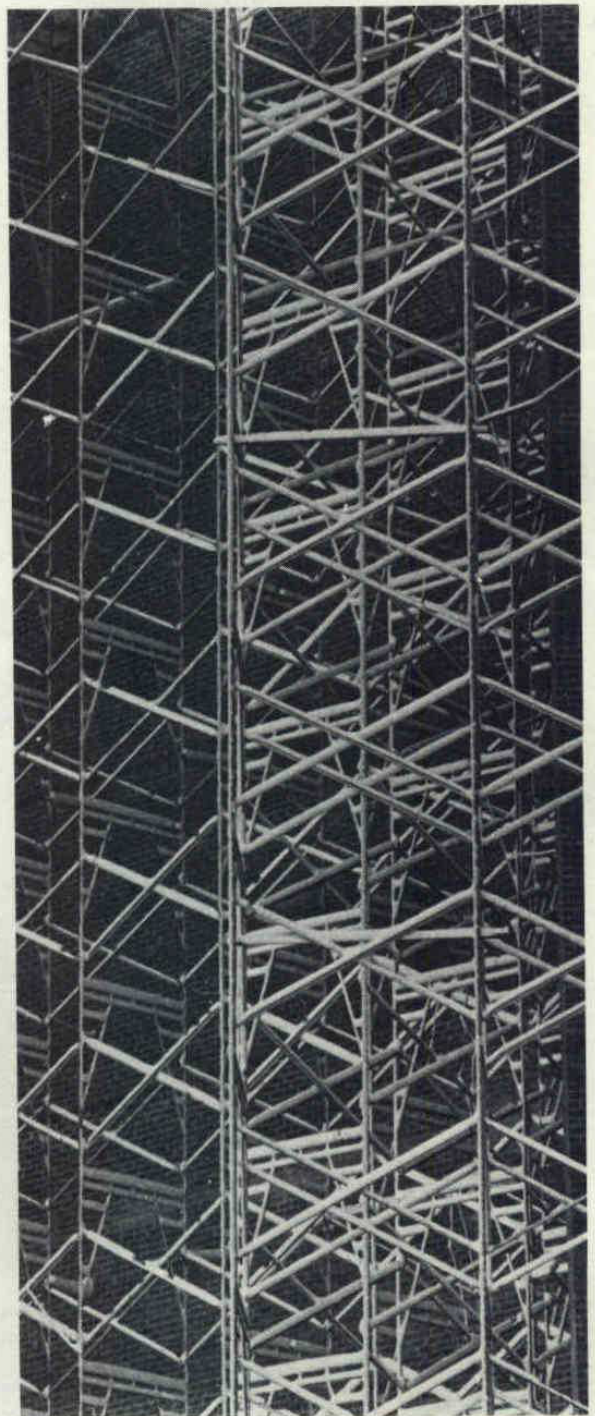
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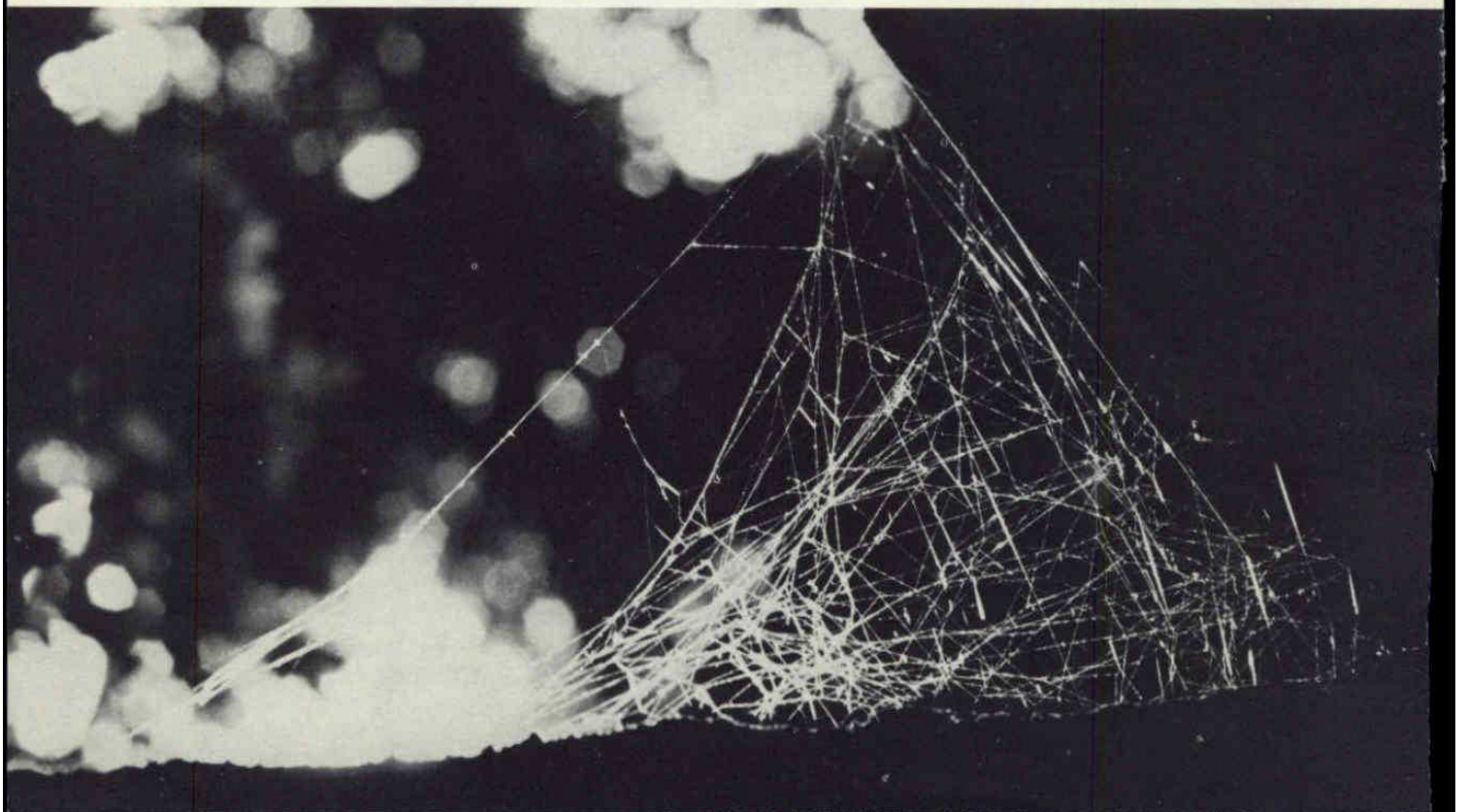


130 Faculty

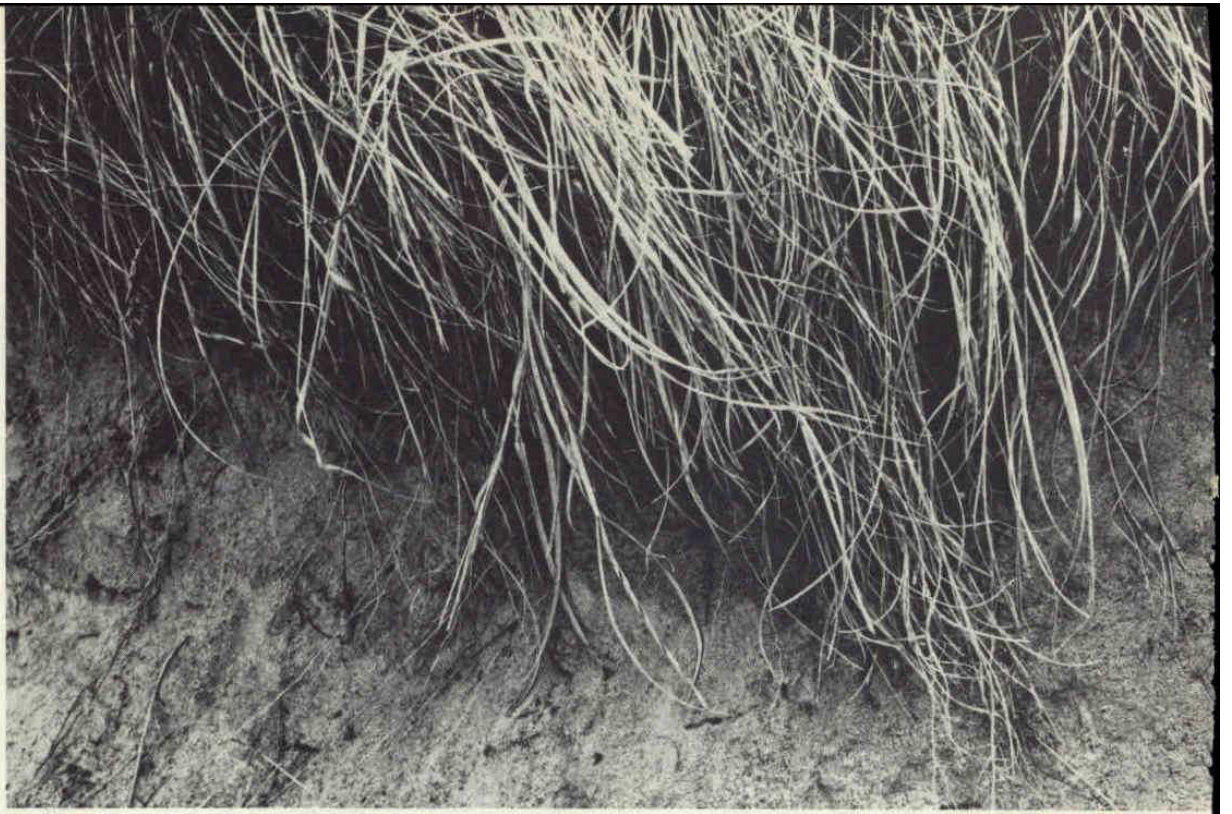
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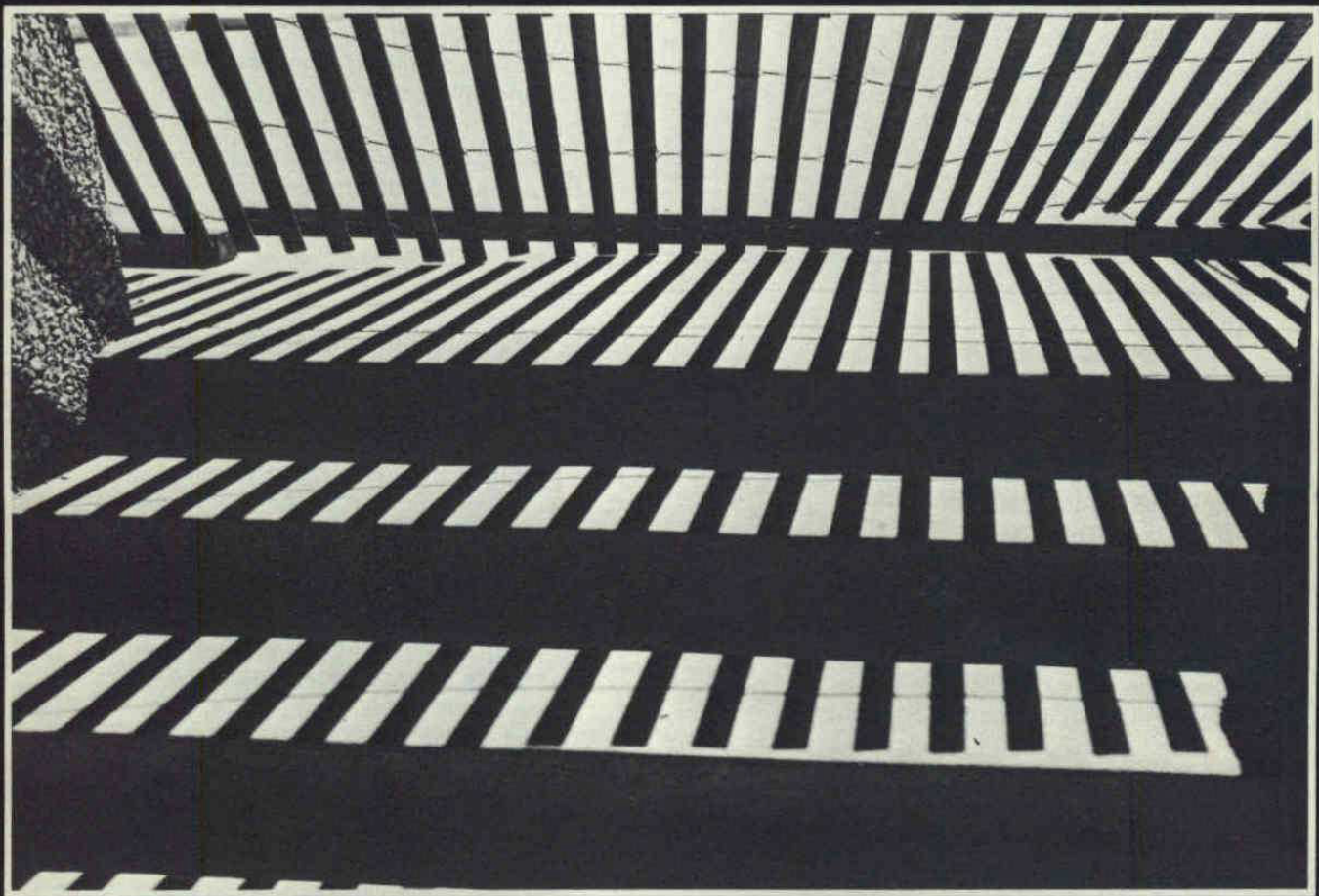


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- Academic advising, 30
- Academic calendar, 77-79, 144
- Academic plan, 2-6, 18-24
- Academic petition for transfer students, 95
- Academic plan form, 77
- Addresses, for more information, iv
- Administration, business, collateral in:
see environmental administration
- Administration, courses in, 106-107
distribution, 106
finance, 106
labor relations, 106-107
organization and operations, 107
quantitative methods, 107
- Administration, public, collateral in:
see environmental administration
- Administration, UW, 126
UWGB, 126
- Admission, 92-96
adult students, 95
freshmen, 95
general policy, 92
procedures, 92-96
requirements, 92
special opportunities, 95
summer session, 95
transfer students, 93-95
veterans, 95
- Adult education, 84, 95
- Adult students, admission of, 95
- Advising, academic, 30
for adults, 84
- Advisory committees, 14
- Agricultural science, preprofessional program in,
64
- Aids, student financial, 98-102
- All-university requirements, 18-22
- American literature and language, courses in,
116-117
- Analysis-synthesis, concentration in, 32-35
courses in, 107
- Anthropology, courses in, 107-108
option in, 48-49
- Apartments, campus, 86
- Applied music, courses in, 119
- Architecture, preprofessional program in, 65
- Art, curator of, 88-89
- Art: see visual arts
- Athletics, intercollegiate, 87
intramural, 87
- Bachelor's degrees, 75
- Band, 119
- Basketball, intercollegiate, 87
- Biochemistry, courses in, 110, 113, 118-119
- Biology, courses in, 110
biology, 110
botany, 110
entomology, 110
microbiology, 110
zoology, 110
option in, 49-51
- Board of Regents, members of, 126
- Board of Visitors, members of, 126
- Botany, courses in, 110
- Budget, typical, 98
- Business administration: see managerial systems
and environmental administration
- Calculus, tool subject, 21
- Calendar, academic year, 144
- Campus map, inside back cover
- Campuses, 8-13
Fox Valley, 10-12
Main, 8-9
Manitowoc County, 12-13
Marinette County, 13
- Career information, 88
- Catalog, how to use, 6
- Change of campus, 76
- Chemistry, courses in, 110
option in, 51
- Chemistry-physics, courses in, 110
- Choral organizations, 119
- City planning and community development,
preprofessional program in, 65
- Cognate in managerial systems, 41
- Collaterals, 24, 60-64
education, 60-64
environmental administration, 60
leisure sciences, 64
mass communications, 64
social services, 64
- College and university teaching, 72
- Colleges, 26-29
College of Community Sciences, 26-27
College of Creative Communication, 27-28
College of Environmental Sciences, 28-29
College of Human Biology, 29
- Communication-action, concentration in, 35-36
courses in, 111

Communication sciences, option in, 51
Community advisory committees, 14
Community involvement, 13
Community outreach and research, 15-16, 81-84
Community Sciences, college of, 26-27
 courses in, 111
Commiversity projects, 15
Computing services, 88
Concentrations (majors), 22, 32-46
 analysis-synthesis, 32-35
 communication-action, 35-36
 ecosystems analysis, 36
 environmental control, 37-38
 growth and development, 38-39
 human adaptability, 39-41
 managerial systems, 41
 modernization processes, 41-42
 nutritional sciences, 43-44
 population dynamics, 44-45
 regional analysis, 45-46
 urban analysis, 46
Concentration-option (major), 22-24
Conferences, 84
Continuing education opportunities, 81-86
Counseling, 84, 88, 102
Courses, list of, 104-124
 experimental, 105-106
 directed study, 106
 late afternoon and evening, 84
 selected topics, 105-106
Creative Communication, college of, 27-28
Credit by examination, 75
Credit evaluation, transfer students, 95
Curator of art, 88-89

Dance, performing arts, option in, 55
 tool subjects, 22
Data processing, tool subject, 21
Data services, 88
Degrees, undergraduate, 75
Directed study courses, 106
Directory, university, 126-136
Distinction, graduating with, 80
Distribution, courses in, 106
Distribution requirements, 20-21

Early admission, 95
Early graduation, 77
Earth science, courses in, 111
 option in, 51-52

140 Index

- Economics, courses in, 111
 - option in, 52
- Ecosystems analysis, concentration in, 36
 - courses in, 112
- Education, collateral in, 60-64
 - courses in, 112
- Educational communications, 89-90
- Educational opportunity grants, 100
- Elementary school license, 62-64
- Employment, student, 102
- Engineering, courses in, 113
 - preprofessional program in, 65
- English: see literature and language
- Entomology, courses in, 110
- Environmental administration, collateral in, 60
 - courses in, 106-107
- Environmental control, concentration in, 37-38
 - courses in, 113
- Environmental Sciences, college of, 28-29
 - courses in, 113
- Evening course opportunities, 84
- Examinations, placement, 30
- Expenses, 96
- Experimental course program, 105-106
- Extension, University, partnership with, 16
 - graduate courses through, 84
 - noncredit classes through, 84
 - undergraduate courses through, 84
- Faculty and staff, UWGB, directory of, 126-136
- Fees, 96
 - preregistration, 96
 - semester, 96
 - summer session, 96
- Finance, courses in, 106
- Financial aids, 98-102
- Finite mathematics, tool subject, 21
- Foreign language, tool subject, 21-22
- Fox Valley campus, 10-11
- French: see literature and language
- Freshmen, selecting a program, 29
 - admission of, 92-93
- Geography, courses in, 113-114
 - option in, 52
- German: see literature and language
- Grading system, 75-77
- Graduate credit courses through University
 - Extension, 84
- Graduation, early, 77
 - request for, 77
 - requirements, 75
 - with distinction, 80, 106
- Grants, educational opportunity, 100
- Green Bay community, 9-10
- Growth and development, concentration in, 38-39
 - courses in, 114



- Health professions, preprofessional programs in, 66-70
- High school students, early admission of, 95
- History, courses in, 114-115
option in, 52-54
- Home economics, preprofessional program in, 70
- Honors programs, 79-80
graduating with honors, 80
- Housing, 86-87
- Human adaptability, concentration in, 39-41
courses in, 115
- Human Biology, college of, 29
courses in, 115
- Human relations training, 88
- Independent learning, 4, 24, 74
- Individualization of learning, 74
- Information, where to write, iv
- Instructional services, 88
- Intercollegiate athletics, 87
- Intramural activities, 87-88
- January interim period, 77-78
practica courses, 115
- Labor relations, courses in, 106-107
- Late afternoon and evening course opportunities, 84
- Late registration, late payment, 96
- Law, preprofessional program in, 70-72
- Lectures and fine arts, 90
- Leisure sciences, collateral in, 64
courses in, 115-116
- Liberal education seminar, 18-20
courses in, 116
- Libraries, 90
- Literature and language, courses in, 116-117
option in, 54
- Loans, 100-102
- Main campus, 8-9
- Majors, 22-24
- Managerial systems, concentration in, 41
courses in, 106-107
- Manitowoc County campus, 12-13
- Map, main campus, inside back cover
- Marinette County campus, 13
- Mass communications, collateral in, 64
courses in, 117
- Mathematics, courses in, 117-118
option in, 54-55
- Mathematics, tool subject, 21
- Medical technology, degree program in, 68
- Medicine, preprofessional program in, 66
- Microbiology, courses in, 110
- Modernization processes, concentration in, 41-42
courses in, 118
- Multi-campus university, 8
- Music, applied, courses in, 119
- Music, performing arts, courses in, 119
option in, 55
- National defense student loan program, 101
- New opportunities program, 80-81
- Noncredit classes, workshops, seminars, and conferences, 84
- Nursing, preprofessional programs in, 67
- Nutritional sciences, concentration in, 43-44
courses in, 118-119
- Off-campus housing, 87
- Off-campus study, 81
- Opportunities, special admission, 95
- Options, 22-24, 48-58
anthropology, 48-49
biology, 49-51
chemistry, 51
communication sciences, 51
earth science, 51-52
economics, 52
geography, 52
history, 52-54
literature and language, 54
mathematics, 54-55
performing arts, 55-57
philosophy, 57
physics, 57
political science, 57-58
psychology, 58
sociology, 58
visual arts, 58
- Orchestra, 119
- Organization and operations, courses in, 107
- Pass-no credit grading, 18, 75
- Payment, late, 96
- Performing arts, courses in, 119-120
music, 119
music, applied, 119
theater, 119-120
option in, 55-57
tool subject, 22
- Personal majors, 24
- Petitions, academic plan form, 77
for transfer students, 95
special, 77
- Pharmacy, preprofessional program in, 68
- Philosophy, courses in, 120
option in, 57
- Physical education, courses in, 120-121
- Physical facilities, 8-13
- Physics, courses in, 121-122
option in, 57
- Physiology: see human adaptability
- Placement and career information, 88
- Placement examinations, 30, 95
- Political science, courses in, 122
option in, 57-58
- Population dynamics, concentration in, 44-45
courses in, 122
- Practica, January (Interim Period), 77-78
courses in, 115
- Practice teaching, 63-64
- Preprofessional programs, 24, 64-72
agricultural science, 64
architecture, 65
city planning and community development, 65
engineering, 65

142 Index

- health professions, 66-70
 - medicine, 66
 - nursing, 67
 - pharmacy, 68
 - medical technology, 68
 - veterinary medicine, 68
 - veterinary science, 70
- home economics, 70
- law, 70-72
- social work, 72
- theology, 72
- water resources and hydrology, 72
- Preregistration fee, 96
- Prerequisites, 74, 104
- Professional applications, 24, 60-72
- Professional collaterals, 24, 60-64
- Professional Studies, school of, 29
- Program planning, how to, 6, 29-30
- Programs, special, 79-81
 - honors, 79-80
 - new opportunities, 80
 - special learning, 81
 - student life, 86-87
 - volunteer, 86
- Psychology, courses in, 122
 - option in, 58
- Public administration: see managerial systems and environmental administration

- Quantitative methods, courses in, 107

- Recreation, intramural, 87
- Refunds, 96
- Regents, Board of, 126
- Regional analysis, concentration in, 45-46
 - courses in, 122-123
- Registration, late, 96
- Request for graduation, 77
- Requirements, admission, 92
 - all-university, 18-22
 - distribution, 20-21
 - liberal education seminar, 18-20
 - tool subjects, 21-22
 - graduation, 75
 - residence, 76
- Resources, 88-90
 - computing services, 88
 - curator of art, 88-89
 - educational communications, 89-90
 - instructional services, 88
 - lectures and fine arts, 90
 - libraries, 90

- Scholarships, 100
- School of Professional Studies, 29
- Secondary school license, 70
- Selected topics courses, 105
- Semester fees, 96
- Semester plan, 77
- Seminars, noncredit, 84
- Senior distinction project, 80, 106
- Senior honors, 79-80
- Senior summary, 77

- Shorewood club, 86
- Soccer, intercollegiate, 8, 87
- Social services, collateral in, 64
 - courses in, 123-124
- Social work, preprofessional program in, 72
- Sociology, courses in, 124
 - option in, 58
- Spanish: see literature and language
- Special learning programs, 81
 - English course in, 116
 - mathematics courses in, 118
- Special petitions, 77
- Sports and recreation, 87
- Staff, UWGB, directory of, 135-136
- State student loans, 101
- Statutory requirements, education, 62
- Student development center, 88
- Student employment, 102
- Student financial aids, 98-102
- Student life programs, 86-87
- Student loans, 100-102
- Student teaching, 63-64
- Student union, 86
- Study, off-campus, 81
- Summary, senior, 77
- Summer session, 78-79
 - admission, 95
 - fees, 96

- Teacher certification, 60-64
- Testing, 88
 - placement, 30, 95
- Theater, performing arts, courses in, 119-120
 - option in, 55-57
- Theme college organization, 6, 26-29
- Theology, preprofessional program in, 72
- Tool subject requirements, 21-22
- Transfer students, admission of, 93-95
 - academic petition for, 95
 - credit evaluation, 95
- Tuition, 96

- Undergraduate courses through University Extension, 84
- Undergraduate degrees, 75
- University directory, 126-136
- University Extension, partnership with, 16
 - courses through, 84
- University of Wisconsin, The
 - administration of, 126
- University of Wisconsin-Green Bay, The
 - administration of, 126
 - faculty and staff of, 126-136
 - Fox Valley campus, 10-12
 - Green Bay community, 9-10
 - main campus, 8-9
 - Manitowoc County campus, 12-13
 - Marinette County campus, 13
 - multi-campus university, 8
 - organization of, 26
- University short-term student loans, 102
- Urban analysis, concentration in, 46
 - courses in, 124

- Variable content courses, 105-106
- Veterans, admission of, 95
- Veterans educational assistance program, 102
- Veterinary medicine, preprofessional program in, 68
- Veterinary science, preprofessional program in, 70
- Visitors, Board of, 126
- Visual arts, courses in, 124
 - option in, 58
 - tool subject, 22
- Volunteer programs, 86
- War orphans educational assistance, 102
- Water resources and hydrology, preprofessional program in, 72
- Wisconsin guaranteed loan program, 101
- Workshops, noncredit, 84
- Work-study, 102
- Zoology, courses in, 110

CALENDAR

Fall Semester

	1972-1973	1973-1974
Registration and new student period (or register by mail earlier)	Aug. 29-Sept. 1	Aug. 28-31
Classes begin	Sept. 5	Sept. 4
Thanksgiving recess	Nov. 23-26	Nov. 22-25
Monday (Labor Day) classes meet	Dec. 11	Dec. 10
Thursday-Friday (Thanksgiving recess) classes meet	Dec. 12-13	Dec. 11-12
Last day of classes	Dec. 13	Dec. 12
Final examinations	Dec. 14-20	Dec. 13-19
Commencement	Dec. 17	Dec. 20
Christmas recess	Dec. 21-Jan. 1	Dec. 20-Jan. 6

Special Studies Period

Begins	Jan. 2*	Jan. 7
Ends	Jan. 26	Feb. 1

Spring Semester

Registration and new student period (or register by mail earlier)	Jan. 23-26	Jan. 29-Feb. 1
Winter recess	Jan. 27-Feb. 4	Feb. 2-10
Classes begin	Feb. 5	Feb. 11
Spring recess	April 21-29	April 13-21
Last day of classes	May 18	May 24
Final examinations	May 21-26	May 27-June 1
Commencement	May 27	June 2

Summer Session

	1972	1973	1974
Registration and new student period (or register by mail earlier)	June 15-16	June 14-15	June 20-21
Classes begin	June 19	June 18	June 24
Independence Day (holiday)	July 4	July 4	July 4
Last day of classes (finals)	Aug. 11	Aug. 10	Aug. 16
Commencement	Aug. 12	Aug. 11	Aug. 17

*January 1 classes will be made up on January 6.

Key to Map

- | | |
|---------------------------------------------------|---------------------------------------------|
| 1. Zehren Building | 11. Laboratory Sciences |
| 2. Human Development Center | 12. Business Office |
| 3. Physical Plant | 13. Power Plant |
| 4. Ecumenical Center | 14. Soccer Field |
| 5. Student Activity Center | 15. Athletic Fields |
| 6. Student Game Center | 16. Student Housing |
| 7. College of Creative Communication
(1972-73) | 17. Parking |
| 8. Library-Learning Center | 18. College of Community Sciences (1973-74) |
| 9. Instructional Resources | 19. Physical Education Building (1974-75) |
| 10. Environmental Sciences | 20. Parking (1972-73) |
| | 21. Bay Shore Union (1972-73) |