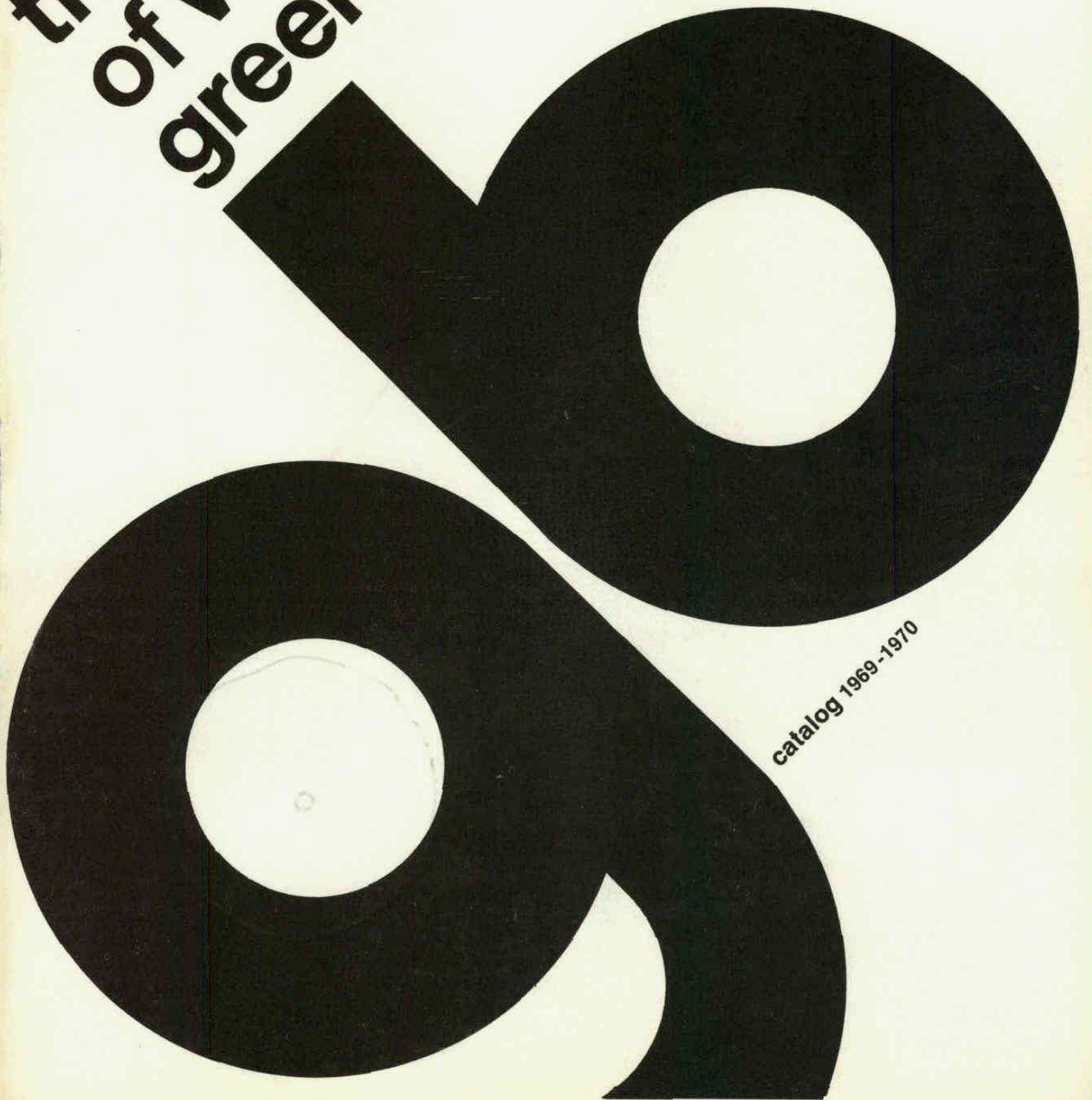


**the university  
of wisconsin  
green bay**



catalog 1969-1970

## **FOR MORE INFORMATION**

Inquiries about The University of Wisconsin-Green Bay are welcomed and should be directed to the appropriate office at 1567 Deckner Avenue, Green Bay, Wisconsin 54302.

### **Admission, general information**

Office of Admissions

### **Scholarships and other financial aids**

Office of Student Financial Aids

### **Student records**

Office of the Registrar

Academic counseling and housing information are available from the Office of Student Affairs at each campus of UWGB:

#### **GREEN BAY CAMPUS**

1567 Deckner Avenue  
Green Bay, Wisconsin 54302  
(414-435-3211)

#### **FOX VALLEY CAMPUS**

Midway Road  
Menasha, Wisconsin 54952  
(414-734-8731)

#### **MARINETTE COUNTY CAMPUS**

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

#### **MANITOWOC COUNTY CAMPUS**

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

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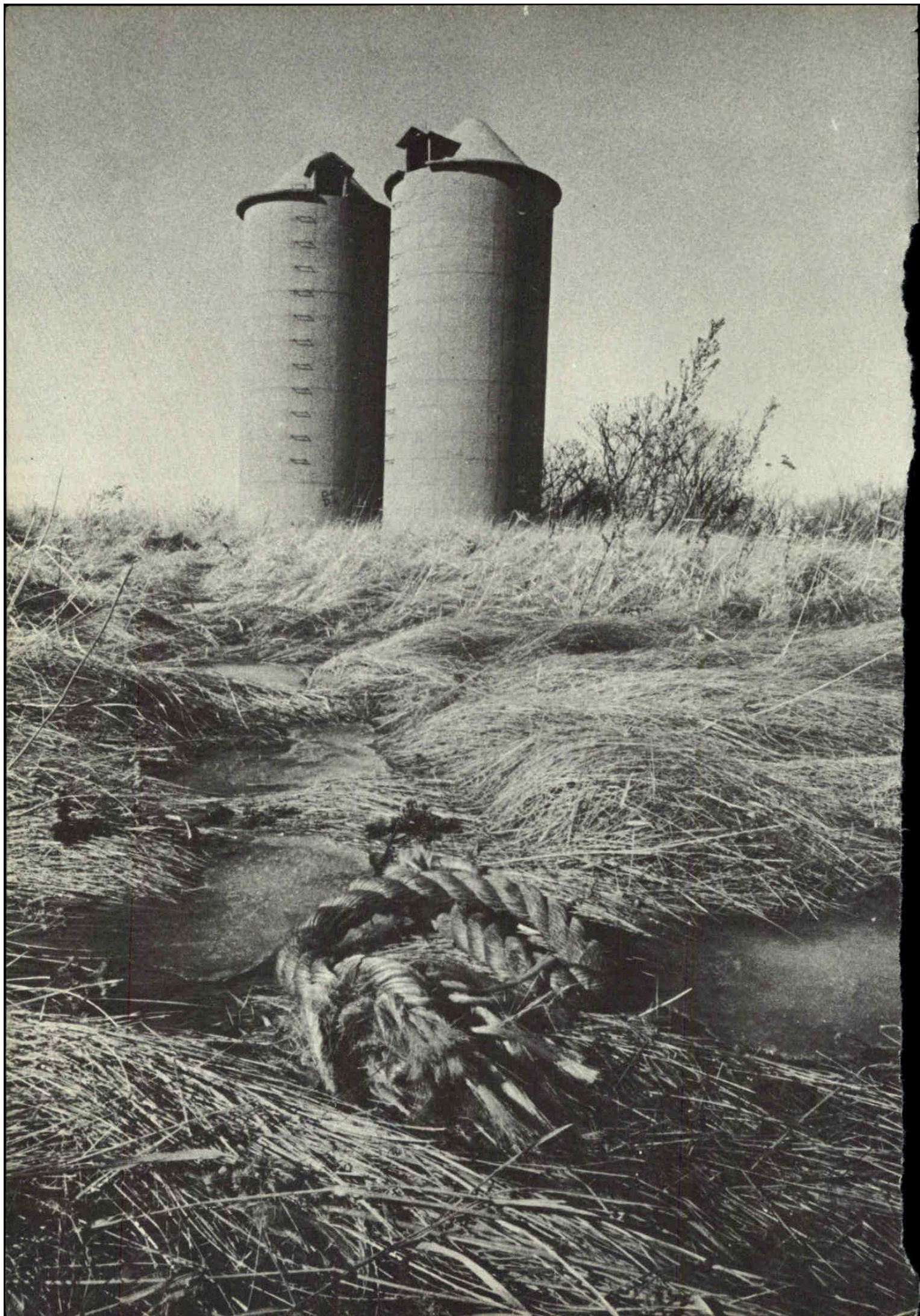
Course offerings listed in this catalog represent course authorizations. Some of them will not be available until 1970-1971, when the first large enrollment of senior students is expected. More information is available from counselors in the Office of Student Affairs at each campus.

Date of publication: September, 1968

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The University



# The University

## A BRIEF HISTORY

The University of Wisconsin-Green Bay was established by act of the Legislature in 1965, as a degree-granting unit of The University of Wisconsin. Developed to meet the needs and respond to the potentialities of the Northern Great Lakes region, the University provides abundant resources for a liberal education that is universal in scope and application.

The central campus is at Green Bay. Integrated with it to form a multi-campus university are campuses at Manitowoc, Fox Valley (Menasha) and Marinette. All are former two-year campuses of The University of Wisconsin Center System, located within a 60-mile radius of Green Bay. The four campuses share a single outstanding faculty and a single central staff, with a dean and appropriate staff located at each of the outlying campuses.

Inter-campus athletic events, fine arts and lecture programs, social affairs and all-University committee functions already link students of the four campuses. In the near future, the campuses will also be connected by a closed circuit instructional television network as well as a computerized "learning bank" accessible by dial telephone from any study area.

Opening as a degree-granting university in September, 1969, UWGB is new in facilities and faculty. As a unit of The University of Wisconsin, however, it reflects from the first the solid traditions of excellence that have made the total university famous throughout the world as a center of instruction, research and public service.

Wisconsin is the sixth largest university in the United States in enrollment of full-time students. It ranks second in the number of foreign scholars on its campuses, fifth in the number of foreign students. Over the past four decades it has ranked second in the country in the awarding of doctorate degrees. Other studies have ranked Wisconsin third in general excellence, and one of the top ten universities with the most alumni listed in *Who's Who in America*.

Wisconsin is a free and democratic university. Its students have a voice in its government as representatives on a number of advisory groups and on faculty committees. Its aim is to provide the kind of education that will help each student to realize his fullest potential. It includes all races and creeds. With jobs, scholarships and loans it attempts to place a university education within the reach of the largest possible number of qualified students.

## A STATEMENT OF PHILOSOPHY

At The University of Wisconsin-Green Bay the traditional spirit of freedom and inclusiveness finds expression in an educational philosophy that begins with people—especially students—and the world in which they live. Two words—*commitment* and *involvement*—express key ideas of this philosophy.

A student who is committed to the world in which he seeks to learn and involved in its day-to-day activity is one for whom learning will have real purpose. Such a student becomes concerned for society and its improvement. When he also becomes involved in the world, through firsthand observation and experience during his years of academic preparation, he becomes a full participant in his education instead of the passive occupant of a classroom chair.

Helping students to define their values through such commitment and involvement is a central purpose of The University of Wisconsin-Green Bay. An individual's values are by their nature very personal. It is not the province of a university to tell a student what to believe; but a university can help him to examine his values and compare them with others. It can help him to relate values, purpose and learning through a series of unique educational experiences on and off the campus.

## FOCUS ON ECOLOGY

From the conviction that learning should be purposeful, that it should help to define individual values, that it should involve the student in the life of the world, has grown the special focus of

## The University

the UWGB program: a focus on ecology, or the study of man in relation to his surroundings. Such an approach to knowledge becomes urgent in the face of the increasing complexity of unsolved problems of the physical and social environment.

Such problems are all around us: decaying cities, racial conflict, population explosion, hot and cold wars, pollution of air and water, diminishing supplies of food and natural resources. All can be accurately described as problems of the environment. All require an environmental approach for most fruitful study and eventual solution.

### ACADEMIC ORGANIZATION

#### Theme Colleges

Because an environmental (or ecological) approach to knowledge cuts across conventional boundaries of academic disciplines, The University of Wisconsin-Green Bay has been organized by colleges based on themes of the environment, rather than by colleges grouped according to disciplines, or fields of study.

Two colleges select certain types of environment for attention. The College of Environmental Sciences emphasizes problems of the environment of natural resources. The College of Community Sciences focuses upon the social environment.

The two remaining theme colleges are concerned with the individual within his environment. The College of Human Biology centers its attention on human adaptability, or the impact of environment on the individual. The College of Creative Communication emphasizes problems of human identity, or the individual's impact on his environment.

Each theme college has responsibility for teaching, research and public service programs that relate to its environmental concern.

#### School of Professional Studies

The School of Professional Studies complements the theme colleges, offering majors in business and public administration and professional applications (collaterals) related to the work of each theme college. Professional collaterals are available in business and public administration; in education, leading to certification for elementary or secondary teaching in Wisconsin; in mass communications\*; in the leisure sciences\* and in the social services\*.

Detailed information about the academic program of each theme college and the School of Professional Studies can be found in Section II, THE EDUCATIONAL PROGRAM.

#### SERVICES TO STUDENTS

The Office of Student Affairs on each of the four campuses of The University of Wisconsin-Green Bay is an integral part of the educational program and campus community. Staff members are available to help each student get the most out of his educational experience by offering a number of services to assist him in decision-making and in adjusting to growing responsibilities and opportunities.

Programs and services coordinated by the Office of Student Affairs include admissions and high school relations, counseling and advising services, financial aid and student employment, health services, intramural activities and athletics, placement, registration, housing and residence halls, and student life programs. Detailed information about these services may be found in the UWGB Student Handbook, which also defines academic and social expectations which the University holds for its students.

A most important service provided by staff members of the Office of Student Affairs is the academic counseling available to every student

\*Will be offered when the collateral has been approved by the Coordinating Council for Higher Education

in regard to planning an academic program to meet future career goals. Ordinarily new students will receive such counsel or advice from a counselor in the Office of Student Affairs. Once a decision has been made concerning the area of academic concentration, a faculty member from the appropriate theme college or the School of Professional Studies will assist the student in further academic program planning.

### STUDENT LIFE

The extent to which a student aggressively participates in his own education largely determines the value of what he learns. A similar statement could be made about the student's co-curricular or out-of-class activities at UWGB. The "co-curriculum" is composed of student organizations, of a variety of special interest programs—for individuals as well as groups—and of participation in the governmental body of the University. The time, interest and experience a student invests in co-curricular activity is usually well spent in terms of the student and faculty contacts he makes as well as in the development of leisure interests and skills.

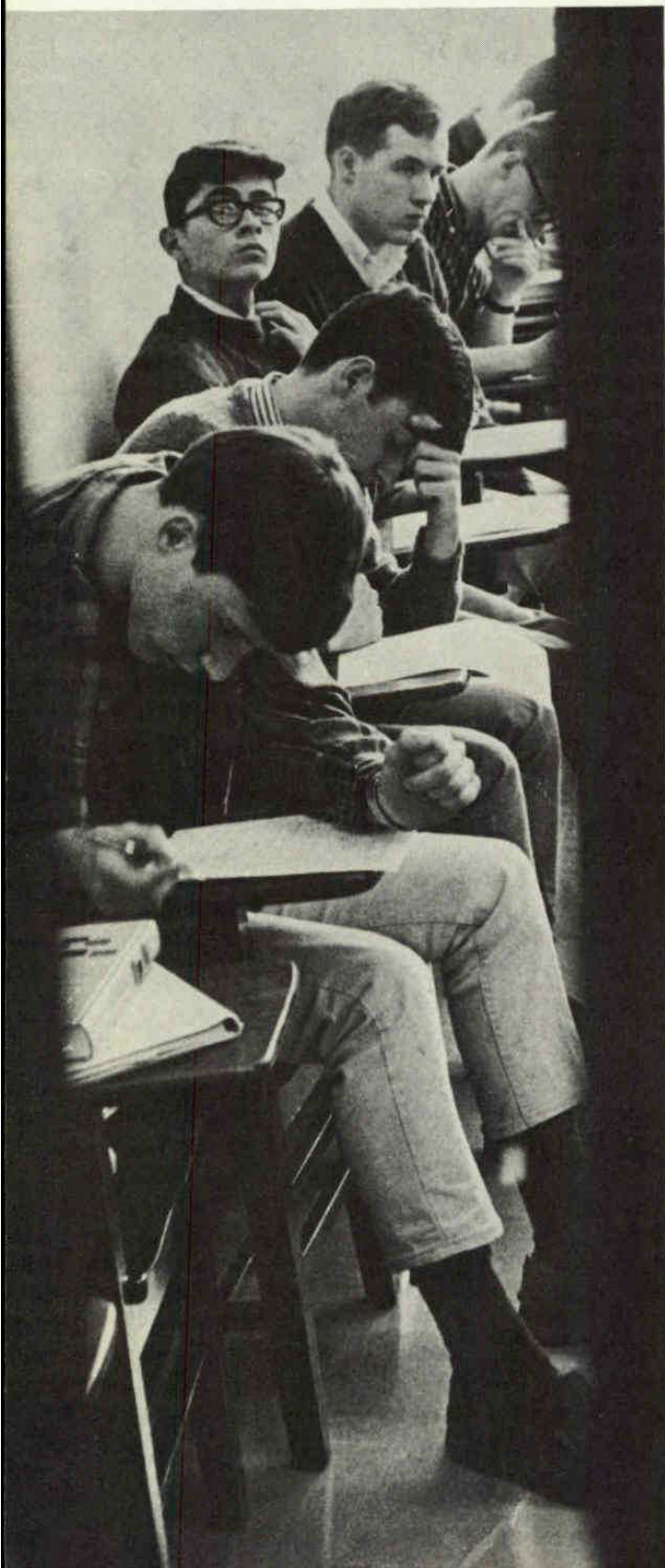
A new university presents a challenge to its students in terms of developing new activities and programs which will be of interest and value to themselves as well as to future students. Creative and current ideas are necessary to the development of student life programs that genuinely involve many students in a wide variety of special interests. However, UWGB has inherited an active student activities program on each of the four campuses.

Each campus has some unique student organizations not duplicated on the other campuses, while some activities and programs are common to all four campuses. For example, Fox Valley, Manitowoc, Marinette and Green Bay have local student governing bodies; in addition, UWGB students at all four locations are united by a United Student Council composed of representatives from each campus. Similarly, each campus has a number of student-faculty committees (fine arts, student life and interests, etc.)





## The University



having local jurisdiction, while simultaneously contributing representatives to similar all-University committees.

Student organizations represent a variety of student interests—political action, service to the University and the community, religion, international travel and language as well as more academically oriented interests. Each campus has an active drama program.

The Fox Valley campus, for example, boasts three foreign language clubs; Manitowoc has an active Explorers Club interested in outdoor activities; Marinette maintains a Soccer Club as well as an organization for mathematics students. Students at Green Bay have recently formed an International Club which sponsors a speakers' program. Similarly, the Anthropology Club at Green Bay has co-sponsored an anthropology film series in addition to promoting periodic "digs" in the area.

Political action organizations and programs are much in evidence on UWGB campuses. Fox Valley is represented with both a Young Republican and a Young Democrat group. At Manitowoc, the political action committee of the Student Government Association responds to student interest in political and social activity.

Service organizations such as Contact at Fox Valley and Gamma Sigma Sigma and Alpha Phi Omega at Green Bay provide opportunities for interested students to become involved in volunteer service projects.

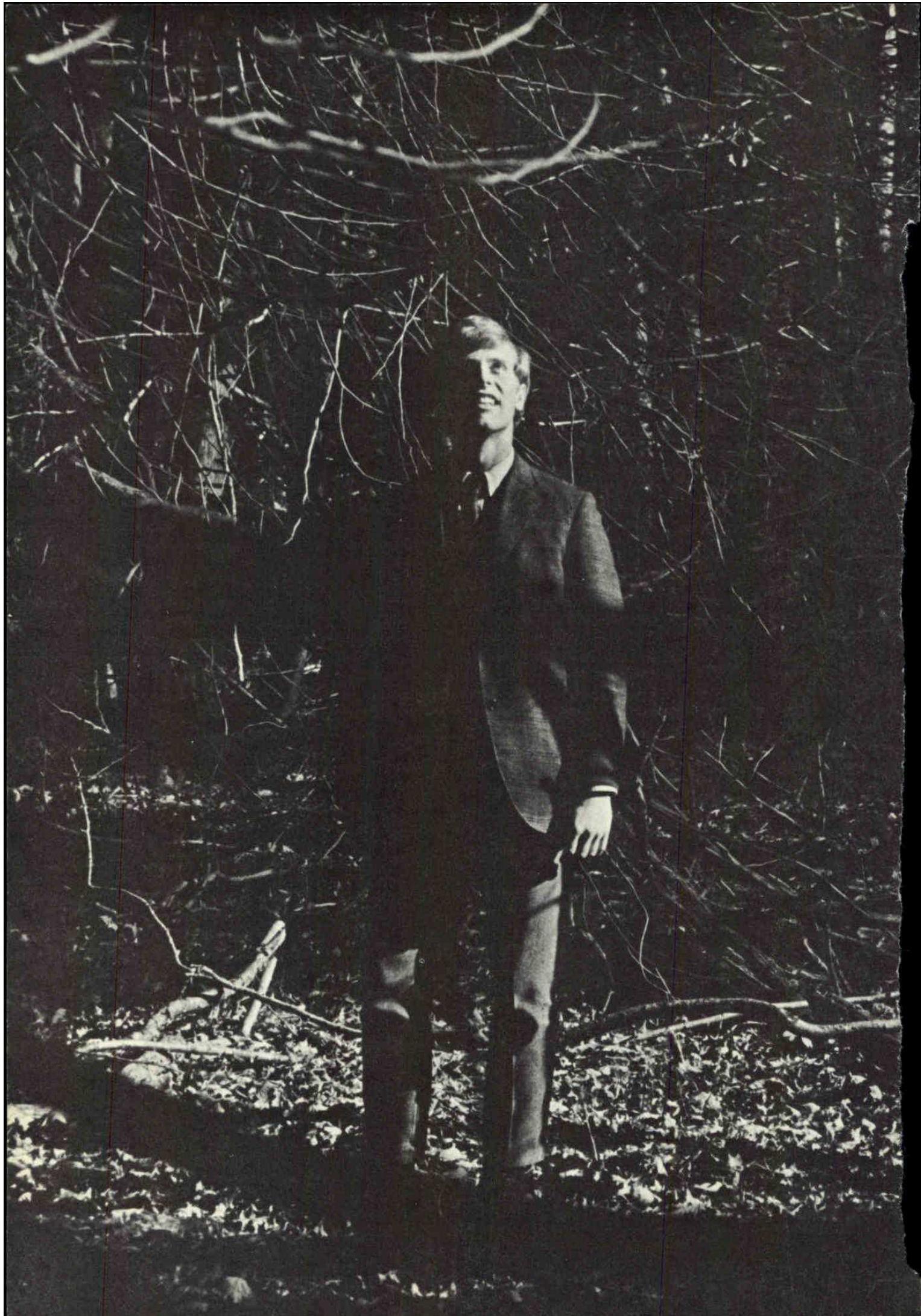
An active recreational program of athletic activities and intramural sports for both men and women will be greatly increased this year with the addition of new faculty and facilities.

The publication of a student newspaper offers many opportunities for student participation in writing, advertising and editing. The development of student literary magazines as well as artistic and musical organizations is also being encouraged to supplement an active fine arts and lecture series program on each campus.

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# The Educational Program



# Degrees and Degree Requirements

## UNDERGRADUATE DEGREES

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 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 may submit a petition. A normal or average student load is 15 or 16 credits.

Grade point averages are determined on a 4.0 basis. Students with a 2.0 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-fail grading system does not count in grade point averages, nor do grades received from institutions outside The University of Wisconsin system.

## ALL-UNIVERSITY REQUIREMENTS

An undergraduate education is a liberating experience. In a context of additional knowledge and experience, the liberating and maturing of students may 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.

### The Liberal Education Seminars

The central core of liberal education at The University of Wisconsin-Green Bay is a four-year series of seminars known collectively as the Liberal Education Seminars. Through this sequence, the student receives an introduction to values, ecology and environment, obtains special

knowledge about certain ecological problems, and has an opportunity to relate his experiences, interests and concerns to those who have different and complementary ones. Each year's work carries six credits, although the sophomore and junior practica may in some instances carry additional credit.

**Freshman Seminar.** The freshman seminar (Liberal Education Seminar 100, 101) provides an introduction to the two central concerns of the University: values and environment. The first semester emphasizes the crisis of belief and the forms of acting on beliefs. The second semester, devoted to a study of ecological crises, provides an intensive review of man's several environments and contemporary ecological problems. Through team teaching and the mixing of students from all parts of the University, a broad experience is assured as the student receives an introduction to ecology as well as a survey of various environmental themes.

At the time of registration, students may choose from among a number of different sections of the seminar, each with a somewhat different focus and reading list as well as different instructors. During the seminar, students will be given substantial writing experiences of different kinds equivalent to those normally found in the traditional English composition course, but focused on the subject matter of the seminar.

### Sophomore Seminar and Off-Campus Experience.

By the time a student is a sophomore, he has normally chosen the theme college in which he wishes to continue his education. Each theme college offers several sections of the sophomore seminar and off-campus experience (Liberal Education Seminar 200, 201) with each section focusing on a particular set of environmental problems.

Within his theme college, a student can select the section or set of problems of greatest interest to him. The first semester's work is normal class work which prepares him for an off-campus experience or special project, stressing the nature of American society and the Northern Great

## The Educational Program

Lakes region and introducing the particular environmental problem on which the section is concentrating.

The second semester's work can be taken during the January special studies period, a regular semester, or during the summer. Approximately 60 hours are spent in supervised off-campus observation or a special project, using the Northern Great Lakes region as a laboratory. Oral reports are made to the seminar, and different experiences of students in the seminar are compared and analyzed.

Some students will be able to take the second semester's work during the summer in connection with supervised summer employment or other special practice. Credit for the second semester's work in such a case may be greater. Many sophomores may prefer to carry out their practica during the January special studies period.

### **Junior Seminar and Other-Culture Experience.**

As a junior, a student continues to study the same set of environmental problems he selected for his sophomore seminar, or a companion or contrasting set. This time, however, he does so in an other-culture context. The junior seminar (Liberal Education Seminar 300, 301) varies widely from college to college and from student to student.

Most commonly, each first semester section of the junior seminar is particularly devoted to one or more areas in the United States outside the Northern Great Lakes region, one or more areas in other Western countries and one or more areas in non-Western countries. The seminar facilitates culture comparisons and explores how differences in culture and values affect the environmental problems on which the seminar is concentrating. Culture change and adaptability are examined as well as culture contrast.

During the January special studies period, during a regular semester and/or during the summer, a limited number of opportunities are available for qualified students to visit another part of the United States for direct observation and study

under supervision. Opportunities to study abroad or elsewhere in the United States—during a semester, a summer, January through August, June through January, or even during the entire junior year—are also available in limited numbers to qualified students. Those who cannot take advantage of these opportunities are given special projects relating the environmental problems under study to other cultures. These are projects that can be carried out at the University, requiring oral and written reports. For those who go abroad, some of this reporting may be done at the beginning of the senior seminar.

For students who participate in VISTA, the Peace Corps or similar educational experiences, college credit may be granted equivalent to that given for all or a part of the sophomore and junior seminars. A maximum of 12 credits may be allowed with no more than six credits for each year's experience.

**Senior Seminar.** The pinnacle of the Liberal Education Seminars is reached in the senior year. An all-University course, the senior seminar (Liberal Education Seminar 400, 401) seeks to integrate knowledge. The first semester is given to examining environmental problems and ecology in relation to the several disciplines. The second semester focuses on problems of values and belief, personal commitment and dedication. Included are an examination of patterns of influence and a unit on aesthetic communication.

Working in a team-teaching situation, the senior has a final opportunity during the senior seminar to study and exchange views with professors and students throughout the University.

### **Distribution Requirement**

A truly educated man or woman has broad intellectual interests and at least background in environmental problems and disciplines. At The University of Wisconsin-Green Bay, this breadth is encouraged in a number of ways. Each of the theme colleges is broadly interdisciplinary. The four-year Liberal Education Seminars, in their consideration of man's ecological problems, bring together students and professors from all

theme colleges. And students in any theme college may freely elect courses offered by any college or school of the University for which they are qualified.

In order to encourage as much breadth as possible in undergraduate education, the University requires a student to select at least five or six hours of work in each of the theme colleges. Any course for which the student is qualified may be selected, although some of the colleges offer certain courses that are particularly appropriate for the spirit of this requirement. Alternatively, this requirement may be met through special examination.

### Tool Subjects

In order to pursue knowledge effectively and to perform adequately in one's chosen role in life, it is necessary to have familiarity with different forms of communication and analysis. Tool subjects, such as data processing, foreign languages, mathematics and the visual and performing arts help to fulfill this need.

At The University of Wisconsin-Green Bay, a student must choose either the data processing or mathematics tool subject plus either the foreign language or studio courses in the visual and performing arts, to fulfill minimum tool subject requirements taken during the freshman, sophomore and junior years. Tool subjects may be taken on a pass-fail basis.

**Data Processing.** A student may meet the data processing requirement through special examination or by satisfactorily completing two three-credit courses in elementary data processing and computer science. This requirement is designed to give the student an introduction to logic, research methods and techniques, elementary statistics, and mechanical and non-mechanical data processing. The course will help a student to understand the application of data processing to his particular field of interest and the impact of computers on various aspects of society.

Work in elementary statistics may be substituted for one or both courses in data processing. Students in the College of Environmental Sciences or the College of Human Biology may meet the data processing requirement by advanced courses in calculus-based computer science and statistics.

**Foreign Language.** A student must demonstrate competence in a foreign language equivalent to that attained after two years of college work. Normally a year's course in high school is equivalent to one semester of college work. Each student selecting the foreign language requirement is given a placement examination in the language of his choice. If he scores sufficiently high, he may be granted exemption from further language work. If not, the level of work required is indicated.

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 another 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 and German). A student who wishes to strengthen his competence in a language not regularly taught will be assisted by language instructors and by the Instructional Resources 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 his native language, if other than English, plus English.

**Mathematics.** As a second alternative, a student may demonstrate ability in mathematics through one year of college calculus. He can do so by means of a special examination or by enrolling in mathematics courses for credit, under a pass-fail grading system. A placement examination is given to a student choosing the mathematics alternative. He may be exempt from all or a part of the requirement, depending on his score.

## The Educational Program

**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. Moreover, the skills and capacities gained by the student in the studio experience can add a meaningful dimension to his participation in community endeavors.

Six credits are required if studio courses in the visual and performing arts are chosen to fulfill the tool subject requirements.

### Residence Requirements

In order to graduate from The University of Wisconsin-Green Bay, at least one year of residence (30 credits) in the junior or senior years is required. 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 Seminars. Provided they are UWGB administered, all courses count toward residence whether taken at night, during the summer, during the January special studies period, or regularly during the two semesters.

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 freshman must meet all the requirements of the University and his theme college. A student transferring as a sophomore or a junior must meet all requirements except the year or years of the Liberal Education Seminars he has missed. Such a student 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.

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 taken senior Honors is qualified to graduate magna cum laude. A student with a cumulative grade point average of 3.75 who has successfully taken senior Honors is qualified to graduate summa cum laude.

The transcript of a graduate of UWGB includes a brief paragraph describing the work he took as a student and the objectives sought, in addition to traditional transcript information. His participation in a noncredit physical education course or in an intramural sport will be noted. His participation in noncredit special seminars or institutes will also be noted.

### Semester System

UWGB operates under a semester system. Fall semester classes begin around September 1 and end at mid-December, with final examinations before the Christmas holidays. Spring semester classes begin the first week of February and end the latter part of May, with final examinations before Memorial Day. Registration is handled in advance. Therefore, normally only new students who have not previously taken entrance examinations need to arrive on campus before the start of classes.

The month of January can be used as a special studies period of four weeks. Sophomores and juniors normally carry out or work on matters related to their practica during this period. Freshmen and seniors, particularly, can select special group or individual projects. Most of these are on-campus, some are off-campus. For freshmen, the special studies period is especially useful for remedial work, meeting tool requirements (as through the help of a language house experience), and preparing for write-off examinations. New Opportunities students have a special program during the special studies period

(see section on Special Learning Programs). Certain noncredit institutes or seminars may also be chosen by both freshmen and seniors.

### MAJORS AT UWGB

In addition to meeting the all-University requirements of the Liberal Education Seminars, distribution courses and tool subjects, a student must meet the requirements of his college or school for majors. By the time a student is a first term sophomore, he should normally have selected the theme college or school in which he proposes to major.

#### **The Concentration: Choosing an Environmental Problem**

A student majoring in a theme college must select a concentration (for a list of these, see description of each college). The term *concentration* refers to an interdisciplinary focus on an environmental problem. By the time a student is a first term junior, he should normally have selected the concentration he proposes to follow within his college. A student selecting a concentration will normally be required to take about 30 credits in his junior and senior years (i.e. 30 credits of work at the 300 and 400 levels) directly related to the concentration.

Students in the School of Professional Studies may major in either business or public administration as undergraduates.

#### **The Option: Selecting a Discipline or Field of Knowledge**

A student majoring in a theme college may, in addition to his concentration, select an option. The term *option* refers to a disciplinary or field of knowledge emphasis within a concentration such as art, political science or biology. The decision on whether an option is to be selected should normally be made by the beginning of the junior year. A student selecting a concentration-option combination will normally be required to take about 36 credits at the 300 and 400 levels, approximately 24 of which relate the option to

the concentration (e.g. relate chemistry to environmental control of water, sociology to urban analysis, or biology to human adaptability). Applying traditional fields of knowledge to environmental problems in this way provides an exciting dimension to higher education.

Normally a student does not select an official minor at UWGB. Because of the interdisciplinary nature of concentrations and even of concentration-options, it is assumed that a student's junior and senior years will include work in several disciplines related to a particular environmental problem. Thus the formal credit requirements for concentrations and concentration-options are merely guidelines for planning. For the most part, a student devotes his junior and senior years to the pursuit of knowledge related to his goal in whatever disciplines are appropriate. With approval of the dean or deans involved, students may combine concentrations or options to meet their individual needs.

A junior or senior electing a course at the 300 or 400 level in a theme college other than his own may request to be graded on a pass-fail basis if the course is not integrally related to his concentration. All students are urged to seek breadth as well as depth in their work.

#### **The Professional Collateral: Relating Concentrations and Options to Special Professional Fields**

The University of Wisconsin-Green Bay believes that the bachelor's degree is primarily a non-specialist and non-professional degree. It is designed to give a student additional knowledge and experiences that will enhance his thinking and reasoning processes and mature and strengthen his set of values. At the same time, many students are faced with the fact that the bachelor's degree will be terminal for them and they seek specialist or professional applications of their liberal education to further their chosen vocational and avocational fields of service.

Each of the concentrations and options has di-



## The Educational Program

rect professional applications; for example, the concentration in regional analysis for regional planning and the option of chemistry for its large professional area. However, several special applications of the concentrations and options require some additional particular competence. To meet this need, a student may select a professional collateral.

Professional collateral courses do not lead to majors. They are designed to prepare an undergraduate for certain graduate professional schools and to give an undergraduate preparation for useful employment in certain areas. A student electing professional collateral courses normally takes 12 to 18 credits of work in the professional field concerned, supplementing and directly related to his major within one of the theme colleges. In elementary education the range of credits permitted extends to 26. In addition, students electing professional collateral courses may adapt their sophomore off-campus and junior other-culture experiences to be relevant both to the theme college major and the collateral.

Collateral courses are offered in education (leading to teacher certification at the elementary and secondary levels), business administration, public administration, mass communications\* (journalism, radio and television), leisure sciences\* and social services\*. Each of these except social services may be combined with majors in each theme college. In the case of social services, work can be related to that in each theme college except the College of Environmental Sciences. All collateral courses are graded; they cannot be taken on a pass-fail basis. All professional collaterals are offered by the School of Professional Studies. Business or public administration majors may elect certain non-administration collateral courses.

\*Will be offered when the collateral has been approved by the Coordinating Council for Higher Education.

Students not selecting a collateral must take a three-credit course, Policy and Program Implementation, as seniors. The course seeks to relate liberal education to vocational and professional goals. It emphasizes group dynamics, policy formation, and methods of realizing program goals.

In addition to the professional collateral, special two- and four-year preprofessional programs are available in such areas as engineering, nursing, medicine and law (see School of Professional Studies section for more information).



**A Sample Program**

A sample program of a typical student at UWGB might be as follows:

<i>Freshman Year</i>	<i>Credits</i>
Liberal Education Seminar 100-101	6
Distribution requirement	12-16
Tool subjects	6-8
Electives	0-6

Note: As a first semester freshman, a student will normally enroll in the Liberal Education Seminar 100 and in one course in each of the four theme colleges.

<i>Sophomore Year</i>	
Liberal Education Seminar 200-201	6
Distribution requirement	6-8
Tool subjects	6
Major (concentration or concentration-option)	6
Electives	6

<i>Junior Year</i>	
Liberal Education Seminar 300-301	6
Major (concentration or concentration-option)	15
*Electives	9

<i>Senior Year</i>	
Liberal Education Seminar 400-401	6
Major (concentration or concentration-option)	15
*Policy and Program Implementation	3
*Electives	6

\*Electives may include collateral courses, if desired. If not, seniors must take Policy and Program Implementation.

**PLACEMENT EXAMINATIONS**

Voluntary as well as compulsory placement examinations are offered by UWGB in most areas of high school work. Written and spoken English placement examinations are required for all students. Students entering mathematics, biology, chemistry, physics or foreign language courses for the first time are required to take a placement examination. Students in history and the social sciences may take such examinations. Normally, placement examinations do not lead to university credit; they indicate the level of work previously achieved and the course or courses in which to enroll. They may lead to the waiving of certain requirements, however.

Especially qualified high school seniors, and in exceptional cases juniors, may take one or more courses for college credit at any campus of UWGB, with the approval of both their high school and the admissions office of the University.

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 remedial programs available (see section on Special Learning Programs).

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 the remedial English program at any time for extra help. Special attention will be given to written English in the freshman seminar, and special attention to spoken English in the sophomore and junior seminars. However, English is not a particular course to be taken and passed. It is a communications skill which must be constantly employed.

## The Educational Program

### SPECIAL LEARNING PROGRAMS

Special learning programs have been developed at The University of Wisconsin-Green Bay to meet the needs of particular students. Three such programs are administered by the office of the Director of Special Learning Programs: the Honors program, the New Opportunities program and the remedial program. Details of these programs are available in special brochures.

#### Honors Program

Sophomores or juniors with at least a 3.5 grade point average are invited to become members of the Honors program. Students with a grade point average below 3.5 may also be invited into the Honors program, if they have demonstrated outstanding achievement over two semesters of academic work. Freshmen whose grades place them within the top one percent of the entering class at any of the four campuses of UWGB will be invited to begin Honors work during the freshman year and may enjoy all of the special prerogatives provided for students in the Honors program.

Special prerogatives for Honors students at UWGB include the following:

- (1) an opportunity, in consultation with theme college or Honors advisers, to redefine degree requirements usually imposed upon other undergraduates;
- (2) an opportunity to elect special Honors courses and seminars and participate in Honors off-campus experiences during the junior and senior years;
- (3) an opportunity to attend special lectures, seminars and colloquia involving outside guests of the University and limited to Honors students;
- (4) an opportunity to participate in special independent study programs through the identification of a distinctive Honors concentration or concentration-option;

(5) the use of an Honors lounge and library collection;

(6) special advising and counseling services organized by the Honors program within particular theme colleges or the School of Professional Studies;

(7) a diploma which notes that the student is an Honors graduate of the University as well as a graduate of a theme college or school.

Students electing to enter the Honors program are expected to participate in aspects of programs with those less gifted than themselves. Such programs will take place both on and off the campus and are an important aspect of activities available to the Honors student.

Most disciplinary options at UWGB offer students who have shown outstanding capacities in an option the opportunity to enter disciplinary option Honors programs. The special prerogatives for such "Honors in option" students have been determined by the deans of the theme colleges and the School of Professional Studies. Information on such opportunities is available through the office of the Director of Special Learning Programs.

#### New Opportunities Program

Two distinct programs have been developed for students seeking new educational opportunities. These programs are designed to make possible undergraduate education (1) for those who do not initially meet the normal entrance requirements of the University and (2) for older students who wish to complete an undergraduate degree after a lapse of a number of years.

The New Opportunities program of UWGB constitutes 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 educational 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. Others who should seek admission under this program are students whose college careers have been curtailed by military or family obligations.

Special prerogatives for students in the New Opportunities program include the following:

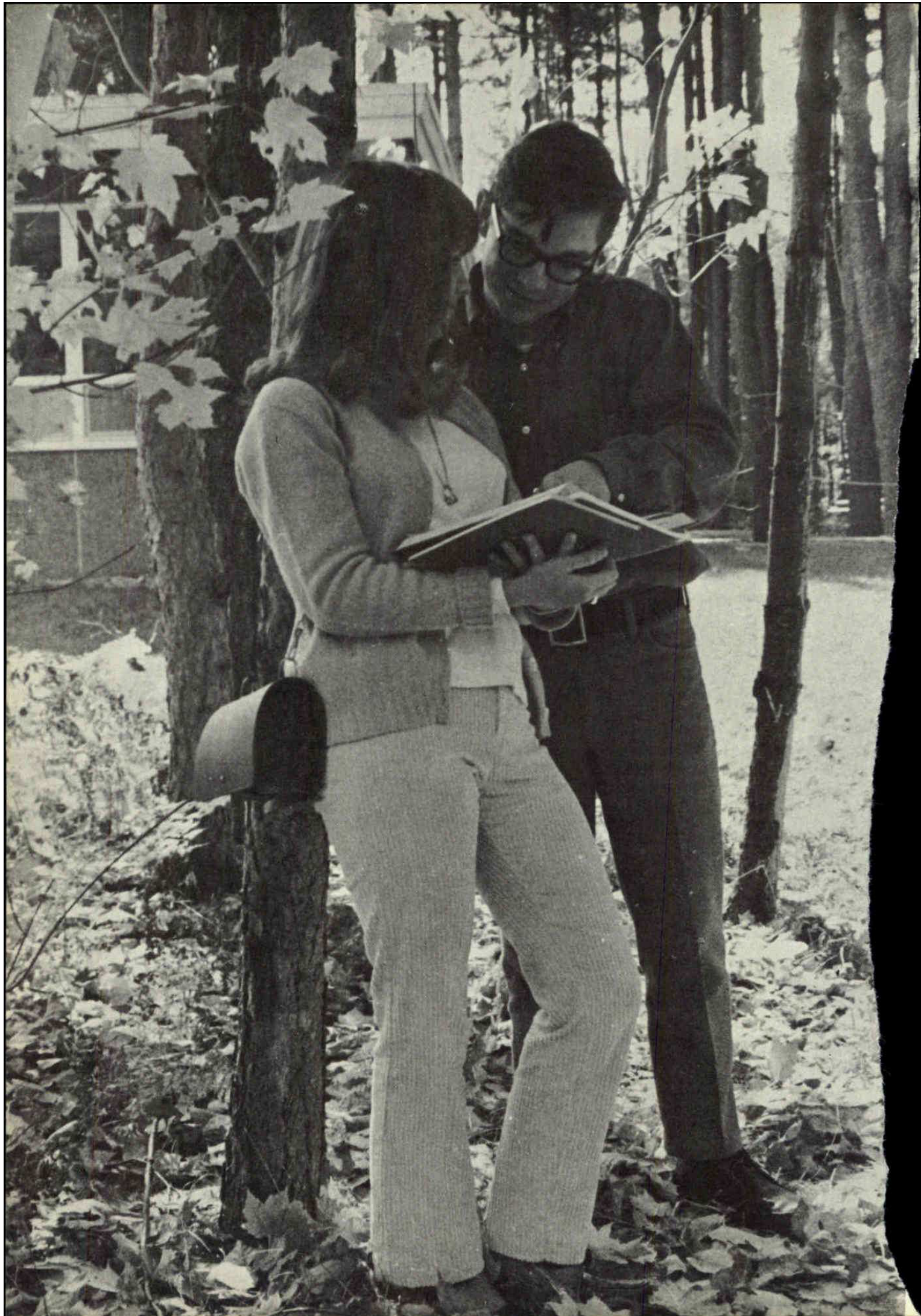
- (1) financial support, including room and board, such as to make possible full-time work at the University;
- (2) an opportunity to participate without additional cost in a special learning program for UWGB credit during the month of August before the freshman and sophomore years;
- (3) an opportunity 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;
- (4) an opportunity to take advantage of credits earned in August and January by reducing the academic program by 20 percent during the regular academic year;
- (5) an opportunity to work with younger students in the New Opportunities program upon completion of the first two years of the program;
- (6) a general opportunity to improve skills and capacities by use of UWGB remedial services, particularly in English, mathematics and foreign languages;
- (7) close work with program advisers in the special learning programs 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 one vital aim of the program is to assure that they will be able to complete the junior and senior years without further special academic assistance.

#### Remedial Programs

Placement examinations may indicate the need for remedial work. Whether as a result of such tests, through the advice of a member of the University faculty, or on his own initiative, a student may take special remedial work in English, mathematics and foreign languages.

While some full remedial courses do exist at UWGB, most remedial work is available on a tutorial basis with remedial specialists designated by theme college deans. Such tutorials are arranged through the office of the Director of Special Learning Programs.



# The College of Environmental Sciences

## PROGRAMS

Programs in the College of Environmental Sciences are designed to probe into the concept of ecosystems and provide an understanding of the exchange of materials and energy between living organisms and their physical and chemical environments, to provide an understanding of the many modifications arising from man's use of natural resources, and to provide an understanding of the alterations of the ecosystem due to additions of man-made detritus to air, water and soil.

The student takes a core of theme courses designed to provide a basic knowledge in science which is essential for the comprehension of man's place in today's physical world. Concurrent with or following the sequence of core courses, the student, depending on his interests, majors in one of two environmental science concentrations. The concentrations are:

- (1) Environmental control
- (2) Ecosystem analysis

Within each concentration a student may select from course sequences which will give him a meaningful disciplinary option. These options include chemistry, mathematics, physics or earth sciences. Students may select options such as biology from disciplines housed in other colleges with approval of the two respective deans.

Majors in the College of Environmental Sciences may choose a professional collateral. As appropriate, students may combine a concentration or concentration-option with the following collaterals: (1) education (elementary or secondary), (2) public administration, (3) business administration, (4) leisure sciences\*, (5) mass communications\* or (6) social services\*. Students selecting combined programs of this type are encouraged to adapt their off-campus sophomore and junior experiences so they are relevant to

\*Will be offered when the collateral has been approved by the Coordinating Council for Higher Education.

both the concentration and collateral. (See the all-University statement and that of the School of Professional Studies for more information.)

Students majoring in the College of Environmental Sciences must meet the all-University requirements including the four-year liberal education seminars, distribution credits, tool subjects, and Organization and Operations 450, Policy and Program Implementation (or a professional collateral). Details of these requirements are to be found in the general University undergraduate program statement. Advanced level courses in computer science and statistics will be accepted as a substitute for the all-University data processing requirement.

The College of Environmental Sciences requires the following basic science courses:

Chemistry 210-212  
 Chemistry-Physics (three semesters)  
 Environmental Sciences 102  
 Introduction to Environmental Sciences  
 Biology 202  
 Biology of Cells  
 Earth Sciences 202  
 Earth Sciences or  
 Biology 203  
 Biology of Organisms  
 Human Biology 102  
 Introduction to Human Adaptability

## SUMMARY OF A SAMPLE PROGRAM

<i>Freshman Year</i>	<i>Credits</i>
Liberal Education Seminar 100-101	6
Distribution:	
Course from College of Creative Communication	3
Course from College of Community Sciences	3
Human Biology 102	3
Other	5
Environmental Sciences 102	3
Tool subjects: Mathematics 202 (Calculus)	4
Chemistry-Physics 210	5
	—
	32

## The Educational Program

<i>Sophomore Year</i>	<i>Credits</i>
Liberal Education Seminar 200-201	6
Distribution:	
Biology 202	4
Other	4
Earth Sciences 202 or Biology 203	4
Chemistry-Physics 211-212	10
Tool subjects: Mathematics 203 (Calculus)	4
	—
	32
<i>Junior Year</i>	
Liberal Education Seminar 300-301	6
Major subjects: Concentration or concentration-option	15
Tool subjects: Computer science and statistics	6
Electives or professional collateral courses	Up to 6*
	—
	30
<i>Senior Year</i>	
Liberal Education Seminar 400-401	6
Major subjects: Concentration or concentration-option	15
**Electives or professional collateral courses	Up to 12*
	—
	30

\*The Liberal Education Seminar (sophomore and junior years) may be considered as part of a student's concentration or as part of a professional collateral, or both, thus reducing certain credit requirements during the junior and senior years.

\*\*Seniors not following a professional collateral must take Organization and Operations 450, Policy and Program Implementation.

### The Concentration in Environmental Control

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; the conflict of interests arising from multiple use of resources.

Because these resources are vital to the maintenance of the biosphere, including man, man must develop an appropriate strategy for the wise management and use of these resources. The objective of the concentrations in environmental control is to prepare individuals to participate in the solution of these complex and diverse problems.

Students who successfully complete a concentration in environmental control are awarded the degree of Bachelor of Science (or Arts) in Environmental Sciences. Students concentrating in environmental control enter the College of Environmental Sciences in the freshman or sophomore year, and must complete the college core requirements by the end of the sophomore year.

Students concentrating in environmental control must complete 30 credits in 300- and 400-level courses. It is recommended that they include in these 30 credits: Environmental Sciences 210, Environmental Measurement; Environmental Sciences 440, Applied Environmental Sciences; Ecology 302, Principles of Ecology; Earth Sciences 303, Conservation of Natural Resources, and Environmental Sciences 420, Resource Management Strategy.

The remaining advanced credits may be elected from the following groups of courses according to the area in which the student has chosen to concentrate:

<i>Area</i>	<i>Course</i>	<i>Credits</i>
Air	Chemistry 441	4
	Physics 450	3
	Environmental Sciences 430	3
	Environmental Sciences 431	3
Water	Chemistry 442	4
	Earth Sciences 330	3
	Earth Sciences 450	4
	Earth Sciences 322	3
Air/Water	Physics 320	3
	Physics 340	3
	Physics 350	3
	Earth Sciences 351	3

<i>Area</i>	<i>Course</i>	<i>Credits</i>
Land	Chemistry 443	4
	Physics 440	4
	Ecology 420	3
	Earth Sciences 343	3

and selected courses from the College of Community Sciences on such subjects as regional geography, cartography, aerial photography, geomorphology

Land/Water	Chemistry 430	4
	Earth Sciences 321	3

Natural Resources	Mathematics 366	3
	Earth Sciences 341	3
	Earth Sciences 342	3
	Environmental Sciences 320	3

and selected courses from the College of Community Sciences or the School of Professional Studies on such subjects as economics, regional planning, group dynamics, administration and management, public policy

#### The Concentrations in Ecosystem Analysis

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 biological and other natural resources. With increasing intensity and scope, man intervenes in the dynamics of the ecosystem to increase its productivity or to regulate the flows and transactions for his own ends. These interventions include the construction of a man-made ecosystem (agriculture), the use of fertilizers and biocides to regulate biological productivity, and conscious weather modification to alter the frequency and distribution of precipitation.

These interventions cannot be undertaken 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 the ecological manipulation. The objective of the concentrations in ecosystem analysis is to prepare individuals to make substantial contributions to the understanding of the dynamics of the ecosystem.

Students who successfully complete a concentration in ecosystem analysis are awarded the degree of Bachelor of Arts (or Science) in Environmental Sciences.

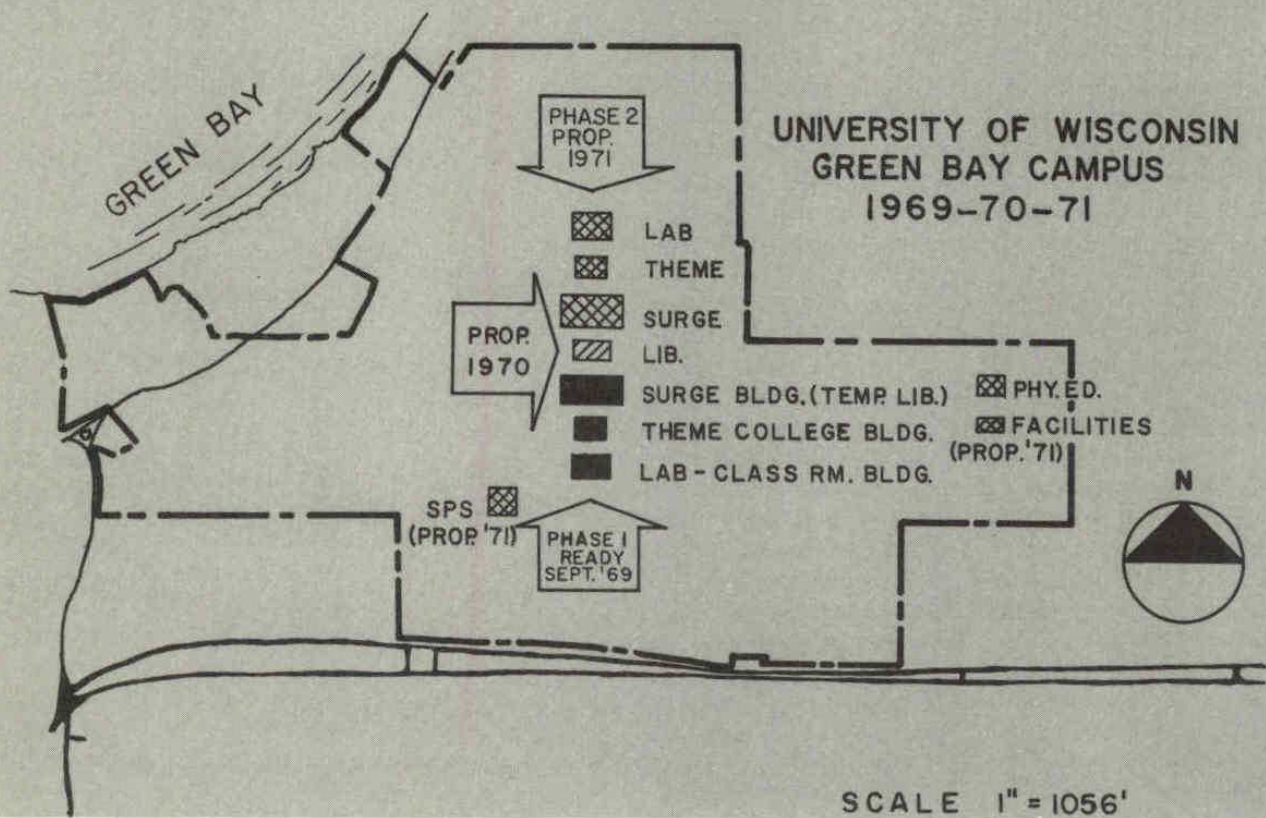
Students concentrating in ecosystem analysis enter the College of Environmental Sciences in the freshman or sophomore year and must complete the college core requirements by the end of their sophomore year. They must complete 30 credits in 300- and 400-level courses. It is recommended that they include in these 30 credits: Environmental Sciences 310, Environmental Measurement; Ecology 302, Principles of Ecology; Botany 310, Systematics and Taxonomy, and Botany 320, Field Botany.

The remaining credits may be elected from the following courses according to the area in which the student has chosen to concentrate:

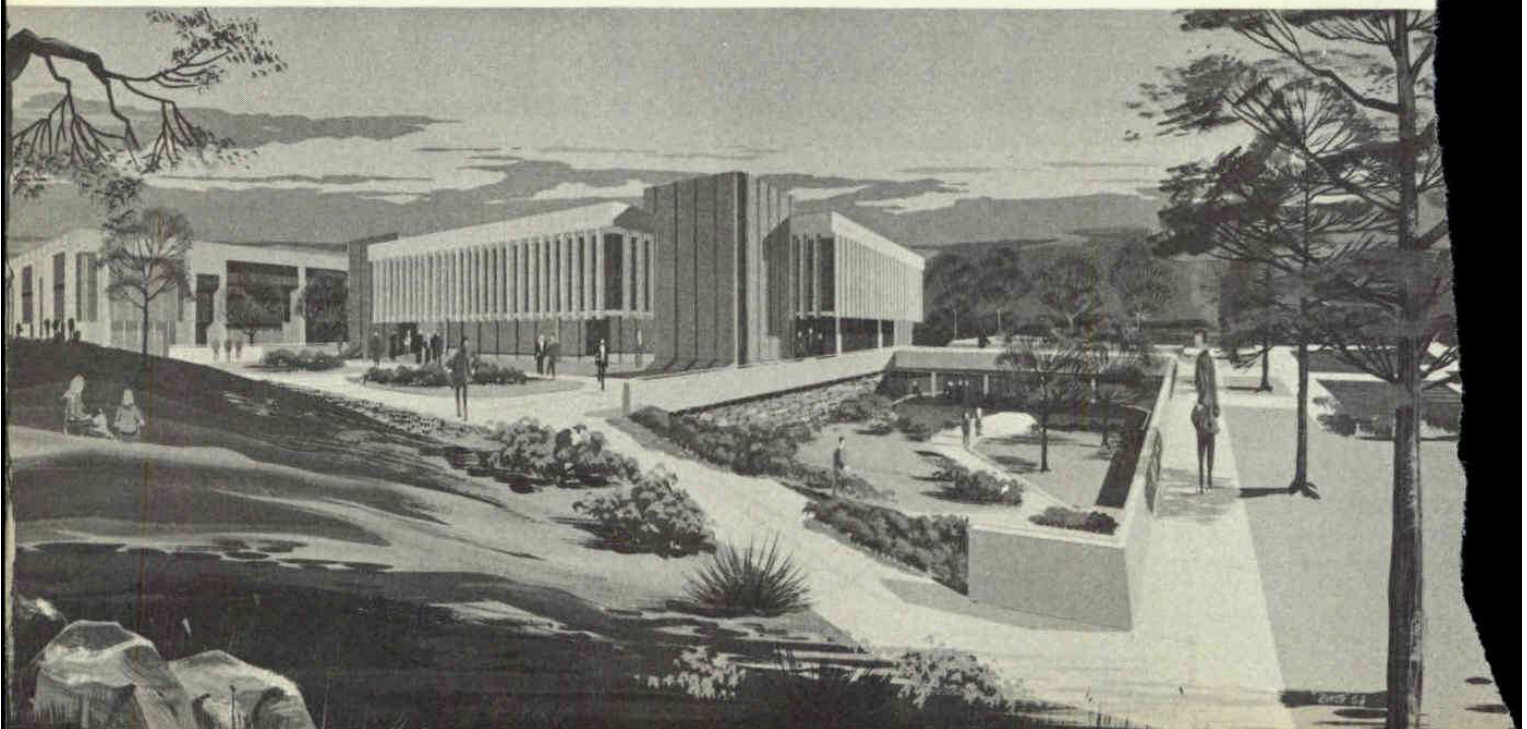
<i>Area</i>	<i>Course</i>	<i>Credits</i>
Ecosystemology (systems ecology; ecological models)	Mathematics 321	2
	Mathematics 322	2
	Mathematics 360, 361	6
	Mathematics 350	3
	Ecology 303	3
Communities and Populations	Ecology 403	3
	Zoology 403	3
	Microbiology 302	3
	Microbiology 420	3
	Entomology 302	3
	Chemistry 430	3
	Ecology 402	3



The Educational Program



Environmental Sciences Buildings



Area	Course	Credits
Physiological	Chemistry 441	4
Ecology (environment impact on individual organisms)	Chemistry 442	4
	Ecology 430	3
	Physiology 350	3
	Physiology 402	3
	Physiology 302	4
	Chemistry 321	4

Working with a faculty adviser, the student may alternatively elect individual combinations from among the courses in these three areas.

#### Options in Earth Sciences

Students electing an option in the earth sciences must take the following prerequisite courses: Environmental Sciences 102, Introduction to Environmental Sciences; Earth Sciences 202. Advanced courses (i.e., those at the 300 or 400 level) required in this option are Earth Sciences 343, Field Geology; Earth Sciences 320, Soil Environment; Physics 350, Meteorology; Earth Sciences 321, Surface and Ground Water. The remaining 11 credits may be selected from among the following:

Course	Credits
Earth Sciences 303 Conservation of Natural Resources	3
Environmental Sciences 320 Renewable Resources	3
Environmental Sciences 310 Environmental Measurements	3
Ecology 302 Principles of Ecology	3
Ecology 420 Landscape Ecology	3
Earth Sciences 351 Climatology	3
Earth Sciences 341 Earth Resources I: Minerals	3
Earth Sciences 342 Earth Resources II: Rocks	3
Chemistry 430 Environmental Biochemistry and selected courses from the College of Community Sciences on such subjects as geomorphology, regional geography, cartography, aerial photography, regional planning.	3

Courses such as these will add an important dimension to the training of students to deal professionally with the problems of environmental pollution.

#### Option in Mathematics

Students electing an option in mathematics must take the prerequisite courses: Mathematics 202 and 203, Mathematics 250 and 251 (Computer Science) and Mathematics 360 and 361 (Statistics). The student may choose 18 credits from the following advanced electives:

Course	Credits
Mathematics 350 Numerical Analysis	3
Mathematics 365 Probability Theory	3
Mathematics 321, 322 Linear and Matrix Algebra I and II	4
Mathematics 330 Set Theory	3
Mathematics 366 Theory of Games	3
Mathematics 420 Elementary Topology	3
Mathematics 313 College Geometry	3
Mathematics 341, 342 Modern Algebra I and II	6
Mathematics 410 Introduction to Complex Variables	4

#### Option in Chemistry

Students electing an option in chemistry may choose 24 credits from the following advanced courses:

Course	Credits
Chemistry 313 Analytical Chemistry	4
Chemistry 441 Air Chemistry	4
Chemistry 442 Water Chemistry	4
Earth Sciences 450 Water Pollution	4
Chemistry 443 Soil Chemistry	4
Chemistry 320 Thermodynamics and Kinetic Theory	4
Chemistry 321 Physical Chemistry	4
Chemistry 410 Inorganic Chemistry	4
Chemistry 315 Radiochemistry	4
Physics 302 Electromagnetic Radiation	4

Courses such as these will play a fundamental role in the training of students to deal profes-

## The Educational Program

sionally with the problems of environmental pollution.

Students desiring to opt for chemistry in its applications to human biology may follow the program outlined above and also choose advanced elective courses from those listed in the biology options under biochemistry:

Chemistry 330 Biochemistry	4
Microbiology 303 Advanced Microbiology	3
Chemistry 422 Protein Chemistry	4
Chemistry 340 Energy Metabolism	3
Chemistry 420 Mineral Metabolism	3
Chemistry 421 Vitamins and Hormones	3

### Option in Physics

Students electing an option in physics must take Environmental Sciences 310, Environmental Measurement, and Environmental Sciences 440, Applied Environmental Sciences. They may choose 18 credits from the following electives:

<i>Course</i>	<i>Credits</i>
Physics 302 Electromagnetic Radiation	4
Physics 440 Soil Physics	4
Physics 350 Meteorology	3
Earth Sciences 351 Climatology	3
Physics 450 Air Pollution Meteorology	3
Environmental Sciences 430 Community Air Pollution	3
Environmental Sciences 431 Air Pollution Control	3
Physics 320 Thermodynamics and Kinetic Theory	4
Physics 340 Fluid Mechanics	3
Earth Sciences 330 Hydrology	3

Courses such as these will play a fundamental role in the training of students to deal professionally with the problems of environmental pollution.

### Preprofessional Programs

The College of Environmental Sciences offers special programs to prepare the student for entry into specialized professional areas: agricultural

science, engineering, hydrology and water resources. A student should select the professional school he plans to attend as early as possible. Then, in consultation with his adviser, the student should adjust his course program at UWGB to meet transfer requirements for the professional field and school of choice.

A student completing three years of an appropriate program at UWGB and the remainder at an accredited professional school may qualify for a B.S. or B.A. from UWGB. A student planning to complete a B.S. or B.A. degree at UWGB with preprofessional emphasis must select a concentration in one of the theme colleges or schools, and, with the approval of his adviser and that of his theme college or school, work out appropriate courses to be taken at UWGB through the junior year and at another university as a substitute for residence at UWGB as a senior.

**Agricultural Science.** The University of Wisconsin-Green Bay provides the prospective agricultural science student with an opportunity to obtain a basic and unique background for entry into the agricultural profession. With the various combinations of theme college concentrations and options available, the student may obtain background preparation, for example, in natural sciences, economics, social sciences, environmental sciences, nutrition, communications and business or public administration. The University of Wisconsin-Green Bay does not offer a degree program in agriculture.

A strong high school background in science is recommended for entry into this program. The following courses are recommended for pre-agricultural students and should be completed by the end of the sophomore year:

Chemistry-Physics 210-212  
Liberal Education Seminar 100-101  
Mathematics 250 Computer Science  
Mathematics 260 Applied Statistics  
Earth Sciences 202 Earth Science  
Earth Sciences 320 Soil Environment  
Biology 202 Biology of the Cell  
Biology 203 Biology of the Organism

**Engineering.** The University of Wisconsin-Green Bay provides the prospective engineering student with an opportunity to obtain a fundamental and unique background for entry into the engineering profession. With the various combinations of theme concentrations and options available, the student may obtain background preparation, for example, in administration, natural sciences, communications, economics, or environmental sciences in addition to a basic pre-engineering background. The College of Environmental Sciences provides an integrated basic training in related areas of mathematics, chemistry-physics and engineering.

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

Liberal Education Seminar 100-101  
Chemistry-Physics 210-212  
Mathematics 202-203 Calculus and  
Mathematics 217 Differential Equations  
Mathematics 250-251 Computer Science

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

Engineering 113  
    General Engineering Graphics  
Engineering 102  
    Elements of Descriptive Geometry  
Engineering 302  
    Engineering Mechanics: Statics  
Engineering 303  
    Engineering Mechanics: Dynamics  
Foreign language

**Hydrology and Water Resources.** The environmental control and ecosystem analysis concentrations in the College of Environmental Science 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.



## The Educational Program

### COURSES

#### Abbreviations

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

#### Environmental Sciences

##### 10 Introductory Sciences 0 cr.

Introduction to the scientific method; observation, data collection, hypothesis, testing and logic; the scientific units of measurement; states of matter; fundamental composition of the earth and biological systems. P: Mathematics 10. (Cross-listed in College of Human Biology as Human Biology 10.)

##### 102 Introduction to Environmental Sciences 3 cr.

Introduction to the principles of resource development for food production, engineering purposes, recreation and aesthetic uses; exploitation and conservation of the resource system; influence of controlled and uncontrolled waste disposal on the resource system; the interface of biological and earth sciences. This course satisfies university distribution requirements in the College of Environmental Sciences.

##### 310 Environmental Measurement 3 cr.

The course deals with the kinds, ranges and variations of environmental conditions within small increments of space and time; scope and significance of environmental studies, experimental methods and procedures, and the actual techniques for measuring environmental variables. P: Environmental Sciences 102, Chemistry-Physics 212.

##### 320 Renewable Resources 3 cr.

The nature and variety of renewable resources;

man's dependence upon renewable resource production and quality. P: Biology 203.

##### 351 Climatology 3 cr.

Heat exchange near the ground; relation of topography and plant cover to the microclimate; modification of microclimate by inadvertent and conscious intervention by man. P: Environmental Sciences 310, Chemistry-Physics 212.

##### 420 Resource Management Strategy 3 cr.

Application of principles of ecology and conservation to the development of strategies for maintaining optimum environmental qualities. P: Liberal Education Seminar 301, Earth Sciences 303.

##### 430 Community Air Pollution 3 cr.

Evaluation of the impact of air pollution on the community; the community air quality survey and monitoring of community air pollution; effects of air pollutants on plants, animals, and man; on buildings, on materials; aesthetic effects of air pollution. P: Physics 450.

##### 431 Air Pollution Control 3 cr.

Establishment of air quality criteria and air quality standards; role of federal, regional, state and local agencies in air pollution control; survey of engineering aspects of air pollution control; legal and economic considerations in air pollution control. P: Physics 450, Environmental Sciences 430.

##### 440 Applied Environmental Science 3 cr.

Problems of control of quality of water and air, laboratory studies of air, water and community wastes; effects of water and airborne wastes on the environment. P: sr st in the College of Environmental Sciences.

##### 498, 499 Reading and Research 1-4 cr.

Independent reading and research in selected subject matter areas. P: cons inst.

#### Earth Sciences

##### 202 Earth Sciences 4 cr.

The lithosphere, hydrosphere, atmosphere and

biosphere (earth system) provide the materials of the environment. Their interaction set the conditions for environmental control. Evolution of the hydrosphere, atmosphere and biosphere is related to the materials and processes of the earth, with emphasis on the lithosphere. P: Environmental Sciences 102.

**303 Conservation of Natural Resources 3 cr.**

Principles of conservation of natural resources; chemical, physical and biological processes occurring in nature which affect conservation and management of natural resources. P: Environmental Sciences 102, Earth Sciences 202.

**320 The Soil Environment 4 cr.**

The physical, chemical and biological properties of soils; formation of soil, classification, distribution and conservation of soils; use of the soil resource in agricultural, engineering, municipal and recreational activities. P: Environmental Sciences 102, Chemistry-Physics 212.

**321 Surface and Ground Water 3 cr.**

The hydrologic phenomena of watersheds concerned with the water balance, floods and sedimentation; management and development of watersheds for controlled water yields; natural and artificial ground water recharge; efficient use of available water resources. P: Earth Sciences 320.

**322 Elements of Marine Science 3 cr.**

An introduction to the nature and extent of the oceans, including chemical and physical processes, plant and animal life in the seas and seasonal cycles. P: Biology 203, Chemistry-Physics 210 or Chemistry 108.

**330 Hydrology 3 cr.**

Major physical processes relating to water as it moves from the atmosphere, over and through the earth, is discharged to the oceans and returned to the atmosphere. P: Physics 340 or 440.

**340 Geomorphology of the Great Lakes Region 3 cr.**

Variations in land form patterns have strongly influenced the patterns of human distribution,

especially the development of urban centers and surface transportation. The glacial history of the Great Lakes region is viewed in relation to general geomorphology, with consideration of the influence of preglacial geomorphic features on the glacial land forms. Principles of geomorphic processes, analysis of land forms, application to regional analysis. P: Earth Sciences 202.

**341 Earth Resources I: Minerals 4 cr.**

Knowledge of the relationship of mineral structures to energy distribution provides a framework for carrying the study of minerals beyond chemical classification. The relationship of crystallography to minerals; description of the principal rock-forming and ore minerals; recognition of minerals in hand specimens. P: Earth Sciences 202, Chemistry-Physics 212.

**342 Earth Resources II: Rocks 5 cr.**

Study of igneous, sedimentary and metamorphic rocks related to classification, genesis and distribution; introduction to optical methods of identification; identification of hand specimens and field occurrences. P: Earth Sciences 341.

**343 Field Geology 4 cr.**

Application of standard geologic mapping methods to the field study of selected areas. Collection of materials for laboratory analysis will be related to mapping techniques. P: Earth Sciences 202, 341, 342 or cons inst.

**430 Soil Ecology and Geography 3 cr.**

Influence of major environmental and biological factors on soil morphology; classification systems and world geographical distribution of soils; interrelationships of soil ecology with plant and human ecology. P: Environmental Sciences 102 and Chemistry-Physics 210 or cons inst.

**450 Water Pollution 4 cr.**

Physical, chemical and biological factors affecting water quality; problems in maintaining water quality in agricultural, industrial, urban and wildland areas; waste water treatment and natural purification. P: Chemistry 430, 442.

## The Educational Program

### Ecology

#### **302 Principles of Ecology 3 cr.**

The biological principles which govern the interactions of plants and of animals in their physical and biotic environments; physiological and behavioral adaptations; populations, successions, communities and ecosystems. Consideration is given to human societal modifications of environments and to concepts underlying strategies used in the management of natural resources. P: Biology 203.

#### **303 Productivity of the Ecosystem 3 cr.**

World food sources and production processes; components of yield; fertilizer efficiency; genetic potential; climatic control and land capability restrictions on food production; potential of aquatic and microbial food sources. P: Biology 203.

#### **310 Plant Ecology 3 cr.**

Interrelations of plant populations with the physical and biological factors of the environment; detection and description of pattern in the vegetation of North America and of Wisconsin. P: Ecology 302.

#### **311 Principles of Plant Distribution 3 cr.**

A study of present and past distributions of plants throughout the world and the structure of modern vegetation with emphasis on the floristic and ecological plant geography of North America. P: Botany 309.

#### **402 Population Biology 3 cr.**

The concept of the biological population density-dependent and density-independent factors regulating populations; isolation, hybridization and migration in populations; population as the adaptive element of the ecosystem. P: Ecology 302.

#### **403 Community Biology 3 cr.**

The nature, structure and dynamics of the biological community. P: Ecology 402.

#### **410 Principles of Human Ecology 3 cr.**

Application of principles of animal ecology to

human biology: elements of habitat, development and individuality of man, morphological adaptations, and physiological, behavioral and social adjustments to environment; regulation of populations and control of environmental factors. P: Ecology 302, Earth Sciences 202.

#### **420 Landscape Ecology 3 cr.**

Problems of multiple use of landscapes. P: Ecology 302.

#### **430 Elements of Biometeorology 3 cr.**

The influence of the atmospheric environment on plants and animals; adjustments and adaptations made by organisms to changes in atmospheric environment. P: Physics 350, Ecology 302.

### Mathematics

#### **10 Intermediate Algebra 0 cr.**

A remedial course, also intended for students whose algebra preparation did not include the second course in high school algebra (Grade XI): setting up and solving quadratic equations and inequalities; complex numbers; rational exponents; progressions; graphing of circles and quadratic polynomials; definition and elementary properties of logarithms.

#### **102 College Algebra 3 cr.**

A course to prepare the student for Mathematics 202 (Calculus I): algebra of polynomial and rational functions; the function concept; theory of polynomial equations, including remainder and factor theorems; solution of simultaneous linear equations; infinite geometric progressions; mathematical induction; binomial theorem. Credits in this course may not be counted toward the 124 required for the B.S. or B.A. at UWGB. P: Mathematics 10 or satisfactory score on placement examination.

#### **103 Trigonometry 2 cr.**

A course to prepare the student for Mathematics 202 (Calculus I). Introduces the trigonometric functions of the real number, and basic properties and graphs; equations and identities; applications to angles, triangles and complex numbers. Credits in this course may not be

counted toward the 124 required for the B.S. or B.A. at UWGB. P: Mathematics 10 or satisfactory score on placement examination.

**104 Analytic Geometry 3 cr.**

A study of two- and three-dimensional configurations upon which the calculus courses will be built. Credits in this course may not be counted toward the 124 required for the B.S. or B.A. at UWGB. P: Mathematics 102, 103.

**110 Finite Mathematics 3 cr.**

Elements of mathematical logic; structure in sets; partitions and counting; probability theory; stochastic processes. P: Mathematics 102 or satisfactory score on placement examination.

**202, 203 Calculus I, II 4, 4 cr.**

An introduction to the fundamentals of calculus: differentiation, integration, vectors, sequences, infinite series and their applications. P: satisfactory score on placement examination or passing grade in Mathematics 102, 103, 104.

**217 Differential Equations 3 cr.**

A first course in the theory of differential equations; elementary methods of solutions; physical applications; power series solutions and other topics. P: Mathematics 203.

**221 Calculus and Analytic Geometry 5 cr.**

An introduction to differential and integral calculus and plane analytic geometry. P: Mathematics 102 and 103 or four units of high school mathematics and a satisfactory score on the placement examination.

**222 Calculus and Analytic Geometry 5 cr.**

Further topics in analytic geometry and linear algebra; transcendental functions, techniques of integration. P: Mathematics 221.

**223 Calculus and Analytic Geometry 5 cr.**

Solid analytic geometry; partial derivatives, multiple integrals, improper integrals, infinite series, linear systems and matrices. P: Mathematics 222.

**250, 251 Computer Science 3, 3 cr.**

A lecture and laboratory course about the structure, operations and programming of a computer; application of data processing to student's areas of interest; logic decision techniques as applied to systems and procedures. Examples will be selected that are appropriate to the needs of students in each of the theme colleges. Each student will select work related to his theme concentration. P: Mathematics 102 or satisfactory score on placement examination.

**260 Statistics 3 cr.**

Representation of data; averages; measures of dispersion; comparison of distribution; correlation; probability functions; sampling. Example material will be selected that is appropriate to the needs of students from each theme college. Each student will be permitted and encouraged to select problem work related to theme concentration. P: Mathematics 250 or cons inst.

**302, 303 Advanced Calculus 3, 3 cr.**

Properties of the real number system, vectors, functions of one or several variables, implicit function theorems, infinite series, transformations, stieltjes integrals, improper integrals, line and surface integrals and infinite products. P: Mathematics 203.

**313 College Geometry 3 cr.**

An introduction to analytic and projective geometry, including a study of the conic sections and quadric surfaces. P: Mathematics 203.

**321, 322 Linear and Matrix Algebra 3, 3 cr.**

Vector spaces and vector space isomorphisms; linear transformations; matrices and matrix operations; determinants and solutions of equations; equivalence relations on matrices; canonical forms for similar matrices including a study of eigenvalues and eigenvectors; metric orthogonalization. P: Mathematics 203.

**330 Set Theory 3 cr.**

A study of sets, subsets and set operations; cardinal numbers of sets and cardinal arithmetic; ordered sets and their order types; well ordered sets and ordinal numbers. P: Mathematics 203.



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### **341, 342 Modern Algebra 3, 3 cr.**

Topics include properties of the integers, the rational, real and complex number fields; groups, rings, vector spaces, fields and such related topics as homomorphisms and polynomial rings. P: Mathematics 203.

### **350 Numerical Analysis 3 cr.**

A course for students interested in scientific applications of the computer. Participants will be encouraged to work with statistical and scientific problems being studied in other course work. Students will be expected to program and run problems on a computer, including a major problem of their choice. P: Mathematics 251 or cons inst and Mathematics 217, 303 or 321.

### **360, 361 Theoretical Statistics 3, 3 cr.**

Probability and combinatorial methods; discrete and continuous, univariate and multivariate distributions; sampling; expected values; moments; normal distributions; point and interval estimation. Testing of hypotheses: analysis of variance comparison of means; method of least squares; orthogonal polynomials. Examples will be selected that are appropriate to the needs of students in each of the theme colleges. Each student will be permitted and encouraged to select problem work related to theme concentration. P: Mathematics 203 or cons inst.

### **365 Probability Theory 3 cr.**

Probability in discrete sample spaces; combinatorial analysis; conditional probabilities: stochastic independence; Laplace limit theorem; Poisson distribution; laws of large numbers; random variables; applications. P: Mathematics 203.

### **366 Theory of Games 3 cr.**

Introduction to von Neumann's theory of games, with emphasis on the two-person zero-sum games; applications to problems of strategy, to the theory-of-decision function, and to linear programming. P: Mathematics 203.

### **410 Introduction to Complex Variables 4 cr.**

The complex number system, analytic and elementary functions, topology of the plane; inte-

grals, including the cauchy theory; power series, residues and poles, and conformal mappings. P: Mathematics 303.

### **420 Elementary Topology 3 cr.**

A course in set theory and functions; topology of the real line, plane and general euclidean space; abstract topological spaces with properties of compactness, connectedness and the separation axioms; metric spaces. P: Mathematics 303.

## Engineering

### **102 Elements of Descriptive Geometry 3 cr.**

Orthographic projection and its application to analysis and solution of three-dimensional problems involving points, lines, planes and solids; axonometric projections for pictorial representation with engineering applications. P: Mathematics 10.

### **113 General Engineering Graphics 3 cr.**

Advanced principles of projection and perspective, sectional views, dimensioning freehand sketching, isometric and oblique pictorials, graphs and nomographs, drawings and electric circuits. Individual problems are designed to serve the interests of the student's theme college concentration. P: Engineering 102.

### **302 Statics 3 cr.**

Principles of mechanics, force systems, equilibrium, structures, distributed forces, moments of inertia of areas, and friction. P: Mathematics 202. (Formerly listed as Engineering Mechanics 101)

### **303 Dynamics 3 cr.**

Kinematics, force-mass-acceleration relations, work and energy, impulse and momentum, moments of inertia of mass. P: Engineering 102 and Mathematics 203. (Formerly listed as Engineering Mechanics 102)

## Chemistry-Physics

### **210, 211, 212 Principles of Chemistry and Physics 5, 5, 5 cr.**

Analytical study of matter and motion; heat, work, and energy; atomic theory of matter; chemical

bonding; the states of matter and kinetic-molecular theory of gases; the periodic system; chemical changes; thermal energy; thermodynamics and chemical equilibrium; physical, chemical and electro-chemical properties of selected elements and compounds; wave motion, sound and optics; electrostatics, electrodynamics, and electromagnetic radiation; magnetism and properties of magnetic materials; radioactivity and nuclear physics; the fundamental particles; elementary quantum theory. P: For Chemistry-Physics 210, 211, concurrent registration in Mathematics 202, 203, respectively.

**320 Thermodynamics and Kinetic Theory**  
**3 or 4 cr.**

Temperature; thermal properties of gases, solids and solutions; heat transfer; laws of thermodynamics; thermodynamic techniques; equilibrium between phases; introductory kinetic theory and statistical mechanics. P: Chemistry-Physics 212, Mathematics 217.

**Chemistry**

**108 General Chemistry 5 cr.**

For students who will take only one semester of chemistry. Extra emphasis is given to organic chemistry. Does not serve as prerequisite for Chemistry-Physics 211.

**210, 211, 212 Principles of Chemistry and Physics**

(See Chemistry-Physics 210, 211, 212.)

**302, 303 Organic Chemistry 4, 4 cr.**

The nomenclature and geometry of organic compounds; covalent bonds, hybridization and delocalization; proof of structure of organic compounds; chemistry of aliphatic and aromatic compounds; polyfunctional and heterocyclic chemistry; reaction mechanisms. The first semester covers aliphatic compounds and introduces the aromatic hydrocarbons. Aromatic, heterocyclic and silicon compounds as well as natural products are emphasized in the second semester. P: Chemistry-Physics 210.

**313 Analytical Chemistry 4 cr.**

Theory and practice of quantitative sampling, separation, gravimetric, volumetric and spectrometric analysis; titration curves and electroanalytical methods; introduction to instrumental methods and equipment. P: Chemistry-Physics 212.

**315 Radiochemistry 4 cr.**

Principles and methods employed in the use of such tracers as  $P^{32}$ ,  $Sr^{90}$ ,  $Ca^{45}$ ,  $C^{14}$ , and  $I^{131}$ , in biological use. P: Chemistry 313.

**320 Thermodynamics and Kinetic Theory**  
(See Chemistry-Physics 320.)

**321 Physical Chemistry 3 or 4 cr.**

Properties of gases, liquids and solids; solutions, thermochemistry and thermodynamics; chemical kinetics, electrochemistry, atomic and molecular structure. P: Chemistry-Physics 320.

**330 Biochemistry 4 cr.**

Nature and function of the important constituents of living matter, their biosynthesis and metabolism. Energy transformation and metabolic control. P: Chemistry-Physics 212, Chemistry 302, Biology 202.

**340 Energy Metabolism 4 cr.**

The concept of energy balance; measurement of energy exchanges by the living organism; regulation of energy balances; variations of energy exchange associated with age, sex, activity and environmental factors. P: Chemistry 330.

**410 Inorganic Chemistry 4 cr.**

A survey of the elements and their relationships to atomic structure; principles of chemical bonding and their application to inorganic stereochemistry and complex compounds; theory of acids and bases; non-aqueous solvent systems. Preparation of various inorganic compounds will be undertaken in laboratory. P: Chemistry 321.

**413 Analytical Chemistry 4 cr.**

A survey of the principal methods, theory and practice of analysis by instruments including

## The Educational Program

mass spectroscopy, nuclear magnetic resonance, gas chromatography, atomic absorption, ultraviolet and infrared spectroscopy, and polarography. P: Chemistry 313.

### **420 Mineral Metabolism 3 cr.**

Metabolic role, significance and distribution of mineral elements in biological systems; interrelationships in soil or aquatic plant-animal associations; the role of chelation as a fundamental chemical reaction in biological and certain physical systems. P: Biology 203, Chemistry 330.

### **421 Vitamins and Hormones 2 cr.**

Chemistry of vitamins and hormones and their role in biology; normal requirements, metabolic disturbances caused by vitamin and hormonal deficiencies. P: Chemistry 330.

### **422 Protein Chemistry 3 cr.**

Chemistry and structure of proteins and amino acids; protein synthesis and metabolism, role of nucleic acids. P: Chemistry 330.

### **430 Environmental Biochemistry 4 cr.**

Transformation of carbon, nitrogen, phosphorus, sulfur and certain trace elements in soil-water-atmosphere systems; beneficial and toxic effects on plant and animal life; role in pollution of the environment; transformations and removal in waste disposal systems. P: Biology 203, Earth Sciences 202, Chemistry 302.

### **441 Air Chemistry 4 cr.**

The nature, composition and chemical reactions occurring in the several regions of the atmosphere. Transformations of nitrogen, sulfur and carbon compounds in the troposphere and their relationship to human uses of the atmosphere will receive special attention. P: Physics 350, Chemistry 313, 315.

### **442 Water Chemistry 4 cr.**

Chemical composition of natural marine, fresh and ground waters; chemical reactions and thermodynamic properties that control or affect solute content of waters; analytical procedures; establishment of water quality criteria and standards. P: Chemistry 313.

### **443 Soil Chemistry**

Fundamental principles of the structure and chemical behavior of clay minerals; reactions of soil colloids; soil pH and redox potentials; chemical reactions occurring in soils and their significance in the growth and nutrition of plants and on the quality of surface and ground waters. P: Chemistry 313, Earth Sciences 320, Chemistry-Physics 321.

## Physics

### **210, 211, 212 Principles of Chemistry and Physics**

(See Chemistry-Physics 210, 211, 212.)

### **302 Electromagnetic Radiation 4 cr.**

A study of electromagnetic radiation starting from Maxwell's equations; the electromagnetic spectrum; geometrical and physical optics; optical instruments; interference, diffraction, and polarization; microwave technology; x-ray technology; special topics. P: Chemistry-Physics 212.

### **303 Mechanics 3 cr.**

Origin and development of classical mechanics; mathematical techniques, especially vector analysis; conservation laws and their relation to symmetry principles; introduction to orbit theory and rigid body dynamics; accelerated coordinate systems; fluid dynamics; generalized coordinates; Lagrange's equations. P: Chemistry-Physics 212, concurrent registration in Mathematics 217.

### **304 Electricity and Magnetism 4 cr.**

Direct current circuits; alternating current circuits; theory of electric and magnetic fields; electromagnetic induction; magnetic properties of material; dielectric properties of matter; Maxwell's equations and electromagnetic waves. P: Chemistry-Physics 212, Mathematics 217.

### **305 Electronic Aids to Measurement 4 cr.**

Fundamentals of electronics, electronic elements, basic circuits; combinations of these into measurement and control instruments. P: Chemistry-Physics 212.

**310, 312 Modern Physics 3, 3 cr.**

A study of relativity; atomic, nuclear, molecular, and solid state physics; black body radiation; atomic structure of matter; atomic and molecular spectra; introduction to quantum theory; x-ray spectra; nuclear structure, radioactivity; experimental techniques using radioactive isotopes; nuclear reactions; fundamental particles; mechanical, thermal, electrical and magnetic properties of solids. P: Chemistry-Physics 212.

**311, 313 Advanced Laboratory Physics 2, 2 cr.**

Experience with important research techniques and apparatus with emphasis on independent work; high vacuum, particle counters, ionization chambers, photoelectricity, x-rays, magnetic resonance, temperature measurement, photographic and emulsion techniques. P: cons inst.

**320 Thermodynamics and Kinetic Theory**

(See Chemistry-Physics 320)

**340 Fluid Mechanics 3 cr.**

Fundamental mechanical and thermodynamic behavior of fluids; the statics and dynamics of compressible flow, viscous flow and incompressible flow; boundary layer problems. P: Chemistry-Physics 320.

**350 Meteorology 3 cr.**

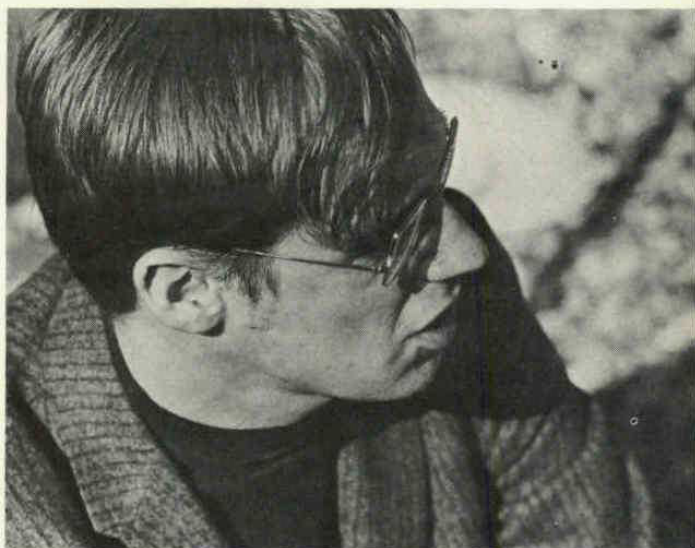
Introduction to atmospheric processes, their nature and their measurement. P: Chemistry-Physics 212.

**440 Soil Physics 3 cr.**

The structure and physical constitution of soils; physical laws governing the infiltration, drainage and flow through porous media; factors affecting the composition, exchange and movement of gases in the soil; heat flow and soil temperature. P: Chemistry-Physics 212, 320, Earth Sciences 320.

**450 Air Pollution Meteorology 3 cr.**

The application of meteorological principles to the accumulation and dispersal of biologically important materials: plant pathogens, aeroallergens, dust and emissions from man's technological devices. P: Physics 350.





# The College of Human Biology

## PROGRAMS

The focus of the educational program of this college is human adaptability. The health of individuals and of populations is expressed as ability to adjust and adapt to many stresses—physical, chemical, biological, and mental (perceptive and conceptual)—within the environment. Human adaptability arises from the genetic variability of the human species and from the flexibility of phenotype of the individual. The basic components of human adaptability are constellations of morphological, biochemical, physiological and behavioral traits and mechanisms. Human adaptability exhibits ontogeny, for it passes through stages of immaturity, maturity, and decay. Both the stages of adaptability and the constellation of adaptive traits are individually distinctive, presumably determined in part by inheritance and in part by unique environmental experience.

Within this context, the College of Human Biology conducts programs for educating human biologists. A human biologist is an individual who is trained in the biological and related sciences but who is particularly versed in the biology of man. Individuals with this competence are increasingly in demand in the health sciences (e.g. medicine, nursing, public health, health education) and in the behavioral sciences. There is an urgent need to educate people capable of investigating man within the framework of his total environment so that the impact of that complex and diverse environment upon his health and well-being may be better understood.

Because so much of this total environment is man-made and because man is most dependent upon the culture within which he develops, the educational programs of this college are conducted in close collaboration with those of the other colleges of UWGB, particularly the College of Community Sciences, in which are located several of the academic disciplines associated with the behavioral sciences.

Within the limitations set by University and college requirements, the program of each student

will be individually designed. Among the alternatives for concentration are human development, human adaptability, human performance,\* nutritional sciences\* and population dynamics. Within each of these broad areas, a disciplinary option may be elected in biology (biochemistry, botany, entomology, microbiology, physiology and/or zoology). In disciplines housed outside the college, options in earth sciences or psychology are available. Students in the College of Human Biology may select other options from disciplines housed in other colleges with approval of the two respective deans. Opportunity to pursue professional collaterals in such fields as administration, education (leading to teacher certification), mass communications\*\*, leisure sciences\*\* and social services\*\* is available.

Students majoring in the College of Human Biology must meet the all-University requirements including the four-year liberal education seminar, distribution credits, tool subjects and Organization and Operations 450, Policy and Program Implementation (or professional collateral). Details of these requirements are to be found in the general University undergraduate program statement. Advanced level courses in computer science and statistics will be accepted as a substitute for the all-University requirement regarding data processing.

The College of Human Biology requires the following basic science courses:

Chemistry-Physics 210-212 (three semesters)  
Human Biology 102  
Introduction to Human Adaptability  
Environmental Science 102  
Introduction to Environmental Sciences  
Biology 202 Biology of Cells  
Biology 203 Biology of Organisms

\*This concentration will not be offered in 1969-1970 pending approval by the Coordinating Council for Higher Education.

\*\*Will be offered when the collateral has been approved by the Coordinating Council for Higher Education.

## The Educational Program

In the third and fourth years the student concentrates in one of the areas of human development, human adaptability, human performance\*, nutritional science\* or population dynamics.

### SUMMARY OF A SAMPLE PROGRAM

	<i>Credits</i>
<i>Freshman Year</i>	
Liberal Education Seminar 100-101	6
Distribution:	
Course from College of Creative Communication	3
Course from College of Community Sciences	3
Environmental Sciences 102	
Introduction to Environmental Sciences	3
Other	5
Human Biology 102	
Introduction to Human Adaptability	3
Tool subjects: Mathematics 202 (Calculus)	4
Chemistry-Physics 210	5
	—
	32
<i>Sophomore Year</i>	
Liberal Education Seminar 200-201	6
Distribution (CCS or CCC)	4
Chemistry-Physics 211-212	10
Biology 202 Biology of Cells	4
Biology 203 Biology of Organisms	4
Tool subjects: Mathematics 203 (Calculus)	4
	—
	32
<i>Junior Year</i>	
Liberal Education Seminar 300-301	6
Major (concentration or concentration-option)	up to 15**
Tool subjects: Computer science and statistics	6
Electives (or professional collateral courses)	up to 6**
	—
	30
<i>Senior Year</i>	
Liberal Education Seminar 400-401	6
Major (concentration or concentration-option)	up to 15**
***Electives (or professional collateral courses)	up to 12**
	—
	30

## The Concentrations in Human Development

Among the major problems of biology in general and human biology in particular is study of the processes and mechanisms regulating the physical growth and development of organisms. Little, for example, is known about the development of homeostasis. For man, these problems have come into increasing prominence with the conquest of infectious diseases. Congenital diseases and malformations have emerged as increasingly important causes of neonatal mortality.

At the same time there has developed an increasing array of problems associated with mental growth and development. A variety of mental problems is characteristic of the maturing young person; mental retardation now looms as a major concern for children, and neuroses and psychoses account for a large proportion of the people suffering from chronic disabling illnesses. The purpose of the concentration in human development is to begin educating young people to deal with these problems, to apply knowledge to the treatment and prevention of such human difficulties.

Students who successfully complete a concentration in human development are awarded the degree of Bachelor of Science (or Arts) in Human Biology. They enter the College of Human Biology in the freshman or sophomore year.

\*This concentration will not be offered in 1969-1970 pending approval of the Coordinating Council for Higher Education.

\*\*The Liberal Education Seminar (sophomore and junior years) may be considered as part of a student's concentration or as part of a professional collateral, or both, thus reducing certain credit requirements during the junior and senior years.

\*\*\*Seniors not following a professional collateral must take Organization and Operations 450, Policy and Program Implementation.

Students concentrating in physical growth and development must complete the following prerequisites by the end of the sophomore year: Chemistry-Physics; Human Biology 102, Introduction to Human Adaptability; Mathematics 202 and 203, Calculus; Biology 202, Biology of Cells, and Biology 203, Biology of Organisms. These students must take as tool subjects computer science and statistics. It is recommended that those students planning to enter graduate school also prepare themselves in a modern foreign language.

Students concentrating in mental growth and development do so jointly between the Colleges of Human Biology and Community Sciences. They must complete the following prerequisites by the end of the sophomore year: Human Biology 102, Introduction to Human Adaptability; Community Sciences 102, Man and His Social Environment; Biology 202, Biology of Cells, and Biology 203, Biology of Organisms. Among the courses available in the College of Community Sciences, the following are suggested for students in this concentration:

- Psychology 102 The Behavior and Experiences of Man
- Anthropology 203 Understanding Changing Cultures
- Anthropology 204 Technological Change and Cultural Patterns
- Anthropology 205 Culture and Personality
- Psychology 202 Introduction to Social Psychology
- Psychology 206 Experimental Psychology

Students concentrating in human development must complete 30 advanced credits in 300- and 400-level courses. With the assistance of a faculty adviser, the student may elect these credits from the following courses according to the area in which he elects to concentrate:

Area	Course	Credits
Physical	Human Biology 330 (required)	3
Growth and	Zoology 311	3
Development	Zoology 310	3
	Physiology 402	3
	Chemistry 330	4
	Chemistry 421	3
	Chemistry 422	4
	Biology 303	3
	Human Biology 310	3
Mental	Human Biology 331	3
Growth and	Human Biology 332	3
Development	Human Biology 430	3

and courses dealing with such subjects as abnormal psychology, behavioral genetics, child behavior, group dynamics, developmental guidance and psychological measurement.

Combinations of courses from these lists are also possible to satisfy a concentration in growth and development.

#### The Concentration in Human Adaptability

The health of individuals and of populations is the ability to adjust and adapt to countless stresses—physical, chemical, biological and mental (perceptual and conceptual)—within the environment. Human adaptability arises from variability of the human species and from the flexibility of the individual. The basic components of human adaptability are constellations of biochemical, morphological, physiological and behavioral traits and mechanisms. Human adaptability passes through stages of immaturity, maturity and decay. Both the stages of adaptability and the constellation of adaptive traits are individually distinctive, presumably determined in part by inheritance and in part by unique environmental experience.

The purpose of the concentration in human adaptability is to prepare individuals to undertake broad and careful studies of man within the context of his total environment. Because that environment is rapidly changing, it is mandatory that knowledge on the scope and range



## The Educational Program

of the adaptability of man be constantly enlarged. Man appears to be determined to alter his own environment. One important question becomes, "What is the optimum environment for man?"

Students who successfully complete a concentration in human adaptability are awarded the degree of Bachelor of Science (or Arts) in Human Biology. They enter the College of Human Biology in the freshman or sophomore year.

Students concentrating in human adaptability must complete the College core course requirements by the end of their sophomore year.

Students concentrating in human adaptability must complete 30 credits in 300- and 400-level courses. It is recommended that they include in this 30 credits: Human Biology 342, Human Evolution; Human Biology 440, Race and Genetic Variations of Man; Anthropology 303, Cultural Ecology; Psychology 337, Social Behavior Dynamics; Human Biology 330, Human Growth, Development and Senescence; Biology 320, Biological Instrumentation; Human Biology 310, Introduction to Human Genetics, and Ecology 410, Principles of Human Ecology.

The remaining advanced credits may be elected from the following courses according to the student's special interests and goals:

Area	Course	Credits
Chemistry	Chemistry 313	4
	Chemistry 330	4
	Chemistry 321	4
	Chemistry 422	4
	Chemistry 315	4
Physics	Physics 302	4
Mathematics	Mathematics 365	3
	Mathematics 321-322	6
	Mathematics 350	3
	Mathematics 360-361	3
Biology	Ecology 402	3
	Biology 302	3
	Biology 303	3
	Physiology 402	3
	Human Biology 341	4
	Zoology 303	3

Area	Course	Credits
Anthropology	Human Biology 340	3
	Anthropology 307	3
Psychology	Psychology 205	3
	Psychology 309	3

### The Concentration in Human Performance\*

The study of human performance is an important facet of a broad program in human biology, for capability to perform effectively and efficiently is fundamental to human survival in a technological age. The concentration on human performance capacity has several emphases. First, human performance plays a major role in agricultural and industrial occupations. The efficiency with which the tasks associated with these occupations are carried out, the influence of environmental factors (e.g. heat, light, noise) on the working man and the design of machinery and other mechanical devices to be used by the working man are major problems of a technological society.

Second, performance plays a major role in human adaptability to various stresses, modifying psychological and social relationships and maintaining health in general. Since performance is a basic function for life as we know it, a proper understanding of performance must precede and accompany the complete understanding of life. The physiological mechanisms involved in the adaptation of the body to work constitute another approach in the study of the more comprehensive problems of organism-environment interaction, and their study is logical to include in the curricula of the College of Human Biology.

Third, there will be a focus on the stress certain types of activities and performances place on the body. There is a viewpoint which maintains that some types and degrees of stress are beneficial whereas others may be harmful. Validating this

\*This concentration will not be offered in 1969-1970 pending approval of the Coordinating Council for Higher Education.

viewpoint is complicated by the great individual variability in desire and need for physical activity. Do all people need vigorous physical activity? If so, how much? If not, what differentiates those who do need exercise from those who do not?

Students who successfully complete a concentration in human performance are awarded the degree of Bachelor of Science (or Arts) in Human Biology. They enter the College of Human Biology in the freshman or sophomore year.

Students concentrating in human performance must complete the College core course requirements by the end of the sophomore year.

Students concentrating in human performance must complete 30 credits in 300- and 400-level courses. It is recommended that they include 30 credits from the following:

<i>Course</i>	<i>Credits</i>
Human Biology 341 Human Anatomy	4
Chemistry 330 Biochemistry	4
Physiology 402 Mammalian Physiology	3
Psychology 337 Social Behavior Dynamics	3
Physiology 320 Kinesiology**	3
Physiology 321	
History of Study of Human Activity**	3
Physiology 322	
Fundamentals of Ergonomics**	3
Physiology 420 Exercise Physiology**	4
Physiology 430	
Human Environmental Physiology**	4

Students concentrating in human performance may do so jointly between the Colleges of Human Biology and Community Sciences. In such a case a student must take 20 of his 30 advanced credits from the College of Human Biology courses and the remainder from selected courses from the College of Community Sciences in the behavioral sciences, in consultation with his adviser.

\*\*This course will not be available in 1969-1970.



## The Educational Program

### The Concentration In Nutritional Science\*

This concentration focuses on the limits of the biosphere to provide the energy and nutritional needs of the human biomass. The growing world population places an increased demand that man produce and process food in sufficient supply. Adequate food is basic to man's ability to control his environment. Methods for maximum utilization of the world's food resources must be explored, including improved methods of preservation, greater palatability and nutritional value, particularly of low-cost foods. In addition to nutrition, the problems of malnutrition, obesity and food faddism cannot be ignored. Society needs scientifically trained individuals who can attack these problems creatively. The rapid expansion of the food industry, with the constant development of new food products, is also dependent upon people who are trained in this area. The concentration in nutritional science will serve to begin the training of individuals to undertake these important tasks.

Students who successfully complete a concentration in nutritional science are awarded the degree of Bachelor of Science (or Arts) in Human Biology. They enter the College of Human Biology in the freshman or sophomore year. They must complete the College core course requirements by the end of the sophomore year.

Students concentrating in nutritional science must complete 30 advanced credits in 300- and 400-level courses. It is recommended that they include in these 30 credits: Chemistry 330, Biochemistry; Nutritional Sciences 305, Nutritional Science; Nutritional Sciences 303, Food Science; and Nutritional Sciences 302, Nutrition and Culture. The remaining advanced credits may be elected from the following courses:

<i>Course</i>	<i>Credits</i>
Physiology 402 Mammalian Physiology	3
Human Biology 330 Human Growth, Development and Senescence	3
Ecology 303 Productivity of the Ecosystem	3
Chemistry 422 Protein Chemistry	4
Chemistry 340 Energy Metabolism	3
Chemistry 420 Mineral Metabolism	3

Chemistry 421 Vitamins and Hormones	3
Nutritional Sciences 403 Food Science Practicum**	3
Nutritional Sciences 405 Nutritional Practicum**	3
Nutritional Sciences 406 Community Nutrition**	3
Nutritional Sciences 450 Food Sanitation	4
Nutritional Sciences 451 Food Chemistry	4
Microbiology 410 Microorganisms in Food	4

Alternatively, students concentrating in nutritional science can do so jointly between the Colleges of Human Biology and Community Sciences. In such a case, a student must take 20 of his 30 advanced credits from the list above, and the remainder from economics and sociology in the College of Community Sciences in consultation with his adviser.

### The Concentration in Population Dynamics

The most important problem facing mankind in this century is the population avalanche. The origins of the tremendous recent growth in the human population are simple to identify. The crux of the matter is to find a generally effective solution. Here teamwork is essential, by individuals trained in the biology of man and in the behavioral sciences. Individuals capable of coping with this most complex circumstance are in great demand. It is the purpose of this concentration to begin educating individuals who can work toward the solution of this problem.

Students who successfully complete a concentration in population dynamics are awarded the degree of Bachelor of Science (or Arts) in Human Biology. They enter the College of Human Biology in the freshman or sophomore year.

\*This concentration will not be offered in 1969-1970 pending approval by the Coordinating Council for Higher Education.

\*\*This course will not be offered in 1969-1970.

Students who concentrate in population dynamics must complete 30 advanced credits in 300- and 400-level courses. These credits can be elected from such courses as the following:

<i>Course</i>	<i>Credits</i>
Human Biology 320	
Introduction to Population Dynamics	(required) 3
Anthropology 303 Cultural Ecology	3
Anthropology 307 Heredity, Environment and Human Population	3
Anthropology 403	
Racial and Genetic Variations of Man	3
Psychology 337	
Social Behavior Dynamics	3
Physiology 402	
Mammalian Physiology	3
Ecology 402 Population Biology	3
Ecology 410	
Principles of Human Ecology	3
Human Biology 310	
Introduction to Human Genetics	3
Human Biology 420	
Human Mating Behavior	3
Human Biology 421 Problems in Population Regulation	3

Alternatively, students concentrating in population dynamics can do so jointly between the Colleges of Human Biology and Community Sciences. In such a case a student must take 20 of his 30 advanced credits from courses within the College of Human Biology and the remainder from selected courses in anthropology, psychology and sociology, in consultation with his adviser.

#### Options In Biology

The options in biology make it possible for students whose interests focus on organisms other than man to prepare for a career in biology as well as facilitating a desire for a disciplinary focus among students emphasizing man. Biology of other organisms contributes most importantly to understanding the biology of man. In this sense, also, these options play a significant role in the educational program of the College of Human Biology. They both strengthen and broaden that

program. Furthermore, it will be via these options that students preparing for careers in teaching will be able to prepare in depth to understand the subject matter of biology.

For students electing an option in biology the following advanced courses are strongly recommended: Ecology 302, Principles of Ecology; Environmental Sciences 310, Environmental Measurement, and Biology 302, History of Biology. The remaining credits may be centered in one of the divisions of biology—biochemistry, botany, entomology, microbiology, physiology, and zoology—or may be distributed among several divisions as a disciplinary option in biology.

With the assistance of his faculty adviser, the student may formulate his program from such courses as the following:

<i>Area</i>	<i>Course</i>	<i>Credits</i>
Biochemistry	Chemistry 330	4
	Chemistry 422	4
	Chemistry 340	3
	Chemistry 420	3
	Chemistry 421	3
	Botany	Botany 309
	Botany 310	3
	Botany 320	3
	Botany 402	3
	Botany 410	3
	Ecology 303	3
	Ecology 310	3
	Physiology 350	4
Entomology	Entomology 302	3
	Entomology 310	3
	Entomology 330	3
Microbiology	Microbiology 302	3
	Microbiology 303	3
	Microbiology 310	4
	Microbiology 320	4
	Microbiology 402	3
	Microbiology 403	3
	Microbiology 410	3
	Microbiology 420	4
Physiology	Physiology 302	3
	Physiology 402	3
	Physiology 430	4

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Area	Course	Credits
Zoology	Zoology 302	3
	Zoology 303	3
	Zoology 310	3
	Zoology 311	3
	Zoology 320	4
	Zoology 402	3
	Zoology 403	3
	Biology 303	3

### Preprofessional Programs

The College of Human Biology offers special programs to prepare the student for entry into specialized professional areas. A student should select the professional school he plans to attend as early as possible. Then, in consultation with his adviser, the student should adjust his course program at UWGB to meet transfer requirements for the professional field and school of choice.

A student completing three years of an appropriate program at UWGB and the remainder at an accredited professional school may qualify for a B.S. or B.A. from UWGB. Students planning to complete a B.S. or B.A. degree at UWGB with preprofessional emphasis must select a concentration in one of the theme colleges or The School of Professional Studies. Then, with the approval of his adviser and that of his theme college or school, he should work out appropriate courses to be taken at UWGB through the junior year and at another university as a substitute for residence at UWGB as a senior.

**Home Economics.** The University of Wisconsin-Green Bay provides an opportunity for students interested in home economics to obtain a basic and unique background for entry into the home economics profession. With the various combinations of theme college concentrations and options available, the student may obtain background preparation in human development, nutrition, economics, social sciences, natural sciences, communications or administration. The following subject areas are recommended for pre-home economics students and should be completed by the end of the sophomore year:

Course	Credits
English	6
English literature	6
Economics	3
Psychology	3
Sociology	3
Chemistry	5
Physiology	5

Depending upon the field of home economics, the student should elect eight additional credits from microbiology, biochemistry, botany, chemistry, physics and zoology.

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

Course	Credits
Biology	8
Chemistry	16
English	6
Physics	8

In many cases, students are 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, government, history, literature, mathematics, philosophy, psychology, sociology, statistics, zoology and additional courses in physics and in chemistry.

In any case, students should examine catalogs of the dental schools to which they plan to seek admission.

**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.

<i>Course</i>	<i>Credits</i>
Inorganic chemistry	12
Organic chemistry	8
Physics	8
Zoology (biology)	12
English	6
Modern foreign language	16

Physical chemistry and mathematics through calculus provide a useful background and allow a better understanding of the basic concepts of human biology. Therefore, these 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 will be considered. Special attention will be 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 premedical and premedical committee regarding the formulation of their programs. Dean Frederick Sargent II, M.D., is chairman.

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.
2. Physics: year course
3. Zoology
  - a. General: semester course.
  - b. Developmental biology: semester course
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 committee.

## The Educational Program

**Nursing.** A student may begin one of two programs of study for nursing at The University of Wisconsin-Green Bay.

1. In cooperation with the Bellin Memorial Hospital School of Nursing, The University of Wisconsin-Green Bay offers a program leading to a diploma in nursing and prepares the student for certification as a registered nurse.

The first year is spent at the Green Bay campus, followed by two years at the Bellin Memorial Hospital School of Nursing. The following courses or their equivalents are required:

Course	Credits
English	6
General chemistry	5
Zoology	5
Sociology	3
Psychology	3

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 School of Nursing of The University of Wisconsin-Madison and the School of Nursing of The University of Wisconsin-Milwaukee offer programs in nursing. Both programs lead 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 The University of Wisconsin-Green Bay; the remainder is offered at the schools of nursing on the Madison and Milwaukee campuses.

Required courses at Madison are listed in the School of Nursing bulletin; those required at Milwaukee appear in The University of Wisconsin-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 will be 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.

**Veterinary Medicine and Veterinary Science.** The College of Human Biology offers special programs for students interested in seeking admission to a professional school of veterinary medicine. The University of Wisconsin does not grant a degree in veterinary medicine. However, The University of Wisconsin-Madison offers a graduate program in veterinary science.

A student interested in veterinary medicine and veterinary science should consult his adviser as early as possible to work out course programs which meet the requirements described below:

**Veterinary Medicine.** A minimum of two years of prescribed preprofessional college work, with a creditable academic average, is required for admission to the professional curriculum in veterinary medicine. Students in veterinary medicine who wish to receive both the degrees of Doctor of Veterinary Medicine and Bachelor of Science will take at least three years' work in the curriculum at UWGB. Such a program must have the approval of the deans of the College of Human Biology and the veterinary medicine school of choice. The professional curriculum extends over a period of four years and leads to the degree Doctor of Veterinary Medicine.

To earn the degree Doctor of Veterinary Medicine, candidates must be 21 years of age and of good moral and professional character. They must have at least two quality points per credit in all courses taken in the professional curriculum and must be approved by all departments of the veterinary college.

Applicants for admission to a college of veterinary medicine must present a total of not less than 60 semester credits, excluding physical education credits, from an approved college or university. Credits must include the following:

Course	Credits
English	8
Chemistry (general, quantitative, organic)	16
Mathematics (algebra and trigonometry)	6
Physics	8
Biological science (zoology, botany, genetics)	10
American government	2

Because of limited facilities, admission to the College of Veterinary Medicine is on a competitive and selective basis. A pre-admission conference with members of the veterinary faculty or other persons designated by the dean is usually required. High school records, scholastic performance 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 are given preference.

**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 to the veterinary field. Students majoring in veterinary

science may choose a minor in any of the related sciences.

**Medical Technology.** A student may complete the first two years of the medical technology program at The University of Wisconsin-Green Bay. 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 foreign language or have completed two years of one foreign language in high school; chemistry through quantitative analysis and two semesters of organic; 12 credits of English or equivalent, including six credits of English literature; college algebra, two semesters of physics and one semester each of animal physiology, zoology and parasitology.

**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 can be completed at the Green Bay campus and three years in the School of Pharmacy at the Madison campus. Basic requirements of the pre-pharmacy program are 60 semester hours including:

English (or equivalent)	2 semesters
Physics	2 semesters
Biology	2 semesters
Economics	1 semester
General chemistry	2 semesters
Analytical chemistry	1 semester
Organic chemistry with laboratory	2 semesters
College algebra and trigonometry	2 semesters





**COURSES**

**Abbreviations**

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

**Human Biology**

**10 Introductory Science 0 cr.**

Introduction to the scientific method; observation, data collection, hypothesis, testing and logic; the scientific units of measurement; states of matter; fundamental composition of the earth and biological systems. P: Mathematics 10. (Cross-listed in College of Environmental Sciences as Environmental Sciences 10)

**102 Introduction to Human Adaptability 3 cr.**

Introduction to the development, nature and processes of human adaptability in the individual and in the biological population. This course fulfills the university distribution requirement in the College of Human Biology.

**310 Introduction to Human Genetics 3 cr.**

Principles of human genetics; genetics of populations. P: Biology 303.

**320 Introduction to Population Dynamics 3 cr.**

Factors controlling the size of animal and human populations, their density and their composition; population cycles; concepts of population genetics; migration; hybridization and assortative mating. P: Biology 203.

**330 Human Growth, Development and Senescence 3 cr.**

An analysis of the physical and functional events of the stages in the life sequence of the human being. P: Zoology 310, 311.

**331 Infancy and Early Childhood 3 cr.**

Review of genetic and physical factors; social, emotional, cognitive development; family and other social interaction impacts. This would encompass motivation and learning; personality and intellect; sex-role development. P: jr st.

**332 Middle Childhood and Adolescence 3 cr.**

Scope as in Human Biology 331 with additional consideration of learning processes, peer-group, school and community impacts; identity crises in connection with adolescence. P: Human Biology 331.

**340 Human Skeleton 3 cr.**

Qualitative and quantitative study of the human skeleton. P: Zoology 303 or sr st in the College of Community Sciences.

**341 Human Anatomy 3 cr.**

The structure of the human body; the relations of structure to function. P: Zoology 303, 310, 311.

**342 Human Evolution 3 cr.**

The origin, evolution and dispersion of the species *Homo sapiens*. P: Biology 203, Anthropology 203 or jr st in the College of Community Sciences. (Cross-listed in College of Community Sciences as Anthropology 305.)

**420 Human Mating Behavior 3 cr.**

Analysis of the biological and cultural determinants of mating behavior in human populations; problems of population genetics. P: Human Biology 320 and a course in anthropology.

**421 Problems in Population Regulation 3 cr.**

Consideration of biological, cultural and political problems in regulating human populations. P: Human Biology 420.

**430 Adulthood and Later Maturity 3 cr.**

Scope as in Human Biology 331 and 332; emphasis on identity resolution, adjustment to work, marriage, parenthood, processes of old age, involving physical, intellectual, personality developments, adjustment to retirement. P: Human Biology 332.

## The Educational Program

### **440 Racial and Genetic Variations of Man 3 cr.**

The origin and description of the varieties of *Homo sapiens*; factors responsible for the maintenance of human diversity. P: Human Biology 342 or sr st.

### **498, 499 Reading and Research 1-4 cr.**

Independent reading and research in selected subject matter areas. A student in consultation with a faculty member in the subject matter area of choice will plan a program of selected reading and research, including the type of report or equivalent to be submitted for evaluation for credit approval. P: cons inst.

## **Biology**

### **202 Biology of Cells 4 cr.**

Selected topics on concepts of biology at the subcellular and cellular levels. P: Human Biology 102.

### **203 Biology of Organisms 4 cr.**

Selected topics on concepts of biology at the level of the organism. P: Biology 202.

### **302 History of Biology 3 cr.**

History of ideas, concepts and discoveries in the life sciences. P: Biology 203.

### **303 Genetics 3 cr.**

Mechanisms of heredity and variation, their cytological basis and their implications in biology. P: Biology 203.

### **325 Biological Instrumentation 3 cr.**

Laboratory exercises with instruments useful in biological investigations. P: Biology 203, Physics 305.

## **Microbiology**

### **302 Principles of Microbiology 3 cr.**

A study of microorganisms and their activities; form, structure, reproductive physiology, metabolism and identification; distribution in nature and relationship to each other and to other living things. P: Chemistry 102 or 108 or Chemistry-Physics 210. (Formerly Bacteriology 101.)

### **303 Advanced Microbiology 3 cr.**

Detailed study of microorganisms from virus to fungi in their environment. A study of both free-living and pathogenic organisms and their degrading abilities. P: Microbiology 302.

### **310 Microbial Physiology 3 cr.**

The chemistry and physics of bacterial processes. P: Microbiology 303, Chemistry 330.

### **320 Microbial Genetics 3 cr.**

The fundamental genetic principles; examples from fungi, bacteria, viruses, protozoa and algae. P: Microbiology 302, Biology 303.

### **402 Virology 3 or 4 cr.**

The structure, composition and replication of bacterial, plant and animal viruses; their effects upon host cells; techniques used for studying viruses; some effects of certain pathologic viruses on selected host organisms. P: Microbiology 303, Chemistry 330.

### **403 Pathogenic Microorganisms 3 cr.**

The physical and chemical manifestations of diseases produced by microorganisms of the micro- and macro-level. P: Microbiology 402.

### **410 Microorganisms in Foods 4 cr.**

Normal microbial flora of foods; desirable fermentations; food infections and intoxications; detection of contamination in foods. P: Chemistry 330, Nutritional Sciences 303, Microbiology 302.

### **420 Principles of Parasitology 3 cr.**

General biology, ecology and classification of animal parasites; adaptations of parasites to the external environment, physiology of parasites, host-parasite relationships and immunity to parasite infection. P: Biology 203. (Cross-listed as Zoology 420)

## **Botany**

### **309 Plant Taxonomy 3 cr.**

A laboratory, field and discussion course in identification and classification of plants of North America including flora of Wisconsin. P: Biology 203.

**310 Systematics and Taxonomy 3 cr.**

A consideration of the historical background of systematics, modern systems of analysis, the experimental approach to systematic problems and interrelations with other fields. P: Biology 203, Botany 309.

**320 Field Botany 4 cr.**

Special consideration is given to the collection, preservation, identification and natural history of plants indigenous to Northeastern Wisconsin. Each student will conduct a field study. P: Biology 203, Botany 309.

**402 Plants and Civilization 3 cr.**

The economic importance of plants in the development of civilization and in modern agriculture and industry. Emphasis is on historical and modern cultural aspects. P: Human Biology 102.

**410 Dendrology 3 cr.**

Identification of native and cultivated trees and shrubs, their economic uses, distributions, growth, reproduction and autecology. P: Biology 203.

**Zoology**

**103 Animal Biology 5 cr.**

The anatomy and physiology of the vertebrate body; an introduction to histology, embryology, heredity and evolution. Laboratory emphasis is upon the frog and its relation to the human body. (Formerly listed as Zoology 101.)

**302 Vertebrate Zoology 3 cr.**

The taxonomy, general biology, ecology, behavior and special adaptations of chordate animals. P: Biology 203.

**303 Comparative Anatomy of Vertebrates 3 cr.**

Lectures compare structure of organ systems in the different vertebrate groups. Laboratory dissection of shark, mud-puppy, turtle, bird and cat. P: Biology 203.

**310 Embryology 3 cr.**

Principles of development including gametoge-

nesis, fertilization, gastrulation, organogenesis and experimental aspects of development in vertebrates. Laboratory work includes morphogenesis of amphibians, chicks and pigs, and work with living embryos. P: Biology 203.

**311 Histology 3 cr.**

Microscopic structure of cells, tissues and organs; growth, differentiation and organization of tissues, their structural patterns and functional interrelationships in animals adapted to various environments. P: Biology 203.

**320 Field Zoology 3 cr.**

Field collection and laboratory identification of aquatic and terrestrial invertebrates and vertebrates of the region, with analysis of their habitats. A collection is required. P: Biology 203.

**402 Ichthyology 3 cr.**

An introduction to the major groups of fishes, their morphology, systematics, ecology and distribution. P: Biology 203.

**403 General Limnology 3 cr.**

An introduction to the physical, chemical and biological interactions in lakes and streams as expressed in the nature and dynamics of aquatic communities; laboratory and field techniques used in the characterization of the aquatic environment. P: Biology 203, Chemistry-Physics 210.

**420 Principles of Parasitology 3 cr.**

General biology, ecology and classification of animal parasites; adaptations of parasites to the external environment; physiology of parasites, host-parasite relationships and immunity to parasite infection. P: Biology 203. (Cross-listed as Microbiology 420)

**Entomology**

**302 Principles of Entomology 3 cr.**

The biology and habits of insects and their interrelationships with man. This course includes general anatomy, physiology, embryology and classification of insects. Field collection is required. P: Biology 203.

## The Educational Program

### **310 Taxonomy of Insects 3 cr.**

The principles of insect taxonomy with identification and morphology of mature and immature insects. P: Entomology 302.

### **330 Insect Physiology 3 cr.**

The basic physiology and histology of organ systems of insects; integration of the nervous systems and the behavior of insects. P: Entomology 302.

## **Physiology**

### **104 Anatomy and Physiology 4 cr.**

The structure of the human body and the physiology of the organ systems. P: Chemistry 108 and Zoology 103 or Biology 202 or Chemistry-Physics 210.

### **302 Comparative Physiology 3 or 4 cr.**

The functional aspects of animal systems, from invertebrate to mammals, are compared at the subcellular, cellular and organismal levels. The course includes the ecology of both internal and external environments. P: Chemistry-Physics 212, Biology 203.

### **320 Kinesiology\*\* 3 cr.**

Mechanics and muscular action of balance and movement of the human body. P: Biology 203.

### **321 History of Study of Human Activity\*\* 3 cr.**

History of ideas, concepts and discoveries in chemistry and physiology of muscular contraction, physiology of exercise and ergonomics. P: Biology 203.

### **322 Fundamentals of Ergonomics\*\* 4 cr.**

Study of precision and efficiency of human activity; influence of environmental factors; the human factor in the design of equipment. P: Biology 203.

### **350 Plant Physiology 4 cr.**

General physiology of vascular plants; nutrition and metabolism; plant growth and development; natural and synthetic growth regulators, transport systems. P: Biology 203, Chemistry-Physics 212.

### **402 Mammalian Physiology 4 cr.**

The study of the functions of the major organs and organ systems of mammals; application of systems analysis to physiological regulation. P: Chemistry-Physics 212, Biology 203.

### **420 Exercise Physiology\*\* 4 cr.**

Study of human activity and the effects of activity on organs and organ systems; training as an adaptation; component analysis of human movement. P: Physiology 402.

### **430 Human Environmental Physiology 4 cr.**

Effects of meteorological factors on man; acclimatization to heat, cold, altitude and solar radiation. P: Physiology 402.

## **Nutritional Sciences**

### **302 Nutrition and Culture 3 cr.**

Effect of environmental and cultural influences on food as related to the history of man; role of food in health and disease as related to man and the biosphere. P: Human Biology 102.

### **303 Food Science 4 cr.**

Recognition of food quality; detection and understanding of differences among prepared foods; food spoilage, food preservation, role of food additives. P: Biology 202, Chemistry-Physics 212, concurrent registration in Nutritional Sciences 302.

### **305 Principles of Nutritional Science 4 cr.**

Principles of normal nutrition; special requirements during growth, reproduction and senescence; diet therapy, alterations in diet for prevention and treatment of disease. P: Biology 203, Nutritional Sciences 302, concurrent registration in Chemistry 330.

### **403 Food Science Practicum\*\* 3 cr.**

Extra-university experience in food science, such as summer work in the foods laboratory of an industrial food company. P: Nutritional Sciences 302.

\*\*This course will not be available in 1969-1970.

**405 Nutritional Practicum\*\* 3 cr.**

Extra-university experience in nutrition, e.g., experience in field study techniques and community nutrition, in cooperation with agencies such as the Wisconsin Division of Health. The student will spend a minimum of 135 hours as a student worker in nutrition, working closely with a professional nutritionist. At the completion of the work period, the student will present written and oral reports on his experience. P: Nutritional Sciences 305.

**406 Community Nutrition\*\* 3 cr.**

Current problems in public health nutrition, food misinformation; factors leading to malnutrition of certain population groups; community programs

directed toward solution of these problems; field trips. P: Nutritional Sciences 302, 305.

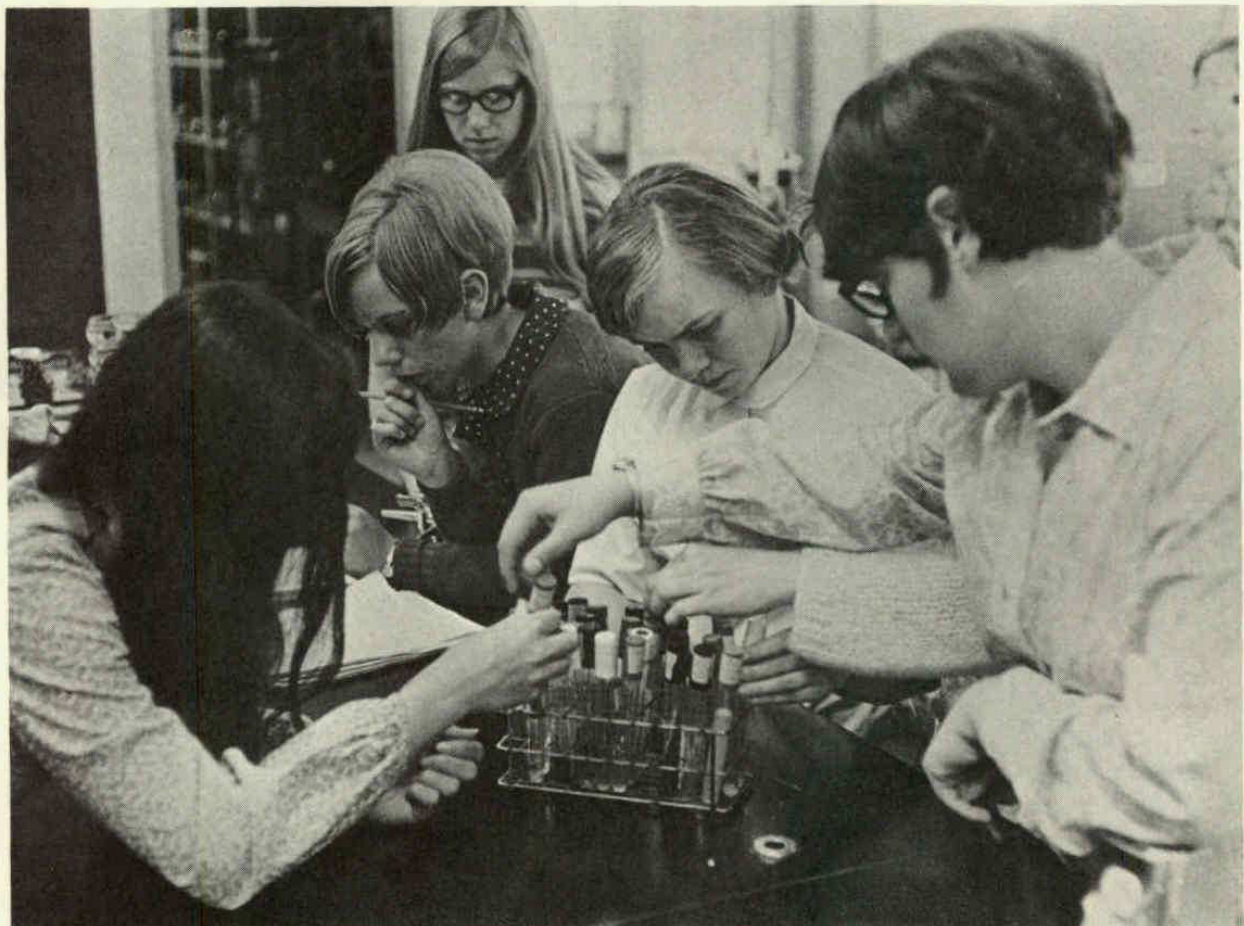
**450 Food Sanitation\*\* 4 cr.**

Control of biological, chemical and physical environments in maintaining proper sanitation and safety of food, including milk and water; field trips. P: Nutritional Sciences 303, Chemistry 330, Microbiology 302.

**451 Food Chemistry 4 cr.**

The chemical composition and physiochemical analysis of foods; determination of coloring materials, preservatives and metals in foods. P: Nutritional Sciences 305, Chemistry 313, 330.

\*\*This course will not be available in 1969-1970.





# The College of Community Sciences

## PROGRAMS

The College of Community Sciences offers programs focusing upon the role of man in the social environment and the process 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. The six disciplines central to the program and housed in this college are anthropology, economics, geography, political science, psychology and sociology.

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 persons 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 basic 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 community sciences concentrations. The concentrations are:

- (1) Regional analysis
- (2) Urban analysis
- (3) Modernization processes

Upon indicating his intent to enter a concentration, a student is assigned to an appropriate faculty member within the college.

Students who successfully complete a concentration in regional analysis, urban analysis or modernization processes will be awarded the

degree of Bachelor of Science (or Arts) in Community Sciences. They normally enter the College of Community Sciences at the beginning of the sophomore year and select the concentration by the junior year.

Students concentrating in regional analysis, urban analysis or modernization processes normally will complete 30 credits in the 300- and 400-level courses directly related to the concentration. Students selecting a concentration-option combination normally will complete 36 credits at the 300 and 400 levels, 24 of which relate the option (e.g. sociology) to the concentration (e.g. regional analysis). The courses available within the College of Community Sciences from which choices can be made are listed under the disciplines. An adviser can assist the student with the selection of these and other courses for the concentration or the concentration-option.

Students in the College of Community Sciences may choose to augment their concentration with a disciplinary option. Each discipline within the College offers such options. For example, it is possible for a student to take his concentration in regional analysis with either an anthropology, economics, geography, political science, psychology or sociology option. The same options can be applied in the case of urban analysis or modernization processes. Students may select an option from disciplines housed in other colleges with approval of the two respective deans.

Further, students may choose to pursue any one of the professional collaterals offered by the University. Such programs are usually initiated at the beginning of the third year. As appropriate, students may combine a concentration or a concentration-option with the following collaterals: (1) education (elementary or secondary), (2) public administration, (3) business administration, (4) leisure sciences\*, (5) mass communications\*, or (6) social services\*. Students se-

\*Will be offered when the collateral has been approved by the Coordinating Council for Higher Education.



## The Educational Program

lecting combined programs of this type are encouraged to adapt their off-campus sophomore and junior experiences so as to be relevant to both the concentration and collateral. (See the all-University statement and that of the School of Professional Studies for more information.)

Students majoring in the College of Community Sciences must meet all-University requirements including the four-year liberal education seminars, distribution credits, tool subjects and Organization and Operations 450, Policy and Program Implementation (or a professional collateral). Details of these requirements are to be found in the general University undergraduate program statement.

The College of Community Sciences shares with the other colleges in the University a concern that graduates of UWGB gain those skills necessary for effective functioning in the contemporary world. The College recognizes that many students will be able to attain one or more of the required levels of tool subject capacity before entering the University. Therefore, students who are able to write off any requirement are urged to consider the great advantages of attaining necessary capacity in those other areas where they do not have advanced preparation.

In meeting University distribution requirements, students should recognize that these course experiences can be directly related to work in their concentration and disciplinary option. Members of the faculty are available to assist students in developing programs for themselves that take advantage of such relationships.

Two courses administered outside the College of Community Sciences are required of all students completing their concentrations in this college. They are:

<i>Course</i>	<i>Credits</i>
Community Sciences 205	
Social Science Statistics	3
Philosophy 111 Descriptive Logic	3

It is expected that students will usually complete these six credits of course work before starting the junior year.

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

<i>Course</i>	<i>Credits</i>
Community Sciences 102	
Man and His Social Environment	3
and one of the following courses*	
Anthropology 102	
Environmental Anthropology	3
Economics 102	
Economics and the Modern World	3
Geography 102	
Approaches to Geography	3
Political Science 103	
Introduction to Political Analysis	3
Psychology 102	
The Behaviors and Experiences of Man	3
Sociology 102	
The City	3

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. Courses taught in the College of Community Sciences by this college's faculty, but meeting requirements of concentrations in other theme colleges, are suitably cross-listed.

\*Community Sciences 100 is a prerequisite for all these courses.



SUMMARY OF A SAMPLE PROGRAM

	<i>Credits</i>
<i>Freshman Year</i>	
Liberal Education Seminar 100-101	6
Distribution (in three other theme colleges)	9-12
Community Sciences 102	3
Electives in the College of Community Sciences	6
Tool subjects	6-8
Electives	as appropriate
	—
Total (approx.)	32
 <i>Sophomore Year</i>	
Liberal Education Seminar 200-201	6
Distribution	9
Tool subjects	6
Electives in the College of Community Sciences	5
Social science statistics	3
Descriptive Logic	3
	—
Total	32
 <i>Junior Year</i>	
Liberal Education Seminar 300-301	6
Major subjects (concentration or concentration-option)	up to 15*
Electives (or professional collateral)	up to 12*
	—
Total (approx.)	30
 <i>Senior Year</i>	
Liberal Education Seminar 400-401	6
Major subjects (concentration or concentration-option)	up to 21*
**Electives (or professional collateral)	up to 6*
	—
Total (approx.)	30

**The Concentration in Regional Analysis**

Regional analysis provides a meaningful focus in the study of the community sciences by the examination of economic, political and social interactions within the context of a geographic region. Although citizens grant their ultimate political loyalties to nation-states, states within a federation, and other formal political subdivisions, their economic and social relationships tend to cluster within geographic regions. The effective application of individual capacities and the critical use of material resources depend on a clear understanding of the regional character of such primary interactions. These and related conditions, problems and opportunities constitute the focus of the concentration.

Students entering the concentration in regional analysis will be able to focus their studies in various of the community sciences in such a way as to increase their ultimate capacity to function within various kinds of business organizations as well as governmental agencies. Students with a concentration in regional analysis will find the field a useful preparation for a professional school such as law, business administration or social work. The student can begin his preparation by adding a disciplinary option or professional collateral to the concentration in regional analysis. The disciplinary options available within the college are anthropology, economics, geography, political science, psychology and sociology.

In addition to the previously indicated graduation requirements of the University and the College of Community Sciences, the student concentrating

\*The Liberal Education Seminar (sophomore and junior years) may be considered as part of a student's concentration or as part of a professional collateral, or both, thus reducing certain credit requirements during the junior and senior years.

\*\*Seniors not pursuing a professional collateral must take Organization and Operations 450, Policy and Program Implementation.

## The Educational Program

in regional analysis must complete certain fundamental courses in anthropology, economics, geography, political science, psychology and sociology. Among the courses most highly recommended are the following:

<i>Course</i>	<i>Credits</i>
Community Sciences 202	
Introduction to Regional Analysis	3 (required)
Community Sciences 499 Special	
Readings in Community Sciences	arr.
Anthropology 202	
Economic Anthropology	3
Economics 202	
Macro Economic Analysis	3
Economics 203	
Micro Economic Analysis	3
Economics 204	
Regional Economic Analysis	3
Geography 255 Introduction to	
Quantitative Methods of	
Spatial Analysis	3
Geography 262 Geography of	
Great Lakes Region of Africa	3
Geography 272 Geography of	
Great Lakes of North America	3
Political Science 202 State	
Government and Public Policy	3
Psychology 202 Introduction to	
Social Psychology	3
Sociology 202 Introduction to	
Sociological Analysis	3

### The Concentration In Urban Analysis

Urban analysis provides a meaningful focus in the study of the community sciences by an examination of economic, political and social interactions within the context of metropolitan areas. Both in the United States and abroad, contemporary ecological problems have reached crisis proportions. Community life in the 20th century largely involves urban relationships. Urban analysis, therefore, becomes a major key to effective participation in contemporary life.

Students entering the concentration in urban analysis will be able to center their studies of the community sciences in such a way as to increase

their ultimate capacity to function within various kinds of business organizations, as well as governmental agencies. Students will find a concentration in urban analysis a useful preparation for a professional school such as law, journalism, business administration, or social work. The student can begin his preparation by adding a disciplinary option or professional collateral to the concentration in urban analysis. The disciplinary options available within the college are anthropology, economics, geography, political science, psychology and sociology.

In addition to the previously indicated graduation requirements of the University and the College of Community Sciences, the student concentrating in urban analysis must complete certain fundamental courses in anthropology, economics, geography, political science, psychology and sociology. Among the courses most highly recommended are the following:

<i>Course</i>	<i>Credits</i>
Community Sciences 203	
Introduction to Urban Analysis	3 (required)
Community Sciences 499 Special	
Readings in Community Sciences	arr.
Anthropology 202	
Economic Anthropology	3
Economics 202	
Macro Economic Analysis	3
Economics 203	
Micro Economic Analysis	3
Geography 241 Urban Geography	3
Geography 255 Introduction to	
Quantitative Methods of Spatial	
Analysis	3
Political Science 202 State	
Government and Public Policy	3
Political Science 213 Urban Politics	3
Psychology 202 Introduction	
to Social Psychology	3
Sociology 203 Problems of	
American Minority Groups	3
Sociology 204 Collective Behavior	3

**The Concentration  
In Modernization Processes**

Study of culture change in the direction of modernity requires an examination of those economic, political and social factors that bring about changes in the essential values of the communities within which men live. Such values, in turn, influence the manner in which men arrange their economic, political and social relationships. Effective participation in modern life depends on the understanding of such changes in values and makes more likely social adaptation to essential changes in economic, political and social institutions.

Modernization processes involve changes in institutional arrangements and behavioral patterns, particularly in regard to technology and economic, political and social systems. Traditional and agrarian cultures are in the process of adapting to very rapid technological change tending to alter such cultures in the direction of becoming modern and industrial. Even the most modern countries such as the United States have pockets of underdevelopment. And modernization is a process characteristic of the whole of so-called "advanced" countries. It is a changing and ever-elusive goal. A focus on modernization processes affords a meaningful problem orientation to the study of the community sciences. Effective participation in the world community certainly depends on broad recognition of the complex modernization processes.

Students entering the concentration in modernization processes will increase their ultimate capacity to function within various kinds of business and governmental agencies. They will find the concentration a useful preparation for professional schools such as law, public administration, business administration or social work. They 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 by adding a disciplinary option or professional collateral to the concentration in modernization processes. Disciplinary options

available within the college include anthropology, economics, geography, political science, psychology and sociology.

In addition to the previously indicated graduation requirements of the University and the College of Community Sciences, the student concentrating in modernization processes must complete certain fundamental courses in anthropology, economics, geography, political science, psychology and sociology. Among the courses most highly recommended are the following:

<i>Course</i>	<i>Credits</i>
Community Sciences 204 Introduction to Modernization Processes (required)	3
Community Sciences 499 Community Sciences Special Readings	arr.
Anthropology 203 Understanding Changing Cultures	3
Anthropology 204 Technological Change in Cultural Patterns	3
Anthropology 205 Culture and Personality	3
Economics 202 Macro Economic Analysis	3
Economics 203 Micro Economic Analysis	3
Economics 205 Comparative Economic Systems and Institutions	3
Geography 276 Geography of Developing Areas	3
Political Science 203 Politics of Developing Systems	3
Political Science 204 Comparative Bureaucratic Behavior	3
Psychology 202 Introduction to Social Psychology	3
Psychology 205 Psychology of Human Adjustment	3
Sociology 202 Introduction to Sociological Analysis	3
Sociology 204 Collective Behavior	3
Sociology 205 Social Change	3

## The Educational Program

### Option in Anthropology

Anthropology involves the systematic study of man's place in the natural world and includes his evolutionary history and development, the organization of basic social life, his cultural patterns and symbolic systems. Anthropology shows a particular concern for comparisons between differing societies and, in particular, those universals of culture that exist in the midst of wide variations in the economic, political and social ways of life. Courses in anthropology concentrate within the two fields of cultural anthropology and physical anthropology.

Students choosing the anthropology option will find that the skills and capacities gained through such a program can be applied in a wide variety of vocations and professions; government service at the local, state and national levels, work with private and public agencies both here and abroad, and in education.

With the approval of his faculty adviser and the dean of the College of Community Sciences, a student may select 24 credits of 300- and 400-level anthropology courses, relating them to one of the college's concentrations. This constitutes an anthropology option. The following listing arranges the principal courses in terms of two fields within the discipline of anthropology. See also the courses listed under the several concentrations and the complete list of anthropology courses presented elsewhere.

Area	Course	Credits
Cultural	Anthropology 302	3
Anthropology	Anthropology 303	3
	Anthropology 304	3
	Anthropology 402	3
	Anthropology 498, 499	6
Physical	Anthropology 305	3
Anthropology	Anthropology 306	3
	Anthropology 307	3
	Anthropology 403	3
	Anthropology 498, 499	6

Another aspect of anthropology, linguistics, is largely appropriate for the graduate level. For those planning graduate work in linguistics, an introductory undergraduate course is offered in the College of Creative Communication.

### Option in Economics

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 government, as well as the pricing, development and use of resources, and regional and community development.

Undergraduate training is oriented toward the analysis of contemporary problems and the determination of alternative economic approaches toward resolving those problems. It will prepare students for active roles in business and industry, in governmental agencies, in various educational units and in a host of community organizations.

Courses in economics concentrate in five areas. They are business, industrial and labor economics, economic theory, international economics, public finance, and resource economics. With the approval of his faculty adviser and the dean of the College of Community Sciences, a student may select 24 credits of 300- and 400-level economics courses, relating them to one of the college's concentrations. This constitutes an economics option.

The following listing arranges the principal courses in terms of five fields within the discipline of economics. See also the courses listed under the several concentrations and the complete list of economics courses.

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Area	Course	Credits
Business, Industrial and Labor Economics	Economics 302	3
	Economics 303	3
	Economics 304	3
	Economics 308	3
	Economics 309	3
Economic Theory	Economics 498, 499	6
	Economics 303	3
	Economics 307	3
	Economics 308 <sup>1</sup>	3
	Economics 309 <sup>1</sup>	3
	Economics 402	3
International Economics	Economics 498, 499	6
	Economics 309 <sup>1</sup>	3
	Economics 403	3
	Economics 404	3
	Economics 405	3
Public Finance	Economics 498, 499	6
	Economics 302	3
	Economics 303	3
	Economics 306	3
	Economics 309 <sup>1</sup>	3
Resource Economics	Economics 405	3
	Economics 498, 499	6
	Economics 303	3
	Economics 305	3
	Economics 309 <sup>1</sup>	3
	Economics 402	3
	Economics 404	3
	Economics 498, 499	6

<sup>1</sup>This course is required of all students choosing the economics option.

**Option in Geography**

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, since the problems of man's life in communities are strongly influenced by the particular features of geographic location. Students choosing a geography option are able to study spatial variations in terms of particular topics, or to consider a number of physical and cultural phenomena within a particular region or regions. Courses in geography concentrate within the four fields of

cultural geography, physical geography, regional geography and urban geography.

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.

With the approval of his faculty adviser and the dean of the College of Community Sciences, a student may select 24 credits of 300- and 400-level geography courses, relating them to one of the College's concentrations. This constitutes a geography option. The following listing arranges the principal courses in terms of four fields within the discipline of geography. See also the courses listed under the several concentrations and the complete list of geography courses.

Area	Course	Credits
Cultural Geography	Geography 202	3
	Geography 350 <sup>1</sup>	3
	Geography 361	3
	Geography 378	3
	Geography 498, 499	6
Physical Geography	Geography 320	3
	Geography 325	3
	Geography 350 <sup>1</sup>	3
	Geography 498, 499	6
	Geography 215	3
Regional Geography	Geography 316	3
	Geography 350 <sup>1</sup>	3
	Geography 361	3
	Geography 371	3
	Geography 377	3
Urban Geography	Geography 498, 499	6
	Geography 316	3
	Geography 342	3
	Geography 345	3
	Geography 350 <sup>1</sup>	3
	Geography 498, 499	6

<sup>1</sup>This tool course is required of all students choosing the geography option.

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### Option In Political Science

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. 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 concentrate within the five fields of American political behavior, comparative politics, international politics, political analysis and public administration.

Career opportunities in wide variety are open to students who choose the political science option. 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.

With the approval of his faculty adviser and the dean of the College of Community Sciences, a student may select 24 credits of 300- and 400-level political science courses, relating them to one of the College's concentrations. This constitutes a political science option. The following listing arranges the principal courses in terms of five fields within the discipline of political science. See also courses listed under the several concentrations and the complete list of political science courses.

Area	Course	Credits
American	Political Science 302	3
Political	Political Science 303	3
Behavior	Political Science 426	3
	Political Science 472	3
	Political Science 498, 499	6

Area	Course	Credits
Comparative Politics	Political Science 302	3
	Political Science 304	3
	Political Science 305	3
	Political Science 402	3
	Political Science 498, 499	6
International Politics	Political Science 304	3
	Political Science 306	3
	Political Science 403	3
	Political Science 404	3
	Political Science 498, 499	6
Political Analysis	Political Science 303	3
	Political Science 307	3
	Political Science 402	3
	Political Science 498, 499	6
Public Administration	Organization and Operations 302	3
	Political Science 320	3
	Political Science 321	3
	Political Science 405	3
	Political Science 498, 499	6

### Option in Psychology

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. Patterns of behavior in animals are examined for the light they can shed on human behavior. Courses in psychology concentrate within the three fields of industrial psychology, psychological theory and social psychology.

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

With the approval of his faculty adviser and the dean of the College of Community Sciences, a student may select 24 credits of 300- and 400-level psychology courses, relating them to one of

the College's concentrations. This constitutes a psychology option. The following listing arranges the principal courses in terms of three fields within the discipline of psychology. See also the courses listed under the several concentrations and the complete list of psychology courses.

Area	Course	Credits
Industrial Psychology	Psychology 314	3
	Psychology 320	3
	Psychology 415	3
	Psychology 416	3
	Psychology 498, 499	6
Psychological Theory	Psychology 306	3
	Psychology 309	3
	Psychology 338	3
	Psychology 417	3
	Psychology 498, 499	6
Social Psychology	Psychology 335	3
	Psychology 337	3
	Psychology 416	3
	Psychology 438	3
	Psychology 498, 499	6

**Option in Sociology**

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 interpersonal relations, 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 four fields of demography, deviant behavior, social organization and social theory.

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

With the approval of his faculty adviser and the dean of the College of Community Sciences, a student may select 24 credits of 300- and 400-level sociology courses, relating them to one of the College's concentrations. This constitutes a

sociology option. The following listing arranges courses in terms of four fields within the discipline of sociology. See also courses listed under the several concentrations and the complete list of sociology courses.

Area	Course	Credits
Demography	Sociology 302	3
	Sociology 303	3
	Sociology 402	3
	Sociology 403	3
	Sociology 498, 499	6
Deviant Behavior	Sociology 304,305	6
	Sociology 404	3
	Sociology 466	3
Social Organization	Sociology 498, 499	6
	Sociology 302	3
	Sociology 308	3
Social Theory	Sociology 308	3
	Sociology 405	3
	Sociology 407	3
	Sociology 498, 499	6
	Sociology 303	3
	Sociology 306, 307	6
	Sociology 406	3
	Sociology 498, 499	6



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## COURSES

### Abbreviations

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

### Community Sciences

**102 Man and His Social Environment 3 cr.**  
Introduction to concepts and concerns of the community sciences through an interdisciplinary focus on problems and opportunities of man and his social and cultural environment.

**202 Introduction to Regional Analysis 3 cr.**  
Study of the community sciences through an identification of the physical, economic, political, social and cultural interactions and problems of regions; concepts for identifying or defining functional regions; evaluation of selected problems and opportunities of regions, contrasting the Northern Great Lakes region with other relevant regions. P: soph st.

**203 Introduction to Urban Analysis 3 cr.**  
Study of the community sciences through an examination of the physical, economic, political, social and cultural interactions within urban and urbanizing areas; concepts for evaluation of selected problems and opportunities of urban and urbanizing areas. P: soph st.

**204 Introduction to Modernization processes 3 cr.**  
Study of the community sciences through an examination of those economic, political, social and cultural factors that bring about changes in various communities within which men live; changes in institutional arrangements and behavior patterns, particularly in regard to technology, value systems, and economic, political

and social systems that are a central part of the modernization processes. P: soph st.

**205 Social Science Statistics 3 cr.**  
Course in application of statistics to problems of the social sciences, particularly those problems pertaining to regional analysis, urban analysis and modernization processes. Application of statistical techniques in problem definition, hypotheses construction, and data collection, processing and evaluation. P: soph st.

### 499 Community Sciences Special Readings Up to 3 cr per semester

Special readings on the role of man in his social and cultural environment; community problems and opportunities at the local, state, national and international levels; possible contributions and interdependencies of disciplines. P: soph st.

### Sociology

**102 The City 3 cr.**  
Introduction to social systems through a focus on problems of urbanization. P: Community Sciences 102.

**202 Introduction to Sociological Analysis 3 cr.**  
Introduction to major sociological theories and their application to contemporary problems of society. P: soph st.

**203 Problems of American Minority Groups 3 cr.**  
Character of racial, religious and ethnic minority groups; social and economic adjustments in American society; the roles of private and public agencies. P: soph st.

**204 Collective Behavior 3 cr.**  
Analysis of the dynamics of social movements, mobs, crowds, masses; voluntary and compulsory associations; power structure; group responses to varieties of leadership. P: soph st.

**205 Social Change 3 cr.**  
Social change in community and society with emphasis upon the rate, direction, mechanisms and planning of change in modern and emerging nations. P: soph st.

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### **302 Social Stratification 3 cr.**

Occupation, class and status as determinants of group interests, ideologies and struggles; selected international comparisons. P: jr st.

### **303 Theories of Societal Development and Change 3 cr.**

Analysis of theories of social change with reference to contemporary patterns in developing areas of the world. P: jr st.

### **304, 305 Processes of Deviant Behavior 3, 3 cr.**

Factors and conditions which underlie disagreement about fundamental values; relation of values to personal and social maladjustment; evaluation of various theories of deviant behavior; deviant behavior in different societies; group approaches to social reintegration. P: jr st.

### **306, 307 Concepts of Social Analysis 3, 3 cr.**

Survey and analysis of theories concerning society, forms of sociological analysis. Second semester is devoted to 20th century thinkers and ideas. P: jr st.

### **308 Marriage and Family 3 cr.**

Nature of the family; processes of courtship and marriage interaction; correlation of physiological, psychological, economic and sociological contributions to marriage and family life. P: jr st.

### **310 Philosophy and Sociology of Leisure 3 cr.**

The impact of increasing leisure on society and its sub-cultures; attitudes and values which have influenced the development of leisure services in organizational and institutional settings; emergence and development of leisure service professions. P: jr st. (Cross-listed in School of Professional Studies as Leisure Sciences 302.)

### **402 World Populations 3 cr.**

Population size, distribution, composition and processes; social and economic determinants and consequences of demographic variations. P: jr st and one course in sociology at the 300 level.

### **403 Demographic Characteristics of the Upper Great Lakes Region 3 cr.**

Description and analysis of population characteristics of the Upper Great Lakes region; past aspects and future trends in relation to resources and potential. P: jr st and one course in sociology at the 300 level.

### **404 Criminology 3 cr.**

Crime as a form of deviant behavior; its relation to societal values and social structure; behavior systems and types of criminal behavior; theories of treatment and control. P: jr st and one sociology course at the 300 level.

### **405 Rural-Urban Interaction 3 cr.**

Relationships between rural and urban social patterns; problems of adjustment to city life. P: jr st and one course in sociology at the 300 level.

### **406 Comparative Social Systems 3 cr.**

Contemporary social systems; distinctions and broad cross-cultural comparisons between Western and non-Western systems. P: jr st and one sociology course at the 300 level.

### **407 Complex Organization 3 cr.**

Major theories relating to structures and processes of large-scale formal organizations; consideration of industrial-commercial, governmental, religious, military, political and educational organizations. P: jr st and one sociology course at the 300 level.

### **446 Juvenile Delinquency 3 cr.**

Characteristics of delinquency; explanatory theories; programs for prevention and control; role of police, courts, correctional schools, community agencies. P: jr st and one sociology course at the 300 level.

### **498, 499 Contemporary Problems in Sociology 3, 3 cr.**

Senior seminar or tutorial on selected topics and current issues in sociology: demography, deviant behavior, social organization, social theory; applications and limitations of sociological research to community problems; integrative individual projects. P: pursuit of sociology option.

**Anthropology**

**102 Environmental Anthropology 3 cr.**

Science of human cultures in different ecological contexts; man's biological and social variability; human societies of the present and recent past around the world; man and nature interrelationships and cultural adaptability emphasizing contemporary problems of various cultures. P: Community Sciences 102.

**202 Economic Anthropology 3 cr.**

Production, distribution and consumption in nonliterate societies; land tenure and personal property concepts, prestige systems, and incentives to labor. P: soph st.

**203 Understanding Changing Cultures 3 cr.**

Fundamental concepts and methods and their substantive applications to the changing non-literate, peasant and complex societies; study of cultural processes of innovation, transculturation, drift, modernization, secularization and integration. P: soph st.

**204 Technological Change and Cultural Patterns 3 cr.**

Introduction to anthropological analyses of contemporary cases relating to human problems resulting from cultural change; emphasis on modernization problems and processes of cultures in developed and underdeveloped countries. P: soph st.

**205 Culture and Personality 3 cr.**

A critical survey of the field of culture and personality and of the principal concepts and methods used in studying the relationship of the individual to his culture. P: soph st.

**206 Anthropological Perspectives on Population Problems 3 cr.**

Evaluation of sociocultural factors influencing growth and movement of rural-urban population; cultural factors in human fertility and population control; cross-cultural study of population control; evaluation and measurement of communication and motivation problems in different cultural groups. P: soph st.

**302 Peoples and Cultures of Northern Great Lakes Region 3 cr.**

Description, comparison and analysis of regional cultural and resource variations; their past and present interrelationships with development and adjustment problems of the Northern Great Lakes region. P: jr st.

**303 Cultural Ecology 3 cr.**

A study of interrelationships of man, nature and culture; cultural adaptability, with regard to physiological and behavioral traits and mechanisms for human groups inhabiting different environments and spatial arrangements. P: jr st.

**304 Family, Kin and Community 3 cr.**

A cross-cultural comparison of the form and function of such social institutions as marriage and the family; age, sex and kin groups; task groups; caste and class. P: jr st.

**305 Human Evolution 3 cr.**

Survey of physical anthropology; evolutionary theory applied to contemporary problems of human evolution; comparisons of living and fossil primates with living and modern man in terms of human adaptability. P: jr st; Biology 203 or Anthropology 203. (Cross listed as Human Biology 342 in College of Human Biology)

**306 Prehistoric Man and His Surroundings 3 cr.**

Human biological and cultural evolution, with special emphasis on prehistoric archaeology and prehistoric ecology. P: jr st.

**307 Heredity, Environment and Human Population 3 cr.**

Cultural and ecological factors influencing the composition and structure of human population; expression and distribution of genetic versus acquired characteristics within and between populations; mating systems and their genetic consequences. P: jr st or Biology 203, Anthropology 206 or sociology course at 300 level.

**402 Comparative Social Structures 3 cr.**

Research procedures and theories in the cross-cultural examination of social categories,

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groups and classes; their interrelationships with cultural and ecological factors. P: sr st.

### **403 Race and Genetic Variation of Man 3 cr.**

Genetic and morphologic variations of the living races of mankind; processes of human variation; biological history of selected human populations. P: sr st or Anthropology 305. (Cross-listed as Human Biology 440 in College of Human Biology)

### **498, 499 Contemporary Problems in Anthropology 3, 3 cr.**

Senior seminar or tutorial on current issues in anthropology related to methods, theories and concepts of physical and cultural anthropological analysis; their values, uses and limitations in reference to community problems. Integrative individual projects are developed for student reading, research and reports. P: pursuit of anthropology option.

## Geography

### **102 Approaches to Geography 3 cr.**

An introduction to contemporary geography, its viewpoints and methodology. Geographic reality of the present-day world is analyzed in the form of case studies in which both the regional approach and systematic analysis are used. P: Community Sciences 102.

### **202 Introduction to Cultural Geography 3 cr.**

A consideration of the impact of culture through time in creating the world's contrasting landscapes.

### **215 Economic Geography 3 cr.**

A survey of patterns of economic activities, including agriculture, extractive industries, manufacturing, transportation and trade. Major theories and concepts essential to understanding the location of economic activities are discussed.

### **241 Urban Geography 3 cr.**

Regional variation in form and degree of urbanization and in relations of cities to the areas they serve. P: soph st.

### **255 Introduction to Quantitative Methods of Spatial Analysis 3 cr.**

A methods course covering application of selected statistical measures and computer techniques to the analysis of geographic problems. P: Community Sciences 205 or a course in applied statistics.

### **262 Geography of the Great Lakes Region of Africa 3 cr.**

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

### **272 Geography of the Great Lakes Region of North America 3 cr.**

A systematic analysis of the areas surrounding the Great Lakes of the United States and Canada; internal and external relationship of the region; economic activities of the region; regional change and problems. P: soph st.

### **276 Geography of Developing Areas 3 cr.**

An analysis of the geography of countries in various stages of development and the role of physical and human resources. P: soph st.

### **316 Geography of Transportation and Industrial Location 3 cr.**

Geographic analysis of transportation and industrial location; the role of transportation in determining the location of business and industrial activities. P: jr st or cons inst.

### **320 Landform Geography: Topics and Regions 3 cr.**

Introduction to geographic methods of landform description and analysis with application to selected regions of the world. P: jr st or cons inst.

### **325 Regional Climatology 3 cr.**

The elements, controls and classification of climates; the distribution of climatic types over the earth; world patterns. P: jr st or cons inst.

**342 The City 3 cr.**

Areal diversification of character, function and relationships within individual cities. P: jr st or cons inst.

**345 Historical Geography of Urban Places 3 cr.**

Changes in the morphology, functions and arrangement of towns and cities over time. P: jr st or cons inst.

**350 Maps and Air Photos 3 cr.**

Introduction to the use and evaluation of various kinds of maps; interpretation of air photos; large-scale maps and vertical air photos. P: soph st.

**351 Elements of Map Making 3 cr.**

The use of control, coordinate systems, compilation and photogrammetry for medium and large-scale maps. P: jr st or cons inst.

**353 Air Photo Interpretation and Use 3 cr.**

The use of vertical, oblique and infrared aerial photographs as research sources in the social and physical sciences; the theory of aerial photo measurement and photo mapping procedures. P: jr st or cons inst.

**361 Geography of Africa 3 cr.**

The broad physical and human patterns of Africa; historical aspects of geography including the imposition of colonial organization on resource use and on indigenous cultures. P: soph st.

**371 Geography of the United States and Canada 3 cr.**

A systematic analysis of the physical features, resources, people and economic activities of the United States and Canada. The various regions of the two countries are compared and contrasted. P: soph st.

**377 Geography of Northern Lands 3 cr.**

A topical and regional analysis of the subarctic and arctic areas of North America and Eurasia; regional emphasis on Alaska, Northern Canada and Greenland. P: jr st or cons inst.

**378 Geography of Tension Areas 3 cr.**

Investigation of the economic and political geography of areas actually or potentially dangerous to the peace of the world in an attempt to analyze underlying causes of existing tensions. P: jr st or cons inst.

**498, 499 Contemporary Problems in Geography 3, 3 cr.**

Senior seminar or tutorial on selected topics and current issues related to cultural, physical, regional and urban geography; current geographic problems related to student's academic experiences. Integrative individual projects will be developed for student reading, research and reports. P: pursuit of a geography option.

**Economics**

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

An introductory study of the economic system; economic institutions; economic growth; comparative economic systems. P: Community Sciences 102.

**202 Macro Economic Analysis 3 cr.**

An introduction to analysis of behavior of the economy and its components; national accounts; flow of funds, money and credit; government operation; business fluctuations; economic growth; concepts of aggregative economic analysis. P: soph st.

**203 Micro Economic Analysis 3 cr.**

An introduction to analysis of behavior and economic problems of individuals, firms, industries and markets; concepts of equilibria; output, product and factor prices; income distribution in competitive and noncompetitive systems. P: soph st.

**204 Regional Economic Analysis 3 cr.**

Introduction to basic concepts and problems in the economic study of sub-regions of an economy, in both an intraregional and interregional context; problems in regional analysis, economic concepts regarding location and spatial organization; economic concepts regarding planning for regional development. P: Economics 202.

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### **205 Comparative Economic Systems and Institutions 3 cr.**

Analysis of contemporary functioning of different economic systems and institutions; comparison of principles of operation, social conditions and objectives; role and function of cooperatives. P: jr st and Economics 202 and 203.

### **302 Money and Banking 3 cr.**

Monetary and banking principles and practices; price theories; banking systems and their operation. P: jr st and Economics 202.

### **303 Money, Income and Prices 3 cr.**

Monetary standards, the value of money, monetary equilibrium; employment, output and prices; monetary policy and public finance. P: jr st and Economics 302.

### **304 Contemporary Labor Markets 3 cr.**

Labor supply, demand and wages; labor force, unemployment and underemployment; labor mobility, functioning of the labor markets; problems of labor and management and their interrelationships with government. P: jr st and Economics 202 and 203.

### **305 Natural Resources Economic Policy 3 cr.**

Acquaints the student with policies leading to public, private and public-private arrangements for the development, management and use of natural resources; their physical and economic classifications, physical and economic feasibility, benefits and costs, external effects. P: jr st.

### **306 Public Finance and Fiscal Policy 3 cr.**

Effects of government spending and taxation on resources, incomes, prices and employment; major taxes employed at national, state and local levels; current policy problems. P: jr st and Economics 202 and 203.

### **307 Sources of Contemporary Economics Concepts 3 cr.**

The development of contemporary economic thought, drawing upon contributions from the mercantilist period to the present, emphasizing contributions of major schools of thought. P: jr st.

### **308 Business Cycles 3 cr.**

Description and recent history of business cycles; leading explanations of the levels of employment, output and prices; savings and investments, forecasting, governmental policy. P: jr st and Economics 202 and 203.

### **309 Introduction to Quantitative Economics 3 cr.**

Introduction to the estimation of economic relationships, including simulation and operations research. P: Community Sciences 205.

### **402 Resource Economics Analysis 3 cr.**

Study and use of the tools and concepts of economic analysis in resource decision-making; concepts of joint production and joint costs, externalities; public finance, introduction to welfare economics; capital theory and discount rates, cost-benefit analysis and rates of return. P: jr st and Economics 202 and 203.

### **403 International Trade 3 cr.**

Theory and concepts in development of international trade and finance; contemporary conditions and major current problems in international economic relations. P: jr st and Economics 202.

### **404 Economics of Developing Areas 3 cr.**

Social and economic factors underlying economic development; leading issues in growth theory; comparative rates of progress in different countries. P: sr st and Economics 202.

### **405 International Finance 3 cr.**

Theory and recent experience in currency standards, international banking, exchange fluctuations and exchange controls; international monetary cooperation and special topics. P: Economics 403.

### **498, 499 Contemporary Problems in Economics 3, 3 cr.**

Senior seminar or tutorial on selected topics and current issues in economics related to concerns with business, industrial and labor economics; economic theory; international economics; public finance; resource economics. Course includes the values, uses and limitations of economic

concepts to community problems. Integrative individual projects are developed for student reading, research and reports. P: pursuit of an economics option.

### **Political Science**

#### **103 Introduction to Political Analysis 3 cr.**

The nature and function of political science; politics as a cultural phenomenon. P: Community Sciences 102.

#### **202 State Government and Public Policy 3 cr.**

The federal system; legal bases and behavior of state, intrastate and interstate, county and local structures; functions of all levels of government. P: soph st.

#### **203 Politics of Developing Systems 3 cr.**

Political processes in contemporary developing systems; problems of nation building, the formulation of cross-national comparisons and emerging patterns of regional cooperation. P: soph st.

#### **204 Comparative Bureaucratic Behavior 3 cr.**

The role and impact of bureaucracies in the development of contemporary political systems. P: soph st.

#### **213 Urban Politics 3 cr.**

Organization and politics of city government; changing political structures and leadership patterns in urban areas; consideration of urban policy problems. P: soph st.

#### **302 Community Political Behavior 3 cr.**

A description and analysis of major trends in American local politics; behavior of major structures and local associations. Some field experience will be provided. P: jr st.

#### **303 Elections and Voting Behavior 3 cr.**

Psychological and social elements in voting behavior; current electoral trends; role of voters in the government process. P: jr st.

#### **304 Comparative Political Systems 3 cr.**

An introduction to comparative political analysis

stressing both essential structures and functions. Modes of analysis will be illustrated by reference to the British, French, Russian and other political systems. P: jr st.

#### **305 Political Systems of the Commonwealth 3 cr.**

An analysis of problems of institutional transfer by specific reference to the experience in systems once a part of the British Empire. Case materials will be drawn from the Canadian, Indian, Nigerian and other systems. P: jr st.

#### **306 International Political Systems and Processes 3 cr.**

Analysis of international political systems: balance of power, collective security, deterrence; the major political processes sustaining such systems. P: jr st.

#### **307 Concepts in Political Theory 3 cr.**

An analysis of the nature of conceptual thought about politics; examination of various problematic concepts of traditional and scientific theory: power, authority, community, justice and other concepts. P: jr st.

#### **310 Labor Unions in America 3 cr.**

The history and development of labor unions in private business and in government service; present status of unionization. P: jr st. (Cross-listed in School of Professional Studies as Labor Relations 310.)

#### **320 Practice of Public Administration 3 cr.**

The management of physical and human resources in the execution of public policy; relationship between policy determination and policy administration; leadership, control and accountability. P: jr st. (Cross-listed in School of Professional Studies as Organization and Operations 320.)

#### **321 Politics of Bureaucratic Responsibility 3 cr.**

A description and analysis of the role of bureaucracies in various political systems, focusing on problems of bureaucratic responsibility. P: jr st.



## The Educational Program

### **402 Political Values and Ideologies 3 cr.**

A critical examination and analysis of assumptions and characteristics of modern ideologies; application of contemporary philosophical analysis to such systems of belief as are found in communism, fascism and democracy; the role of values in determining individual and group political behavior. P: jr st and one course in political science or philosophy at the 300 level.

### **403 Foundations and Problems of International Politics 3 cr.**

A description and analysis of contemporary international politics stressing the wide variety of approaches to such a study. P: jr st and one political science course at the 300 level.

### **404 American Foreign Economic and Military Policies 3 cr.**

Examination of the role of economic and military policies in efforts by the United States to assure security, international stability and economic development. P: jr st and one political science course at the 300 level.

### **405 American Executive Behavior 3 cr.**

Analysis of the patterns of executive behavior at the local, state and national levels in the United States; interplay of administration and partisan politics, influence of variations in structural arrangements. P: jr st and one political science course at the 300 level.

### **426 American Legislative Process 3 cr.**

Description and analysis of procedures through which American national and state legislatures arrive at legislation; group behavior of representative bodies in the contemporary United States. P: jr st and one political science course at the 300 level.

### **472 Parties and Pressure Groups 3 cr.**

Description and analysis of the role of parties and pressure groups in the American political system; techniques employed in advancing their interests. P: jr st and one political science course at the 300 level.

### **498, 499 Contemporary Problems in Political Science 3, 3 cr.**

Senior seminar or tutorial on selected topics and current issues in political science related to American political behavior, comparative politics, international politics, political analysis and public administration; applications and limitations of political research to community problems. Integrative individual projects will be developed for student reading, research and reports. P: pursuit of political science option.

## Psychology

### **102 The Behavior and Experiences of Man 3 cr.**

Introduction to general psychology and the psychology of individual differences; examination of basic and complex processes; problems in systematic study of objective and subjective data. P: Community Sciences 102.

### **202 Introduction to Social Psychology 3 cr.**

Introduction to social psychology, including attitude formation and attitude change; group processes, communication, roles, multiple group membership, social prejudice. P: soph st.

### **205 Psychology of Human Adjustment 3 cr.**

Personality adjustment and maladjustment in normal persons; need, frustration and conflict; adjustive techniques; analysis and rehabilitation. P: soph st.

### **206 Experimental Psychology 3 cr.**

Experimental designs applied to psychological problems; individual and group projects. P: soph st.

### **306 Psychology of Perception 3 cr.**

Nature of perceptual processes and their functional relationships to environmental, behavioral and central factors such as motivation, learning and personality. P: jr st.

### **309 Psychology of Motivation 3 cr.**

Development of motives in childhood; group attractions and pressures; special problems of motivation in industry and advertising; general problems of physiological basis of motives; changing of motives and conflict. P: jr st.

**314 Industrial Psychology 3 cr.**

Human personality, behavior organization and human relations in terms of the nature of work and its evolution in society; analysis of biosocial evolution of man in work. P: jr st.

**320 Personnel Psychology 3 cr.**

Selection, classification and placement procedures; techniques of employment interviewing, rating methods, industrial tests (mechanical, clerical, trade), job analysis and occupational description; lecture and laboratory work. P: jr st.

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

Analysis of attitudes; social factors in the formation and change of attitudes; expression of attitudes in public opinion, voting and consumer behavior; polling techniques and problems. P: jr st.

**337 Social Behavior Dynamics 3 cr.**

Important factors in social behavior, roles, multiple group membership, cognitive processes, motivation, aggression, social prejudice. P: jr st and Psychology 202.

**338 Psychology of Learning 3 cr.**

Basic principles of conditioning and learning; functional relationships between salient variables related to rate of acquisition and degree of retention, transfer effects and related phenomena. P: jr st.

**415 Organization Psychology 3 cr.**

Relation between social structure and psychological behavior, problems of bureaucracy, leadership styles, communication networks, decision-making processes, group productivity. P: sr st.

**416 Psychology of Intergroup Relations 3 cr.**

The psychology of conflict and cooperation, cleavage and integration; principles and applications in industrial organizations, cross-generation adjustments, race relations and international relations. P: sr st.

**417 Thinking and Problem Solving 3 cr.**

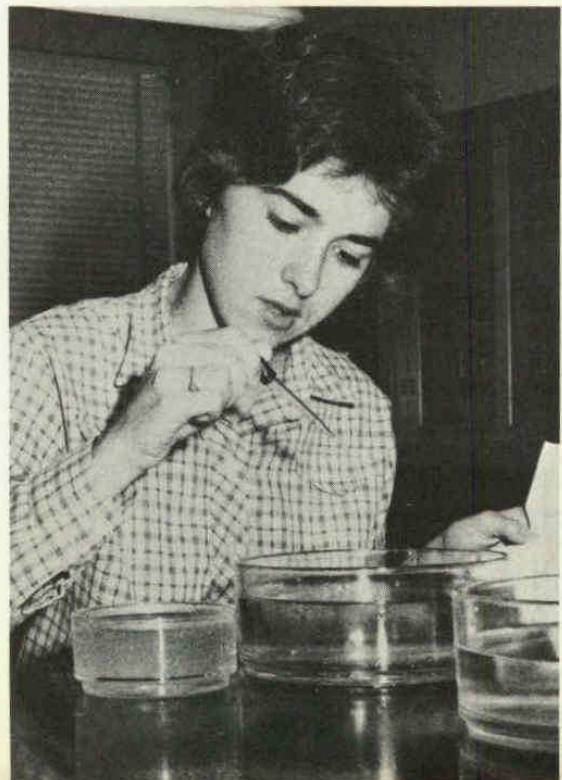
Methodological problems and experimental results in concept formation, language, thinking and problem solving. P: sr st and Psychology 206.

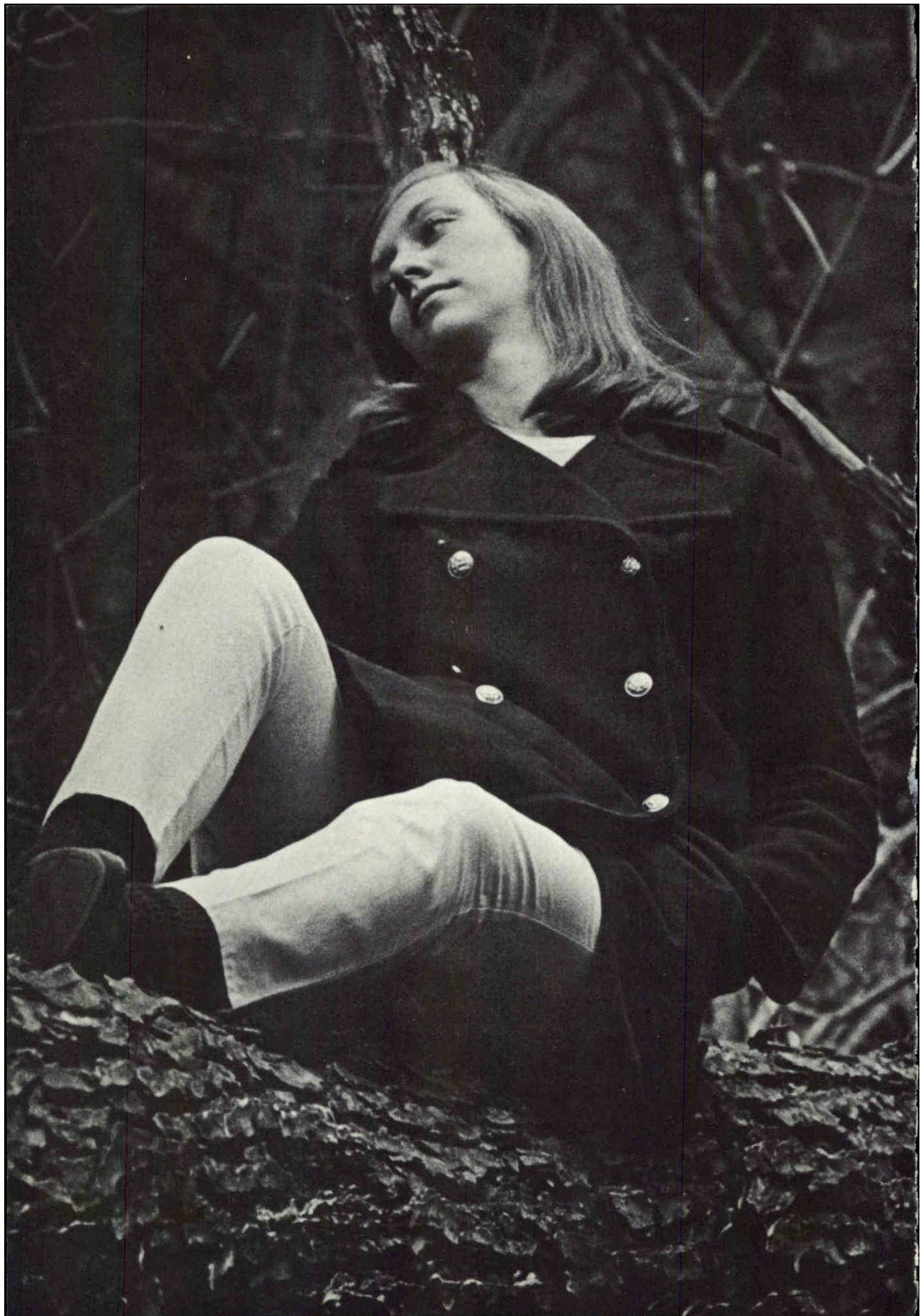
**438 Group Dynamics 3 cr.**

Psychological principles as they apply to the individual in social groups, experimental analyses of group formation, maintenance, morale and productivity. P: sr st and Psychology 202.

**498, 499 Contemporary Problems in Psychology 3, 3 cr.**

Senior seminar or tutorial on selected topics and current issues in psychology related to concerns with psychological theory; industrial psychology and social psychology; values, uses and limitations of psychological concepts in community problems. Integrative individual projects will be developed for student reading, research and reports. P: pursuit of psychology option.





# The College of Creative Communication

## PROGRAMS

However much we rely on science and technology in the shaping of tomorrow's world, the realm of human values, significance and meaning will always remain the prerogative of man. Whether this paragon is called artist, musician, writer, philosopher or mathematician, words like space, light, form, meaning and beauty will be as essential to his vocabulary as the critical paths, analyses, calculations and statistics of human engineering.

The educational philosophy of UWGB is an ecological one. Inherent in such an approach is the impingement and the relevance of any one field or area of learning on any number of other fields or areas of learning. The walls between disciplines are, in fact, artificial; as far as teaching and learning are concerned, there is no necessity for them. The curriculum, then, reflects that philosophy. Our educational philosophy being an ecological one, our academic posture is interdisciplinary.

The theme College of Creative Communication is dedicated to the reintegration of our contemporary scientific, technological, social and artistic environment. This is one of the great contemporary challenges. A key task of our time is the education of the senses—the development of our neglected, atrophic sensibilities. We need to integrate the knowledge we have about the processes of vision and sensory feeling, the didactic devices to develop them, and the concrete areas where creative vision and feeling can be put to service.

The formlessness of our present life has several obvious aspects. First is our environmental chaos which accounts for inadequate living conditions, waste of human and material resources and pollution of air, water and earth. Second, our social chaos—lack of common ideas, common feelings, common purposes. Third, our inner chaos—individual inability to live in harmony with oneself, inability to accept one's whole self and let body, feelings and thought dwell together in harmony. We have, then, three basic tasks before

us: we must build bridges between man and nature; we must build bridges between man and man; we must build bridges inside ourselves. The last of these tasks and a part of the second are the central responsibility of this college. The central focus is on human identity.

A student choosing to major within the College of Creative Communication chooses one of two concentrations: analysis-synthesis (the integrative, evaluative function of each human being) and communication-action (the outreach, communication, performance, action, influence function of each human being).

In addition, a student may choose one of the following disciplinary options: visual arts, performing arts (music, drama, dance), communication sciences, philosophy, history, literature and language (with several area alternatives). Two options from other colleges are especially appropriate for students in the College of Creative Communication, namely, mathematics and psychology. A concentration requires 30 credits at the 300 and 400 level, an option requires 36, of which 24 relate the discipline to the concentration.

The various disciplinary options within the college present substantial potential to center on visual, verbal, mathematical and musical formulations of our awareness, creativity and expression and their interplay with environment. Neither the concentrations nor the options need be mutually exclusive. A student interested in set design might combine literature, visual arts and drama (to produce a set for a play by Shakespeare, for example). Variable combination-options are possible.

A student may select one of the professional collaterals: business or public administration, education (teacher certification at the elementary or secondary levels), leisure sciences\*, social services\* and mass communications.\*

\*Will be offered when the collateral has been approved by the Coordinating Council for Higher Education

## The Educational Program

Students majoring in the College of Creative Communication must meet the all-University requirements including the four-year liberal education seminar, distribution credits, tool subjects and the senior Policy and Program Implementation course (or a professional collateral). Details of these requirements are to be found in the general University undergraduate program statement.

The College of Creative Communication requires all majors to take a one-semester course, Introduction to Human Identity. Students selecting the analysis-synthesis concentration must take Introduction to Creativity. Students selecting the communication-action concentration must take Principles of Expression. Otherwise, each student works out his own program in cooperation with his adviser, subject to general University guidelines.

### SUMMARY OF A SAMPLE PROGRAM

<i>Freshman Year</i>	<i>Credits</i>
Liberal Education Seminar 100-101	6
Distribution:	
Community Sciences	6
Environmental Sciences	4
Human Biology	4
Introduction to Human Identity	3
Principles of Expression or Introduction to Creativity	3
Tool subjects	3
Electives	3
	—
	32
 <i>Sophomore Year</i>	
Liberal Education Seminar 200-201	6
Distribution (CES and CHB)	6
Tool subjects	9-11
CCC courses	6-8
Electives	3
	—
	32

<i>Junior Year</i>	<i>Credits</i>
Liberal Education Seminar 300-301	6
Major (concentration or concentration-option)	up to 18*
Electives (or professional collateral)	up to 8*
	—
	30
 <i>Senior Year</i>	
Liberal Education Seminar 400-401	6
Major (concentration or concentration-option)	up to 18*
**Electives (or professional collateral)	up to 8*
	—
	30

### The Concentration in Analysis-Synthesis

The concentration in analysis-synthesis emphasizes the need of every human being to "take a stand" on values. Each individual, consciously or unconsciously, performs an integrative, evaluative, creative function in regard to values, beliefs and opinions. The "mix" he comes up with is uniquely his own, reflecting his individuality. Of course, some persons have a more distinctive mix of values or more radical values than others. Further, there are vast individual differences in the degree of system and consciousness lying behind choice of values.

The student choosing the concentration in analysis-synthesis must meet general University requirements. As a freshman or sophomore, he must elect the College of Creative Communication courses Introduction to Human Identity and

\*The Liberal Education Seminar (sophomore and junior years) may be considered a part of a student's concentration or a part of a professional collateral, or both, thus reducing certain credit requirements during the junior and senior years.

\*\*Seniors not following a professional collateral must take the Policy and Program Implementation course.

Introduction to Creativity. He also must choose either a third year of a foreign language or the six-credit course, Introduction to the Man-Made Environment. It is recommended, although not required, that a student take Descriptive Logic.

A student concentrating in analysis-synthesis must select 30 credits of junior or senior level courses related to the concentration. If he selects a concentration-option, he must take 36, approximately 24 of which are in the disciplinary option. Two major alternatives are available, the area of evaluation and the area of opinion formation. The former is heavily related to courses in philosophy, history and literature in the College of Creative Communication; the latter is heavily related to courses in sociology, psychology and political science in the College of Community Sciences. Students selecting the latter alternative may develop a special joint program between the two colleges with approval of their advisers and the respective deans. In any event, some courses from each alternative must be selected by each student.

Area	Course	Credits
Evaluation	Philosophy—Selected courses in metaphysics and philosophy of religion	3
	History 202	3
	Literature and language—Selected courses in English and American literature	3
	Political Science 402	3
Opinion Formation	Sociology 202	3
	Sociology 204	3
	Sociology 302	3
	Sociology 303	3
	Psychology 202	3
	Psychology 309	3
	Psychology 335	3
	Psychology 417	3
Political Science 303	3	

### The Concentration in Communication-Action

The concentration in communication-action emphasizes the need of every human being to affect or alter his own environment and to express himself. Partly such an outreach function may be for the purpose of influencing others or changing conditions. Partly, it may be for distinctive self expression, aside from a particular effect on persons or things. Of course, individuals vary widely in the modes and devices of expression, influence and action they employ.

The student choosing the concentration in communication-action must meet general University requirements. As a freshman or sophomore, he must elect the College of Creative Communication courses Introduction to Human Identity and Principles of Expression. He also must choose either a third year of a foreign language or the six-credit course, Introduction to the Man-Made Environment. It is recommended, although not required, that a student take Descriptive Logic.

Students concentrating in communication-action must select 30 credits of junior or senior level courses related to the concentration. If they select a concentration-option, they must take 36, approximately 24 of which are in the disciplinary option. Two major alternatives are available, the area of expression and the area of influence. The former is heavily related to courses in the visual and performing arts and communication sciences in the College of Creative Communication. The latter is heavily related to courses in communication sciences in the College of Creative Communication and to courses in sociology, psychology and political science in the College of Community Sciences. Students selecting the latter alternative may develop a special joint program between the two colleges, with approval of their advisers and the respective deans. In any event, some courses from each alternative must be selected by each student.

## The Educational Program

Area	Course	Credits
Expression	Visual arts—Selected courses in the visual arts (especially Design and Drawing and Creative Design)	
	Performing arts — Selected courses in music, drama and the dance (especially Voice and Movement, drama, musical expression of different cultures, music)	
	Literature and language— Selected courses in writing and structure of language	
Influence	Communication Sciences 262	3
	Communication Sciences 266	2
	Sociology 204	3
	Sociology 303	3
	Sociology 304, 305	6
	Sociology 405	3
	Psychology 309	3
	Psychology 335	3
	Psychology 337	3
	Political Science 213	3
	Political Science 302	3
	Political Science 303	3
	Political Science 472	3

### Option in Communication Sciences

The communication sciences option is closely interwoven with the concentrations in the College of Creative Communication, especially the expression and influence aspects of communication-action and the opinion formation aspects of analysis-synthesis. In fact, communication sciences courses are grouped in these three categories. Students may elect 24 credits of advanced work at the junior and senior level from such courses and supporting courses in the College of Community Sciences in order to fulfill the requirements of the option in communication sciences.

Work in expression fulfills the need for work in spoken communication in connection with

preparation for teaching certification. In addition, it leads to increased technical proficiency in speech. Work in the influence and opinion formation aspects of communication sciences borrow heavily from the behavioral sciences. A joint College of Creative Communication-College of Community Sciences option can be arranged in these areas by a student, in consultation with his adviser and with approval of the respective deans. A student normally will select courses from at least two of the categories into which courses are divided. Courses may be selected from the following list:

Area	Course	Credits
Expression	Communication Sciences 102	3
	Applied Music 160, 161, 260, 261	6
	Philosophy 306	3
Influence	Communication Sciences 102	6
	Communication Sciences 262	3
	Communication Sciences 266	3
Opinion Formation	Mass Communications 430	3
	Psychology 335	3
	Mathematics 260	3
	Distribution 410	3
	Communication Sciences 266	3

See also relevant courses in sociology, psychology and political science.

### Options in Literature and Language

Literature and language involve a consideration of important aspects of culture, stressing unique features as well as general trends. Literature is especially related to the analysis-synthesis concentration in the College of Creative Communication, language to the communication-action concentration. However, there is considerable overlapping between literature and language both in concept and within the courses offered in these fields. On a broader plane, there is considerable connection between literature and the fields of philosophy, history and the behavioral sciences.

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 areas can be applied in a wide variety of vocations and professions: business, government service and journalism. They also are appropriate gateways to certain areas of graduate work.

Courses are listed by the following classifications: English literature, American literature, literature in translation, literature in other languages, creative use of English, and creative use of other languages. A student may select 24 credits at the 300 and 400 level from any of these classifications or specialize in one or two. A student desiring teacher certification in English would combine English-American literature and creative use of English. A student desiring teacher certification in a foreign language would combine literature in that language and creative use of that language. In any event, a student should relate his option to one of the concentrations.

Area	Course	Credits
English and American Literature	Literature and Language 102, 103 (required)	6
	Literature and Language 104, 105 (required)	6
	Literature and Language 106, 107 (required)	6
	In addition, selections may be made from the following:	
	Literature and Language 334	3
	Literature and Language 498, 499	6
and courses in the history of English and American literature.		
Literature in Translation	Literature and Language 110, 111	6
	Literature and Language 202, 203	6
	Literature and Language 204, 205	6
	Literature and Language 207, 208	6
	Literature and Language 498, 499	6

Area	Course	Credits	
Literature in Other Languages	French, German and Spanish are included. The French prototype is outlined below:		
	History 204	3	
	Literature and Language 104, 105	6	
	French 221-222	6	
	French 321	3	
	French 498, 499	6	
	Creative Use of English	Literature and Language 231	3
		Literature and Language 302-303	6
		Drama 202-203	6
		Drama 302	3
Literature and Language 220		3	
Also included are the following possible choices:			
Creative Communication 181	3		
Creative Communication 182	3		
Philosophy 306	3		
For spoken English, refer to communication sciences option.			

**Creative Use of Other Languages**

For this option, a selection is made from advanced speaking and composition courses in the several languages offered at UWGB.

**Option in History**

The history option involves a consideration of important historical dimensions of human experiences and human expressions. Courses in this option include cultural history, economic history, political history, scientific history and social history.

Students choosing the history option will find the field a particularly useful preparation for a professional school such as law, business, social work, education and library science.



## The Educational Program

With the approval of his faculty adviser and the dean of the College of Creative Communication, a student may combine any 24 credits of 300- and 400-level history courses and related courses in the College of Community Sciences into a history option. The following listing arranges courses in terms of the five fields within the discipline of history. Students most often will choose courses from more than one field and relate them to an appropriate concentration.

Area	Course	Credits
Cultural History	Anthropology 203	3
	Courses in history of different regions, with special individual emphasis on cultural history (e.g., American, Asian, European, etc., with no more than 6 credits from any one region) and/or courses in history of language, literature or art.	12
	History 498, 499	6
Economic History	History 202	3
	Courses in history of different regions, with special individual emphasis on economic history (e.g., American, Asian, European, etc., with no more than 6 credits from any one region.)	12
	History 498, 499	6
Political History	Political Science 304	3
	Courses in history of different regions, with special individual emphasis on political history (e.g., American, Asian, European, etc., with no more than 6 credits from any one region)	12
	History 498, 499	6

Area	Course	Credits
Scientific History	Ecology 302	3
	or	
	Ecology 410	3
	or	
	Human Biology 342	3
	History 405	3
	Descriptive courses pertaining to the history of science	6
	History 498, 499	6
Social History	Sociology 406	3
	Courses in history of different regions, with special individual emphasis on social history (e.g., American, Asian, European, etc., with no more than 6 credits from any one region)	12
	History 498, 499	6

### Options in Philosophy

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. It begins with an appreciation of the Socratic dictum, "The unexamined life is not worth living," and moves through the critical analysis of the ideas and ideologies of man to an informal consideration of contemporary challenges to man's values, beliefs and systems of thought.

Courses in the philosophy option include emphasis upon the five aspects of aesthetics, ethics, metaphysics, philosophy of religion and social and political philosophy.

Students choosing the philosophy option will find such a discipline useful in the pursuit of many different occupations and a productive dimension of their active participation in community endeavors. This option is also a good preparation for graduate study in areas such as law, journalism and education.

With the approval of his faculty adviser and the

dean of the College of Creative Communication, a student may combine any 24 credits of 300- and 400-level philosophy and coordinate courses into a philosophy option. The following listing arranges courses in terms of the five fields within the field of philosophy. Students most often will choose courses from more than one field and relate them to an appropriate concentration.

Area	Course	Credits
Aesthetics	Course chosen from offerings in drama, dance, music, two-dimensional or three-dimensional visual arts	3
	Philosophy 103	3
	Philosophy 203	3
	Philosophy 303, 304, 305	6
	Philosophy 498, 499	6
Ethics	Philosophy 102	3
	Philosophy 202	3
	Philosophy 205	3
	Philosophy 303, 304, 305	6
	Philosophy 498, 499	6
Metaphysics	Philosophy 206	3
	Philosophy 306	3
	Philosophy 307	3
	Philosophy 303, 304, 305	6
	Philosophy 498, 499	6
Philosophy of Religion	Anthropology 205	3
	Philosophy 103	3
	Philosophy 204	3
	Philosophy 303, 304, 305	6
	Philosophy 498, 499	6
Social and Political Philosophy	Political Science 307	3
	Sociology 306, 307	3
Philosophy	Philosophy 205	3
	Philosophy 303, 304, 305	6
	Philosophy 498, 499	6

The student selecting a philosophy option must take the course in Contemporary Problems in Philosophy as a senior. Each student will be encouraged to emphasize the aspects of philosophy in which he is especially interested within the boundaries of the course.

### Option in Visual Arts

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.

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

A student selecting a visual arts option chooses 24 credits at the junior and senior level from the following courses, in consultation with his adviser.

Area	Course	Credits
Two-dimensional Art	Art 102, 103	3
	Courses in architectural rendering	3
	Courses in painting and/or graphics	total of 9
	Art 498, 499	6
	Art 231, 232	3
Three-Dimensional Art	Art 409	3
	Art 480, 481	
	and/or Art 331	
	and/or Art 332	total of 9
	Art 498, 499	6

Students at the University, as well as the faculty, are encouraged to participate in the wide range of extracurricular two-dimensional and three-dimensional activities organized by the faculty responsible for this option. These activities

## The Educational Program

constitute an integral part of the community outreach of the University.

### Options in Performing Arts

The performing arts involve an effort at meaningful aesthetic communication between performers and their audiences. Courses in the performing arts include emphasis upon the dance, drama and music.

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

The following listing arranges courses in terms of the three fields of the dance, drama and music. Students are encouraged to relate one of these art forms to the others, and the whole to one of the concentrations. Twenty-four credits must be selected from these courses.

Area	Course	Credits
Dance	Dance 302	3
	Dance 303	6
	Dance performance <sup>1</sup> or	
	courses in music, literature, history and	
	courses in the musical expression of different cultures	
		total of 6
Drama	Dance 498, 499	6
	Drama 102	3
	Drama 103, 104	3
	Drama 202, 203, 302	3
	Drama 303	3
	Drama 105, 205, 305, 405	6
		or
	Drama 498, 499	6

<sup>1</sup>This course will be used by the student who seeks experience in performance. In such instances credit will be assigned with permission of his tutor, and his preparation for performances may be regarded as seminar-tutorial. It may also be used to fulfill physical education requirements for teaching certification.

Because the study of drama leads nowhere if restricted to the printed page, and because drama by its very nature is a "community" art, the core of the drama program at UWGB rests upon an intercurricular theater requirement for the performing arts option in drama. Intercurricular theater is a laboratory course offering variation in theater-participation-training and interdisciplinary study, with possible off-campus and other-culture programs. Its focus can be ecological problem solving within both historical and contemporary contexts of the creation, staging, and meaning of a play and its impact upon its community.

### Music

The study of music is one of the options available to a student in the College of Creative Communication. In keeping with the liberal arts philosophy of the University, the aim of the course of studies in music is to introduce the student to the nature of music as a component of culture and environment and as a means of expression. At the same time, it provides basic technical and theoretical training for those students who may ultimately decide to pursue a career in music.

In order to allow each student to evolve a program which suits his particular needs, specific requirements for an option in music have been kept to a minimum. For example, a student interested in opera could, in conjunction with the drama department, concentrate on music of the theater. While a great deal of individual freedom will be possible, certain courses (analysis, orchestration, etc.), although not actually required for a degree, may be considered vital in a thorough course of study in music. Faculty advisers will be responsible for strongly recommending that the majority of students take these courses.

All entering students will be given an examination in basic musicianship, covering musical notation, scale and chord structure and location on the keyboard and the fundamentals of reading and hearing scales and intervals. Students who do not demonstrate the necessary skills will be re-

quired to take a one-unit course, Basic Musicianship, during the first semester. Other courses are the following:

<i>Course</i>	<i>Credits</i>
Music 110, 111	3
or	
Course in music literature and history	3
Music theory and composition	6
Music performance <sup>2</sup>	6
or	
Courses in the musical expression of different cultures	6
Music 498, 499	6

<sup>2</sup>This instructional course involves the student's participation in one or more of the musical groups sponsored by the University to help develop his excellence in musical performance. Credit will be assigned by the appropriate director or directors. This course will also be used for the student who seeks to perform as a soloist. In such instances, credit will be assigned with the permission of his tutor, and his preparation for performances may be regarded as a seminar-tutorial.

Students at the University, as well as faculty, are encouraged to participate in the wide range of extracurricular dance, drama and music activities organized by the faculty responsible for these options. These activities constitute an integral part of the University and its community outreach.



## The Educational Program

### COURSES

#### Abbreviations

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

#### Creative Communication

##### **102, 103 Introduction to the Man-Made Environment 3, 3 cr.**

An introduction and survey of the development of artistic forms, two- and three-dimensional, which reflect and influence the social conditions within which these forms are created. Particular attention will be paid to ways in which such artistic expressions influence the responses of men to their environment.

##### **181 Introduction to Creativity 3 cr.**

An introduction to the problems of artistic expression with reference to problems of creative efforts in the literary, performing and visual arts.

##### **182 Principles of Expression 3 cr.**

A consideration of the evolution of aesthetic theory; selections from Vasari, Wolflin, Burkhardt, Symonds, Ruskin, Dewey, Bell, Croce and others.

#### Communication Sciences

##### **102 Fundamentals of Public Speaking 3 cr.**

The principles of preparing and presenting effective public messages; application of these principles in the analysis of contemporary speeches and in the presentation and critique of student speeches. Open to freshmen; not open to those who have had Speech 105. (Center System catalog)

##### **262 Argumentation and Debate 3 cr.**

The theory of argument, with practice in the preparation and delivery of various types of ar-

gumentative speeches and debates. P: soph st and Speech 102, or cons inst.

##### **266 Theory and Practice of Group Discussion 3 cr.**

The structure and dynamics of small group decision-making; includes critical and creative problems in group interaction processes. P: soph st and Speech 102.

#### Literature and Language

##### **102, 103 Introduction to English Literature 3, 3 cr.**

A study of representative works of major English writers in the light of historical and cultural backgrounds.

##### **104, 105 Introduction to Literary Types 3, 3 cr.**

A survey of major literary types (epic, lyric, sonnet, ballad, ode, types of the novel, drama, essay) through intensive analysis of literary classics. Significant contemporary works will be studied for aesthetic structure and convention.

##### **106, 107 Introduction to American Literature 3, 3 cr.**

A study of representative works of major American writers in the light of their historical and cultural backgrounds.

##### **109 Introduction to Writing 3 cr.**

Study and written analysis of various contemporary types of written expression; basic types of exposition, "creative" writing and critical writing.

##### **110, 111 Introduction to World Literature 3, 3 cr.**

A study of the literary heritage and traditions of world culture, including non-Western expressions.

##### **202, 203 French Literature in Translation 3, 3 cr.**

An introductory survey of the literary culture of France in the novel, drama and poetry. Some knowledge of French is helpful, but not required.

##### **204, 205 German Literature in Translation 3, 3 cr.**

An introductory survey of the literary culture of Germany in the novel, drama and poetry. Some knowledge of German is helpful, but not required.

**207, 208 Spanish Literature in Translation 3, 3 cr.**

An introductory survey of the literary culture of Spain in the novel, drama and poetry. Some knowledge of Spanish is helpful, but not required.

**220 Shakespearean Drama and Dramaturgy 3 cr.**

Representative selections from Shakespeare's tragic, comic, and history plays; techniques and problems of play production as these affect interpretation. (See Drama 202)

**231 Advanced Composition 3 cr.**

A study and written analysis of examples of various types of literature in English with emphasis on critical exposition.

**302, 303 Creative Writing 3, 3 cr.**

A course in the study and practice of writing. Jr st recommended.

**309, 310 Contemporary British and American Literature 3, 3 cr.**

An approach to American and British literature through significant and representative modern prose and poetry. Jr st recommended.

**311, 312 Poetry in Context 3, 3 cr.**

A course of study in the genre of poetry. First semester: a chronological study of the development of the more important genres and their distinctive features. Second semester: comparative studies of outstanding examples or practitioners of selected forms (e.g., *Beowulf*, Milton's *Paradise Lost*, Williams' *Paterson*). Jr st recommended.

**313, 314 The Drama in Context 3, 3 cr.**

First semester: a study of the drama as a form with distinguished examples selected from the dramatic literature of Europe, England and the United States. Second semester: the study of drama organized around a theme, or themes, at the option of the staff. Jr st recommended.

**315, 316 The Novel in Context 3, 3 cr.**

First semester: the various forms of the novel (historical, picaresque, manners, social protest) are studied. Second semester is devoted to a thematic, genristic or period approach at the option of the staff. Jr st recommended.

**320, 321 Introduction to the Study of Linguistics 3, 3 cr.**

Nature of language and principles of language analysis; phonetics, phonemics, morphology and syntax; comparative linguistics (Indo-European) with special attention to the development of English. Jr st recommended.

**331 Major American Novelists 3 cr.**

Studies of writers such as Cooper, Hawthorne, Melville, Howells, Mark Twain, Henry James, Stephen Crane and Frank Norris. Analysis of these writers' works as literary masterpieces representative of literary romanticism, realism and naturalism; definition of these works in relation to the times in which they were written. Jr st recommended.

**333 Study of a Theme in American Literature 3 cr.**

Poetry or prose fiction. The theme could start with writers as early as Charles Brockden Brown and H. H. Brackenridge and proceed through 19th and 20th century novelists in America. A sample theme: The "loner" in American literature. Jr st recommended.

**332 Literature of the American Renaissance 3 cr.**

Novels, essays and poetry of the period from the 1850s to the 1880s; Emerson, Thoreau, Whitman, Hawthorne, Melville and James. Basic guide for the course will be F. O. Matthiessen's *American Renaissance*. Other critical essays will be read as well as works of minor writers. Jr st recommended.

**334 Literary "isms" 3 cr.**

The works of a number of writers of fiction and poetry are studied in relation to literary "isms": Neo-Classicism, Romanticism, Transcendentalism, Realism, Naturalism. Jr st recommended.

## The Educational Program

### **435 Study of an Outstanding Figure or Figures in Literature 3 cr.**

An in-depth study of one or more writers; study of a writer's major themes and their implementation; analysis of the characteristics of great writing. Jr st recommended.

### **498, 499 Problems of Literature and Language 3, 3 cr.**

An inter-disciplinary seminar or tutorial designed to review, explore and re-examine the fundamental values on which the student has based his collegiate career. A critical survey is made of the student's total curricular program in an attempt to identify strengths which he might exploit and weaknesses which he might remedy. P: literature major required.

## French

### **102, 103, 202, 203 Introduction to the French Language 4, 4, 4, 4 cr.**

Study of the structure of the French language with conversation, reading and writing based on the level of achievement. Courses are sequential. One year high school French equals one semester university French.

### **221, 222 Introduction to French Literature 3, 3 cr.**

Study of representative authors in French literature. May be taken concurrently with French 225, 226. P: French 203 or equivalent high school preparation.

### **225, 226 French Composition and Conversation 3, 3 cr.**

Development of facility in oral and written French. May be taken concurrently with French 221, 222. P: French 203 or equivalent high school preparation.

### **317, 318 Introduction to French Culture and Civilization 3, 3 cr.**

A study of characteristic periods and movements in the social, intellectual, artistic and literary development of France. P: French 203 or equivalent.

### **321 Nineteenth Century French Drama and Poetry 3 cr.**

Critical study of dramatic and poetic works representative of main currents in nineteenth century French literature. P: French 221, 222.

### **322 Nineteenth Century French Novel 3 cr.**

Critical study of novels representative of main currents in nineteenth century French literature. P: French 221, 222.

### **402, 403 Contemporary French Literature 3, 3 cr.**

Study of major literary expressions in contemporary French novel, drama and poetry. P: French 222.

### **498, 499 Senior Seminar in French Literature 3, 3 cr.**

An intensive analysis of a specific writer or theme, topic to be changed each semester. Course may be offered as seminar or tutorial. P: French 222.

## Spanish

### **102, 103, 202, 203 Introduction to the Spanish Language 4, 4, 4, 4 cr.**

Study of the structure of the Spanish language with conversation, reading and writing based on the level of achievement. Courses are sequential. One year high school Spanish equals one semester university Spanish.

### **221, 222 Introduction to Spanish Literature 3, 3 cr.**

A study of representative authors in Spanish literature. May be taken concurrently with Spanish 225, 226. P: Spanish 203 or equivalent high school preparation.

### **225, 226 Spanish Conversation and Composition 3, 3 cr.**

Development of facility in oral and written Spanish. May be taken concurrently with Spanish 221, 222. P: Spanish 203 or equivalent high school preparation.

**317, 318 Introduction to Spanish Culture and Civilization 3, 3 cr.**

A study of characteristic periods and movements in the social, intellectual, artistic and literary development of Spain and Spanish America. P: Spanish 203 or equivalent.

**323 Spanish Golden Age Drama 3 cr.**

Critical study of drama in the Siglo de Oro as represented by Lope de Vega, Tirso de Molina, Calderon and others. P: Spanish 221, 222.

**324 Spanish Golden Age Prose 3 cr.**

Critical study of significant prose works from the Siglo de Oro with special emphasis on Cervantes. P: Spanish 221, 222.

**402, 403 Contemporary Spanish Literature 3, 3 cr.**

A study of major literary expression in Spanish contemporary novel, drama and poetry. P: Spanish 222.

**498, 499 Senior Seminar in Spanish Literature 3, 3 cr.**

An intensive analysis of a specific writer or theme, topic to be changed each semester. Course may be offered as seminar or tutorial. P: Spanish 222.

**German**

**102, 103, 202, 203 Introduction to the German Language 4, 4, 4, 4 cr.**

Study of the structure of the German language with conversation, reading and writing based on the level of achievement. Courses are sequential. One year of high school German equals one semester university German.

**221, 222 Introduction to German Literature 3, 3 cr.**

A study of representative authors in German literature; may be taken concurrently with German 225, 226. P: German 203 or equivalent high school preparation.

**225, 226 German Composition and Conversation 3, 3 cr.**

Development of facility in oral and written Ger-

man; may be taken concurrently with 221, 222. P: German 203 or equivalent high school German.

**317, 318 Introduction to German Culture and Civilization 3, 3 cr.**

A study of characteristic periods and movements in the social, intellectual, artistic and literary development of Germany. P: German 203 or equivalent.

**327 The Age of Goethe 3 cr.**

Critical study of poetry, drama, essay and novel as representative of the era; special emphasis on Goethe. P: German 221, 222.

**328 German Novelle 3 cr.**

Critical study of the genre as representative in various literary periods. P: German 221, 222.

**402, 403 Contemporary German Literature 3, 3 cr.**

A study of major expressions in contemporary German novel, drama and poetry. P: German 222.

**498, 499 Senior Seminar in German Literature 3, 3 cr.**

An intensive analysis of a specific writer or theme, topic to be changed each semester. Course may be offered as seminar or tutorial. P: German 222.

**History**

**202 History of Economic Concepts 3 cr.**

A critical examination of major economic theories; political and social conditions of the periods when these theories were evolved. The works of such writers as Smith, Ricardo, Marx and Keynes will be considered.

**203 History of Europe from 1300 to 1815 3 cr.**

The development of Europe from the early Renaissance to the end of the Napoleonic era; the emergence of secular nation-states.

**204 History of Europe Since 1815 3 cr.**

The development of continental Europe since Napoleon; French, German and Spanish history



## The Educational Program

and the creation of the modern industrial nation-state.

### **205 History of the United States from 1600 to 1865 3 cr.**

The development of the United States from the first colonial settlements to the end of the Civil War; emergence of American national democracy.

### **206 History of 19th Century America 3 cr.**

The development of the United States in the 19th century; economic growth and increased involvement in the Western hemisphere; the growth of continental dominance.

### **302, 303 History of American Thought and Culture 3, 3 cr.**

European influences on American thought, religion, science, art and the agencies of cultural life; emergence of distinctive American patterns; influence and impact of American ideas on the world. P: jr st.

### **304, 305 History of Asian Thought and Culture 3, 3 cr.**

The evolution of Asian thought, religion and art; the agencies of cultural life; impact of European culture; influence of Asian thought outside Asia. P: jr st.

### **306, 307 History of European Thought and Culture 3, 3 cr.**

Major currents in European culture and the development of religions, science, artistic modes and the agencies of cultural life; the worldwide influence of European culture and impact of European ideas on other major regions. P: jr st.

### **308, 309 History of Modern Science 3, 3 cr.**

The development of science since the 16th century; changes in the conditions facing the scientist over the past four centuries; relationship of scientific discovery to technological change. P: jr st.

### **402 Political and Social History of Modern Asia 3 cr.**

A critical examination of political and social

change in 20th century Asia; the clash between colonialism and emerging nationalist movements; continued European and American involvement in Asia. P: jr st and one 300-level history course.

### **403 Political and Social History of Modern America 3 cr.**

A critical examination of political and social change in 20th century America; the evolution of governmental roles in essential social change; the emergence of the United States as a world power. P: jr st and one 300-level history course.

### **404 Political and Social History of Modern Europe 3 cr.**

A critical examination of political and social change in 20th century Europe; the emergence of European fascism; post-World War II changes. P: jr st and one 300-level history course.

### **405 History of Technological Advancement 3 cr.**

An analysis of the impact of major inventions on the patterns of life in modern society; ecological problems resulting from technological changes. P: jr st and one 300-level history course.

### **498, 499 Problems in Historical Causation 3, 3 cr.**

A seminar or tutorial involving the careful consideration of major schools in historiography; problems in the interpretation of cultural, economic, political, scientific and social history. P: sr st and choice of history option.

## Philosophy

### **102 Contemporary Moral Philosophy 3 cr.**

The critical examination of modern answers to questions regarding the nature of the right and the good; the meaning of "moral obligation."

### **103 Theories of Valuation 3 cr.**

A critical examination of major theories of valuation, especially in moral philosophy and philosophy of art; problems of verification.

### **111 Descriptive Logic 3 cr.**

A study of the principles of right reasoning; the ways people misuse language; creative poten-

tialities of clear thinking in science; the formation of value judgments.

**202 Ethical Relativism 3 cr.**

A critical examination of the philosophical varieties of moral relativism, their consequences for traditional theories and their roots in psychology and anthropology. P: 3 cr in philosophy.

**203 Contemporary Aesthetic Philosophy 3 cr.**

A critical examination of contemporary philosophies of art and art criticism. P: 3 cr in philosophy.

**204 Man, Religion and Society 3 cr.**

Critical survey of theories about the sources of religion in the individual and in society; the consequences of religion for the individual and society. P: 3 cr in philosophy.

**205 Freedom, Fate and Choice 3 cr.**

This course will critically survey the problem of freedom of the will; the ideas of Mill, James, Russell and Sartre. The issue will be examined as to its sources, the problem of its clarification, the problem of arriving at a reasonable solution. P: 3 cr in philosophy.

**206 Philosophy of Mind 3 cr.**

A critical study of the nature of mind and its relation to body and matter; recent movements in psychology and philosophy. P: 3 cr in philosophy.

**302 History of Ancient Philosophy 3 cr.**

Critical study of the ideas of major philosophers from the pre-Socratics to Augustine; Plato and Aristotle and their relevance to contemporary problems. P: jr st.

**303 History of Modern British and Continental Philosophy 3 cr.**

Critical study of major philosophical ideas of the modern age; Descartes and the early Empiricists and Idealists; Locke, Hume, Berkeley. The course will develop and formulate an understanding of the ways in which the ideas studied have influenced the formation of contemporary values and beliefs. P: jr st and 3 cr in philosophy.

**304 History of American Philosophy 3 cr.**

An historical and critical survey of the American philosophical tradition. The course focuses on those elements of American philosophy which are distinctively American (e.g. transcendentalism, pragmatism) and their relevance to present-day problems. P: jr st, 3 cr in philosophy.

**305 History of Asian Philosophy 3 cr.**

An historical and critical survey of the great philosophies and religions of Asia; contemporary manifestations. P: jr st and 3 cr in philosophy.

**306 Linguistic Analysis 3 cr.**

A critical examination of the functions of language and relationships between language and philosophical problems; role of language analysis in the solution of philosophical problems; the works of Ludwig Wittgenstein. P: jr st and 3 cr in philosophy.

**307 Belief, Knowledge and Truth 3 cr.**

Study of the grounds of rational belief and knowledge and the methods for obtaining them; the problems of evidence and truth. P: jr st and 3 cr in philosophy.

**498, 499 Contemporary Problems in Philosophy 3, 3 cr.**

A seminar or tutorial required of senior students in the philosophy option, including critical analysis of current philosophical problems of interest to the class and instructor. An effort will be made to integrate work in the philosophy option and to direct the results of such work to the solution of the problems discussed.

**Art**

**102, 103 Design and Drawing Studio 3, 3 cr.**

Basic structure of art with emphasis on visual perception through studio work in two-dimensional design and drawing.

**202 Technical Drawing 3 cr.**

Suggested to students who seek a visual arts option and a concentration in communication-action. Required in two-dimensional emphasis in visual arts option. P: Art 102, 103.

## The Educational Program

### **231, 232 Design and Drawing Studio 3, 3 cr.**

An introduction to social significance of design in man's environment; investigation of design concepts involving the third and fourth dimension.

### **303, 304 Water Color 3, 3 cr.**

Creative approach to water color techniques; cultivation of personal expression and development of imaginative concepts.

### **305, 306 Graphic Arts: Relief Printing 3, 3 cr.**

Aspects of relief printing: woodcut, collage print, linoleum cut and wood engraving; relief printing in full color.

### **307, 308 Graphic Arts: Intaglio Printing 3, 3 cr.**

Studio work in intaglio techniques, including dry point, engraving and various etching procedures. Various color printing techniques are taught and the development of a personal concept encouraged. P: Art 102, 103 or a course in painting.

### **311, 312 Oil Painting 3, 3 cr.**

Cultivation of techniques for personal expression; composition and development of imaginative concepts in oil paint and allied media. P: Art 102, 103.

### **321, 322 Basic Sculpture 3, 3 cr.**

Studio course with an emphasis in the use of clay, plaster and other media. Traditional and contemporary methods will be investigated, giving student a fundamental understanding of sculptural form. P: Art 102, 103.

### **331 Basic Ceramics 3 cr.**

Laboratory course introducing basic methods of forming clay, including pitch, coil and slab methods and throwing on the wheel. A study of ceramic chemicals and glaze calculations; glaze application, stacking and firing the kiln. P: Art 102, 103.

### **361, 362 Life Drawing and Anatomy 3, 3 cr.**

The skeletal and muscular structure of the human figure and animals as a basis for artistic interpretation. P: Art 102, 103.

### **409 Materials Workshop for the Designer 3 cr.**

Investigation of various materials of the designer and techniques of fabrication with these materials. P: Art 102, 103 and Art 202.

### **410 Materials Workshop for the Painter 3 cr.**

Investigation and demonstration of painting media; the chemistry of paint; framemaking; preparation of painting grounds; underpainting, glazing. P: Art 102, 103 and a course in painting.

### **480, 481 Introduction to Environmental Design 3, 3 cr.**

Investigation of environmental content in three-dimensional art; various relationships between man and form in terms of scale, texture, light and other design phenomena. P: Art 409.

### **498, 499 Problems in Visual Expression 3, 3 cr.**

Problems of special interest to the advanced student in the visual arts. P: Visual arts option.

## **Dance**

### **302 Introduction to the Dance 3 cr.**

Theory and philosophy of dance; study and clarification of the meaning of dance as a creative performing art and as an academic discipline.

### **303 Dance History and Techniques 3 cr.**

Phasic development of dance forms from primitive to contemporary societies; the relationship of dance to other societal and cultural developments.

### **304, 404 Dance Performance 3, 3 cr.**

Seminar-tutorial course in dance with emphasis on performance experiences; elements of composition and form, costuming and stage design; study and performance of completed dance works for theater production. P: Dance 303 or cons inst.

### **498, 499 Problems in Performing Arts 3, 3 cr.**

An opportunity for advanced students to pursue individual problems in the performing arts. Work may be done in music, dance, theater, opera. P: cons inst.

**Drama**

**102 Theater Techniques 3 cr.**

This course will cover various elements of three-dimensional form in the visual arts as it applies to creating and embodying the stage space for specific performance: design, lighting, costumes. The study of these elements may include work in particular modes of theater presentation as a part of learning historical techniques and practices of theater staging.

**103, 104 Voice and Movement 3, 3 cr.**

A fundamental course which introduces the student to the use of voice and body in effective expression. Study will be centered upon an understanding of the voice and body as expressive instruments. Exercises to develop the fullest use of the performer's total instrument will be a major concern. Voice work is required of speech and music students as well as theater option students; movement is required of dance students.

**105, 205, 305, 405 Intercurricular Theater 3 cr.**

The student will perform a specific function or functions relative to production of a particular play, working with study guides on theory and practice. To this end, the student earns credits in a particular area of theater techniques. (1) Students acting a role will receive sessions in voice, movement and acting-training for credit in these areas. (2) Students working in technical areas (design, lighting, costuming) will receive study guides on theory and practice in these areas (e.g. costumer for a Greek play working in historical research for these costumes), and execute the function, earning credits in the particular area(s). He will at the same time be working in an area of theater history. All students, regardless of their specific function for Intercurricular Theater, receive study guides about the theory and practice of the play being prepared and performed, earning credits in a particular area of dramaturgy (literature and theater history).

**132, 232, 332, 432 Theater Techniques (Acting) 3 cr each**

Any particular semester's work will involve investigation and practice of acting techniques as

applicable to the individual student, to particular modes or styles of acting and to the level of the student's capabilities. Courses and/or Intercurricular Theater work in acting will involve students in understanding and use of the actor's instrument in portraying characters in various sorts of drama. A progressive demand of competence will be required for enrollment in the course as a student at the level of 132, 232, 332 or 432. Audition will be the usual requisite for admission.

**202, 203 Dramaturgy (Literature-Theater History) 3, 3 cr.**

In any particular semester this course will center upon a mode or period of dramatic literature and the aspects of theater history applicable to it. The specifics covered will depend upon staffing capabilities and load, but in general representative dramas, dramatic theory and theater building-stagecraft will be studied, to grasp an understanding of a particular era of theatrical art. (See Literature and Language 220.)

**302 Dramaturgy (Playwriting) 3 cr.**

A study of the craft of writing for the theater. Representative theories and playscripts will be studied, but the primary emphasis will be upon the creation of original scripts. Student scripts will be read and discussed. Some will be staged, in a rudimentary way, for fuller realization and evaluation.

**303 Stage Direction 3 cr.**

The study of various theories and techniques of theatrical staging. Students will direct scenes of varying lengths and complexity from different kinds of drama and types of staging. Study of dramas, dramatists, critics and directors will lead to these staging exercises.

**498, 499 Problems in the Performing Arts 3, 3 cr.**

An opportunity for advanced students to pursue individual problems in the performing arts. Work may be done in music, dance, theater, opera. P: cons inst.

## The Educational Program

### Music

#### 102 Basic Musicianship 2 cr.

Musical notation, scale and chord structure and location on keyboard; practice in sight-singing and dictation. Open to non-music students. Not accepted for credit toward the option in music.

#### 103, 104 Beginning Harmony and Counterpoint 4, 4 cr.

Elementary study of harmony; species counterpoint in two parts; simple four-part harmonizations of chorale melodies; analysis of pertinent works; attainment of the musical skills of sight-singing dictation, keyboard harmony and ear training.

#### 110 Music in Perspective 3 cr.

An introduction to and study of the individual areas of history, art, literature, philosophy and music as they relate to the study of a single music masterpiece representing an entire artistic period. Readings in related fields; open to students in the music option and also to qualified non-music students.

#### 111 Music in Perspective 3 cr.

A study of a single musical masterpiece as representative of an entire artistic period. Lectures and readings in history, art, literature and philosophy of the period; delineation of social and intellectual climate. Open to non-music students.

#### Applied Music: Voice and Instruments 2 cr.

160, 161 Class Instruction

260, 261 Class Instruction

360, 361 Class Instruction

460, 461 Class Instruction

165, 166 Private Instruction

265, 266 Private Instruction

365, 366 Private Instruction

465, 466 Private Instruction

Study of solo music literature through group or private instruction: instruction available in voice, conducting, piano, organ, flute, oboe, clarinet, saxophone, bassoon, horn, trumpet, baritone, trombone, tuba, timpani, percussion, violin, viola, violoncello, double bass. Placement by audition before applied music committee.

#### Applied Music: Ensembles

170, 171 Instrumental Ensembles 1-2 cr.

270, 271 Instrumental Ensembles 1-2 cr.

370, 371 Instrumental Ensembles 1-2 cr.

470, 471 Instrumental Ensembles 1-2 cr.

String, woodwind and brass ensembles; mixed ensembles; piano trios, quartets, quintets. Placement at discretion of applied music committee.

180, 181 Organizations 1 cr.

280, 281 Organizations 1 cr.

380, 381 Organizations 1 cr.

480, 481 Organizations 1 cr.

Chorus, orchestra, band, opera workshop. Admission by audition.

#### 202, 203 Intermediate Harmony and Counterpoint 4, 4 cr.

Four-part chorale harmonizations; counterpoint in three or four parts; canons and inventions; introduction to harmony based on 19th century practice; analysis of pertinent works; attainment of the musical skills of sight-singing, dictation, keyboard harmony and ear training.

#### 230, 231 Landmarks in Western Music 3, 3 cr.

A survey of the important basic musical styles from antiquity to the present. A course requirement for students in the music option; open to qualified non-music students. P: Music 103, 104.

#### 302, 303 Advanced Harmony and Counterpoint 3, 3 cr.

The fugue; continuation of 19th century harmony; introduction to 20th century harmonic and contrapuntal practices; practice in composing in larger forms; analysis of pertinent works. P: Music 202, 203.

#### 320 Music in the United States 3 cr.

The contribution of music to the development of American culture, with emphasis on folk music; the development of jazz. P: Ability to read music.

#### 321 Music of India and the Orient 3 cr.

A survey of the music of India and the Orient, with emphasis on its influences in contemporary art music; offered in alternation with Music 421. P: Ability to read music.

**330 Music of the Baroque Period 3 cr.**

Music developments of the Baroque era, based on analysis of selected works. Offered in alternation with Music 430; not available in 1969-1970. P: Music 231 and Music 203 or their equivalents.

**331 Music of the Classic Period 3 cr.**

Musical developments of the Classic period, based on analysis of selected works. Offered in alternation with Music 431; not available in 1969-1970. P: Music 231 and Music 203 or their equivalents.

**340, 341 Analysis of Music 3, 3 cr.**

A study of musical forms and structural principles from the Middle Ages to the present. Emphasis on selected periods at the discretion of the instructor. P: Music 203.

**350 Choral Arranging 3 cr.**

Voice ranges; problems in phonetics; arranging for choral ensembles and for large chorus. P: Music 203.

**351 Instrumental Arranging 3 cr.**

The study of the functions of orchestral and band instruments; problems in scoring for orchestra and band. P: Music 203.

**421 Music of Africa and Eastern Europe 3 cr.**

A survey of the music of Africa and Eastern Europe, with emphasis on its influences in contemporary art music; offered in alternation with Music 321; not available in 1969-1970. P: Ability to read music.

**430 Music of the Nineteenth Century 3 cr.**

Musical developments of the Romantic era based on analysis of selected works; offered in alternation with Music 330. P: Music 231 and Music 203 or their equivalents.

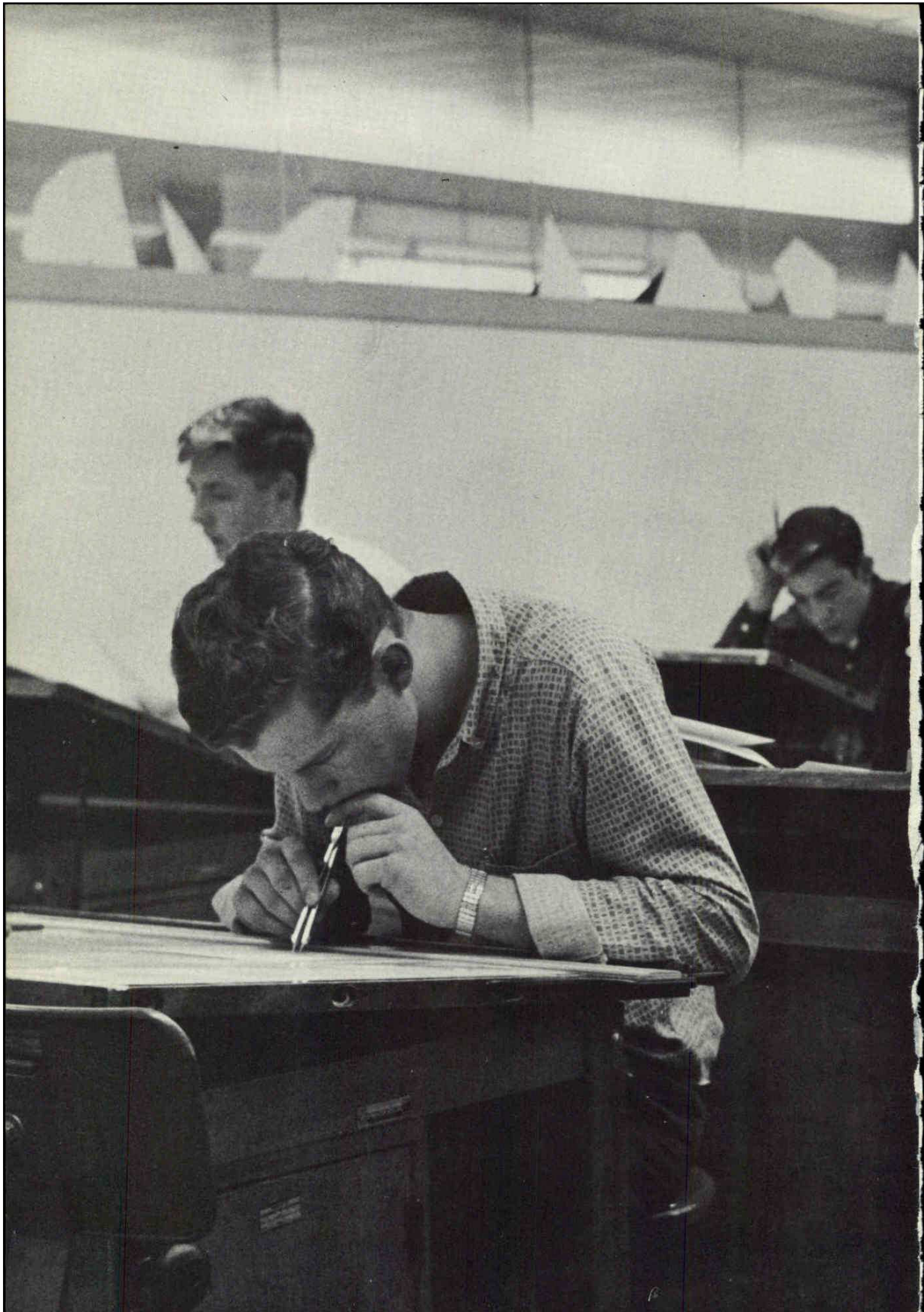
**431 Contemporary Music 3 cr.**

Music developments of the 20th century, based on analysis of selected works; offered in alternation with Music 331. P: Music 231 and Music 203 or their equivalents.

**498, 499 Problems in the Performing Arts 1-3 cr.**

An opportunity for advanced students to pursue individual problems in the performing arts. Work may be done in music, dance, theater or opera. P: cons inst.





# The School of Professional Studies

## PROGRAMS

### Majors in Business and Public Administration

In the School of Professional Studies, the student may major in business administration or public administration, earning the degree of Bachelor of Science (Administration). He enters the School of Professional Studies as a sophomore or as a junior. In the first semester of his sophomore year, whether he enters the School then or a year later, he is required to take Organization and Operations 202, Business and Its Environment, and in the second semester, Organization and Operations 203, Government and Business. This year course is open to all students without any prerequisite except sophomore standing.

For the major, the student next chooses six credits in courses in any four of the following five fields:

Organization and Operations  
Quantitative Methods  
Distribution  
Finance  
Labor Relations

Many of the courses are common to both business and public administration. Some are primarily in business administration, while others are primarily in public administration.

The student who intends to prepare for the Certified Public Accountant examination is urged

to take all the Quantitative Methods courses except 230. The student majoring in business administration must include Organization and Operations 490 in his senior year program, while the student majoring in public administration must include Organization and Operations 491.

Whichever of the two majors the student is pursuing, he must have a *cognate* of approximately 30 credits, of which six credits must be in one of the four fields of his administrative major. The cognate program is to be planned with the student's adviser, following these principles:

(1) The six credits should all be in the field of the student's principal interest, this supplementing the six credits he has taken as part of his major.

(2) The student in business administration is advised to fill his cognate from among the courses in economics. Particularly relevant are Economics 202, 203, 302, 304, 308, 403 and 405.

(3) For the student in public administration, the cognate program should be relevant to his field of special interest. The student interested in city management might choose political science or urban analysis. The student interested in planning might select regional analysis or modernization processes. The student preparing for administration of social services might pick sociology. Other appropriate cognate fields for the public administration major are environmental control and communication sciences.

	Common to Business and Public Administration	Primarily Business Administration	Primarily Public Administration
Organization and Operations	302, 303, 402, 450	304, 310, 490	320, 491
Quantitative Methods	204, 205, 206, 230 302, 303, 304, 403	315, 410	310
Distribution	302, 310, 410	402, 403, 404, 407	305
Finance	402, 403	302, 304	303
Labor Relations	310, 312, 402, 403, 412, 420	302	303



## The Educational Program

### Professional Collateral in Business or Public Administration

The purpose of the professional collateral in business or public administration is to introduce the student to the problems and techniques involved in working in groups and attaining group goals. Courses required to fulfill the collateral are Organization and Operations 202, 203, 302, 303, and optionally, 450.

In addition, the student interested in business takes Organization and Operations 310 or 390, while the student interested in the public sector selects Organization and Operations 320, 491, or Political Science 204. The student's program is to be chosen in consultation with his faculty adviser.

### Professional Collateral in Education

To secure a license to teach in the schools in the state of Wisconsin, the student must meet certain requirements of state law and regulations. Basic to all of them is that a person must graduate from a four-year teacher training institution of which the program of instruction has been approved by the State Department of Public Instruction.

A student who pursues one of the programs explained below, and who meets the general degree requirements of The University of Wisconsin-Green Bay, will be licensed for a three-year term. A permanent license follows after three years of successful teaching experience.

**Foundation Courses.** The student must have a course in the fields of educational psychology or psychology of learning, a requirement which is met by either one of two courses: Human Biology 332, Human Development, or Psychology 338, Psychology of Learning.

Two other courses pertinent to the professional collateral are Education in America (3 credits), offered in the College of Community Sciences, and Philosophy of Education (3 credits) given in

the College of Creative Communication. Education in America is an analytical preview of the teaching profession, and is recommended for students who are considering entering the profession but who have not yet definitely decided to do so. Philosophy of Education examines the philosophical and scientific foundations of the calling. It will give the student a broader perspective and a more solid intellectual view of the profession of education.

Students who wish to be licensed to teach in science or social studies must have course work in the field of conservation of natural resources. This subject is included in Environmental Sciences 102, Introduction to Environmental Sciences, or Economics 303 or 402.

To be licensed to teach economics, social studies, or agriculture, students must have course work in cooperatives. Such work is given in Economics 102, Economics in the Modern World.

Since elementary school teachers must be prepared in all subject matter fields, students desiring to secure an elementary school teaching license must take both Environmental Sciences 102 and Economics 102. It should be noted that both courses also count toward either field or distribution requirements in the theme colleges.

### Subject Matter Requirements

**Elementary School License.** For an elementary school license, the student must acquire subject matter proficiency in the following subjects: social studies, art, science, mathematics, music and physical education, as well as proficiency in English. Among the courses that fulfill the requirement are:

Community Sciences 102 (and beginning courses in the social sciences)	Man and His Social Environment	3 cr
Human Biology 102	Introduction to Human Adaptability	3 cr
Environmental Sciences 102	Introduction to Environmental Science	3 cr

## The School of Professional Studies

Mathematics 110	Finite Mathematics	3 cr
Creative Communication 182	Principles of Expression	3 cr
Literature 104	Introduction to Literary Types	3 cr
Art 102	Design and Drawing Studio	3 cr
Music 102	Basic Musicianship	3 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	The Teaching of Reading	3 cr

**Secondary School License.** For a secondary license, the student must acquire either a major, a major and a minor, two majors, or a broad field major. A major comprises 34 credits and a minor, 22 credits. A broad field major includes at least 54 credits. Among the majors recognized by the State Department of Public Instruction, the following are available at The University of Wisconsin-Green Bay: English, French, Italian, Spanish, German, art, mathematics, music (instrumental), music (vocal), biology, chemistry, conservation, physics, physiology, earth science, psychology, sociology and social studies.

Because secondary school teachers are licensed to teach in a specific area or areas, they must also meet a general education requirement. This requirement is met in The University of Wisconsin-Green Bay as the student fulfills the following degree requirements: (1) the liberal education seminars taken in each of his four years of undergraduate study, (2) the distribution requirement, in which the student must have five or six credits in the three colleges other than the one of his field of concentration, and (3) possibly by the tool subject requirement of data processing plus a foreign language, mathematics or studio courses in the visual and performing arts.

### Teaching Methods Courses

**Elementary School License.** For an elementary school license, the student must have the following teaching methods courses, for which he ordinarily enrolls in his junior and senior years.

Education 302	Elementary School Teaching Methods in Social Studies	3 cr
Education 303	Elementary School Teaching in Art	2 cr

It is possible to be licensed for a specific grade only, and at the other extreme, it is possible to be licensed for kindergarten through eighth grade, but neither alternative is customarily chosen. Most commonly, the prospective elementary school teacher decides before he takes his teaching methods courses to be licensed either for kindergarten through fourth grade, or fifth through eighth grades.

**Secondary School License.** To secure a secondary school license, the student must have a teaching methods course in his subject matter field major. Courses available are:

Education 310	Teaching Methods in English	3 cr
Education 311	Teaching Methods in Foreign Languages	3 cr
Education 312	Teaching Methods in the Social Studies	3 cr
Education 313	Teaching Methods in Mathematics	3 cr
Education 314	Teaching Methods in the Sciences	3 cr
Education 315	Teaching Methods in Physical Education	2 cr
Education 316	Teaching Methods in Art	2 cr
Education 317	Teaching Methods in Music	2 cr

For the student desiring to be licensed in both a major and a minor, in two majors, or in a broad field major, it is recommended that two of the above teaching methods courses be taken, rather than one.

## The Educational Program

**Practice Teaching.** The statutory requirement in Wisconsin for teacher licensing at either the elementary or secondary level is five credits in practice teaching.

The University of Wisconsin-Green Bay does not consider this minimum to be enough for adequate practice teaching experience, and therefore requires eight credits in practice teaching. Practice teaching is customarily taken in the student's senior year, and registration for it must be arranged in advance with the supervisor of practice teaching, for the student's program must fit the practice teaching opportunities available in the public schools.

At the elementary level, practice teaching is available on a full-time basis for half a semester, which may be either the first or second half of either the fall or the spring semester of the student's senior year. During the other half of the semester in which practice teaching is taken, the student registers for 7 or 8 credits of elementary school teaching methods courses. The remaining teaching methods courses may be taken either before or after this semester.

At the secondary level, ordinarily the student will register for practice teaching half time during either the fall or the spring semester of his senior year. He should register during the same semester for the teaching methods course or courses appropriate to his program.



### PROFESSIONAL COLLATERAL IN MASS COMMUNICATIONS\*

This field of study is concerned with the application of communications skills and insights to the mass communications media: newspapers, magazines, radio and television. In consultation with his adviser, the student chooses 12 credits from among the following courses: Mass Communications 202, 203, 305, 310, 320, 402, 405, 430, and Distribution 403. Six credits are selected from Psychology 202, Distribution 305 and 410, and Organization and Operations 450 and 490.

### PROFESSIONAL COLLATERAL IN THE LEISURE SCIENCES\*

This collateral covers the organization and operation of private companies and public facilities for recreational and other constructive uses of leisure time. The student undertaking this collateral chooses, in consultation with his faculty adviser, 12 credits from among the following courses: Leisure Sciences 302, 303, 310, 320, 403, 404, and 410. In addition, six credits are selected from Psychology 202, Organization and Operations 310, 320, and 450, Distribution 410, and Political Science 204.

### PROFESSIONAL COLLATERAL IN THE SOCIAL SERVICES\*

Fulfilling this collateral prepares the student for beginning professional social work in public and private agencies where the Master of Social Work degree is not required. The student, in consultation with his faculty adviser, chooses nine credits from among the following courses: Social Services 202, 203, 310, 405 and 410. He selects six credits from Social Services 302, Sociology 203 and 302 and Organization and Operations 320 and 450. Social Services 402 is required to complete the collateral.

\*Will be offered when the collateral has been approved by the Coordinating Council for Higher Education

## COURSES

### Abbreviations

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

### Organization and Operations

#### 202 Business and Its Environment 3 cr.

The interaction of environmental factors with American business, including social, political and economic systems; the development of business practices and institutions. The first semester of the introductory course is required of all business and public administration majors.

#### 203 Government and Business 3 cr.

Relations of businessmen and business firms with the levels of government: local, state and national; corporations and bureaucracies as institutions, their similarities and differences; brief treatment of government regulation of business and business determinants of government policy. The second semester of the introductory course for majors in business and public administration. P: soph st.; Organization and Operations 202.

#### 302 Principles of Organization 3 cr.

Principles underlying the subdivision and specialization of productive work; problems arising from line and staff functions; geographical decentralization; coordination. P: Organization and Operations 203.

#### 303 Principles of Operations 3 cr.

The organization over periods of time: changing work demands; adapting to new requirements; flow of information; means of control. P: Organization and Operations 302.

#### 304 Industrial Management 3 cr.

The management of physical and human resources in the production and operations functions for producing goods or providing services in manufacturing and processing enterprises. P: jr st.

#### 310 Small Business Management in the Northern Great Lakes Region 3 cr.

Case studies leading to the development of principles concerning the operation of small businesses; cases drawn from the Northern Great Lakes region. Course draws upon all phases of business management at the level of simplification suitable to enterprises of limited size and staff. P: jr st.

#### 320 Practice of Public Administration 3 cr.

The management of physical and human resources in the execution of public policy, relationship between policy determination and policy administration; leadership, control and accountability. P: jr st. (Cross-listed in College of Community Sciences as Political Science 320)

#### 402 Planning, Control and Routinization 3 cr.

The ongoing process of an administrative organization in operation: job analyses, routinization of procedures; handling variations in work load; standing orders; translating control information into planning terms. P: jr st.

#### 450 Policy and Program Implementation 3 cr.

Relates liberal education to vocational and professional goals; emphasizes group dynamics, policy formation and methods of realizing program goals. Required of all seniors who are not fulfilling a professional collateral. The course may be counted in the professional collateral in business and public administration.

#### 490 Problems of Business Management I, II 3, 3 cr.

The capstone undergraduate course in business administration; conducted on the case system, utilizing principles and techniques in all the fields of business administration. Open to seniors in business administration, and to others only with consent of the instructor.

## The Educational Program

### **491 Problems of Public Management I, II 3, 3 cr.**

The capstone undergraduate course in public administration; conducted on the case system, utilizing principles and techniques in all the fields of public administration. Open to seniors in public administration and to others only with consent of the instructor.

### **498, 499 Special Readings in Administration 1-4 cr.**

A readings course adapted to the individual's particular interests in the field of administration. P: jr st and cons inst.

### **Quantitative Methods**

#### **204 Introductory Accounting 3 cr.**

Fundamental principles of accounting; basic business terminology, techniques and practices, books and accounts, and statements for retailing and wholesaling concerns; treatment and presentation of sole proprietorship, partnership and introductory corporation accounts. Open to second semester fr; soph st recommended.

#### **205 Intermediate Accounting 3 cr.**

Accounting theory, principles, concepts and procedures as they apply to balance sheet and income statement accounts; presentation and interpretation of financial reports, including the problems of terminology, manufacturing valuation and analysis. P: Quantitative Methods 204.

#### **206 Accounting for Administrators 3 cr.**

Accounting concepts and methods; interpretation and use of accounting reports and analyses for the managerial purposes of planning, coordination and control. P: Quantitative Methods 204 or jr st.

#### **230 Quantitative Methods in Administration 3 cr.**

Studies of the origin, processing, use and interpretation of accounting, statistical and other computerized data in administrative organizations; application of techniques of accounting and financial analysis to reporting, planning and controlling. P: soph st.

### **302 Cost Accounting 3 cr.**

Problems of accounting for costs in administrative organizations; structural aspects, working knowledge and techniques for solving cost problems. P: Quantitative Methods 204, 205 or 230.

### **303 Financial Accounting, Theory and Practice 3 cr.**

The analysis of accounting problems, methods of problem solving, presentation of financial data; determination of income under various bases of accounting; analysis of all accounts in financial statements. P: Quantitative Methods 302, or 205 and 230.

### **304 Financial Accounting, Theory and Practice 3 cr.**

Specialized and technical subject matter for majors in accounting; accounting for installment sales and consignments, home office and branches; preparation of consolidated statements; foreign exchange, reorganizations, bankruptcy and equity receiverships; estates and personal trusts.

### **310 Governmental and Institutional Accounting 3 cr.**

Accounting theory and practice unique to governmental and institutional jurisdictions; control of revenues and expenditures through budgets and allotments; comparison with commercial accounting, including nature and purpose of separate funds. P: Quantitative Methods 303.

### **315 Business Law 3 cr.**

Contracts, agency, negotiable instruments, sales, property, partnerships, corporations, bankruptcy law. P: jr st.

### **403, 404 Auditing Standards and Procedures 3, 3 cr.**

First semester: auditing standards and procedures; review and evaluation of internal control; examination and reporting; short cases and problems.

Second semester: advanced cases covering the various audit points and procedures; readings, problems and cases on statistical sampling,

electronic data processing, systems auditing; SEC requirements. P: Quantitative Methods 230 and 303.

**410 Income Tax Theory and Practice 3 cr.**  
Federal and state income tax as applied to individuals, partnerships and corporations; tax and raw source materials; written problems; tax planning and tax determination. P: Quantitative Methods 204 or 206.

#### Distribution

**302 Principles of Distribution 3 cr.**  
An introduction to marketing and advertising goods and services from the standpoints of seller and buyer. P: jr st.

**305 Theory and Practice in Public Relations 3 cr.**  
External relations of the business enterprise or governmental unit; attitudes and actions of the public and how they affect internal relations and conduct of the unit.

**310 Transportation and Purchasing 3 cr.**  
Economic analysis of the costs of transportation and their effects on economic development, location and marketing; relationships with price policies; principles of procurement of materials and goods by industry and government: sources, specifications, quality and price, internal control.

**402 Retailing and Wholesaling 3 cr.**  
Management practices in the operation of retail and wholesale enterprises; merchandising, promotion, role of the buyer, inventory control. P: Distribution 302, sr st.

**403 Principles of Advertising 3 cr.**  
Types of advertising and their characteristics; planning, execution and auditing of advertising campaigns. P: Distribution 302.

**404 Marketing Research 3 cr.**  
The techniques of securing information about marketing problems and analyzing them; securing data from primary sources, including shelf inventory sampling; keying advertising to sales.

#### **407 International Distribution and Marketing 3 cr.**

The structure of foreign trade; facilities available to exporters and importers; cross-cultural and economic analysis in marketing decisions; contemporary trends in international economic affairs. P: Distribution 302 and Economics 403.

**410 Applied Motivational Research 3 cr.**  
Studies and cases in the motivation of buyers and sellers, consumers and categories of publics. P: Distribution 302 and Psychology 335.

#### Finance

**303 Corporation Finance 3 cr.**  
Organization for management of finance of business units; management of fixed and working capital; short- and long-range financial planning; money and capital markets; expansion of income administration; failure; reorganization. P: Organization and Operations 203.

**306 Public Finance and Fiscal Policy 3 cr.**  
The theory and practice of public finance: revenues, primarily taxes; budget, expenditures, public debt, fiscal policy. P: jr st.

**305 Principles of Risk Management 3 cr.**  
The theory of probability applied to risk management; techniques and bases for decision making in management of business and personal risks. P: jr st. A course in social science statistics is recommended.

**402 Problems of Investment 3 cr.**  
Principles underlying the construction and management of investment portfolios; meeting investment needs of personal and institutional investors; reducing investment risks inherent in selection; inflation, depression and money market fluctuations. P: Finance 304.

**403 Financial Planning and Control 3 cr.**  
Money management: anticipation of cash flow and cash needs; relation of capital management to work production and asset management. P: Finance 304.

## The Educational Program

### Labor Relations

#### **302 Personnel Administration in Business 3 cr.**

The functions of personnel management: recruitment, staffing, training, safety, wage policy and fringe benefits. P: jr st. This course may not be taken by persons who have had Labor Relations 303.

#### **303 Personnel Administration in Government 3 cr.**

A counterpart course to Labor Relations 302, but emphasizing aspects of personnel management unique to government service: the problem of patronage, civil service rules and regulations, written examinations for recruitment. P: jr st. This course may not be taken by persons who have had Labor Relations 302.

#### **310 Labor Unions in America 3 cr.**

The history and development of labor unions in private business and in government service; present status of unionization. P: jr st. (Cross-listed in College of Community Sciences as Political Science 310)

#### **312 Collective Bargaining 3 cr.**

Cases on techniques and problems in dealings between organized employees and their employers; industry-wide collective bargaining; constraints in the public service; administration of collective bargaining agreements. P: Labor Relations 310 or cons inst.

#### **402 Problems in Labor Relations 3 cr.**

Treats basic problems such as industrial vs. craft unionism, strikes in government employment, the role of mediation and arbitration; the efficacy of statutes governing organized relations. Does not include cases in collective bargaining. P: Labor Relations 312.

#### **403 Labor Legislation and Administration 3 cr.**

Federal and state statutory and administrative regulation of collective dealings between employers and their organized employees; other regulations, such as Workmen's Compensation, Social Security, etc.

#### **412 Cases in Collective Bargaining 3 cr.**

Cases involving union recognition, type of shop, aspects of wages and hours determinations, strikes, grievance machinery and fringe benefits. P: Labor Relations 312 and sr st.

#### **420 International Labor Relations 3 cr.**

Comparative labor relations in industrialized foreign countries: government regulation, labor productivity, wage rates and labor costs; relationships between labor organizations in the U.S. and the International Labor Organization. P: Labor Relations 312.

### Education

#### **302 Elementary School Teaching Methods in Social Studies 3 cr.**

Teaching methods in the social studies in the elementary school. Required for an elementary school teacher's license in Wisconsin. P: jr st.

#### **303 Elementary School Teaching Methods in Art 2 cr.**

Teaching methods in art. Required for an elementary teacher's license in Wisconsin. P: jr st.

#### **304 Elementary School Teaching Methods in Music 2 cr.**

Teaching methods in music. Required for an elementary school teacher's license in Wisconsin. P: jr st.

#### **305 Elementary School Teaching Methods in Mathematics and Science 4 cr.**

Teaching methods in mathematics and science. Required for an elementary school teacher's license in Wisconsin. P: jr st.

#### **306 Elementary School Teaching Methods in Physical Education 2 cr.**

Teaching methods in physical education. Required for an elementary school teacher's license in Wisconsin. P: jr st.

#### **307 The Teaching of Reading 3 cr.**

Teaching methods in reading. Required for an elementary school teacher's license in Wisconsin. P: jr st.

**310 Teaching Methods in English 3 cr.**

For students who wish to be licensed in Wisconsin for the teaching of English in secondary schools. P: jr st.

**311 Teaching Methods in Foreign Languages 3 cr.**

For students who wish to be licensed in Wisconsin for the teaching of foreign languages in secondary schools. P: jr st.

**312 Teaching Methods in Social Studies 3 cr.**

For students who wish to be licensed in Wisconsin to teach one or more of the social studies in secondary schools. Fields included are history, political science, economics, geography, psychology, sociology, social problems, civics (citizenship) and other social studies. This course is required for every field. The fields of licensure are based on subject matter courses; 20 credits are usually required in a field. P: jr st.

**313 Teaching Methods in Mathematics 3 cr.**

For students who wish to be licensed to teach mathematics in Wisconsin secondary schools. A minimum of 22 credits specifically in mathematics is also required. P: jr st.

**314 Teaching Methods in the Sciences 3 cr.**

For students who wish to be licensed to teach chemistry, physics or biology in Wisconsin secondary schools. Appropriate differentiations are provided for the teaching of chemistry, physics or biology. Students who wish to be licensed in science as a broad field major must have 22 credits in one of these three sciences and 24 credits in three other sciences. The other sciences may include physiology, conservation or earth sciences as well as two sciences from the above list of three (chemistry, physics, biology) not selected for specialization. P: jr st and the appropriate first-year course in the chosen field.

**315 Teaching Methods in Physical Education 2 cr.**

For students who wish to be licensed to teach physical education in Wisconsin secondary schools. P: jr st.

**316 Teaching Methods in Art 2 cr.**

For students who wish to be licensed to teach art in Wisconsin secondary schools. Appropriate differentiations are provided for the needs of students according to the art medium selected. P: jr st and the appropriate beginning course in art.

**317 Teaching Methods in Music 2 cr.**

For students who wish to be licensed to teach instrumental music, vocal music, or both in Wisconsin secondary schools. P: jr st and the appropriate courses in music.

**402, 403 Practice Teaching 4, 4 cr.**

Supervised practice teaching in elementary and secondary schools in the Green Bay region. Student teachers meet every week as a group with the supervisor of practice teaching, and in monthly seminar with each other. Required for a teacher's license in Wisconsin. P: A 300-level course in education. Preregistration is advised at least four weeks in advance.

**499 Special Readings in Professional Education 1-4 cr.**

A readings course adapted to the individual's particular interests in the field of professional education. P: jr st and cons inst.

**Mass Communications**

**202 Media I: Radio and Television 3 cr.**

News, entertainment and business aspects of the electronic mass media; functions, economic and political aspects and social policy implications. Required for the professional collateral in mass communications. P: soph st.

**203 Media II: Newspapers and Magazines 3 cr.**

Distinctive and common problems of various categories of periodicals; their organization and functioning, economic and political foundations and social implications. Required for the professional collateral in mass communications. P: soph st.

**305 Television and Radio News Writing 3 cr.**

Development of the basic skills required for ef-



## The Educational Program

fective performance in news writing and announcing situations. An optional course for the professional collateral in mass communications. P: jr st.

**310 Television Directing and Producing 3 cr.**  
Objectives and methods in commercial and public service programming, including the conception, writing and producing of individual program ideas. This is an activity course which will be conducted primarily in commercial television studios in Green Bay. An optional course for the professional collateral in mass communications. P: jr st.

**320 Reporting Laboratory 3 cr.**  
Assignments in interviewing and gathering news; writing and copy editing for newspapers and radio or television newscasts. Optional for the professional collateral in mass communications. P: jr st.

**402 Television and Radio Internship\*\* 3 cr.**  
Supervised assistance and practice in the production of radio programs and television programs at commercial stations in the Green Bay area. P: sr st and Mass Communications 310.

**405 Professional Reporting Internship\*\* 3 cr.**  
A field course, comprising supervised instruction and practice in gathering and reporting news for a newspaper in the Green Bay area. P: sr st and mass communications 320.

**430 Mass Media and Society 3 cr.**  
Critical examination of the mass media of communication as social agencies in contemporary living; communication networks; the concept of the semantic environment; effects of the media on public opinion, morality and popular taste. An optional course for the professional collateral in mass communications. P: 9 cr in mass communications courses.

**499 Special Readings in Mass Communications 1-4 cr.**  
A readings course adapted to the individual's particular interests in the field of mass communications. P: jr st and cons inst.

## Leisure Sciences

**302 Philosophy and Sociology of Leisure 3 cr.**  
The impact of increasing leisure on society, its culture and sub-cultures; fundamental attitudes and values which have influenced the development of leisure services in various organizational and institutional settings; the emergence and development of leisure service professions. P: jr st. (Cross-listed in the College of Community Sciences as Sociology 310)

**303 Physiology and Psychology of Leisure 3 cr.**  
Concepts of the individual and his total development; the differential physiological effects of work and leisure time activity; the differential effects of various kinds of leisure time use; the psychological motivations involved in leisure activities of various kinds and their differentiation from work motivation. P: jr st.

**310 Public Park and Recreation Systems 3 cr.**  
Policies, principles and administrative practices involved in the planning, development and operation of public park and recreation systems.

**320 Field Practicum\*\* 2 cr.**  
Directed work-study experiences in selected environmental settings in the United States, Canada or other culture; available to qualified students between junior and senior years. Oral and written reports are required. P: jr st and cons inst.

**403 Recreation Supply and Demand Analysis 3 cr.**  
Actual case problems in analyzing both supply and demand for recreation: theoretical concepts, determinants of supply and demand, including treatment of the substitution effect; pricing and allocation of recreation resources and services. P: Leisure Sciences 302 and 303.

**404 Formulating and Administrating Leisure Programs\*\* 3 cr.**  
Practice in designing programs and establishing effective organizations for their administration;

\*\*Not offered in 1969-1970

applying valid conclusions from the philosophical, sociological, physiological and psychological characteristics of leisure time usage; theories, principles and practices of program development in public, private and commercial operations. Includes such settings as community centers, hospitals, convalescent centers, camps, nature centers, resorts, parks and tourist centers. P: Leisure Sciences 403.

**410 Recreation Resource Planning in the Upper Great Lakes Region 3 cr.**

Regional recreation resource planning utilizing ecological principles; resource inventory classification and allocation; forecasting demand; quantification of user-resource relationships; formulation and application of recreation planning guides; fiscal considerations. Problems orientation in the Upper Great Lakes region. P: sr st and Leisure Sciences 403.

**499 Special Readings in Leisure Sciences 1-4 cr.**

A readings course adapted to the individual's particular interests in the field of leisure sciences. P: jr st and cons inst.

**Social Services**

**202 Introduction to Social Work 3 cr.**

The role of social work in modern society; field methods, principles, scope of the social services. P: soph st.

**203 Social Welfare Programs of the National, State and Local Government 3 cr.**

Nature, development and administration of social insurance, public assistance, categorical aids, poverty programs and urban redevelopment. P: soph st.

**302 Methods of Public Welfare Investigation 3 cr.**

The role of the social worker in understanding and helping clients; techniques of interviewing; analyses of cases; agency policy and the choice of suitable social services. P: Social Services 202 or 203 and jr st.

**310 Child Welfare 3 cr.**

Problems of dependent, neglected and delinquent children; methods of study and treatment policies by private agencies, and by federal, state and local governments. P: Social Services 202 or 203 and jr st.

**402 Field Experience in a Social Service Agency\*\* 3 cr.**

Actual social service work through placement in a social service agency; weekly seminar meetings and written reports. P: Social Services 302 and sr st.

**405 Probation and Parole 3 cr.**

The history and theory of probation and parole; methods for treating offenders; investigation for probation; eligibility, selection, supervision and termination of parole. P: Social Services 302 and sr st.

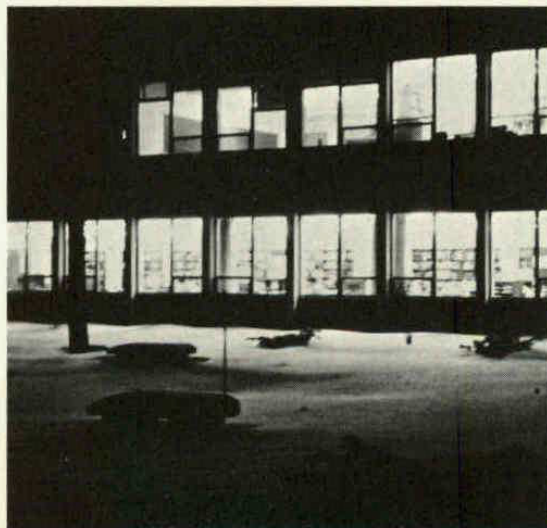
**410 Social Programs and the Aged\*\* 3 cr.**

An historical consideration of the role of old people in society; the changing position of the aged in American society; problems of the aged and methods of administration. P: Social Services 302 and sr st.

**499 Special Readings in Social Services 1-4 cr.**

A readings course adapted to the individual's particular interests in the field of social services. P: jr st and cons inst.

\*\*Not offered in 1969-1970





# Continuing Education Opportunities

University Extension provides a statewide mechanism that seeks to bring the total resources of The University of Wisconsin to bear on problems and opportunities of the people of the state. University Extension is joined by The University of Wisconsin-Green Bay in a partnership to bring its resources and others of The University of Wisconsin to the people of the northeast region and the state.

In cooperation with University Extension, The University of Wisconsin-Green Bay provides opportunities for the people of Northeastern Wisconsin to take part in the process of continuing education and learning. It provides these opportunities through classes, seminars and workshops for working men or women, retired persons, nonprofessionals and professionals, young and old, poor and prosperous. These opportunities are scheduled at the campuses at Green Bay, Marinette, Manitowoc and Menasha and elsewhere at times convenient to those interested in participating.

## DAYTIME CREDIT COURSES

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 of these adults are working toward a career goal which includes a Bachelor of Science degree or a Bachelor of Arts degree. Others are enrolling in courses for credit which will enhance their educational or professional attainments.

The University of Wisconsin-Green Bay encourages adults to enroll part time in order to advance educationally and professionally. To assist them in exploring these possibilities, adults are encouraged to write or call the Office of Student Affairs at Green Bay or the other three campuses.

## LATE AFTERNOON AND EVENING CREDIT COURSES

The University of Wisconsin-Green Bay offers an array of courses in its regular academic curric-

ulum. By their nature or content, some of these courses are of particular interest to adult members of the communities of Northeastern Wisconsin who are not regular daytime students.

Courses of particular interest to community adults are scheduled for late afternoon or evening to permit those involved in other daytime activities to attend. These courses are open also to regular daytime students.

Adult members of the community enroll 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 Affairs can provide specific information and assistance on registration, fees and related matters.

Examples of possible late afternoon or evening courses for credit include the following:  
Business Law (Quantitative Methods 315, School of Professional Studies)  
Cost Accounting (Quantitative Methods 302, School of Professional Studies)  
Elections and Voting Behavior (Political Science 303, College of Community Sciences)  
Landmarks in Western Music (Music 103, College of Creative Communication)  
Nutrition and Culture (Nutritional Sciences 302, College of Human Biology)  
Psychology of Learning (Psychology 338, College of Community Sciences)  
Recreation Supply and Demand Analysis (Leisure Sciences 403, School of Professional Studies)  
The Soil Environment (Earth Sciences 320, College of Environmental Sciences)

These or other courses of UWGB may be offered in the evening, depending upon the adult interest. Individuals or groups 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 Student Affairs.

## NONCREDIT CLASSES, WORKSHOPS, SEMINARS AND CONFERENCES

University Extension and The University of Wisconsin-Green Bay often cooperate to provide

## **The Educational Program**

various noncredit offerings. Some focus on problems and opportunities of communities; some focus on problems and opportunities of individuals and families.

Noncredit offerings focusing on communities may cover such topics as (1) specific problems and opportunities for enhancing environmental quality; (2) community and regional planning and development; (3) unique opportunities for economic and social development of Northeastern Wisconsin; (4) specific problems and opportunities for recreation development including planning and management of facilities and services; (5) specific conditions of individual, family and community disadvantage; (6) specific problems and opportunities for cultural development in communities.

Noncredit offerings focusing on the individual cover a broad array of possibilities. They may explore the problems and possibilities for professional improvement in the fields of education, business management, public administration or governmental services, recreation and leisure use, communications and social services. They may help individuals to explore possible new or related careers in these fields and others. They may contribute to general educational advancement or cultural enrichment of the individual. Examples are noncredit offerings in literature, history, philosophy, music, theater, dance and the visual arts.

### **UNDERGRADUATE COURSES FOR CREDIT THROUGH UNIVERSITY EXTENSION**

In cooperation with academic departments on the Madison and Milwaukee campuses of The University of Wisconsin, University Extension and The University of Wisconsin-Green Bay offer some courses for undergraduate credit. These courses are scheduled at the University campuses and at such other places as meet the needs of the residents.

The University of Wisconsin-Green Bay will assist University Extension in increasing the course offerings in Northeastern Wisconsin. These may

be courses that help residents toward professional improvement, toward general educational advancement or cultural enrichment and courses that help residents to explore a new or related career.

Some summer courses which can be taken by adults are offered cooperatively by University Extension and The University of Wisconsin-Green Bay. For example, University Extension and The University of Wisconsin-Green Bay now offer summer courses at Door County in painting, art survey, sculpture and art metal. Summer courses also are offered at the campuses of UWGB.

Classes will be held at the UWGB campuses and elsewhere and scheduled at times convenient to Northeastern Wisconsin residents.

### **GRADUATE CREDIT COURSES THROUGH UNIVERSITY EXTENSION**

In cooperation with academic departments on the Madison and Milwaukee campuses, University Extension and The University of Wisconsin-Green Bay cooperate to offer selected graduate credit courses. Examples of such courses offered through University Extension include the following: Computer Applications in Educational Administration; Elementary School Curriculum; Instructional Innovations and Procedures for Driver and Traffic Safety Education; Human Behavior and the Social Environment; Social Policy and Social Welfare Organization.

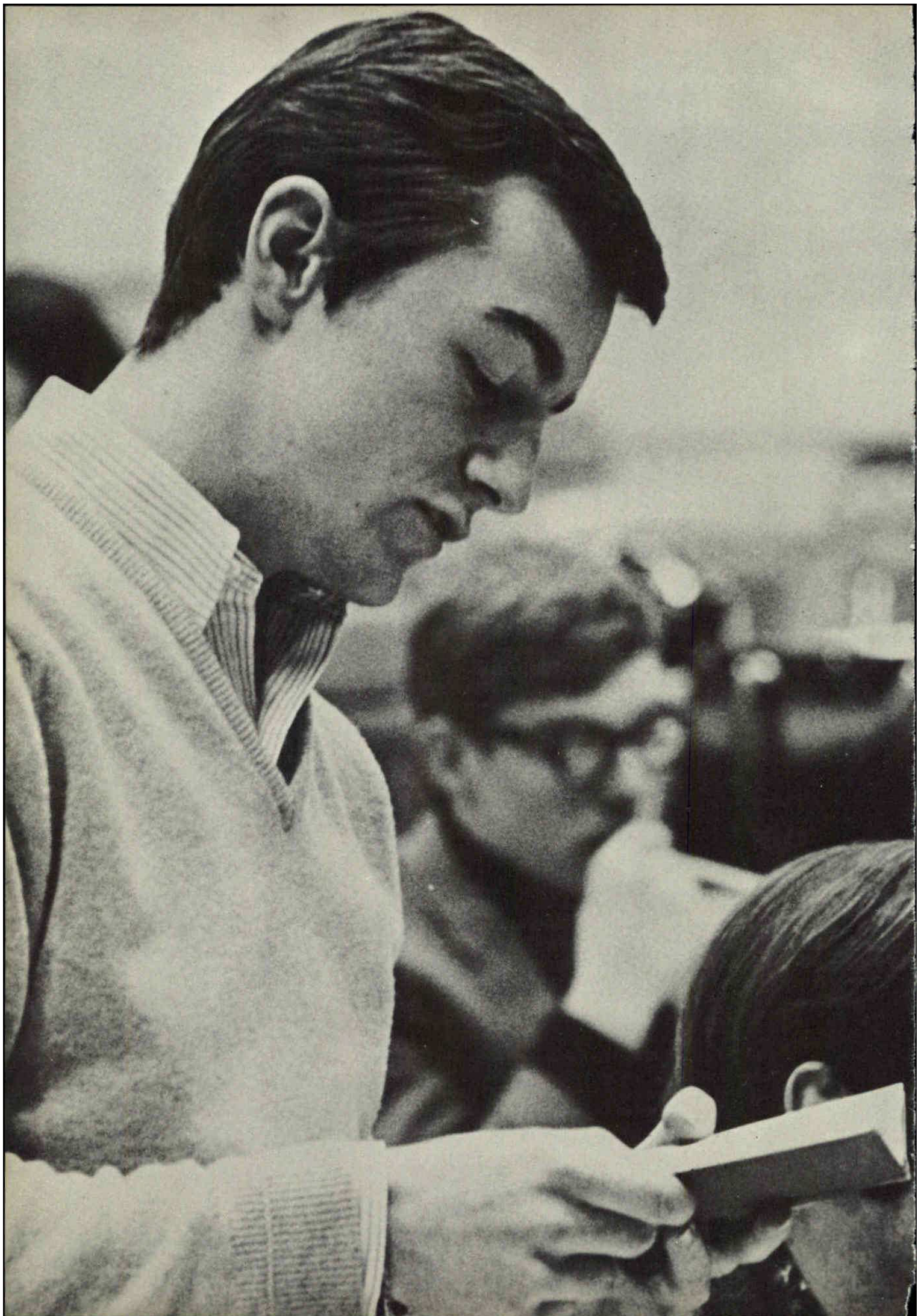
### **ASSISTANCE TO ADULTS IN EXPLORING EDUCATIONAL OBJECTIVES**

Individuals who wish to make some evaluation of their possible educational objectives or goals can obtain assistance from counselors in the Office of Student Affairs or from the Continuing Education Agent, University Extension, at Green Bay or at the other three campuses. Counselors will in turn refer special questions or requests for information to the UWGB academic deans or to other appropriate individuals.

the university  
of wisconsin  
green bay



**Admission, Expenses and Financial Aids**



# Admission

## 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 matriculated student must normally 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. They are 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. However, the level of achievement indicated by test results will be used by an admissions counselor in fulfilling 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 out of 3	Foreign language*	2 units
	History and social studies	2 units
	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

**For 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.

High school students may apply as early as October of their senior year for the fall, spring or summer term of the following academic year.



## Admission, Expenses and Financial Aids

However, 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, non-refundable fee with the application for admission. Wisconsin residents do not pay an application fee.

Many students are admitted to the University on the basis of grades earned through the junior year in high school plus a listing of subjects carried in the senior year, and therefore may receive a Permit to Register before high school graduation. Others may be asked to provide grades through the senior year to assist 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 after a Permit to Register has been authorized. 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.

**For transfer students.** Students who have attended any kind of school after high school graduation will complete the same application blank 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. 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 made for training schools attended as part of military service.

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.

### SPECIAL OPPORTUNITIES

**Early admission for superior high school students.** The University of Wisconsin-Green Bay provides opportunities to challenge superior students while they are still in high school or to permit them 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 this 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 guidance counselor. A student electing an early admission program should be completing at least the 10th grade and preferably the 11th grade.

The University also considers placement and University credit in specific subjects for high school students who have earned satisfactory scores on the appropriate achievement tests of the College Entrance Examination Board.

A 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 their recommendations are necessary to insure that the early admission program fits in with high school class schedules.

**For adult students.** The University of Wisconsin-Green Bay provides many opportunities for higher education to adult students who do not qualify for admission on the basis of previously listed requirements. An adult who wishes to take one or two courses or to work toward a degree is invited to consult an admissions counselor at any of the four UWGB campuses, or to write for information to the UWGB Director of Admissions.

# Expenses and Financial Aids

## EXPENSES

### Semester Fees

Fees for each semester at The University of Wisconsin-Green Bay total \$139 for a student who qualifies as a Wisconsin resident and is enrolled in a program of eight or more credits. An out-of-state student or nonresident pays \$372. A student may register for seven credits or less on a per-credit basis. Wisconsin residents pay \$12 per credit; nonresidents, \$33 per credit.

Exemption from the nonresident tuition is governed by Section 36:16, Wisconsin Statutes of 1963. This statute is administered by residence examiners in the Office of Admissions, 1567 Deckner Avenue, Green Bay 54302. Since the regulations governing residency for tuition purposes differ in many respects from residency for other purposes, students whose cases may be questionable are advised to consult the statute or write the Office of Admissions for advice. Informal opinions or statements concerning residence status by other University personnel are not to be considered official.

### Late Registration, Late Payment

An added fee of \$10 is charged for students who complete registration (except for payment of fees) after classes begin. If fees are paid after the first week of instruction, the student will be assessed a late payment fee according to the following schedule: during the second week of classes, \$5; third week, \$10; fourth week, \$15; fifth week, \$20; after the fifth week of classes, \$25.

A late registration fee is not applicable to part-time students. However, the following penalties have been established for late payment of fees: during the third week of classes, \$5; fourth week, \$10; fifth week, \$15.

### Refunds

A student who notifies the Office of Admissions in writing that he is withdrawing from the Uni-

versity will receive a refund as follows: withdrawal during the first week of classes, 100 percent; during the second week, 80 percent; during the third or fourth week, 60 percent; fifth or sixth week, 40 percent; during the seventh or eighth week, 20 percent. The date on which the notice of withdrawal is submitted to the Office of Admissions is the official date used in authorizing a refund.

### A Typical Budget:

	Student Living at Home	Student Living Away from Home
Fees	\$278	\$278
Books and supplies	\$100	\$100
Board	\$400	\$700 (incl. room)
Miscellaneous and travel	\$500	\$450
Total	\$1278	\$1528

Nonresident students add \$466 to this budget for out-of-state tuition.

The "living at home" budget above shows the actual costs of supporting a student in college for an academic year. Figures include the cost of food while living at home, miscellaneous expenses and travel.

Commuters and their parents should keep in mind that they are already paying for these three items. The only additional costs are those for fees and books. Most average commuter families will find they will be paying only an additional \$378 (\$278 in fees, \$100 for books). Travel expenses may be higher than transportation costs of the student while in high school. This will vary, depending on whether the student is a resident of a UWGB campus community or commutes from a more distant residence.

### Summer Session Fees

Fees for the summer session are based on the number of credits elected, according to the

## Admission, Expenses and Financial Aids

following schedule:

Credits	Resident Fee	Nonresident Fee
1 or 2	\$30	\$ 90
3 or 4	\$45	\$135
5 to 8	\$60	\$180
Over 8	\$90	\$270

Fees are payable in full at registration, and students are not considered enrolled until payment is made. Further information is to be found in the Summer Sessions Bulletin.

### Extension Fees

Fees for credit courses offered by University Extension at the campuses of The University of Wisconsin-Green Bay are normally calculated at \$17 per credit hour for undergraduate classes and \$23 per credit for graduate credit classes. Fees for noncredit classes vary widely, depending upon the type of offering and the size of the class.

THE UNIVERSITY RESERVES THE RIGHT TO ALTER CHARGES WITHOUT NOTICE. THESE FEES WERE EFFECTIVE JULY 1, 1968.

## FINANCIAL AIDS

### Policies

Many and varied financial aids are available to qualified young men and women who wish to attend The University of Wisconsin-Green Bay at Green Bay (main campus), Menasha (Fox Valley), Marinette or Manitowoc. Students have the opportunity to draw from the overall University financial aid program. In addition, some campuses have their own special programs designed to aid students from their area. The Office of Student Affairs at each campus has additional information about these special programs.

### Parents' Confidential Statement

To help the University judge student need and award aid fairly, the University asks parents to fill

out a confidential financial statement of their income, assets and liabilities. On the basis of this financial statement, the University can determine the gap between what parents and student can provide and what his education will cost.

The following table indicates what the University considers a reasonable parental contribution toward a student's annual expenses:

Parents' income (before federal tax)	Number of dependent children			
	1	2	3	4
\$4,000	\$300	\$110	\$ 0	\$ 0
6,000	750	540	350	220
8,000	1220	950	710	560
10,000	1690	1350	1060	890
12,000	2150	1730	1400	1190

Some things considered in determining a reasonable parental contribution are salaries of both parents, additional income, net worth of business or farm, real estate holding, savings, investments, special family circumstances (such as additional costs of two working parents), number of dependents, student's earning and assets, extraordinary expenses (such as business or medical) and debts for certain purposes. Special circumstances—job expenses, debts, support of elderly relatives or other children in college—are also taken into account.

### Student's Contribution

Students are expected to commit a substantial part of their resources toward educational expenses before they request assistance. For students living on or near a University 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 under-

graduate 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 combinations. He need not accept the whole package to receive part of it.

Awards are based upon the total cost of supporting a student (see A Typical Budget, under Expenses). Assistance given beyond costs for fees and books should go toward meeting board and miscellaneous expenses.

If a student wishes to discuss college finances or any questions regarding financial aids, he may make an appointment for counseling through the Office of Student Affairs at the campus he plans to attend.

### 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 Affairs at any UWGB campus. A student who submits an application will be 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 award of aid. A parents' financial statement, completed by the parents of the applicant, must accompany each application for financial aid.

**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 will be notified between April 15 and May 15 of action taken on their applications. Continuing and transfer students will be 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 scholarship deadline dates but before priority dates will be notified of their awards by August 15.

### 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 seven selected traits and six semesters of 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.

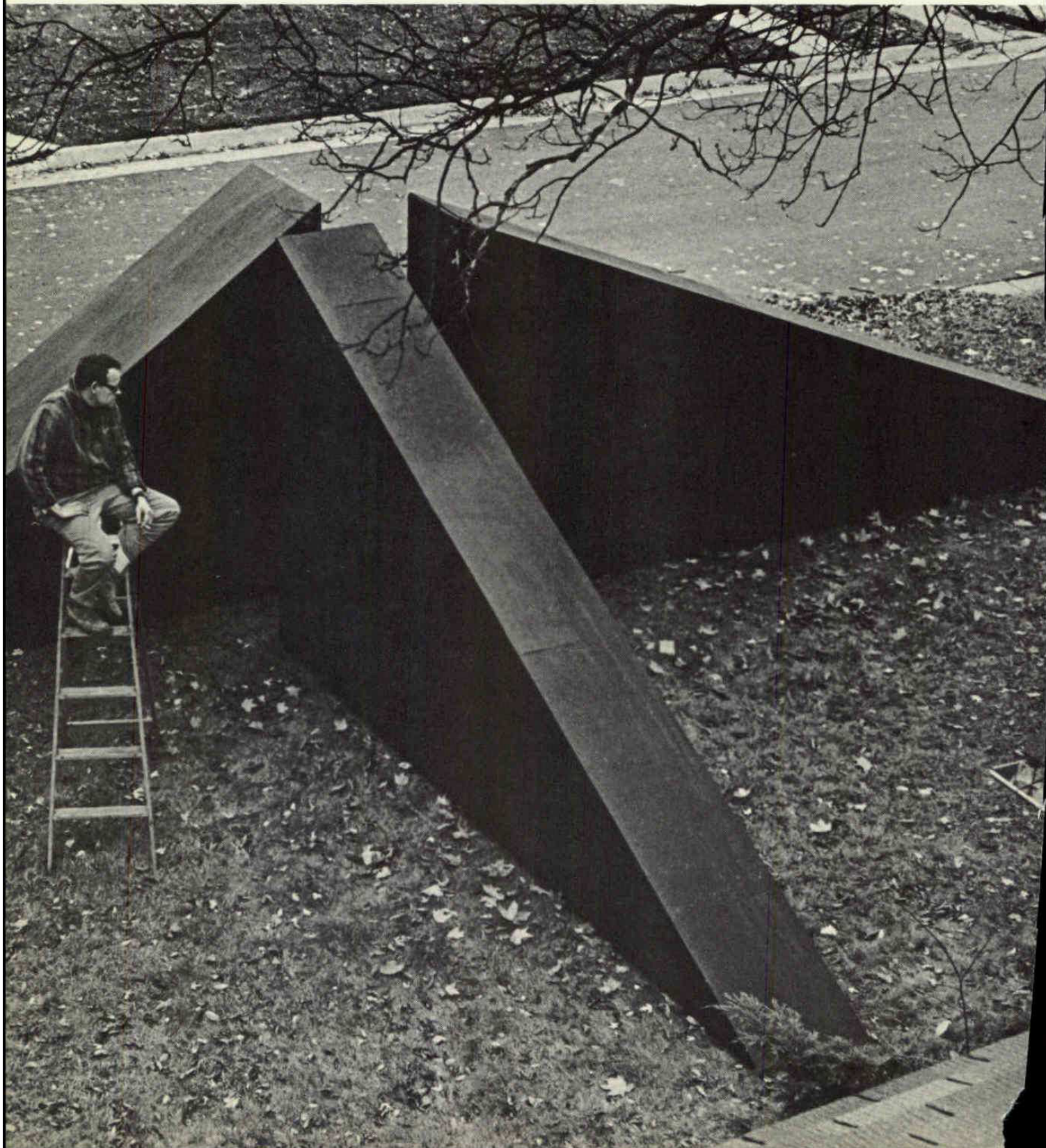
Awards to continuing or transfer students are made on the basis of the student's college cumulative grade point average.

The single financial aid application, with the appropriate parents' financial data, is all that is needed to apply for any scholarship assistance at The University of Wisconsin-Green Bay.

**Educational Opportunity Grants.** The Higher Education Act of 1965 created a new federal student assistance program to further help students "of exceptional financial need." In general, this means students whose parents are able to provide only a small portion of the financing of their child'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 could 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

**The Educational Program**



of \$800. This grant is renewable each year up to four years as long as the student continues to make satisfactory progress and his financial situation does not change. Grants are considered as gift assistance and do not have to be repaid.

**Loans.** In some cases it is advisable to borrow to finance an education, if a student borrows only what he needs to maintain a minimum living standard. Caution is advised in borrowing. 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. Students may find themselves facing a staggering debt upon graduation—a burden which can cause problems as they plan for marriage, children, home, automobile and so on. Taking part-time work or even dropping out of school for a year or so to work full time might be advisable for some students.

Loans are not available for non-educational expenses, nor are they generally available for the repayment of previously incurred debt.

In all loan programs at the University, need is the primary factor in determining whether an applicant will receive assistance.

**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. The act directs that need be the primary consideration for granting a loan.

An undergraduate, depending on his need, may borrow up to \$1,000 during any one fiscal year (July 1-June 30) with maximum disbursements of \$500 per semester. Accumulated loans may not exceed \$5,000. Graduate students may borrow up to \$1,500 per year, depending on financial need, with a maximum accumulation of \$10,000.

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 three percent 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 non-profit elementary or secondary school or institution of higher education, he can arrange to have portions of his loans cancelled at the rate of 10 percent a year for each complete year of academic service. The maximum amount which may be cancelled for teaching service is 50 percent of the total loan, including interest, unpaid as of the first day of teaching. Cancellation of 15 percent a year for up to 10 years 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 armed forces, Peace Corps or VISTA.

To apply for a loan under this program a student must

- be a citizen or permanent resident of the United States
- be enrolled as at least a half-time student on the undergraduate, graduate or professional level (law only). Definition of "half-time" student: undergraduate carrying at least eight credits per semester; graduate student carrying at least five credits per semester. (Graduate students who have fulfilled their residence requirements and passed their preliminary examinations will be considered eligible if they are carrying two credits and are completing a dissertation. Special students and students attending only a summer session at the University are not eligible.)
- meet the following grade requirements: entering freshman—admitted to the University; undergraduate—minimum 2.0 cumulative grade point average and for last completed semester; graduate student—minimum 3.0 cumulative grade point average and for last completed semester.

## Admission, Expenses and Financial Aids

**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 attending and the State Higher Educational Aids Board.

A student is eligible to borrow from the state loan program if he

- is a citizen or permanent resident of the United States and is a Wisconsin resident attending an accredited post-high school educational institution.
- is an undergraduate, graduate or professional school student carrying one half or more of a normal academic load.
- has demonstrated academic ability and is likely to go on to graduation. (An undergraduate is required to maintain a 2.0 cumulative grade point average and for the last completed semester; a graduate student a 3.0 cumulative grade point average and for the last completed semester before he is recommended to the state for a loan.) Entering freshmen who have been admitted to the University are eligible.
- demonstrates financial need.

A student may borrow up to \$1,000 per year as an undergraduate or \$1,500 as a graduate or professional (law, medicine, pharmacy, nursing) school student. The maximum accumulation of loans is \$5,000 for an undergraduate and \$7,500 for a graduate or professional school student. No interest is charged as long as the student is in school. Nine months after the student ceases to be at least a half-time student, repayment with interest commences at three percent a year. The student has up to 10 years from this date to repay the loan, depending upon the total amount that is outstanding. The state bills on a monthly basis, with a minimum yearly repayment of \$360. No cancellation benefits are allowed in this loan program, but deferments of up to three years may be obtained for active duty with the armed forces or the Peace Corps.

**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, i.e. banks, savings and loan associations, credit unions, etc. 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.

To be eligible for a Guaranteed Student Loan, an applicant must

- be a citizen or permanent resident of the United States and a Wisconsin resident as defined by Section 36.16 of the Wisconsin Statutes (i.e. the same as the University's requirements for residency);
- be enrolled or accepted for enrollment at an accredited post-high school educational institution;
- be at least a half-time student (see NDEA loan requirements);
- have demonstrated academic ability and be likely to go on to graduation (i.e. a 2.0 cumulative grade point average and a 2.0 in the last completed semester).

This is a long-term loan. Depending upon the total amount borrowed, the student has up to 10 years to repay the loan after he has permanently left school. Nine months after a borrower ceases to be at least a half-time student, he will be billed on a monthly basis with a minimum annual repayment of \$360 per year. Thus a student may have less than 10 years to repay his obligation, depending upon the total amount outstanding under this program.

In general, if the adjusted family income is below \$15,000 a year, the student does not have to pay interest while he is in school and pays four percent simple interest per annum for up to ten years thereafter. (The federal government actually pays seven percent interest to the lender when the student is in school and three percent

after the student leaves school). If the adjusted family income is above \$15,000, the student pays the entire six percent simple interest each year. There is no government interest subsidy.

The student may borrow up to \$1,000 per fiscal year as an undergraduate with an additional \$250 per summer session. Maximum accumulation of loans, including summer session installments, is \$5,000 for undergraduates. Graduates and professional school students may borrow up to \$1,500 annually, also with an additional \$250 per summer session. Maximum accumulation of loans for graduate and professional students is \$7,500.

The commercial lenders must have signed an agreement with the state corporation to participate in the program. Therefore, it is possible that not all banks or savings and loan associations will be active in this program. However, the number of participating institutions is constantly increasing.

**University Short-Term Student Loans.** These loans are made from funds established by gifts to the University. They are generally granted in amounts up to \$300 per academic year. Repayment usually is expected by the beginning of the next academic year, and summer earnings are pledged for that purpose. A repayment schedule is agreed upon at the time the loan is granted. Interest rates vary, but the average is two to three percent per year. Parents of students under 21 co-sign a promissory note.

To qualify for a University short-term loan, a student must

- be a full-time student;
- maintain a satisfactory academic record: undergraduates at least 2.0 cumulative grade point average or in the last completed semester; graduate students at least a 3.0 cumulative grade point average in the last completed semester. Graduate students who have teaching, research or project assistantships are not eligible to borrow from this fund. Neither are special students or students attending the University only during the summer session.

**Other Loan Funds.** Many individuals and foundations have established private loan funds to assist worthy students. A list may be obtained from the Office of Student Affairs at any of the campuses. Most states also have programs similar to the Wisconsin Guaranteed Loan program outlined above. Addresses of these state agencies may be obtained from the Department of Public Instruction or the appropriate Office of Student Affairs. Loans for Wisconsin veterans of World War II and the Korean conflict are available from the Department of Veterans Affairs, 12A South State Capitol, Madison, Wisconsin 53702.

**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 county Veterans' Service Officer of the county from which the veteran departed for service, or where he now claims residence. However, he may also seek assistance from the Office of Student Affairs.

**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.

**Student Employment.** All enrolled students at the University and their spouses are eligible to use the employment services of the Office of Student Financial Aids. Students may apply any time during the year; however, no student can be referred to a job opening until he arrives on campus.

Approximately 6,000 students work on all The University of Wisconsin campuses and thousands more work in the surrounding communities. In addition, federal funds have been allotted to the



## Admission, Expenses and Financial Aids

University under the Work-Study program for the employment of full-time students who have substantial financial need. For this reason, the University can genuinely offer any student the opportunity to work for a portion of the amount he will need to finance his college education, instead of having to rely totally on borrowing the necessary funds. Students generally are able to earn from \$400 to \$700 during the academic year.

Most academically-able students can carry a full load while holding a part-time job (i.e. 12 to 15 hours a week) without undue strain. Many students find they earn better grades while working part-time than when they are not working, because they budget their time more wisely.

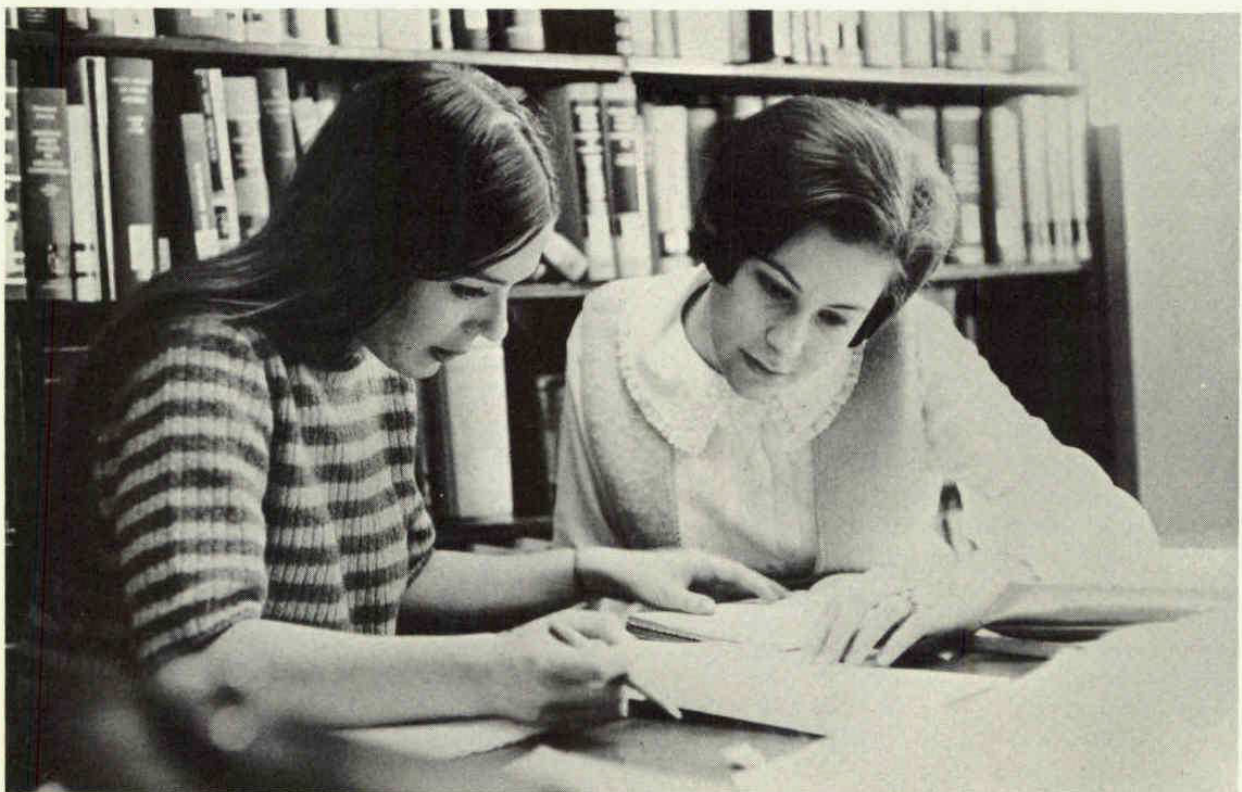
While previous work experience is taken into account, the possession of needed skills is even more important. Students who have skills such as

typing, shorthand, keypunching, bookkeeping, drafting, carpentry or painting, or who know something about mechanics, photography, lab work, sales or janitorial work, will have a much easier time finding part-time positions. These skills are usually quite marketable, and the pay per hour is generally above average.

Rates of pay for student jobs on and off campus generally range from \$1.50 to \$2.50 an hour. The exact rate depends on the complexity of the job.

This chart shows possible expected earnings (before taxes and other deductions) in a school year of about 34 weeks:

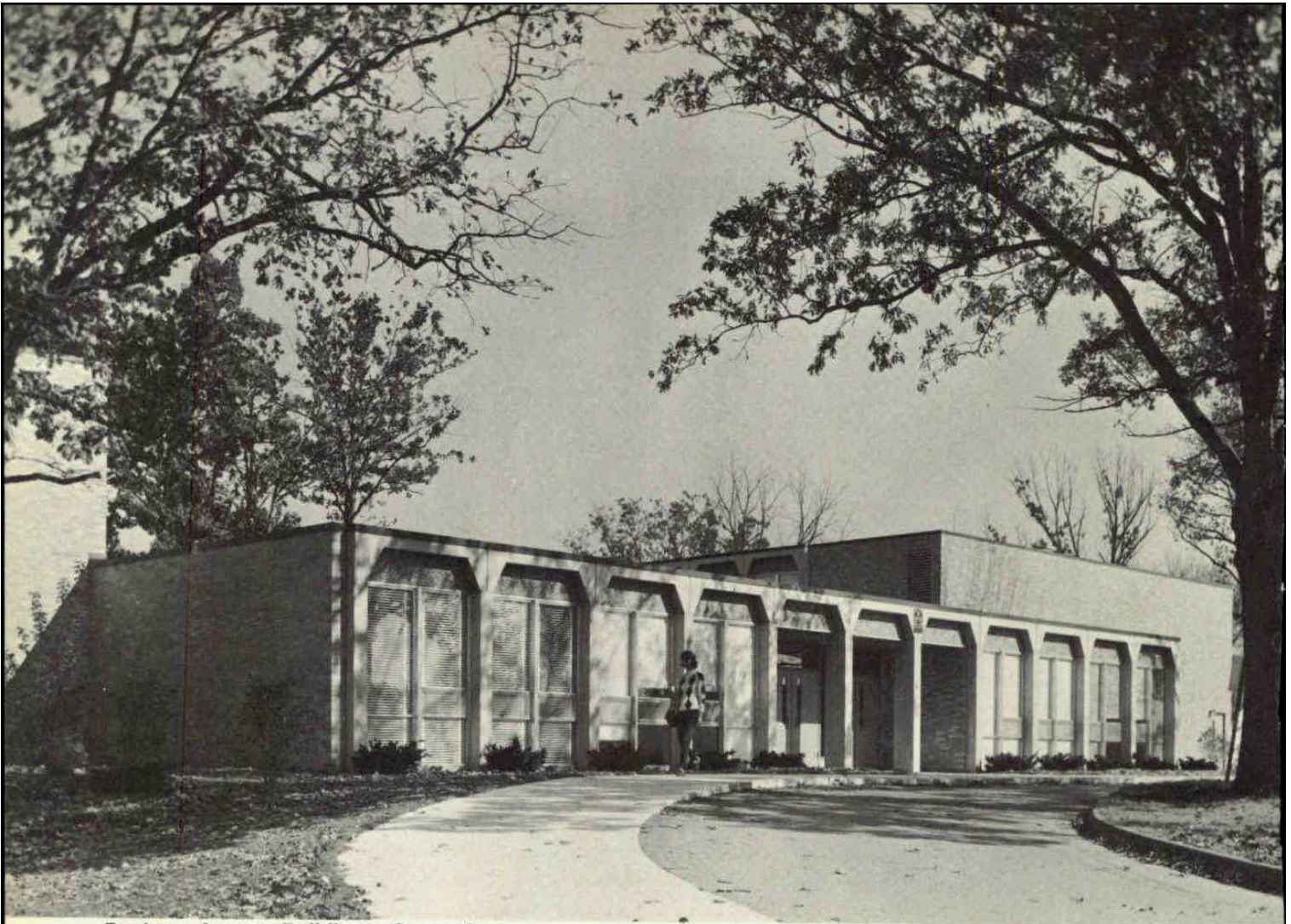
Hours worked weekly	\$1.50/hour	\$1.65/hour
10	\$510	\$561
12	\$612	\$673
15	\$765	\$841



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## The Campuses



Deckner Avenue Buildings, Green Bay



Marinette County Campus

# The Campuses

## AT GREEN BAY

### Main Campus

Students who enter The University of Wisconsin-Green Bay for the 1969-1970 academic year will be the first to occupy the new campus on a wooded, 600-acre site on the shores of Green Bay. Three units comprise the initial phase of construction: a center for the College of Environmental Sciences; a laboratory-classroom building, and a multi-use "surge" area built below grade level. All three buildings are of concrete and native stone, are completely air-conditioned, and interconnected by sheltered indoor walkways.

The College of Environmental Sciences Building, three stories high, houses classrooms, lounge and reading areas, exhibit halls and a lecture hall-auditorium seating 350. In the four-story laboratory-classroom structure, in addition to modern instructional rooms and new teaching laboratories, are to be found special purpose research facilities, faculty offices and a snack bar.

Library collections totaling more than 60,000 volumes and instructional media equipment will be housed temporarily in the surge area until completion of the library-learning center in 1971. Other facilities occupying the surge area include a data processing center and offices for the faculty.

The three units open on a beautifully landscaped plaza paved with brick. When the library is completed, it, too, will look out on the spacious plaza at the heart of the campus.

The main campus is entered from Nicolet Road on the bay shore by way of a circular drive that leads to parking areas. As later phases of the building plan are completed, an outer drive will ring the campus. The interior, except for service roads, will remain free for pedestrian traffic.

Each unit of the campus will be developed as an entity. Future development has been carefully

planned to avoid disruption of the normal use of existing buildings as construction continues. Through the first academic year, the University will serve only students who travel each day from their homes, or who arrange for private housing near the campus. By the fall of 1970, however, apartment-style residence halls are scheduled to be open for occupancy.

Each residence hall will serve as a center of a small "village" of both resident and commuter students within the larger university community. Adjacent to the residence hall will be commons buildings providing space for food service, recreation areas, lounges, meeting rooms, offices for faculty and student counselors, study spaces, a small library of books and periodicals, and lounge areas for commuting students.

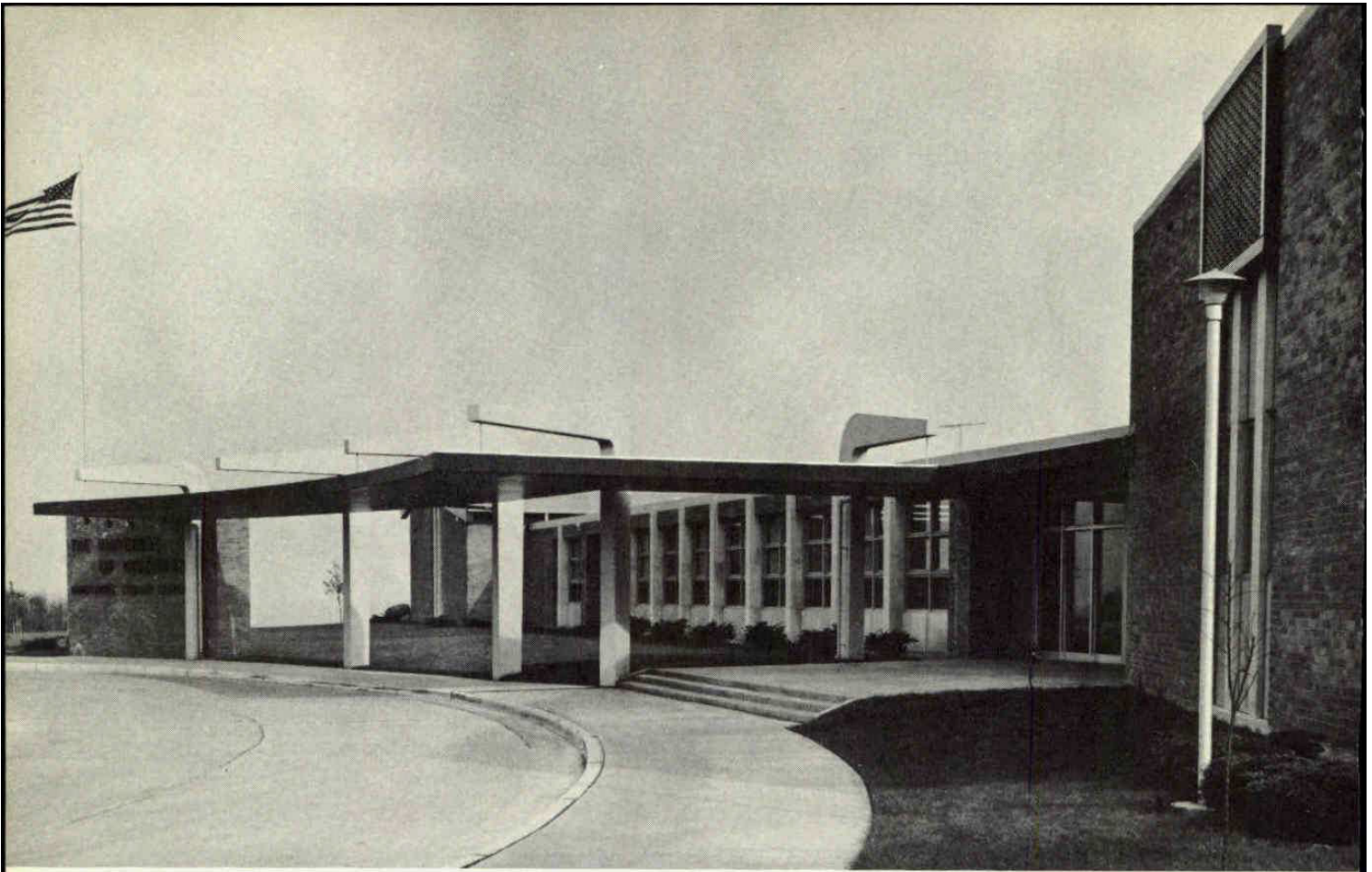
In such a setting, students who live on campus and those who drive in each day from their homes will find maximum opportunity to mingle informally with others of like interests. By planning for "smallness within bigness" from the beginning, the University hopes to accomplish in part with physical facilities one of its primary objectives: individualizing the educational experience for each student.

For some time to come, several small buildings located on the campus will be used as headquarters for administrative personnel. Highest priority in construction will continue to be given to the needs of the rapidly expanding student population.

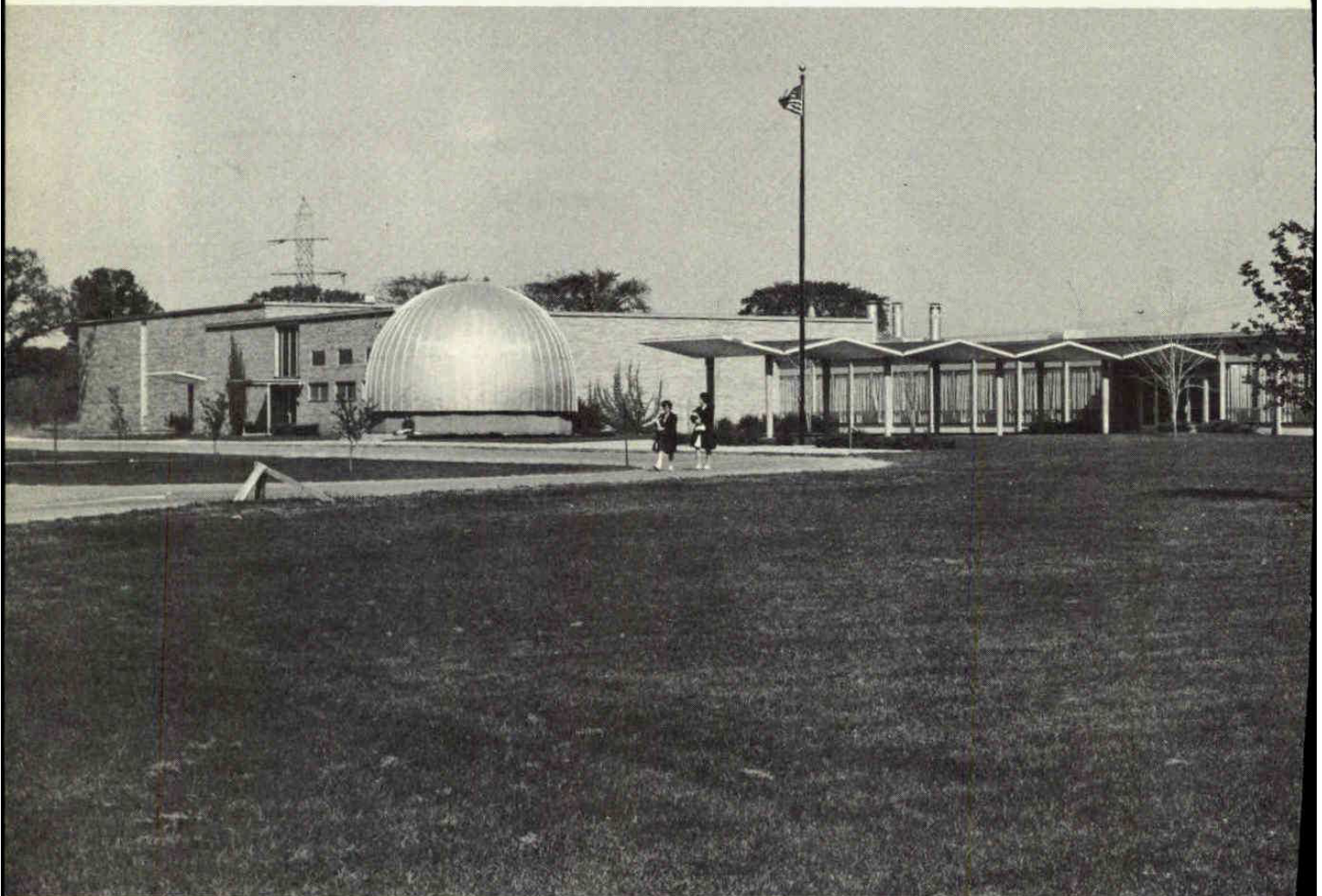
### Deckner Avenue Buildings

Green Bay Campus buildings at 1567 Deckner Avenue will be used as an integral part of the University classroom space until 1971. Well equipped laboratories, classrooms and offices, a lecture hall, gymnasium, music-drama room, life science building, art studios, and a student lounge and cafeteria supplement facilities on the new campus.

Classes will be scheduled both at the Deckner Avenue buildings and on the bay shore campus.



**Manitowoc County Campus**



**Fox Valley Campus**

Bus transportation will be provided on a regular schedule for the ten-minute trip between the two locations.

### THE OUTLYING CAMPUSES

Within a 60-mile radius of the city of Green Bay, three campuses of UWGB continue to offer the first two years of preparation toward a University of Wisconsin degree. Located at Manitowoc, Marinette and Menasha (Fox Valley), the campuses are former branches of The University of Wisconsin Center System.

**Manitowoc County Campus** students can stroll the beaches of Lake Michigan between classes. Founded in the depths of the depression in 1933 with a class of 26, the Manitowoc campus was one of the first two to be established outside Madison. Classes were held for many years in the Manitowoc Vocational School.

The present building on the Lake Michigan shore was opened in September, 1962, to 232 students. Nearly 400 are expected for 1969-1970.

The **Marinette County Campus** nestles against a background of towering pine trees, just under 60 miles to the north and east around the curve of Green Bay. When the new building was opened in 1965 on the 28-acre shoreland site, enrollment jumped from the previous high of 89 to 238 students.

During the past year, a new fine arts building has been constructed for an expanding program in music and theater arts. Enrollment this year is expected to exceed 400. A number will be Michigan residents for whom out-of-state tuition fees are waived under a reciprocal agreement.

To the **Fox Valley Campus** at Menasha come students from the rich farming areas bordering the Fox River and the thriving cities of Appleton, Neenah-Menasha, and Oshkosh, famous throughout the United States for the manufacture of pulp and paper. Rapid growth of the campus began in 1946, when 170 students—many of them

World War II veterans—enrolled in University of Wisconsin classes then held in the vocational wing of Menasha High School.

The present building was constructed in 1959. A 1963 expansion project brought total value of the present facilities to nearly a million dollars. Nearly 700 freshman and sophomore students will be on the campus when 1969-1970 classes open.

### FOUR CAMPUSES, ONE UNIVERSITY

On July 1, 1968, the four former campuses of The University of Wisconsin Center System in Northeastern Wisconsin became integrated with the new University of Wisconsin-Green Bay. A campus dean, a member of the Chancellor's staff, presides over each of the outlying campuses.

A number of faculty members reside in each of the three UWGB communities outside Green Bay, teaching most of their classes on the home campus. Others are deployed from Green Bay to provide for a wide range of special courses.

Inter-campus social affairs, athletic events, programs in the fine arts and activities in student government bring together students from the four campuses. An all-University Student Advisory Committee to the Chancellor provides opportunity for significant involvement of students from all four locations in decisions that affect their future in the University.

Daily delivery service brings the resources of the central University library to each campus, where a permanent, basic collection of study materials is also available. Closed circuit instructional television and dial telephone access to a central computerized "learning bank" will in the future link the four campuses even more closely.

While each campus remains unique, with its own special "flavor" of setting and tradition, all share the advantages of a strong faculty and broad educational program and the common goal of providing maximum educational opportunities for the young and older adults of Northeastern Wisconsin.

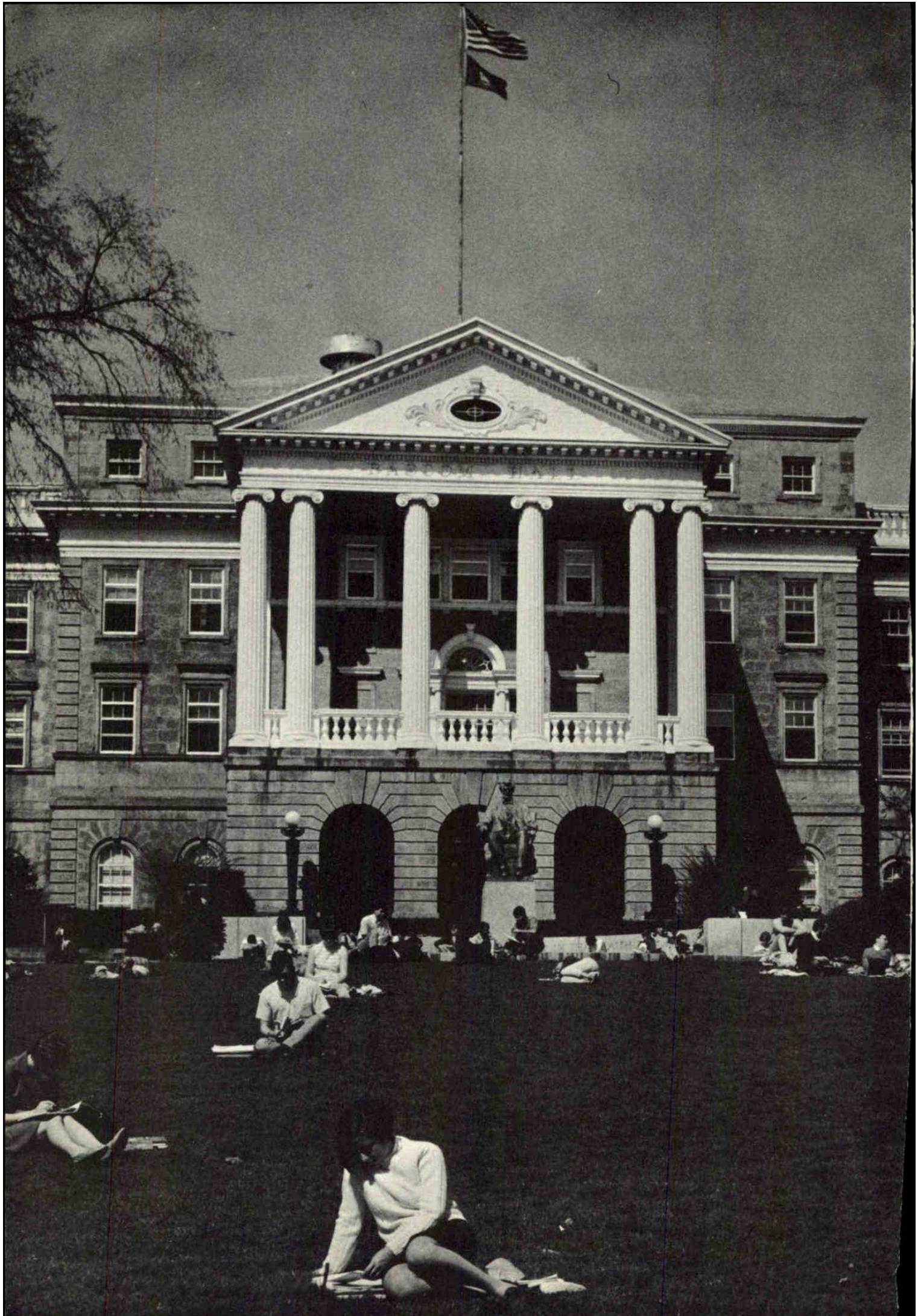


the university  
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green bay



University Directory





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# 1969-1971 Calendar

## First Semester

	1969-1970	1970-1971
Registration and new student period	Aug. 27-30	Aug. 31 - Sept. 2
Labor Day (holiday)	Sept. 1	
Instruction begins	Sept. 2	Sept. 3
Labor Day (holiday)		Sept. 7
Thanksgiving (holiday)	Nov. 27	Nov. 26
Last day of classes	Dec. 13	Dec. 16
Final exams	Dec. 15-20	Dec. 17-23
Christmas recess	Dec. 21 - Jan. 4	Dec. 24 - Jan. 3

## Special Studies Period

Begins	Jan. 5	Jan. 4
Ends	Jan. 31	Jan. 30

## Second Semester

Registration and new student period	Jan. 28-31	Jan. 27-30
Instruction begins	Feb. 2	Feb. 1
Spring recess	March 29-April 5	April 11-18
Last day of classes	May 23	May 22
Final exams	May 25-29	May 24-29
Memorial Day (holiday)	May 30	May 30
Commencement	June 1	May 31

## Summer Session

Eight-week session begins	June 23	June 22
Independence Day (holiday)	July 4	July 4
Eight-week session ends	Aug. 16	Aug. 15

## DIRECTORY OF UNDERGRADUATE COURSES.

This directory of undergraduate course offerings has been compiled to serve as a guide to program planning for students at the four campuses of The University of Wisconsin-Green Bay. Most of the offerings listed here are courses currently offered by the UW Center System. In addition, a number of junior-level courses have been scheduled at Green Bay, as well as a few special courses selected from the 1969-1970 curriculum of The University of Wisconsin-Green Bay.

This directory is intended for use ONLY DURING 1968-1969. A timetable listing specific days and hours of courses for 1968-1969 is available now from the Office of Student Affairs at your campus. The address of each campus is listed on the opposite page.

Early in the fall, a complete catalog of UWGB courses will be available from the Office of Student Affairs at the campus you plan to attend. The UWGB catalog will contain detailed information about academic programs to be offered when the new campus opens in September, 1969.

### A GUIDE TO ABBREVIATIONS AND SYMBOLS:

cr	credits	cons inst	consent of instructor
fr	freshman	P	prerequisite
soph	sophomore	GB	Green Bay Campus
jr	junior	FV	Fox Valley Campus
sr	senior	MN	Manitowoc County Campus
st	standing	MR	Marinette County Campus

I, II Indicates semester or semesters during which a course will be offered.

For example, the designation (FV I, II) following a course description indicates that the course will be offered both in the fall (I) and spring (II) semesters at the Fox Valley Campus.