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1979-81
Undergraduate Programs

AT THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

This catalog is for informational purposes and does not constitute a contract. Programs listed are subject to change, and individual departments and units should be contacted for further information.

University of Illinois administrative offices at Urbana-Champaign are open daily from 8:00 a.m. to 12:00 noon and 1:00 to 5:00 p.m. Monday through Friday, but not Saturdays, Sundays, or all-campus holidays which are indicated in the University Calendar.

An information center, available to visitors to the campus, is located in the north entrance lobby of the Illini Union. The center is open from 8:00 a.m. to 8:00 p.m. daily, including Saturdays and Sundays.

Campus telephone: (217) 333-1000

The policy of the University of Illinois is to comply fully with applicable federal and state nondiscrimination and equal opportunity laws, orders, and regulations. The University of Illinois will not discriminate in its programs and activities against any person because of race, color, national origin, religion, age, sex, handicap, or status as a disabled veteran or veteran of the Vietnam era. This nondiscrimination policy applies to admissions, employment, and access to and treatment in University programs and activities.

Vice-President Ronald W. Brady has been designated as the equal opportunity officer for the University of Illinois. For additional information on the equal opportunity and affirmative action policies of the University, please contact: For the Urbana-Champaign campus, Michele M. Thompson, assistant chancellor and director of affirmative action, 107 Coble Hall, 801 South Wright Street, Champaign, IL 61820, (217) 333-0574.

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Undergraduate Programs, 1979-81, designed by Charles Flora, Office of Printing Services. Photographs by Jim Reiter, Photographic Services (cover and page iii), and Sara Chilton, Office of Public Affairs. Catalog edited by Jan Gantz-Clemens, Office of Public Affairs.



CALENDAR

First Semester, Fall 1979-80

Aug. 19, Sun.-Aug. 24, Fri.....	New Student Week
Aug. 22, Wed.-Aug. 23, Thurs. (5 p.m.)..	Registration
Aug. 27, Mon. (7 a.m.).....	Instruction begins
Sept. 3, Mon.....	Labor Day all-campus holiday
Nov. 11, Sun.....	Veterans Day
Nov. 21, Wed. (5 p.m.)-Nov. 25, Sun....	Thanksgiving vacation
Nov. 22, Thurs.-Nov. 23, Fri.....	Thanksgiving all-campus holidays
Nov. 26, Mon. (7 a.m.).....	Instruction resumes
Dec. 12, Wed.....	Instruction ends
Dec. 13, Thurs.....	Reading day
Dec. 14, Fri.-Dec. 21, Fri.....	Semester examinations

Second Semester, Spring 1979-80

Jan. 13, Sun.-Jan. 18, Fri.....	New Student Week
Jan. 16, Wed.-Jan. 17, Thurs. (5 p.m.)...	Registration
Jan. 21, Mon. (7 a.m.).....	Instruction begins
Mar. 29, Sat. (1 p.m.).....	Spring vacation begins
Apr. 4, Fri.....	Spring recess all-campus holiday
Apr. 6, Sun.....	Spring vacation ends
Apr. 7, Mon. (7 a.m.).....	Instruction resumes
Apr. 18, Fri.-Apr. 20, Sun.....	Campus Mother's Day Weekend
May 8, Thurs.....	Instruction ends
May 9, Fri.....	Reading day
May 10, Sat.-May 17, Sat.....	Semester examinations
May 18, Sun.....	Commencement
May 26, Mon.....	Memorial Day all-campus holiday

Intersession, 1980

May 19, Mon.....	Instruction begins
June 6, Fri.....	Instruction ends

Eight-Week Summer Session, 1980

June 5, Thurs.-June 6, Fri. (noon).....	Registration
June 9, Mon. (7 a.m.).....	Instruction begins
July 4, Fri.....	Independence Day all-campus holiday
July 7, Mon.....	Beginning of second four-week courses
July 31, Thurs. (12:50 p.m.).....	Instruction ends
Aug. 1, Fri.-Aug. 2, Sat.....	Final examinations

First Semester, Fall 1980-81

Aug. 17, Sun.-Aug. 22, Fri.....	New Student Week
Aug. 21, Thurs.-Aug. 22, Fri.....	Registration
Aug. 25, Mon. (7 a.m.).....	Instruction begins
Sept. 1, Mon.....	Labor Day all-campus holiday
Nov. 11, Tues.....	Veterans Day
Nov. 26, Wed. (5 p.m.)-Nov. 30, Sun....	Thanksgiving vacation
Nov. 27, Thurs.-Nov. 28, Fri.....	Thanksgiving all-campus holidays
Dec. 1, Mon. (7 a.m.).....	Instruction resumes
Dec. 10, Wed.....	Instruction ends
Dec. 11, Thurs.....	Reading day
Dec. 12, Fri.-Dec. 19, Fri.....	Semester examinations

Second Semester, Spring 1980-81

Jan. 11, Sun.-Jan. 16, Fri.....	New Student Week
Jan. 14, Wed.-Jan. 15, Thurs.....	Registration
Jan. 19, Mon. (7 a.m.).....	Instruction begins
Mar. 14, Sat. (1 p.m.).....	Spring vacation begins
Mar. 20, Fri.....	Spring recess all-campus holiday
Mar. 23, Mon. (7 a.m.).....	Instruction resumes
Apr. 10, Fri.-Apr. 12, Sun.....	Campus Mother's Day Weekend
May 7, Thurs.....	Instruction ends
May 8, Fri.....	Reading day
May 9, Sat.-May 16, Sat.....	Semester examinations
May 17, Sun.....	Commencement
May 25, Mon.....	Memorial Day all-campus holiday

Intersession, 1981

May 18, Mon.....	Instruction begins
June 5, Fri.....	Instruction ends

Eight-Week Summer Session, 1981

June 11, Thurs.-June 12, Fri. (noon).....	Registration
June 15, Mon. (7 a.m.).....	Instruction begins
July 3, Fri.....	Independence Day all-campus holiday
July 13, Mon.....	Beginning of second four-week courses
Aug. 6, Thurs. (12:50 p.m.).....	Instruction ends
Aug. 7, Fri.-Aug. 8, Sat.....	Final examinations

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THE UNIVERSITY

Founded in 1867 under the Land Grant Colleges Act, the University of Illinois has a history of more than 100 years as a state-supported land-grant institution with a threefold mission of teaching, research, and public service. Originally named the Illinois Industrial College, the University opened on March 2, 1868, with three faculty members and fifty students in one building near the present community of Urbana-Champaign.

Since then, the University of Illinois has become one of the nation's major universities and has three main campuses—the original Urbana-Champaign campus and the Chicago Circle campus, both offering baccalaureate, master's, and doctoral programs, and the Medical Center at Chicago, with teaching, research, and service units in the health sciences.

THE CAMPUS

The Urbana-Champaign campus, the oldest and largest of the University's three campuses, is located 136 miles south of Chicago and 86 miles east of Springfield in the adjoining cities of Urbana and Champaign, a community of nearly 100,000 residents. Transportation between Urbana-Champaign and major cities is provided by Ozark Airlines, with direct service to Chicago, Denver, New York, St. Louis, and Washington, D.C.; Greyhound buslines; and Amtrak passenger trains. The community also can be reached by interstate highways 57, 72, and 74.

Undergraduate, graduate, and professional programs of study are offered at the Urbana-Champaign campus through eight undergraduate colleges, the Graduate College, schools and institutes, the College of Law, and the College of Veterinary Medicine. In addition, two schools of the University of Illinois Medical Center at Chicago are located at the Urbana-Champaign campus; they are the School of Basic Medical Sciences and the School of Clinical Medicine.

UNDERGRADUATE EDUCATION

Eight colleges, the School of Social Work, and the Institute of Aviation offer approximately 150 undergraduate programs of study. These undergraduate colleges, with their approximate enrollments indicated in parentheses, are: College of Agriculture (2,500), College of Applied Life Studies (700), College of Commerce and Business Administration (3,600), College of Communications (325), College of Education (800), College of Engineering (5,000), College of Fine and Applied Arts (2,100), and College of Liberal Arts and Sciences (10,000). The School of Social Work offers a bachelor's degree program and has an enrollment of 110 students. The Institute of Aviation provides two-year certificate programs in aircraft maintenance, aviation electronics, and professional pilot to nearly 190 students.

At this time, the Urbana-Champaign campus is organized primarily to assist the full-time student. A full-time undergraduate student must register for a minimum of 12 semester hours each semester. Most full-time students register for 15 or 16 semester hours (four or five courses) each semester. (A semester hour represents the work of one classroom period for fifty minutes each week during a semester or the equivalent in laboratory, field work, or independent study.) A minimum of 120 hours is required for the baccalaureate degree. Most students complete their baccalaureate degree requirements in four years, but some who change their program of study may need an additional semester or two to complete degree requirements. About 10,000 bachelor's degrees are awarded each year.

STUDENT BODY

The University of Illinois at Urbana-Champaign is an educational community of approximately 33,700 students (25,400 undergraduate, 7,300 graduate, and 1,000 professional students) and 11,000 faculty and staff members. The students come from every state in the union and many foreign countries, but generally 97 percent of the undergraduates are Illinois residents. Minority students comprise about 7 percent of the total campus population. Of the undergraduates about 60 percent are men and 40 percent women.

Each fall approximately 5,800 new freshmen and 1,000 junior transfer students register on campus. Traditionally, these students have been scholastically well above average. Since 1968 the average freshman has had a composite ACT score of 26 and has ranked in the top 15 percent of his or her high school class. The typical transfer student enters the University with a 4.0 grade-point average (5.0 = A).

FACULTY

The majority of faculty at Urbana-Champaign hold the highest-level degree in their field (i.e., a Ph.D., M.D., D.V.M., Law, or Ed.D. degree). Recently, 73 percent of the assistant professors, 75 percent of the associate professors, and 85 percent of the professors held the highest-level degree in their field.

A list of teaching faculty for each college or unit appears in Appendix A of this catalog.

COURSES

Over 4,500 courses, from freshman through postgraduate levels, are offered at Urbana-Champaign. Descriptions of these courses are provided in the *Courses Catalog*. Not all of the courses described are offered every term. To determine when and where a course is to be offered, one must consult the *Timetable* for a particular semester or summer session. Both of these publications are available by request from the address listed on the inside back cover of this catalog.

There is no common first year of course work for students; both course and graduation requirements are determined by the student's college and curriculum and are described in the individual college sections of this catalog.

CLASS SIZE

Classes at the Urbana-Champaign campus range in size from one to 100 or more students. Introductory courses in many subjects are offered as large group lectures with students also participating in smaller required discussion or laboratory groups. Other courses such as music practice, thesis, and special projects are taught on an individual basis. Recently, about 77 percent of all class sections have had fewer than thirty students.

ACADEMIC CALENDAR

The Urbana-Champaign campus operates on an academic calendar of two sixteen-week semesters and one eight-week summer session. A three-week program of intensive instruction in certain courses is available through intercession, which is conducted between the spring semester and the eight-week summer session. The fall semester begins in late August and ends just before Christmas; the spring semester begins in mid-January and ends in mid-May. The summer session extends from early June to early August. Classes are taught on an 8:00 a.m. to 5:00 p.m. schedule, with a few evening classes conducted primarily for graduate students.

SPECIAL PROGRAMS AND OPPORTUNITIES

Many special programs and educational opportunities are available to students. The Educational Opportunities Program (EOP) for students who might otherwise be denied a college education, the Advanced Placement Program, proficiency examinations, the College-Level Examination Program (CLEP), an early admission program for high school students, an honors program, services for physically handicapped students, a delayed admission program for beginning freshmen in the College of Liberal Arts and Sciences and the College of Fine and Applied Arts, concurrent enrollment of students at Parkland College and the Urbana-Champaign campus, and independent and overseas study programs are explained in the "Special Opportunities" section beginning on page 47.

FACILITIES

The University's 703-acre residential campus, with 179 major buildings for classrooms, laboratories, libraries, residence halls, and recreational and cultural activities, is centrally located in the Urbana-Champaign community with 1,900 acres of agricultural experiment fields nearby. The campus is an attractive and stimulating place to study because of its many specialized facilities. A forest plantation, an observatory, PLATO terminals, scenery and costume shops, a child development laboratory, greenhouses, an electron microscope laboratory, music practice rooms, language laboratories, agricultural experiment fields, and a leisure behavior research laboratory are only a few of the resources for learning.

The University Library is the third largest among American university libraries. Its collections now exceed five million bound volumes and over three million other items including microtexts, manuscripts, music scores, sound recordings, maps, and aerial photographs. The library complex includes the central library building, the undergraduate library building, and twenty departmental libraries located in buildings across the campus. Special features of the library include an audio listening area with a catalog of over 4,500 records, browsing rooms, typing and studying carrels, a microfilm room, and a Rare Book Room with more than 100,000 volumes.

STUDENT ACTIVITIES

A wide choice of social, cultural, professional, and recreational activities is available to students. Campus events regularly include programs, lectures, forums, theatrical productions, movies, dances, and special and scientific exhibitions. More than 500 professional, social, and religious organizations are active on campus.

The Illini Union is the University's student center. It houses dining facilities, bowling lanes, a billiard room, art galleries, a browsing library, a bookstore, student organization offices, a campus information office, a check cashing service, a ticket sales counter, lounges, a hotel, and numerous multipurpose rooms for luncheons, dinners, dances, and meetings. The Illini Union Board (IUB) sponsors a program of activities designed to complement the cultural, recreational, and social life of the campus. There are sixty-two IUB-sponsored activities, among them Dad's Day, Mom's Day, Homecoming, International Fair, Spring

Musical, College Bowl and Trivia Bowl, concerts on the Quad, Union All-Niters, Copacabana, and the Student Film Festival.

The Krannert Center for the Performing Arts, a four-theatre complex offering student, faculty, and national and international professional performances in music, dance, and drama, is a nationally recognized center of cultural activity. During a recent program year, 326 performances were presented. The center also serves as an educational facility for more than 1,000 music, dance, and theatre students. There are three museums on campus: the Krannert Art Museum, the World Heritage Museum, and the Natural History Museum.

Many facilities are available for intramural and personal sports and recreation including golf courses; indoor and outdoor swimming pools; gymnasiums; indoor and outdoor tracks; tennis, basketball, and handball courts; ice skating rinks; pistol ranges; and playing fields.

INTERCOLLEGIATE ATHLETICS

The University of Illinois at Urbana-Champaign actively supports intercollegiate athletics for men and women and is committed to providing a high quality program for all student athletes. Men's intercollegiate sports include baseball, basketball, cross-country, fencing, football, golf, gymnastics, swimming, tennis, track, and wrestling. The women's program includes basketball, cross-country, golf, gymnastics, swimming/diving, tennis, track, and volleyball.

CONTENTS

Persons who are unfamiliar with the University of Illinois and who are contemplating study at the Urbana-Champaign campus will find it helpful to first refer to the general description of the University and the Urbana-Champaign campus beginning on page vii, and then refer to "How to Use This Catalog," which gives an overview of the material in it.

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How to Use This Catalog

This catalog provides general information about the University of Illinois at Urbana-Champaign (UIUC) and detailed information about undergraduate programs of study offered by the eight undergraduate colleges, the School of Social Work, the Institute of Aviation, and the College of Veterinary Medicine. Separate catalogs are published for the Graduate College and the College of Law at Urbana-Champaign, and for the University of Illinois at the Medical Center, Chicago, and the University of Illinois at Chicago Circle. Those publications are available on request from addresses given on the inside back cover of this catalog.

The information in this two-year catalog was current at the time of its publication, but admission and graduation requirements, tuition and fee schedules, academic program offerings and requirements, and regulations as stated in the catalog may be changed at any time.

This catalog has two major parts. The first part, "General Information," includes a list of academic programs offered by the colleges and information about admission requirements, precollege programs, special programs and opportunities, student services, student costs, financial aid, graduation requirements and student regulations, Reserve Officers' Training Corps, and the Council on Teacher Education. The second part of this catalog, "Colleges and Other Academic Units," has separate sections for each of the undergraduate colleges, the Institute of Aviation, and the College of Veterinary Medicine, which cover in detail their curricula, special academic programs, specific requirements for graduation, honors programs, and other information.

Prospective applicants for admission who are unfamiliar with the University will find it helpful to first refer to the pages giving a general description of the University and the Urbana-Champaign campus beginning on page vii before turning to the "General Information" part of this catalog.

University of Illinois at Urbana-Champaign publications that supplement the *Undergraduate Programs* catalog, and which may be obtained from the addresses given on the inside back cover, are: semester and summer session *Timetables*, which list courses offered and class meeting times along with registration instructions, tuition and fee charges, and general student information; the *Courses Catalog*, which lists courses offered with a brief description of their content, credit hours, and prerequisites; and the *Code on Campus Affairs and Regulations Applying to All Students*, which contains student administrative, academic, and conduct regulations. This latter publication is offered to all students at time of on-campus registration and is available at 177 Administration Building.

Additional information about the University of Illinois at Urbana-Champaign is available by telephoning the campus—(217) 333-1000—and asking the operator for the proper telephone extension.

GENERAL INFORMATION



Undergraduate Curricula

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Eight undergraduate colleges, the School of Social Work, and the Institute of Aviation offer more than 150 programs of study (called curricula, fields of concentration, and majors) for undergraduate students at the Urbana-Champaign campus. All colleges offer baccalaureate degrees and usually require four years of study. The Institute of Aviation offers two-year certificate programs in aircraft maintenance, aviation electronics, and professional pilot. The list of undergraduate degrees and certificates awarded and the general requirements for graduation begin on page 105. Appearing below is a list of curricula offered by the undergraduate colleges, the School of Social Work, and the Institute of Aviation. Detailed information about these curricula can be found in the college sections of this catalog beginning on page 141.

Four of the undergraduate colleges offer a special curriculum for students who have not decided on a specific program of study. In addition, all curricula in the College of Engineering offer a common freshman year to allow students to change from one engineering curriculum to another at the end of the freshman year without loss of credit. Five of the colleges, Agriculture, Applied Life Studies, Education, Liberal Arts and Sciences, and Fine and Applied Arts, offer teacher education curricula.

Preprofessional education for health career fields such as dentistry, medicine, nursing, occupational therapy, pharmacy, physical therapy, veterinary medicine, medical dietetics, medical laboratory sciences, and medical record administration; for the legal profession; and for careers in journalism, advertising, news-editorial, and radio-television is offered in the College of Liberal Arts and Sciences.

Since student admission to each college and curriculum is carefully monitored to assure that no more students are enrolled than the faculty and facilities can support, applicants may apply for admission to only one of the eight undergraduate colleges, the School of Social Work, or the Institute of Aviation and may designate only one curriculum choice.

The applicant's choice of college and curriculum is particularly important because admission requirements differ by college and curriculum, and once admitted course requirements for students differ by college and curriculum.

Because of enrollment restrictions, beginning freshmen are required to remain in the college to which they have been admitted for at least two semesters of full-time study in the prescribed freshman program to which admitted. Students who wish to transfer to another college at the end of one year must meet the accepting college's admission requirements and compete for any available spaces. Because of severe enrollment restrictions it is unlikely that beginning freshmen may later transfer to a number of curricula. Specific, current information is available from the college concerned. For unusual and extenuating circumstances, college offices will consider individual requests to transfer from one college to another after one semester in residence.

COLLEGE OF AGRICULTURE

Agricultural communications (options in advertising, news-editorial, and radio-television)

Agricultural industries (areas of special interest: agricultural commodities, agricultural real estate and finance, farm supplies, and food and food products)

Agricultural science (a four-year program for students desiring preparation for graduate study or professional work in animal, plant, or soil science; agricultural economics; agricultural law; or rural sociology; and a five-year program for students enrolled in the combined agricultural science and agricultural engineering program)

Core curriculum — All students in this curriculum follow a similar program during

the first two years leading to specialization during the last two years in one of the following:

Agricultural economics (options in farm management, agricultural marketing, general agricultural economics, and rural sociology)

Agricultural mechanization (industrial option with emphasis on farm structures, conservation, farm power, and farm machinery; and equipment operations option)

Agronomy (options in agronomy, crops, soils, and crop protection)

Animal science (general animal science, companion animal biology, and industrial options)

Dairy science

General agriculture (farming and agriculture extension)

Horticulture (fruits, vegetables, or other specialized horticultural crops)

Food industry (options in business, engineering, and production)

Food science

Forest science

Human resources and family studies (options in apparel design, child and family, foods in business, foods and nutrition, general home economics, hospital dietetics, home management, institution management, retailing of clothing and home furnishings, and textiles and clothing) Students may also combine advertising and journalism with human resources and family studies. (See pages 193 and 243.)

Home economics education (for prospective teachers of home economics)

Interior design

Ornamental horticulture (specialization in production, marketing, and use of ornamental crops, and related professional activities)

Restaurant management

Teaching of agricultural occupations, high school level (options in agricultural production, agricultural supply and products, agricultural mechanization, ornamental horticulture, and agricultural resources and forestry)

Wood science

COLLEGE OF APPLIED LIFE STUDIES

Health and safety education (with options in community health education; public safety education; and school health and safety education, a teacher education program)

Leisure studies (with options in outdoor recreation, program specialist, recreation and park administration, and therapeutic recreation)

Physical education (including areas of concentration in bioscience; motor development; motor performance and sport; and social science of sport. Each student must declare an area of concentration no later than the first semester of the junior year. Students who desire teacher certification can satisfy the necessary requirements by appropriate selection of courses within the major and correlate areas.)

INSTITUTE OF AVIATION (Two-Year Certificate Programs)

Flight courses are open to students enrolled in other schools and colleges on a space-available basis.

Aircraft maintenance (including a combined flight-maintenance program)

Aviation electronics (avionics technology)

Professional pilot

COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION

The first two years of work in all fields in commerce and business administration are almost the same. Students later concentrate in one of the following curricula:

Accountancy

Business administration

Economics (several specialized sequences)

Finance (areas of specialization in finance, investment, and banking; insurance and risk management; and real estate and urban economics)

Curriculum unassigned (For students in the College of Commerce and Business Administration who have not selected a degree program. Selection must be made by the end of the sophomore year.)

COLLEGE OF COMMUNICATIONS

This college does not admit beginning freshmen. Applicants for admission to the College of Communications in the following curricula must have completed a minimum of 60 semester hours (90 quarter hours) of undergraduate work by the date of desired admission.

Advertising

News-editorial

Radio-television (Students were not admitted to this curriculum in 1978-79. When admission to this curriculum becomes available, an announcement will be made in the admissions information which is sent to those requesting applications.)

COLLEGE OF EDUCATION

Teacher education curricula are also offered in the Colleges of Agriculture, Applied Life Studies, Fine and Applied Arts, and Liberal Arts and Sciences.

Curricula Open to Freshmen and Other Students

Business education (areas of specialization in accounting-bookkeeping, data processing, economics, marketing and distributive education, and secretarial-office practice)

Early childhood education (Preparation for teaching in kindergarten through the ninth grade with a special focus on kindergarten and the primary grades. Approval is being sought from the Illinois Office of Education to entitle graduates to qualify also for the early childhood certificate to teach at the preschool level.)

Education general (for beginning freshmen and new students with fewer than 60 semester hours who have not selected a degree program in the College of Education and for students who have an insufficient number of semester hours to qualify for admission to curricula in the College of Education requiring junior standing)

Elementary school teaching

Technical education specialties (preparation to teach a specialty at one or more school levels — elementary, secondary, technical institute, junior college, or industrial training program — with such specialties as electronics, health occupations, machine tools, avionics, machine tool drafting, architectural drafting, and construction, as well as industrial arts)

Curricula Open to Students with Junior Standing

Curriculum preparatory to high school teaching (with specialties in teaching English, general science, life science, mathematics, physical science, and social studies)

Curriculum for preparation of teachers of moderately and severely handicapped persons (designed to prepare classroom teachers for the instruction of the moderately and severely handicapped persons)

COLLEGE OF ENGINEERING

A common program is followed by freshmen in engineering so that a student may change from one of the following curricula to another at the end of the first year without loss of credit.

Aeronautical and astronautical engineering

Agricultural engineering (options in electric power and processing, farm structures, power and machinery, and soil and water)

Ceramic engineering

Civil engineering (areas of specialization: structures and structural materials, soil mechanics and foundation engineering, environmental engineering, construction engineering and management, hydraulic and hydrosystems engineering, photogrammetric and geodetic engineering, transportation systems, and engineering systems)

Combined five-year agricultural engineering-agricultural science program (freshmen enter College of Agriculture)

Combined five-year engineering-liberal arts and sciences program (freshmen enter College of Engineering)

Computer engineering

Computer science

Electrical engineering

Engineering mechanics (for students interested in research and development in engineering)

Engineering physics (including preparation for employment in industrial physics and for graduate studies in physics and allied technical fields)

General engineering (fields of concentration in engineering administration, engineering marketing, environmental quality, computer science, and mining and geological engineering)

Industrial engineering

Mechanical engineering

Metallurgical engineering

Nuclear engineering

COLLEGE OF FINE AND APPLIED ARTS

Architectural studies

Art and design

General curriculum — All freshmen in art and design curricula enter the general curriculum. After completing one year in the general curriculum students must select one of the following degree curricula:

Art education

Biocommunication arts (premedical illustration and design) (Four-year pro-

gram combined with the College of Associated Health Professions. The first two years are offered at the Urbana-Champaign campus by the Department of Art and Design.)

- Crafts (ceramic or metal emphasis)
- Graphic design
- History of art
- Industrial design (art or structural emphasis)
- Painting
- Sculpture

Dance (applied program for men and women)

Landscape architecture

Music, with majors in:

- History of music
- Instrumental music
- Music composition
- Voice

Music education for prospective teachers

Teaching of Dance

Theatre

Freshman program (Students are enrolled in this program for one year before qualifying for one of the following theatre options which are restricted to students with sophomore standing and above.)

- Comprehensive theatre
- Professional studio in acting
- Professional studio in theatre design and technology

Urban and regional planning (Admission to this curriculum is restricted to students with junior standing. Beginning freshman applicants are advised to apply for admission to the general curriculum in the College of Liberal Arts and Sciences.)

COLLEGE OF LIBERAL ARTS AND SCIENCES

Chemical engineering curriculum

Chemistry curriculum

Combined five-year engineering-liberal arts and sciences program (freshmen enter College of Engineering)

Combined sciences and letters-education program for mathematics teachers

General (two-year curriculum provides counseling and advising for students who choose to defer selection of a specific curriculum or a field of concentration in the sciences and letters curriculum and for those students who desire to complete pre-professional requirements for communications, nursing, occupational therapy, pharmacy, social work, and urban and regional planning) (See pages 237, 441, 442, 449, and 338.)

Geology curriculum

Human resources and family studies curriculum

Physics curriculum

Preprofessional education—Separate preprofessional curricula for admission to the Colleges of Communications, Law, Veterinary Medicine, Associated Health Professions, Dentistry, Medicine, and Nursing are not offered at the Urbana-Champaign campus. Preprofessional admission requirements may be completed in the College of Liberal Arts and Sciences as indicated below.

Communications—General curriculum

Health fields

Dentistry—Sciences and letters curriculum with life sciences as a field of concentration

Medicine—Sciences and letters curriculum with any field of concentration

Medical dietetics—Sciences and letters curriculum with life sciences as a field of concentration

Medical laboratory sciences—Sciences and letters curriculum with life sciences as a field of concentration

Medical records administration—Sciences and letters curriculum with life sciences as a field of concentration

Nursing—General curriculum

Occupational therapy—General curriculum

Pharmacy—General curriculum

Physical therapy—Sciences and letters curriculum with life sciences as a field of concentration

Law—Sciences and letters curriculum with any field of concentration

Veterinary medicine—Sciences and letters curriculum with a field of concentration within the biological or physical sciences

Sciences and letters curriculum (includes preprofessional preparation for admission to the Colleges of Dentistry, Law, Medicine, and Veterinary Medicine, and the College of Associated Health Professions for health-related programs of study as indicated under Preprofessional Education) (Also available in this curriculum is the Individual Plans of Study, limited to sophomores and above in good academic standing, which allows students to design a course of study which best fulfills their personal educational interests and abilities.)

Students in the sciences and letters curriculum take two years of basic work followed by study in one of the following fields of concentration:

Actuarial science (mathematics)

Anthropology

Asian studies

Astronomy

Biochemistry

Chemistry

Classics (options in classical civilization, Latin, and Greek)

Comparative literature

Economics

English

Finance

French (options in language and linguistics, literature, and civilization)

Geography (liberal arts and graduate specialization and professional specialization)

Geology

Germanic languages and literatures (options in language and literature, literature in the European context, language studies, modern German studies, and Scandinavian studies)

History

History of art (comprehensive and specialization options)

Humanities (options in American civilization, history and philosophy of science, Renaissance studies, and medieval civilization)

Italian

Latin American studies

Life sciences (options in bioengineering, biophysics, general biology, genetics and development, honors biology, botany, ecology and ethology, entomology, microbiology, and physiology)

Linguistics

Mathematics (graduate preparatory and liberal arts options)

Mathematics and computer science

- Music (options in music history, ethnomusicology, and music theory and composition)
- Philosophy
- Physics
- Political science
- Portuguese
- Psychology
- Religious studies
- Rhetoric
- Russian
- Russian language and East European studies
- Sociology (options in theory and methods, social organization, demography and human ecology, social interaction, and comparative sociology)
- Spanish
- Speech communication (options in rhetorical and communication theory, and interpretation)
- Statistics
- Speech and hearing science I (A.B. program)
- Speech and hearing science II (B.S. program, for certification)
- Teacher education (secondary) in fields of biology, chemistry, earth science, English, geography, mathematics, physics, social studies, and speech
- Teacher education (both high school and elementary) in foreign languages (French, German, Latin, Russian, Spanish)

SCHOOL OF SOCIAL WORK

Students must have junior standing (60 semester hours completed) to be eligible to enter this school, but they may apply for admission whenever they have completed 45 semester hours of college credit. A beginning freshman applicant who is interested in pursuing a program of study in social work is advised to enroll in the general curriculum in the College of Liberal Arts and Sciences.

Social work

PREPROFESSIONAL EDUCATION

Students interested in health and allied health career fields such as dentistry, medical dietetics, medical laboratory sciences, medical record administration, medicine, nursing, pharmacy, occupational therapy, physical therapy, and veterinary medicine should refer to page 438 to determine how preprofessional education requirements for these career fields can be met in the College of Liberal Arts and Sciences.

Preprofessional education for admission to the College of Communications to prepare for careers in advertising, news-editorial, and radio-television is explained in the College of Communications section on page 238.

A combined four-year baccalaureate degree curriculum in biocommunication arts is available through the University of Illinois at Urbana-Champaign and the College of Associated Health Professions at the Medical Center in Chicago. The first two years are offered by the Department of Art and Design at Urbana-Champaign. See page 320.

College of Law

The College of Law admits beginning students in August only. Minimum requirements for admission are a bachelor's degree from an accredited four-year college

or university, a minimum grade-point average of 3.5 (A = 5.0) in all course work taken, and a satisfactory score on the Law School Admission Test. Other subjective criteria also may be used. The fact that an applicant meets the college's minimum requirements does not mean that he or she will be admitted. It means only that the applicant can be considered in competition with all other applicants for that year.

The College of Law has no specific prelegal course requirements for admission, but a basic course in accounting is strongly recommended. Prelegal education for students interested in the profession of law is discussed on pages 13 and 346.

Additional information and applications for admission may be obtained by writing to the dean, College of Law, University of Illinois at Urbana-Champaign, 209 Law Building, Champaign, IL 61820.

College of Veterinary Medicine

All applicants for admission to the College of Veterinary Medicine must present a minimum of 60 semester hours of preprofessional course work from a fully accredited college or university by the date of desired admission and a 3.5 (A = 5.0) minimum grade-point average. Students interested in completing the preprofessional course work at the University of Illinois at Urbana-Champaign for consideration of admission to the College of Veterinary Medicine should enroll in the College of Liberal Arts and Sciences unless they have a strong background and interest in agriculture. See page 453.

Admission

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Information presented here is basic admission policy, subject to change before republication of this catalog. Therefore, it is recommended that prospective students seeking information about admission requirements and application procedures for a specific term contact the Office of Admissions and Records, University of Illinois at Urbana-Champaign, 10 Administration Building, Urbana, IL 61801, telephone (217) 333-0302.

The admission application packet includes admissions information and estimated requirements for each admissions year. Applications are available as of September 1 for admission during the next calendar year. See specific application periods for freshmen and transfers listed on pages 23 and 24.

Admission officers are available in 177 Administration Building for consultation from 8:30 a.m. to 12:00 noon and from 1:00 to 4:30 p.m., Monday through Friday, excluding campus holidays. Appointments are recommended and can be made by calling (217) 333-0302.

ADMISSIONS POLICY

Special Admissions

Except for special admission through recognized programs such as the Educational Opportunities Program or the Early Admissions Program, both described later, special admissions have generally been limited to those applicants who meet academic requirements for admission or who have special or unique talents which can enrich the academic or cultural environment of the campus community.

An applicant seeking special consideration must submit with the admission application a letter of petition expressing why attendance at this institution is critical and providing evidence which establishes his or her qualifications to do satisfactory work in the requested academic program. Appeals for special consideration after denial of admission are generally unsuccessful since admission spaces usually have been filled by that time. At the present time the number of qualified applicants exceeds the admission spaces available for most academic programs. This severely limits possibilities to accommodate special admission requests.

GENERAL REQUIREMENTS FOR ADMISSION

Applicants seeking exception to these general requirements should pursue special admissions as outlined above.

Age

An applicant must be at least sixteen years of age by the date of desired enrollment. A prospective student fifteen years of age who meets all other requirements for admission and who will reside, while attending the University, with his or her parents or guardian or with someone selected by them may petition to be admitted through special admission.

High School Graduation

High school graduation is a requirement for admission. High school graduation and the credit to fulfill college preparatory course requirements may be obtained by the following two methods:

Certificate from an accredited high school or secondary school. A student may present a certificate from any high school or preparatory school in Illinois fully

recognized by the Illinois Board of Education; from a school accredited by the North Central Association of Colleges and Secondary Schools or from other regional accrediting associations, schools, and academies registered by the regents of the University of the State of New York; or from schools accredited by state universities provided the certificate shows that the standard state of Illinois time requirements have been met.

General Educational Development Tests (GED). The achievement of satisfactory scores on the General Educational Development Test is acceptable in lieu of graduation from an accredited high school. This test alone will not fulfill the college preparatory subject requirements.

A standard score of 35 on each of the five tests and an average standard score of 45 on all five tests are the minimum scores needed to provide the following high school credit: 9 semesters of English, 8 semesters of social studies, 7 semesters of general science, and 6 semesters of miscellaneous. This is a total of 24 semesters (12 units) of college preparatory subject matter and a total of 30 semesters (15 units) of high school credit. To be eligible to take these tests, an applicant must be eighteen years of age or have been out of school for at least one year. Additional information is available upon request from the Office of Admissions and Records.

To be used in lieu of a high school graduation, transcripts showing GED scores should be sent by the testing center to the Office of Admissions and Records, University of Illinois at Urbana-Champaign, 10 Administration Building, Urbana, IL 61801.

High School Credits

Applicants for admission to all curricula must present a total of at least 15 units of acceptable secondary school work. Graduates of schools organized as three-year senior high schools, including grades ten, eleven, and twelve, must have at least 12 units in the senior high school. Credit earned prior to grade nine is acceptable if the transcript of credit, certified by the senior high school, shows the credit as high school credit from grade eight. A *unit* course of study in the secondary school is a course covering an academic year and including not less than the equivalent of 120 sixty-minute hours of classroom work. Two hours of work requiring little or no preparation outside the class are considered as equivalent to 1 hour of prepared classroom work. Fractional units of the value of less than one-half are not accepted. Not less than 1 unit of work is accepted in a foreign language, elementary algebra, plane geometry, physics, chemistry, or biology. The required 15 units must include the following:

1. Three units of *English* are required. Work offered to meet this requirement should be composed of studies in language, composition, and literature, and require practice in expository writing in all such work.
2. One unit each in *algebra and plane geometry* is required. General mathematics, college preparatory mathematics, or other courses in mathematics may be accepted in lieu of algebra and plane geometry, or more advanced courses, in cases where the content of the course is essentially the same as that ordinarily included in the required course, as determined by the Department of Mathematics at the University of Illinois at Urbana-Champaign. When such courses are not equivalent to the prescribed algebra and plane geometry or more advanced courses, they will be accepted as elective credit.
3. The *college preparatory subjects* prescribed in the pattern specified for the curriculum which the applicant desires to enter are presented in Table 1. Acceptable college preparatory subjects are those defined in paragraphs 1 and 2 above and foreign language, sciences, and social studies as described for the patterns.
4. Since the number of college preparatory units for all curricula is less than the

15 required for admission, each applicant must present *elective units* selected from any of the high school subjects which are accepted by an accredited school toward its diploma and which meet the standards for accrediting. Courses in such fields as agriculture, art, commerce, general science, home economics, industrial arts, and music are accepted as elective units for admission.

College Preparatory Subject Requirements

Admission to each particular college and curriculum requires that the applicant complete certain college preparatory high school subjects. The subjects required differ depending upon the college and curriculum selected by the applicant. There are four different patterns, or combinations of subjects, designated by Roman numerals I, II, III, and IV, each followed by a more specific and more extensive pattern of highly recommended course work. These different patterns are presented in Table 1.

For the transfer applicants who will have completed, by the date of enrollment at the Urbana-Champaign campus, 30 or more semester hours of acceptable college credit, the subject pattern requirements are waived, except for admission to the College of Fine and Applied Arts. The subject patterns required for admission to each college and curriculum are listed in the Admissions Chart beginning on page 35.

A specific subject matter requirement may be waived under extenuating circum-

Table 1: COLLEGE PREPARATORY SUBJECT REQUIREMENTS PATTERNS (See Admissions Chart on pages 35 to 42.)

Subject	I		II		III		IV	
	Re- quired	Recom- mend- ed	Re- quired	Recom- mend- ed	Re- quired	Recom- mend- ed	Re- quired	Recom- mend- ed
English	3	4	3	4	3	4	3	4
Algebra	1	2	1	2	2	2	2	2
Geometry	1	1	1	1	1	1	1	1
Trigonometry		½		½	½	½	½	½
Advanced mathematics		½		½		1½*		1½*
One foreign language**		2	2	4	2	4		2
Science** (Not general science)					2		2	
Biology		1		1		1		1
Chemistry		1		1		1		1
Physics						1		1
Social studies**		2		2		2		2
Total College Preparatory	12***		12		12½		12½	

* Algebra completed in grade eight will allow this recommended pattern.

** The foreign language requirement for admission to any curriculum specifying this subject is fulfilled by two units in any one foreign language. The subjects included in the science field are astronomy, biology (or botany and zoology), chemistry, geology, and physics. General science will not be used as a unit of required science, but will be counted as an elective. The subjects included in the social science field are civics, commercial or economic geography, economics, history, psychology, and sociology.

*** Two units of agriculture or home economics courses may be used to satisfy the 12-unit total for applicants to the College of Agriculture.

stances for otherwise well-qualified applicants. Conversely, applicants with exceptionally strong high school preparation in terms of college preparatory course work and high admission test scores may seek review of rank-in-class. Written requests stating the rationale for such waiver should accompany the application for admission submitted to the Office of Admissions and Records.

Special Admission Requirements

A few colleges and curricula have special admission requirements in addition to the regular academic standards. Instructions on how to fulfill the special admission requirements are forwarded to a student soon after the application is received. *Students should be aware that additional time is required to process applications for admission to curricula with special admission requirements. Students denied on the basis of special admission requirements may find all admission spaces taken in alternative programs at the time of notification. Thus, such applicants should apply to other institutions also.* The following chart indicates the colleges and curricula with special admission requirements.

<i>Colleges and Curricula</i>	<i>Special Requirements</i>
Institute of Aviation	Personal interview and aptitude test
College of Communications	Additional background information
College of Education Teaching of moderately and severely handicapped children	Additional background information
College of Fine and Applied Arts Dance curricula	Qualifying audition
Music curricula	Qualifying audition
Theatre curricula	Qualifying audition or interview
School of Social Work	Additional background information

English Competency

Minimum requirements for competence in English apply to all University students. An applicant for admission may complete minimum requirements for competence in English by certifying that the following requirements have been fulfilled in a country where English is the primary language and in a school where English is the primary language of instruction:

Undergraduate college applicants. Graduation with credit for three units, or the equivalent, of English from a secondary school; or successful completion of a minimum of two academic years of full-time study at the secondary school or collegiate level immediately prior to the proposed date of enrollment in the University.

Graduate and professional college applicants. Completion of at least two academic years of full-time study within five years of the proposed date of enrollment in the University.

For applicants who do not meet the above requirements, evidence can be provided by achieving a satisfactory score on a test of competence in English. The test(s) to be used and the minimum score(s) shall be subject to approval by the University Committee on Admissions with the advice of the University's Technical Committee on Testing. This requirement may be waived upon agreement by the director of admissions and records and the dean of the college concerned, if evidence of competence in English presented by the applicant clearly justifies such action. (See Admission of Foreign Students on page 31.)

Physical Examination

Each new student may be required to present evidence of satisfactory physical and mental health to the director of Health Services at Urbana-Champaign. Each admitted applicant for admission will receive a Student Health Report form which he or she may use to report pertinent medical data to the director of the campus Health Service. If students are under the age of eighteen by the time they arrive for enrollment at the Urbana-Champaign campus, their parents must sign a medical authorization for them to receive care at the McKinley Health Center. Upon the advice of a Health Service physician, admission, readmission, or *continuing registration* of a student may be denied until the student is cleared by the McKinley Health Center.

Students transferring from the Chicago Circle or the Medical Center campuses should request that their Student Health Report forms be transferred by the health center on their campus to McKinley Health Center.

Military personnel may have their Student Health Report forms completed by a base physician.

TUBERCULOSIS CONTROL

All new and readmitted students are encouraged to present evidence of freedom from tuberculosis at the Tuberculosis Control Center in the registration procedure. Foreign students are required to complete a chest X-ray at the Health Service before completing registration.

Evidence of freedom from tuberculosis is established by presentation of a University of Illinois or public health agency certificate (skin test or X-ray) dated within the previous twelve months, or undergoing the application of a tuberculin skin test at the Tuberculosis Control Center during on-campus registration with a negative interpretation by the University of Illinois Health Service forty-eight to seventy-two hours after application. Persons who have a positive reading to this test should have a chest X-ray at the University of Illinois Health Service. Persons with a history of positive reaction to tuberculosis will not be skin-tested, but will be offered a chest X-ray at the Health Service.

ADMISSION OF BEGINNING FRESHMEN

An applicant is considered a beginning freshman for admission purposes if he or she is applying for admission while in high school, even if he or she has earned college credit through the Advanced Placement Program and/or other programs for superior high school students, or if that person has attempted subsequent to high school graduation fewer than 12 semester hours of transferable college-parallel classroom course work at one or more accredited collegiate institutions. A high school midyear graduate planning to attend another collegiate institution before fall term admission to the University of Illinois at Urbana-Champaign should apply as a beginning freshman during his or her last fall term in high school. Such an applicant is admitted on the basis of high school credentials and test results and may complete more than 12 semester hours of transferable college-parallel classroom course work at another institution before enrollment at the University of Illinois at Urbana-Champaign.

Beginning Freshmen Admission Requirements

The beginning freshman applicant must meet the minimum admission requirements previously described. Nonresidents of the state of Illinois must rank in at

least the top quarter of their high school graduating class if space is inadequate to admit all minimally qualified applicants. In addition, all beginning freshman applicants must present evidence in terms of high school rank-in-class and ACT or SAT admission test results which indicate at least a fifty-fifty chance of obtaining a C average the first semester on campus. These minimum requirements for the specific admission year are included in the application packet.

If there are more qualified applicants than admission spaces available, admission is granted to the best-qualified applicants. To select the best qualified, applications received between September 25 and November 1 for spring term admission, and September 25 and November 15 for summer and fall term admission, are treated as though received at the same time. These applications are grouped by academic programs with established admission quotas and ranked within these groupings on the basis of the combination of rank-in-class and test score. The best-qualified applicants are then admitted until the admission spaces are filled for that academic program.

Admission quotas are established by college, and sometimes by individual curriculum or group of curricula, to assure the optimum use of the unique resources available within the immensely varied academic disciplines on campus. Equally important, quotas permit a student admitted to a specific degree program to obtain the course work necessary to graduate in the prescribed number of semesters.

Demand for admission to some academic programs far exceeds their enrollment capabilities. Since admission is offered to the best qualified, this demand escalates the qualifications necessary to obtain admission to these academic programs. To assist the prospective applicant, application packets contain estimates of the admission qualifications that the Office of Admissions and Records believes will be established as a result of the demand for admission to each of the curricula on campus. When those applications complete by November 15 are reviewed as a group, every attempt within the confines of the admission quota is made to assure that applicants who meet the published estimates are offered admission. If the number of applicants who meet these estimates exceeds the admission quota, admissions closes to the receipt of further applications as of November 15 for fall admission and November 1 for spring admission. If the number of applicants with the estimated qualifications comes close to filling the quota, admissions remain open to consider applications received at a later date with the same or better qualifications. If the number of applications received is below those expected, admissions are made to applicants with qualifications below those estimated as necessary, if those estimated qualifications are above the campus minimum qualifications.

Admissions Test Information

Each beginning freshman applicant, regardless of rank-in-class or length of time out of school, is required to submit an admission test score, either the assessment administered by the American College Testing (ACT) program, or the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board. Applicants will not be admitted until scores are received by the Office of Admissions and Records in the form of an official score report sent directly from the testing agency concerned. Complete information concerning the test, the dates of test administration, and the location of testing centers may be obtained from high school counselors or by writing the appropriate testing agency: American College Testing, Box 168, Iowa City, IA 52240 or College Entrance Examination Board, Box 592, Princeton, NJ 08540 or Box 1025, Berkeley, CA 94701.

The highest score is used if more than one score report is received. Prospective applicants are urged to complete an admission test in the spring of their junior year in high school.

Application Dates for Beginning Freshmen

As described above, admission procedures give the best opportunity for admission to those students who apply during the "equal consideration period," that period of time when all applications received are considered as though complete at the same time. Applications received or completed after the end of the equal consideration period have a reduced chance for admission and may be denied for lack of space although the qualifications of the applicant may be excellent. Equal consideration period dates are:

For summer and fall term admission — September 25 through November 15, and
For spring term admission — September 25 through November 1.

Application Documents

It is recommended that beginning freshman applicants submit their application for admission consideration through their high school. The documents to complete an application are listed on pages 29 and 30.

ADMISSION OF TRANSFER STUDENTS

An applicant who has attempted 12 or more semester hours of college parallel classroom course work at one or more accredited collegiate institutions by the desired term of entry is subject to the requirements and quotas governing admission by transfer, with the exception of the midyear high school graduate, as noted on page 21.

If a transfer applicant has not completed 12 semester hours or more of baccalaureate-oriented college classroom credit at the time of submission of the admission application, he or she must submit all admission materials, including rank in high school class and admission test scores, required of the beginning freshman applicant.

Transfer Admissions Policy

The transfer applicant must meet the University's general admission requirements as described on pages 17 through 21. In general, the minimum pretransfer grade-point average requirement is 3.25 (A = 5.00); some curricula require a higher grade-point average. (See the Admissions Chart on pages 35 through 42.) Grade-point averages are calculated on the basis of all transferable courses attempted for which grades are assigned and for which grade-point values can be determined. Incomplete grades are accepted as defined by the initiating institution. Grades in other course work completed, such as technical courses similar in content level to courses taught at the University of Illinois at Urbana-Champaign, may be used in the evaluation for admission upon request of the college to which the student seeks admission.

If there are more qualified transfer applicants than admissions spaces available, admission is granted to the best-qualified applicants. To select the best qualified, applications received between September 25 and November 1 for spring term admission, and between February 1 and March 15 for summer and fall term admissions, are treated as though received at the same time. These applications are grouped by academic program with established admission quotas and ranked within these groupings on the basis of the pretransfer grade-point average and course work accepted toward fulfillment of degree requirements. The best-qualified applicants are then admitted until the admission quota is filled. Admission quotas are estab-

lished by college, and sometimes by individual curriculum or group of curricula, and by class level to assure the optimum use of the unique resources available within the immensely varied academic disciplines on campus. Equally important, quotas are established to assure that students admitted to a specific degree program have the opportunity to obtain the course work necessary to graduate within the semesters appropriate to their level of transfer.

To assist the prospective applicant, application packets (see page 17) contain estimates of the admission qualifications that the Office of Admissions and Records believes will be established as a result of demand for admission to each of the curricula on campus.

Application Dates for Transfer Applicants

As described above, admission procedures give the best opportunity for admission to those students who apply during the "equal consideration period," that period of time when all applications received are considered as though complete at the same time. Applications received or completed after the end of the equal consideration period have a reduced chance for admission and may be denied for lack of space although the qualifications of the applicant may be excellent. Equal consideration period dates for transfer applicants are:

- For summer and fall term admission — February 1 through March 15, and
- For spring term admission — September 25 through November 1.

Application Documents

The documents needed to complete an application are listed on pages 29 and 30.

Acceptance of Credit from Other Collegiate Institutions

Credit may be accepted for advance standing from another accredited university or college. All accepted credit is based on the University of Illinois at Urbana-Champaign's evaluation of the primary transcript of record of each institution attended. Duplicate credit will be deleted. A student who has passed a course at the University of Illinois at Urbana-Champaign may not be given credit for the same course taken elsewhere.

POLICY FOR THE ACCEPTANCE OF TRANSFER CREDIT FOR ADMISSIONS PURPOSES

1. Admission of transfer students to the University of Illinois at Urbana-Champaign is based only on the transfer course work which is of such a nature as to prepare students to continue on to baccalaureate degree programs (or equivalent programs). Such courses are normally referred to as transfer or college-parallel work. Other course work completed, such as technical courses similar in content and level to courses taught at the University, will be used in evaluation for admission only upon the request of the dean of the college to which the student seeks admission.
2. Transfer credit, as defined above, will be accepted at full value for admission purposes on transfer to the University of Illinois at Urbana-Champaign if earned in:
 - a. Colleges and universities which are members of, or hold Candidate for Accreditation status from, the North Central Association of Colleges and Schools or other regional accrediting associations;
 - b. Colleges and universities which are neither members of, nor holders of Candidate for Accreditation status from, the North Central Association of

Colleges and Schools or other regional accrediting associations, but which have been granted accreditation by a *specialized* or *programmatic* accrediting agency which is a member of the Council on Postsecondary Accreditation (COPA)¹; or

- c. Illinois public community colleges which are neither members of, nor holders of, Candidate for Accreditation status from, the North Central Association of Colleges and Schools, but which are approved and recognized by the Illinois Community College Board (ICCB), for a period of time not to exceed five years from the date on which the college registers its first class after achieving ICCB recognition.
3. Certain Illinois colleges and universities do not meet the specifications in 2 above, but have been assigned a status by the University Committee on Admissions which permits credit to be accepted on a provisional basis for admissions purposes on transfer to the University of Illinois at Urbana-Champaign. Transfer credit, as defined in 1 above, from such colleges and universities is accepted only on a deferred basis to be validated by satisfactory completion of additional work in residence. Validation through satisfactory work in residence may be accomplished by earning in the University of Illinois at Urbana-Champaign, or other fully accredited² college or university, at least a 3.0 (A = 5.0) grade-point average (higher if prescribed by the curriculum the student wishes to enter) in the first 12 to 30 semester (18 to 45 quarter) hours completed following transfer.
4. Credit, as specified in 1 above, transferred from an approved² community or junior college is limited only by the provision that the student must earn at least 60 semester or 90 quarter hours required for the degree at the University or at any other approved² four-year college or university after attaining junior standing, except that the student must meet the residence requirements that apply to all students for a degree from the University. When a school or college within the University requires three years of preprofessional college credit for admission, at least the last 30 semester or 45 quarter hours must be taken in an approved² four-year collegiate institution.
5. In all cases, the precise amount of transfer credit which is applicable toward a particular degree will be determined by the University college and department concerned.

Chicago Circle Campus Transfers

Undergraduate intercampus transfer students between Chicago Circle and Urbana-Champaign may be admitted to any undergraduate program on the opposite campus for which spaces are available for transfers from other colleges and universities, provided they meet the requirements of the program on the opposite campus for the admission of on-campus transfers. To be assured consideration as an intercampus transfer, students currently enrolled on the Chicago Circle campus should apply for consideration of enrollment for the spring term between September 25 and November 1 and for the summer or fall terms between February 1 and March 15. Intercampus transfers do not pay the \$20 application fee, but they must submit all application documents required of the transfer applicant.

¹ This excludes the following institutional accrediting agencies: Association of Independent Colleges and Schools (AICS) (Proprietary business schools); National Association of Trade and Technical Schools (NATTS); National Home Study Council (NHSC); and American Association of Bible Colleges (AABC).

² Colleges and universities which meet one or more of the specifications as listed in 2.

READMISSION

A student will be classified as a readmission applicant if he or she falls into one of the two following categories:

- A student who has registered and has earned credit in a degree-granting program at the Urbana-Champaign campus. If a student earns credit at Urbana-Champaign as a nondegree candidate and then applies for admission as a degree candidate, he or she will be considered for admission as a beginning freshman if he or she has attempted less than 12 semester hours and as a transfer student if he or she has attempted 12 or more semester hours.
- A student who has registered as a degree candidate at the Urbana-Champaign campus, has withdrawn prior to earning credit, and has not earned any credit at any other accredited collegiate institution. A student who has registered at the Urbana-Champaign campus, has withdrawn prior to earning any credit, and has subsequently earned credit at another accredited collegiate institution will be considered for admission as a beginning freshman if he or she has attempted less than 12 semester hours of college-parallel classroom course work and as a transfer student if that person has attempted 12 or more semester hours of college-parallel classroom course work.

Readmission Policy

The following three policy statements apply to any category of readmission applicants.

- Applicants who desire readmission to a college other than the college in which they were previously enrolled may be readmitted only with the approval of the colleges concerned.
- Clearance by the McKinley Health Center is prerequisite to the readmission of a former student whose permanent University record shows an encumbrance for medical reasons.
- Clearance by the Business Affairs Office is prerequisite to the readmission of a former student whose University record shows an encumbrance for financial reasons. A student in debt to the University at the end of any semester, term, or summer session for fees or other charges is not permitted to register at the University again until that indebtedness has been discharged.

STUDENTS WHO WERE NOT DROPPED FOR ACADEMIC FAILURE

Students who were not placed on academic drop status when they left the Urbana-Champaign campus and who have not acquired a degree will be automatically readmitted to their former program of study on the same campus for the term of their choice, provided they meet the following conditions:

- If they have attended any other institution of higher learning between the time they left the Urbana-Champaign campus and the term they wish to be readmitted, they must be in good academic standing at the institution which they attended during this interim period. Former students who left the University of Illinois at Urbana-Champaign on clear status or on probation, if they have attended another collegiate institution where they have been dropped or have earned a grade-point average below 3.0 (A = 5.0), may be readmitted to the University of Illinois at Urbana-Champaign only upon approval of their former college at the Urbana-Champaign campus. Scholastic probationary status at the University of Illinois at Urbana-Champaign may not be cleared by attendance at another institution except by action of the dean of the student's college.
- They have submitted a complete application for readmission (see Application Documents on page 29) to the Office of Admissions and Records by November

1 for the spring semester; or by March 15 for the fall semester or for the summer session to continue in the following fall semester.

Applicants who desire readmission to a college other than the college in which they were previously enrolled may be readmitted only with the approval of the college concerned.

STUDENTS WHO WERE DROPPED FOR POOR SCHOLARSHIP OR WERE PLACED ON UNDETERMINED STATUS

Former students who left the University of Illinois at Urbana-Champaign on academic dropped or undetermined status, regardless of whether or not they have attended another collegiate institution since leaving, and those who withdrew during the last three weeks of a semester or the last two weeks in a summer session or in a term, must obtain approval for readmission from the dean of the college concerned.

STUDENTS WHO WERE DROPPED OR WERE PLACED ON PROBATION FOR DISCIPLINARY REASONS

Petitions for readmission of former students who have been dropped from the University of Illinois at Urbana-Champaign for disciplinary reasons and those who are on disciplinary probation or who have been dropped from a previous collegiate institution for disciplinary reasons must be approved by the appropriate subcommittee of the Senate Committee on Student Discipline. (See Admission or Readmission Denied Because of Misconduct on page 120.)

APPLICATION DATES FOR READMISSION

The application forms for readmission to the spring, fall, or summer term of any given year are available from the Office of Admissions and Records, University of Illinois at Urbana-Champaign, 10 Administration Building, Urbana, IL 61801, in September of the preceding year. An application for readmission and supporting credentials (see Application Documents on page 29) *should be submitted* as soon as possible after the following dates, but not before.

- September 25 For admission to the spring semester, the end of the guaranteed readmission period is November 1.
- February 1 For admission to the fall semester or for admission to the summer session to continue in the fall semester, the end of the guaranteed readmission period is March 15.

Readmission applications are usually accepted until registration.

APPLICATION DOCUMENTS

For information regarding application documents see page 29.

OTHER CATEGORIES OF ADMISSION

Nondegree Students

Nondegree admission and enrollment are restricted to participants in special programs and to those with nondegree educational objectives which cannot be met at another institution. Permanent residents of the Champaign-Urbana area are given priority for nondegree admission. Applicants are expected to meet the normal minimum requirements for admission.

Nondegree applicants must choose one of the two campus enrollment options:

Summer session attendance only — Summer session only does not allow enrollment for the fall or spring term; application for readmission is necessary to be considered for the academic year enrollment pattern.

Academic year — fall and spring semesters with summers optional.

Nondegree applications must include a statement indicating the reasons for requesting admission, a list of courses the applicant desires to take, and transcripts for all collegiate course work or a transcript showing the highest level of academic achievement accompanied by a list of additional courses and grades. Transcripts are not required for summer session only nondegree admission.

Applicants holding the bachelor's degree who desire to take any courses at the 400 level or 300-level courses for graduate credit must apply for graduate nondegree status regardless of the level of the other courses in which they desire to enroll. Graduate applicants should complete the "Combined Application for Admission or Readmission to the Graduate College and Application for Graduate Appointment." Undergraduate applicants should request an application for undergraduate nondegree admission. Applicants who are not U.S. citizens or permanent resident immigrants should request the appropriate application form from the Office of Admissions and Records, international admissions unit.

Regular (part-time) nondegree students in the academic year enrollment pattern are subject to the following restrictions:

- Course enrollment requires the approval of the college (home department, at the graduate level) at the beginning of each semester and the approval of the department offering the course. The college of enrollment (home department, at the graduate level) has the privilege of terminating a continuing nondegree student's enrollment before the student's registration for any term.
- Enrollment is limited to part-time status (less than 12 credit hours of course work in any semester). (One graduate unit is calculated as equal to 4 semester hours.)
- Part-time nondegree students are ineligible for advance enrollment.
- Registration for the fall or spring term is not permitted until the fourth day of class. The late registration fine will be waived for undergraduate nondegree students registering the fourth and fifth days of classes and for graduate and professional nondegree students registering on the fourth through the tenth days of classes. Registration after the fifth day of classes requires the written approval of the dean of the college of enrollment.
- The same grading system is applicable to the nondegree as the degree status student. Credit earned on nondegree status will not be applicable to a degree except by subsequent admission to degree status and, at the graduate and professional level, successful petition for application of such credit to the degree. A maximum of 3 units of graduate credit earned on nondegree status may be applied to a degree under these circumstances.
- To be considered for degree status enrollment, nondegree status students must reapply for admission.

Prospective nondegree applicants should specifically request the Application for Admission to Nondegree Status.

Second Bachelor's Degree Students

Persons holding a bachelor's degree who wish to continue study for a second bachelor's degree by registering in an undergraduate college must petition for special admission (see pages 17 and 111) and, in addition, submit all application documents required of a transfer applicant.

Admission to Correspondence Courses

Correspondence courses are open to applicants who can meet the University entrance requirements and who are in good standing at the last school attended, and also to persons eighteen years of age or over whose applications are approved by the director of correspondence study. An application from a student who has been dropped from one of the campuses of the University of Illinois or any other collegiate institution will be considered only upon the recommendation of the authorities of the other campus or institution from which the student was dropped. For further information, write to Guided Individual Study, University of Illinois, 104 Illini Hall, Champaign, IL 61820.

Admission of Listeners or Visitors

Students enrolled at the Urbana-Champaign campus who desire to attend a class as listeners or visitors must first obtain on an Official Visitor's Permit the written permission of the instructor of the class and the approval of the dean of their college. Persons who have never been a registered student at the Urbana-Champaign campus must obtain the required approval from the dean of the college in which the course is offered. Former students not currently registered must obtain approval of the dean of the college in which they were last registered. Former students are not permitted to attend classes as visitors while on dropped status.

Visitors are not permitted in laboratory, military, physical education (other than theory), or studio classes. For additional information, contact the Office of Admissions and Records. (See Visitor's Fee on page 87.)

Part-Time Enrollment

Each student is expected to pursue a full program of studies; the number of credit hours involved in such a program varies with the college and the curriculum. Pursuance of less than a normal program (carrying a reduced load) may be permitted only with approval of the dean of the student's college or his designated representative. Continuation of part-time enrollment is also subject to the approval of the student's college office. Twelve semester hours and above in a semester comprise a full program of study for tuition and fee assessment.

APPLICATION DOCUMENTS

All credentials presented for admission or readmission become the permanent property of the University and are not subsequently released to the student or to another individual or institution. Credentials are *not* held for reconsideration of admission to subsequent terms.

No consideration will be given to any application for admission until all required supporting credentials are received by the Office of Admissions and Records.

All Applicants

All applicants for admission must submit:

– A completed admission application form. Social security numbers serve as permanent student identification numbers and must be entered on the admission application and on the application for the SAT or ACT test. Students who do not have a social security number should obtain one from their local Social Security Office. Admission application forms are available from the Office of Admissions

imum of two academic years of full-time study at the secondary school or collegiate level immediately prior to the proposed date of enrollment in the University.

Graduate and professional college applicants. Completion of at least two academic years of full-time study within five years of the proposed date of enrollment in the University.

For applicants who do not meet the above requirements, evidence can be provided by achieving a satisfactory score on a test of competence in English. The test(s) to be used and the minimum score(s) shall be subject to approval by the University Committee on Admissions with the advice of the University's Technical Committee on Testing. This requirement may be waived upon agreement by the director of admissions and records and the dean of the college concerned, if evidence of competence in English presented by the applicant clearly justifies such action.

If applicable, a score on the English examination must be received by the University before a final decision can be made on the student's request for admission.

The Test of English as a Foreign Language (TOEFL) administered by the Educational Testing Service, Box 899, Princeton, NJ 08540 has been approved for the purpose of determining English competency. In cases where TOEFL testing dates are not available prior to the desired term of entry, the University will arrange for substitution of the test given by the English Language Institute (ELI), Testing and Certification Division of the University of Michigan. Complete instructions to arrange for the ELI examination will be provided by the Office of Admissions and Records to each applicant for whom it is required. Final admission status is determined after the test results have been received.

The English requirement for graduation is explained on page 111.

Financial Verification Requirement

In order to determine eligibility for a Certificate of Visa Eligibility (Form I-20 or DSP-66), it is necessary for all foreign applicants to submit complete and accurate information regarding their sources of financial support. This information is required by the University of Illinois at Urbana-Champaign in compliance with regulations set forth by the United States Immigration and Naturalization Service for all students planning to enter the United States under its auspices. Likewise, current information and certification are required of all foreign applicants transferring from within the United States. Financial resources must be documented for the entire length of time required to earn a degree. Expenses for 1978-79 were estimated at \$6,246 per year. These figures are subject to change without notice and are expected to increase yearly. Current figures for estimated expenses may be obtained by writing the Office of Admissions and Records.

Prospective undergraduate foreign students who cannot document the existence of sufficient resources for the entire length of the degree program will be denied admission to the University.

University financial aid funds are extremely limited and are available only to applicants in specific exchange programs. Individual requests for financial aid cannot be considered.

Application Dates

Undergraduate students are urged to submit the completed admission application form and supporting documents (TOEFL, transcripts, and financial certification) approximately one year prior to the desired term of entry. Competition is extremely keen, and late applicants jeopardize their opportunity for admission. In order to have the best chance for admission, summer and fall applicants should submit the

application and all supporting credentials no later than November 15 of the preceding year. Fall and summer applicants may compete for a limited number of spaces if their applications and supporting documents are received by February 15. Applicants for spring are urged to submit complete applications one year in advance; the absolute deadline for spring application is November 1 preceding the spring semester. *Complete* applications will be considered as they are received until all spaces have been filled. Admission decisions will be announced in writing to the applicant as soon as they are available.

Prospective applicants may obtain additional information and application materials from the Office of Admissions and Records, University of Illinois at Urbana-Champaign, 10 Administration Building, Urbana, IL 61801.

Application Documents

All foreign applicants must submit:

- A completed Application for Undergraduate Admission for Applicants from Other Countries.
- A \$20 (U.S.) nonrefundable application fee payment in the form of a check or money order payable to the University of Illinois. (See page 77.)
- Official records for at least the last four years of secondary school study and for any postsecondary or university-level work completed or attempted.

All records must list subjects taken, grades earned or examination results (including those passed or failed in each subject), and all diplomas and certificates awarded; official translations must be attached to these records if they are in a language other than English. All credentials must be certified by an officer of the educational institution attended or by the U.S. embassy or consulate. Documents from Korean institutions must be certified by the Korean Development Institute or the Korean Ministry of Education. Applicants attending U.S. or Canadian schools should have credentials submitted directly by the school. Notarized copies of credentials do not fulfill certification requirements.

A list of all courses in progress, including recently completed course work which is not listed on the transcript, must also be included with one's transcript. When possible, applicants must have school officials provide a statement of the applicant's rank in class. This statement should indicate the performance of the applicant relative to the performance of other members of his or her secondary or postsecondary school class. Applicants to some fields may be required to submit additional materials, such as portfolios, aptitude test results, or auditions. These items will be requested by the Office of Admissions and Records when needed and will be required only for applicants satisfying all other admission criteria.

- The results of the Test of English as a Foreign Language (TOEFL), if required, as indicated on pages 31 and 32.
- Declaration and certification of finances as required of all foreign students.

SUMMER SESSION ADMISSION AND READMISSION

The University of Illinois at Urbana-Champaign conducts an eight-week summer session offering undergraduate courses for both degree and nondegree candidates. Degree candidates should refer to preceding sections — Admission of Beginning Freshmen (page 21), Admission of Transfer Students (page 23), or Readmission (page 26) — for information on admission requirements and application dates. For a description of required application materials degree candidates should refer to Application Documents (page 29).

Nondegree applicants may be admitted for summer session only (see below) or to a specific college for the academic year with summers optional (see pages 27 and 28).

Undergraduate students enrolled on campus who completed the immediately preceding semester and who are eligible to continue in the same college *need not apply* for admission to the summer session.

Undergraduate students who were dropped for academic reasons at the end of a spring semester and who desire permission to continue for the following summer session only, *need not apply* for admission to the summer session. They are required to consult with an official of the college from which they were dropped and with an official of the college in which they intend to be readmitted at a future date (the same or another college) for approval to enroll in the summer session. Students who are approved for such continuance in the summer must petition for readmission to a subsequent term.

ADMISSION FOR SUMMER SESSION ONLY

This section deals only with admission to the eight-week summer term as nondegree students.

Approval of admission or readmission as a nondegree student to the summer session only does not allow enrollment in the fall or spring. Students admitted to the summer session only as nondegree students who later wish to enter one of the colleges of the University as a degree or nondegree student must seek admission in the usual manner and must satisfy requirements in effect at the time of application. Undergraduate applicants for admission or readmission admitted as nondegree students to the summer session only are not assigned to any college or curriculum.

All students holding a bachelor's degree who wish to enroll for summer session only as a nondegree student must enroll in the Graduate College.

Admission Requirements for Summer Session Only

Undergraduate applicants for admission to the summer session only as nondegree candidates may be approved by the director of admissions and records or by the Summer Session Office under one of the following conditions:

- High school graduates who qualify for admission under minimum rank-test score combination requirements, but who have not been admitted under the competitive rank-test score combination requirements in effect for the fall semester, may be admitted for the summer session as nondegree candidates.

These minimum rank-test score requirements (known as campus minimums) are available from the Office of Admissions and Records the September preceding the summer term for which admission is sought.

- Former University of Illinois at Urbana-Champaign students who have not graduated from the University may be admitted as nondegree candidates if approved by the director of admissions and records through release from their former college. Students on drop or probationary status must petition the Summer Session Office for admission as nondegree candidates. If approved, they will be admitted on probation for that one summer session only.

- Undergraduate students enrolled in other institutions may enroll in the summer session as nondegree candidates if they are eligible to return to the collegiate institution last attended.

- Other persons, eighteen years of age or over, who have never attended a collegiate institution but give evidence that they possess the requisite background and ability to pursue profitable courses for which they are qualified, may enroll in the summer session as nondegree candidates.

Students who have been approved for admission in the fall semester will be authorized to begin in the immediately preceding summer session if they notify the Office of Admissions and Records of their intent to enroll in the summer session.

Application Date

All applicants for admission to the summer session only as nondegree candidates may submit an application on or after February 1, but not before.

Application Documents

All credentials presented for admission become the permanent property of the University and are not subsequently released to the student or to another individual or institution. All nondegree candidate applicants must submit:

- A completed admission application form. This form is available from and should be returned with the required supporting credentials to the Office of Admissions and Records, University of Illinois at Urbana-Champaign, 10 Administration Building, Urbana, IL 61801.
- A \$20 check or money order, payable to the University of Illinois, in payment of the nonrefundable application fee. (See page 77.)

Social security numbers, which serve as permanent student identification numbers, must be entered on the admission application. Students who do not have a social security number should obtain one from their local Social Security Office.

CREDENTIALS REQUIRED OF CERTAIN APPLICANTS

High school graduates (see first category under Admission Requirements above) may be required to submit an official high school transcript received from the high school showing rank in graduating class, and an official report of the admission test score (ACT or SAT) received from the testing agency concerned.

Teachers may be requested to submit a statement attesting to their employment.

Students enrolled at other collegiate institutions may be requested to submit a statement of eligibility to return to the institution concerned.

ADMISSIONS CHART

Requirements for Admission to Undergraduate Curricula

In addition to meeting all other admission requirements a nonresident beginning freshman applicant must rank in the top quarter of his or her graduating high school class if space is inadequate to admit all minimally qualified applicants. Unless a higher average is indicated in the footnotes the required minimum transfer grade-point average is 3.25 (A = 5.0) for all curricula.

College preparatory subject requirements indicated as Patterns I, II, III, and IV in the Admissions Chart beginning on the following page are required of all beginning freshman applicants, transfer applicants with fewer than 30 semester hours of baccalaureate credit by their desired date of entry, and all applicants to the College of Fine and Applied Arts. The subject patterns are described on page 19.

Colleges and Curricula	Subject Pattern (See page 19.)
COLLEGE OF AGRICULTURE	Pattern I
Agricultural communications Agricultural industries Agricultural science ¹ Core curriculum with majors in: ² Agricultural economics (specify option) Agricultural mechanization Agronomy Animal science Dairy science General agriculture Horticulture Food industry Food science Forest science Human resources and family studies Home economics education ³ Interior design Ornamental horticulture Restaurant management Teaching of agricultural occupations (high school level) ³ Wood science	
Combined agricultural science—agricultural engineering (five-year program) ⁴	Pattern IV

¹ See page 172 for minimum transfer average.

² Transfer applicants with 45 or more semester hours must indicate the desired major.

³ Special requirements: Students must have a 3.5 (A = 5.0) grade-point average after 60 semester hours. Continuation in this program beyond the sophomore year requires good standing or provisional status in teacher education. (See page 137.)

⁴ The first three years are taken in the College of Agriculture. The fourth year is taken in either the College of Agriculture or the College of Engineering. The fifth year is taken in the College of Engineering. (See page 174.) Minimum transfer grade-point average is 3.5 (A = 5.0).

COLLEGE OF APPLIED LIFE STUDIES	Pattern I ³
Health and safety education ¹ (options in community health education, public safety education, and school health and safety education) Leisure studies (options in outdoor recreation, program specialist, recreation and park administration, and therapeutic recreation) Physical education ² (options in bioscience, motor development, motor performance and sport, and social science of sport)	

¹ For those who plan to teach school health and safety education, continuation in this curriculum beyond the sophomore year requires good standing or provisional status in teacher education. (See page 137.)

² For those who plan to teach motor development or motor performance and sport, continuation in this curriculum beyond the sophomore year requires good standing or provisional status in teacher education. (See page 137.)

³ Students who enroll in the College of Applied Life Studies will be at a distinct disadvantage if they have not satisfactorily completed at least one unit in both high school biology and high school chemistry.

Colleges and Curricula	Subject Pattern (See page 19.)
INSTITUTE OF AVIATION (Two-year certificate programs) ¹ Aircraft maintenance Aviotian electronics Professional pilot ² Combined flight-maintenance program ^{2, 3}	Pattern I
<p>¹ Special requirements: Personal interview and special aptitude test required for all curricula, except electronics.</p> <p>² A Federal Aviation Administration (FAA) physical examination is required before the first solo flight.</p> <p>³ Students enter aircraft maintenance curriculum.</p>	
COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION Accountancy Business administration Economics Finance Curriculum unassigned (Temporary classification for students who have not selected a degree program. Selection must be made by the end of the sophomore year.)	Pattern I
COLLEGE OF COMMUNICATIONS¹ Advertising ^{2, 3} News-editorial ^{2, 3} Radio-television ^{2, 3, 4}	See page 235.
<p>¹ Beginning freshmen are not admitted to this college.</p> <p>² Minimum admission grade-point average is 4.0 (A = 5.0), but applicants with a lower average will be considered if they demonstrate strong career motivation and aptitude.</p> <p>³ Special requirements: Complete 60 semester hours of undergraduate work. Possess a reasonable degree of typing ability. Applicants are required to submit a letter of career intent, letters of reference, accounts of media experience, and other evidence of interest in communications.</p> <p>⁴ The radio-television curriculum was closed to admission in 1978-79; if it becomes available for admission an announcement will be made in the admissions information which is sent to those requesting applications.</p>	

Colleges and Curricula	Subject Pattern (See page 19.)
COLLEGE OF EDUCATION	Pattern I
Business education ¹	
Early childhood education ¹	
Education, general ²	
Elementary school teaching ¹	
High school teaching ^{1, 3}	
Preparation of teachers of moderately and severely handicapped persons ^{1, 3, 4}	
Technical education specialties ¹	

¹ Minimum transfer grade-point average is 3.5 (A = 5.0).

² Two-year curriculum for freshmen and sophomores who are uncertain of the specific curriculum in which they wish to major and for students with less than 60 semester hours of credit who wish to qualify for admission to a curriculum requiring junior standing in the College of Education.

³ Enrollment limited to students with junior standing.

⁴ Students who wish to enter the program must have had some prior experience with the moderately and severely handicapped.

Colleges and Curricula	Subject Pattern (See page 19.)
COLLEGE OF ENGINEERING	
Aeronautical and astronautical engineering Agricultural engineering Ceramic engineering Civil engineering Computer engineering Computer science Electrical engineering Engineering mechanics Engineering physics ¹ General engineering Industrial engineering Mechanical engineering Metallurgical engineering Nuclear engineering	Pattern IV ⁵
Combined agricultural science—agricultural engineering (five-year program) ²	Pattern IV ⁵
Combined engineering—liberal arts and sciences (five-year program) ^{3, 4} (Specify curriculum. See page 268.)	Pattern III ⁵

¹ A minimum grade-point average of 3.5 (A = 5.0) in all subjects and a combined grade-point average of 3.5 in all courses in mathematics and physics are required for registration in advanced undergraduate physics courses.

² The first three years are taken in the College of Agriculture. The fourth year is taken in either the College of Agriculture or the College of Engineering. The fifth year is taken in the College of Engineering. (See page 174.)

³ Minimum transfer grade-point average is 3.5 (A = 5.0). Special requirements: Applicants must satisfy admission requirements of both the College of Engineering and the College of Liberal Arts and Sciences.

⁴ The first, fourth, and fifth years are taken in the College of Engineering; the second and third years are taken in the College of Liberal Arts and Sciences. In general, transfer students with more than 75 hours of credit are ineligible for this program.

⁵ Students entering engineering curricula without satisfactory proficiency in chemistry are required to take Chemistry 100 and receive no credit toward graduation. Also, the initial physics sequence assumes familiarity with such ideas as the vector nature of forces, simple calorimetry, and simple geometrical optics. Therefore, it is assumed that serious applicants for engineering curricula have studied both chemistry and physics in high school.

Colleges and Curricula

Subject Pattern
(See page 19.)

Colleges and Curricula	Subject Pattern (See page 19.)
COLLEGE OF FINE AND APPLIED ARTS	
Architectural studies ¹	Pattern III
Art and design curricula ^{2, 6} Art education ^{3, 5} Biocommunication arts (premedical illustration and design) ⁴ Crafts General ² Graphic design ¹¹ History of art Industrial design Painting Sculpture	Pattern II
Dance ⁷ Teaching of dance ^{3, 5, 7} Landscape architecture	Pattern I
Music, with majors in: ⁷ History of music Instrumental music Music composition Voice Music education ^{3, 5, 7} Theatre ⁷ Freshman program ⁸ Professional studio in acting Comprehensive theatre Professional studio in theatre, design, and technology Urban and regional planning ^{9, 10}	Pattern II

¹ Transfers from other departments in the University must have a 3.25 (A = 5.0) cumulative grade-point average.

² All first-year students in art enter the general curriculum in art. After completing one year in the general curriculum students must select one of the more specialized art and design curricula. Transfer students with more than 30 semester (45 quarter) hours must designate one of the more specialized art and design curricula.

³ Continuation in this curriculum beyond the sophomore year requires good standing or provisional status in teacher education. (See page 137.)

⁴ The first two years are offered at the Urbana-Champaign campus by the Department of Art and Design; the last two are offered by the College of Associated Health Professions with programs at both the Urbana-Champaign and Chicago Medical Center campuses.

⁵ Special requirement: 3.5 (A = 5.0) grade-point average after 60 semester hours.

⁶ 3.25 grade-point average required for transfers from other departments in the University and for continuation in art and design courses at the junior level. (See page 315.)

⁷ Special requirement: qualifying audition and/or interview. See specific curricula requirements on pages 323, 329, and 335.

⁸ Students are enrolled in this program for one year before qualifying for one of the three theatre options: professional studio in acting; comprehensive theatre; and professional studio in theatre design and technology.

⁹ Beginning freshmen are not admitted to the urban and regional planning curriculum. Since students must have junior standing to be eligible to enter the program, beginning freshman applicants are advised to seek admission to the general curriculum in the College of Liberal Arts and Sciences and later attempt to transfer to the College of Fine and Applied Arts for enrollment in the urban and regional planning curriculum. Students of other institutions should follow a broad general education program as preparation for this curriculum.

¹⁰ Students must have completed 60 semester hours of undergraduate college work and present a grade-point average of at least 4.0 (A = 5.0) at the time of entry. Applicants with less than a 4.0 average will be considered in special cases where strong career motivation and aptitude can be demonstrated. Additional admission requirements may be imposed.

¹¹ Minimum grade-point average of 4.0 (A = 5.0) is required for admission and continuation in the graphic design curriculum and the biocommunication arts program.

Colleges and Curricula

Subject Pattern
(See page 19.)**COLLEGE OF LIBERAL ARTS AND SCIENCES**

Combined sciences and letters—education program for mathematics teachers (See page 428.)¹

General (two-year program for freshmen and sophomores uncommitted to a specified degree program and those who desire to complete preprofessional education requirements for communications, nursing, occupational therapy, pharmacy, social work, and urban and regional planning) (See page 11.)

Human resources and family studies²

Sciences and letters curriculum, including preprofessional preparation for admission to Colleges of Associated Health Professions, Dentistry, Law, Medicine, and Veterinary Medicine. Fields of concentration are listed on pages 12 and 13.¹

Speech and hearing science I (A.B. program)

Speech and hearing science II (B.S. program, for certification)⁵

Teacher education curricula for high school teaching (biology, chemistry, earth science, English, geography, mathematics, physics, social studies, speech)^{6,7}

Teacher education curricula in foreign languages for both high school and elementary school teaching (French, German, Latin, Russian, Spanish)^{6,7}

Pattern II¹⁰

Chemical engineering¹¹

Chemistry

Geology^{3,9}

Physics⁸

Pattern III¹⁰

Combined engineering—liberal arts and sciences
(five-year program)³

Pattern III¹⁰
(See College of
Engineering on page
39.)

¹ Minimum transfer grade-point average is 3.75 with 4.0 (A = 5.0) in mathematics courses; same averages required to remain in the program.

² This curriculum is also offered in the College of Agriculture.

³ Minimum transfer grade-point average is 3.5 (A = 5.0).

⁴ See also pages 439, 346, 441, 443, and 453.

⁵ To remain in good standing, a student in this program must have achieved a cumulative college grade-point average of at least 3.65 by the completion of his or her junior year. Students who desire certification for work in the public schools can complete certification requirements by completing a Master of Science degree.

⁶ Continuation in these curricula beyond the sophomore year requires good standing or provisional status in teacher education. (See page 135.)

⁷ Special requirement: 3.5 (A = 5.0) grade-point average after 60 semester hours.

⁸ A minimum grade-point average of 3.5 (A = 5.0) in all subjects and a combined grade-point average of 3.5 in all courses in physics and mathematics are required for registration in advanced undergraduate mathematics and physics courses.

⁹ After the second year, students in this curriculum must have and maintain at least a 3.5 general grade-point average. A transfer student must present and maintain a corresponding record.

¹⁰ It is strongly recommended that students complete three or, if possible, four years of the same foreign language before entering the College of Liberal Arts and Sciences.

¹¹ Students must maintain a 3.5 general average, excluding military training, in order to be accepted by the department as juniors and seniors. Students with less than a 3.5 average will be considered on an individual basis if they demonstrate strong career motivation and aptitude.

Colleges and Curricula	Subject Pattern (See page 19.)
SCHOOL OF SOCIAL WORK¹	
Social work	See School of Social Work on page 449.

¹ Beginning freshmen are not admitted to this school. Since a student must have junior standing to be eligible to enter the School of Social Work, the beginning freshman applicant is advised to enroll in the general curriculum of the College of Liberal Arts and Sciences.

Students may apply for admission after completion of 45 semester hours of college work, but they must have completed 60 semester hours of undergraduate work at time of entry.

Special requirements: Complete 60 semester hours of undergraduate work. Possess a grade-point average of at least 3.75 (A = 5.0) and present evidence of interest in a professional career in social work; applicants with less than a 3.75 grade-point average will be considered on an individual basis if they demonstrate strong career motivation and aptitude.

Precollege Programs

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PROGRAMS FOR FRESHMEN

Each freshman applicant accepting admission to the University of Illinois at Urbana-Champaign for the fall semester is expected to participate in the Precollege Programs. The Precollege Programs include testing in the spring and academic advising and preenrollment for fall classes during June and July. The brochure, *Precollege Programs for Beginning Freshmen*, which fully explains the programs is sent to each admitted applicant. Freshmen entering in the fall semester who do not participate in the spring testing program and summer advance enrollment program must complete their required testing, academic advising, and class scheduling during New Student Week. Information about New Student Week activities is sent to all students before their arrival on campus.

Precollege Programs are not available for freshmen entering the University during the spring semester; they must complete their required testing, academic advising, and registration during New Student Week, the week immediately preceding the start of classes.

Testing

During March, April, and May beginning freshmen who have been admitted to the fall semester must come to the Urbana-Champaign campus or the Chicago Circle campus to complete their required testing. The tests that must be taken during this one day on campus are: the School-College Ability Test to measure general ability in both verbal and mathematical areas and placement tests in mathematics, chemistry, and foreign languages. These placement tests must be taken by admitted students if they had these subjects in high school but have not received college credit for them, and they intend to pursue these subjects either as required or elective courses at the University. Proficiency credit may also be granted for foreign language placement examinations.

Placement tests are designed to help determine which course a student is best prepared to begin in a particular subject area. Several introductory-level courses are generally available to students in each subject area. It is to a student's advantage to enroll in a course which is neither too difficult nor too easy relative to his or her high school preparation. Placement test scores are used for initial placement and are not recorded on the student's official academic record. Requirements for placement testing vary by college and curriculum. The *Precollege Programs* brochure, sent to all admitted students, contains a full description of required and optional testing.

Freshman students who fail to complete all required spring testing will be assessed a \$25 late fee to take the tests during New Student Week if they are Illinois residents and their Notice of Admission to the University is dated prior to May 1.

The University of Illinois at Urbana-Champaign offers three general examinations of the College-Level Examination Program (CLEP) as an optional part of the Precollege Programs. These examinations in CLEP Social Sciences and History, CLEP Humanities, and CLEP Natural Sciences also may be taken by eligible students during this one day of testing at Urbana-Champaign or Chicago Circle campuses. An explanation of CLEP examinations appears on page 52.

Counseling

The Psychological and Counseling Center offers optional services including the *Self-Counseling Manual* and individual or group counseling interviews to beginning freshmen who have completed the required testing. These services are intended to assist each new student in making the best possible use of the educational oppor-

tunities provided by the University and in making wise educational and vocational decisions.

With the aid of the *Self-Counseling Manual* students and their parents are able to understand the student's test results and to answer for themselves most of the questions freshmen commonly have. Use of the manual may indicate the appropriateness of further counseling; individual or group counseling interviews are available by appointment at the Urbana-Champaign campus from April through July. A request form for such additional counseling is included in the manual. A summary of decisions and recommendations, mutually arrived at in the counseling interview, is given to the student to transmit to the academic adviser.

Academic Advising and Advance Enrollment

Students who have completed the testing required by their college of enrollment may participate in the academic advising and Advance Enrollment Program conducted at the Urbana-Champaign campus in June and July. During the day that students are on campus for this program they meet with an academic adviser who assists them in selecting a schedule of courses for the fall semester which satisfies college and curriculum degree requirements.

Since the results on the placement and/or proficiency tests are used by the colleges and academic departments concerned to evaluate each student's achievement level and to assist the student in arranging his or her class schedule, freshmen must complete any testing required by their colleges before they can participate in the summer program. Students whose colleges have no required testing may participate in the summer program without having completed the spring testing program.

Beginning freshmen who participate in the summer advance enrollment program have top priority in the scheduling of course requests for the fall semester and have a definite advantage in completing registration in the fall. Interested students also have the opportunity to audition for band and choral organizations on the day of their advance enrollment.

PROGRAMS FOR TRANSFER AND READMITTED STUDENTS

New transfer and readmitted students have the opportunity to advance enroll during the summer for the fall semester. These students receive details of the Advance Enrollment Program in a bulletin mailed with their Notice of Admission as well as a form to request participation in the program.

PARENTS PROGRAM

Parents are cordially invited to accompany their son or daughter on the day of advance enrollment. The University and the University's Dads and Mothers Associations conduct an orientation for parents to supplement their knowledge about the University and the Urbana-Champaign community.

ADDITIONAL INFORMATION

Questions concerning the Precollege Programs should be referred to:

Precollege Programs Coordinator
Office of Admissions and Records
University of Illinois at Urbana-Champaign
10 Administration Building
Urbana, IL 61801
Telephone: (217) 333-6427

Special Opportunities

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Because of the comprehensive nature of the University of Illinois at Urbana-Champaign, arrangements for superior students differ among the various colleges and departments. Generally speaking, superior students are able to enter special courses or special sections of courses as freshmen and sophomores, and are encouraged as juniors and seniors to participate in special programs for majors in the different departments. For details of these various arrangements, see the descriptions given in the college sections of this catalog beginning on page 141.

ADVANCED PLACEMENT PROGRAM

The Advanced Placement Program, administered by the College Entrance Examination Board, is designed for able high school students who are about to enter college and who wish to demonstrate their readiness for courses more advanced than those most frequently studied in the freshman year. Advanced classes are offered in many high schools in one or more of the following subjects: art studio, art history, English language and composition (examination available in May 1980), English literature and composition, French language, French literature, German language (examination available in May 1980), German literature, Latin, Spanish language, Spanish literature, biology, chemistry, calculus, physics, music literature, music theory, American history, and European history. There is a national examination in each subject, administered in May by the Educational Testing Service, which is designed to measure the competence of the student in terms of the point at which college study in that subject should begin.

The examinations are prepared by joint national committees of high school and college teachers. They are graded by other national committees on the following basis: 5, high honors; 4, honors; 3, creditable; 2, pass; and 1, fail. The marked papers are sent to the university which the student specifies he or she will attend. Each department within the University of Illinois at Urbana-Champaign has the option of granting or not granting college credit and advanced placement on the basis of the board's grade or on the basis of the student's paper. The University encourages high schools and their outstanding students to participate in the program.

A student transferring from an approved collegiate institution (i.e., one who has attempted 12 or more semester hours of transferable classroom course work), who has been allowed credit for the Advanced Placement Program by that institution and such credit is so indicated on the official transcript of credits, is also allowed credit by the University of Illinois at Urbana-Champaign in the same amount as accepted by the previous institution. Application of transferred advanced placement credit toward graduation, however, is subject to approval by the dean of the student's college.

The specific credit recommendations at the Urbana-Champaign campus for beginning freshmen, including students with less than 12 semester hours of transferable classroom credit attempted at other collegiate institutions, are listed below.

Assignment of credit in specific courses is dependent upon policies established by the individual department and the college and may be changed without prior notice.

The coordinator of placement and proficiency testing, University of Illinois at Urbana-Champaign, 307 Engineering Hall, Urbana, IL 61801, should be contacted for information about policy and procedural changes to the Advanced Placement Program.

Art

Art history

Scores of 5 and 4 receive credit for Art 111 and Art 112 (8 semester hours). Credit will not be awarded for scores of 3 and below.

Art studio

Portfolios must be submitted to the Department of Art and Design for an evaluation in all studio areas.

English**English language and composition**

Examination available in May 1980.

English literature and composition

Scores of 5 and 4 receive credit for English 103 (3 semester hours) and Rhetoric 105 (4 semester hours) and exemption from the University rhetoric requirement. Credit will not be awarded for scores of 3 and 2.

Foreign Languages**French language**

Scores of 5 and 4 receive credit for French 211 and French 215 (6 semester hours). Scores of 3 receive credit for French 211 (3 semester hours). Credit is not awarded for scores of 2.

French literature

Scores of 5 and 4 receive credit for French 202 and French 215 (6 semester hours). Scores of 3 receive credit for French 202 (3 semester hours). Credit will not be awarded for scores of 2.

German language

Examination available in May 1980.

German literature

Scores of 5 and 4 receive credit for German 231 and German 211 (6 semester hours). Scores of 3 receive credit for Ger. 233 (3 semester hours). Credit will not be awarded for scores of 2.

Latin

Scores of 5, 4, and 3 receive credit and placement as follows:

Virgil examination: 3 semester hours of credit and placement in Latin 201.

Lyric examination: 3 semester hours of credit for Latin 201 and placement in Latin 202.

Credit will not be awarded for scores of 2.

Spanish language

Scores of 5 and 4 receive credit for Spanish 209 (3 semester hours). Credit will not be awarded for scores of 3 or below.

Spanish literature

Credit will be awarded for scores of 5 and 4 for either Spanish 200 or 215. Credit will not be awarded for scores of 3 or below.

Mathematics and Natural Sciences**Biology**

Scores of 5 receive credit for Biology 110 and Biology 111 (10 semester hours). Scores of 4 receive credit for Biology 100 (4 semester hours) and Biology 101 (2 semester hours).

Scores of 3 receive credit for Biology 100 (4 semester hours) and placement in Biology 101, 102, or 103.

Credit will not be awarded for scores of 2.

Chemistry

Scores of 5 and 4 receive general chemistry lecture credit (6 semester hours) and placement in Chemistry 122 or both 131 and 134.

Scores of 3 receive general chemistry lecture credit (3 semester hours) and placement in Chemistry 102 and/or 109. Students should take the departmental general chemistry proficiency examination.

Credit will not be awarded for scores of 2.

Mathematics

Calculus AB

Scores of 5, 4, and 3 receive credit for Mathematics 120 (5 semester hours) and Mathematics 131 (3 semester hours) and placement in Mathematics 141.

Scores of 2 receive credit for Mathematics 120 (5 semester hours) and placement in Mathematics 130 or 131.

Calculus BC

Scores of 5, 4, 3, and 2 receive credit for Mathematics 120 (5 semester hours) and Mathematics 131 (3 semester hours) and placement in Mathematics 141.

Physics

Physics B

Scores of 5 and 4 receive credit for Physics 101 and Physics 102 (10 semester hours).

Scores of 3 make students eligible to enroll in Physics 101 or take a proficiency examination for that course. If an A or B grade is earned in the course or on the proficiency examination, credit will be awarded for Physics 101 and Physics 102 (10 semester hours).

Scores of 2 make students eligible to take proficiency examinations in any of Physics 101, 102, 106, or 108.

Physics C

Scores of 5 and 4 will receive credit as follows:

Part I — Mechanics: Physics 106 (4 semester hours).

Part II — Electricity and Magnetism: Physics 107 (4 semester hours).

Scores of 3 are handled as follows:

Part I — Students may take a proficiency examination for Physics 106 or enroll in that course.

Part II — Students may take a proficiency examination for Physics 107 or enroll in that course.

Scores of 2 in Part I or Part II make students eligible, with the approval of the department, to take proficiency examinations in any of Physics 101, 102, 106, 107, or 108.

For additional information or to arrange to take a departmental proficiency examination, students should go to 233 Loomis Laboratory of Physics.

Music

Music literature

Scores of 5 and 4 receive credit for Music 110 (2 semester hours).

Credit will not be awarded for scores of 3 or below.

Music theory

Credit will not be awarded for any scores.

Social Studies

American history

Scores of 5 and 4 receive credit for History 151 and History 152 (8 semester hours).

Credit will not be awarded for scores of 3 or below.

European history

Scores of 5 and 4 receive credit for History 111 and History 112 (8 semester hours).

Credit will not be awarded for scores of 3 or below.

DEPARTMENTAL PROFICIENCY EXAMINATIONS

Departmental proficiency examinations are offered in most University courses normally open to freshmen and sophomores. A student may take proficiency examinations in more advanced undergraduate courses on recommendation of the head or chairperson of the department and approval of the dean of the student's college. Departmental proficiency exams are administered in unscheduled individual sessions or scheduled group sessions during the semester. Department offices can provide information regarding test date, place of administration, type of examination, and references which might be used in preparing for examinations. Course descriptions and prerequisites are listed in the *Courses Catalog*. Proficiency examinations are generally given without cost to the student, but a fee may be charged to defray the cost of proficiency examinations prepared by agencies outside the University.

An undergraduate student who passes a proficiency examination is given credit toward graduation for the amount regularly allowed in the course, if it does not duplicate credit counted for admission to the University or credit earned through some other testing program, and if it is acceptable in the student's curriculum. No official record is made of failures in these examinations, but some departments may keep records to prohibit the student from retaking the examinations. General campus policy information regarding proficiency examinations can be found in the *Code on Campus Affairs and Regulations Applying to All Students*, which is available to each student at registration.

Course credit is not awarded to new, readmitted, or continuous students on the basis of the Proficiency Examination Program (PEP) administered by the American College Testing Program (ACT).

Policies and procedures regarding placement and proficiency examinations, the College-Level Examination Program (CLEP), and the Advanced Placement Program are published in the brochure *Placement and Proficiency Examinations 1978-80*, which is available to students, prospective students, and counselors at college offices or by writing to: Coordinator, Placement and Proficiency Testing, University of Illinois at Urbana-Champaign, 307 Engineering Hall, Urbana, IL 61801, telephone (217) 333-3490.

COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP)

A minimum of 6 hours each in the humanities, social sciences, and natural sciences is required for graduation in all undergraduate curricula at the Urbana-Champaign campus. Some General Examinations of the College-Level Examination Program (CLEP) are administered by the Urbana-Champaign campus to offer students the opportunity to satisfy one or more of these general education requirements and to obtain up to 6 credit hours for each test successfully completed, dependent upon the policy of the student's college of enrollment.

CLEP General Examinations in Humanities, Social Science and History, and Natural Science (subtests in biological science and physical science) are available to prospective students and enrolled students. College policies vary regarding the tests which are acceptable for credit and waiver of a requirement. At the Urbana-Champaign campus, credit is not awarded on the basis of scores from the CLEP General Examinations in English Composition or Mathematics or for any of the CLEP Subject Matter Examinations.

Students who have earned transferable classroom credit or who have earned proficiency credit through some other examination program in any of the four areas of the CLEP General Examinations for which the Urbana-Champaign campus awards credit may not take the CLEP examination in the same area. Any of the CLEP General Examinations may be taken only once during an academic year by a continuing student. The charge for each examination is \$7.

Prospective students planning to enter in the fall semester may take CLEP examinations in the prior spring during the Precollege Testing Program. Those planning to enter in the spring semester may take the examinations beginning one month after the close of spring registration. Any individual may take CLEP exams at any CLEP National Testing Center designated by Educational Testing Service (ETS), Princeton, NJ 08540. Official score reports should be sent by ETS to: Coordinator, Placement and Proficiency Testing, University of Illinois at Urbana-Champaign, 307 Engineering Hall, Urbana, IL 61801. The locations of the various CLEP National Testing Centers and the test administration dates can be obtained by writing to Educational Testing Service or by inquiring at most college and high school counseling offices.

The scores of prospective students who take CLEP exams at UIUC will not be transferred to another institution unless these individuals have enrolled in and completed course work at the University. Some prospective students take CLEP exams in the Precollege Testing Program in the spring, but subsequently decide to decline admission to UIUC and enroll at another institution. In such cases, CLEP scores will not be sent by UIUC to the examinee or to the institution in which he or she enrolled. Students who are uncertain about attending UIUC should take CLEP tests at a National Testing Center to avoid this potential problem.

CLEP test scores earned by Urbana-Champaign beginning freshmen, including students with less than 12 semester hours of transferable classroom credit attempted at other collegiate institutions, are evaluated for credit according to norms established for the campus.

Transfer students who have earned 12 or more semester hours of transferable classroom credit at another single campus will automatically receive credit at UIUC for CLEP credit which is recorded on the official transcript from an approved transfer institution. University policy regarding the acceptability of *all* CLEP credit for transfer purposes is subject to change without advance notice.

Transfer students who have earned less than 12 semester hours of transferable classroom credit at another institution must request that an official copy of their scores be sent to the University of Illinois at Urbana-Champaign. Total standard scores are needed for both the Humanities and the Social Science and History Examinations. Subtest standard scores are needed from the Natural Sciences Examination for Biological Science and Physical Science. All scores will be evaluated using the same standards which are applied to the scores of UIUC students.

CLEP examination scores reported by the Defense Activity for Non-Traditional Education Support (DANTES) testing centers will be evaluated against the same criteria which are applied to continuing UIUC students.

Additional information about CLEP examinations including credit and waiver policies for each college is published in the *Placement and Proficiency Examinations 1978-80* brochure, which is available on request from the coordinator of placement and proficiency testing at the address given above or by calling (217) 333-3490.

EDMUND J. JAMES UNDERGRADUATE HONORS PROGRAMS

The Office of University Honors Programs and the Campus Honors Council are generally responsible for coordination and supervision of undergraduate honors programs and awarding of academic honors on the Urbana-Champaign campus. The University of Illinois at Urbana-Champaign is affiliated with national and regional associations concerned with honors education at the college level: The National Collegiate Honors Council, and the Honors Council for the Illinois Area.

Undergraduate Honors Programs, named for one of the University's distinguished presidents, Edmund J. James, provide a number of special curricular opportunities to academically talented undergraduate students. Designation as a James Scholar honors student is recognition by the University of extraordinary ability and achievement. It entitles the student to certain academic privileges, including extended use of library facilities, and charges him or her with the responsibility of seeking sustained intellectual achievement throughout his or her undergraduate career. There is no monetary award associated with the designation, and students who need financial assistance should apply to the Office of Student Financial Aids. Administrative coordination of all undergraduate honors programs is conducted by the Office of University Honors Programs.

James Scholar honors students are characterized by outstanding academic records, high general aptitudes for college work, and reputations for seriousness of purpose, persistence, and self-discipline in educational endeavors.

Students electing to participate in the program may enroll in any undergraduate curriculum; unusual academic arrangements are open to James Scholar honors students in all courses of study. These arrangements include provision of honors courses and sections, special seminars, and interdisciplinary colloquia. In addition, James Scholars are encouraged to pursue individual scholarly interests by means of independent study and research projects.

Honors Credit Learning Agreements

It is not expected that James Scholar honors students will take a full schedule of special courses; however, an average of at least one honors activity each semester is expected. To encourage such sustained intellectual activity, a campuswide pilot program has been implemented in which the student may earn officially recognized honors credit in a regular undergraduate course. This is accomplished by means of a learning agreement between the student and the instructor in which the student agrees to undertake a special course-related project; successful completion of the project then earns the student transcript-designated honors credit for the course. This program is currently under study and may undergo some changes in the future.

James Scholar Nomination Procedures

Academic requirements for participation in the program are determined by the respective colleges. In general, undergraduates in most colleges may "self-nominate" into the program provided the decision is based on prior achievement, on high school and college faculty or administrative advice, and is accomplished prior to the terminal dates set for entry into academic programs leading to an honors degree. Students above a predetermined college selection index are automatically admitted as James Scholar Designates in the College of Liberal Arts and Sciences. (See page 350 for further information regarding James Scholar honors students in Liberal Arts and Sciences.) Students may elect to leave the program or may be removed for failure to meet standards of academic performance in the various colleges.

During summer advance enrollment, freshmen in most colleges will receive addi-

tional information regarding specific college programs leading to an honors degree, and at that time, in consultation with their advisers, may self-nominate into the program and select an honors course or plan other honors activities.

Although the honors program in each college will vary in detail, generally, incoming freshmen electing to undertake an honors program will enter the University as James Scholar Designates. After completion of a period on campus, each designate's record will be reviewed by his or her college, and he or she will be either invited to continue as a full James Scholar honors student or advised to drop from the program on the basis of criteria developed by each college. Resident and transfer students wishing to self-nominate into the program should inquire at their college offices.

James Scholar Recognition

Successful performance for one year as a James Scholar honors student is recognized by the University Honors Council, Urbana-Champaign. This recognition is recorded on the student's University record as Edmund J. James Scholar (year). This program is described on page 54.

Specific inquiries regarding the honors program of a college may be addressed to the college office in care of the honors dean. General information about campus-wide honors activities is available from the Director, University Honors Programs, University of Illinois at Urbana-Champaign, 1205 West Oregon Street, Urbana, IL 61801.

EDUCATIONAL OPPORTUNITIES PROGRAM

General Nature and Purposes

The Educational Opportunities Program (EOP) at the University of Illinois at Urbana-Champaign is one of several such programs at colleges and universities across the country. This program is designed to provide opportunities for a college experience to students who have historically been excluded from postsecondary education for a variety of reasons. A similar program exists at the Chicago Circle campus.

Participants in the program, like many other students, receive financial support from federal loans and grants, Illinois State Scholarship Commission grants, and tuition waivers authorized by the University. Like other students, participants in the EOP also contribute toward their expenses through family contributions, summer and part-time employment, and loans. Financial aid also comes from private funds available to the University for this purpose. Supporting services for the program are provided by a combination of federal grants and University funds.

Through the EOP, the University is attempting to do several important things:

- Provide educational opportunities to students who otherwise might not even be able to consider undertaking a college-level program.

- Provide diversity among the student population at the Urbana-Champaign campus.

- Develop educational practices and policies, both academic and administrative, which will assist and support such students and which may well benefit students generally.

- Provide for those students not in the EOP the vital cultural and social experience of meeting, living, and learning with and from students from a different culture.

- Provide and disseminate to other educational institutions and agencies information which will assist them in their efforts to address the needs of underrepresented students.

Admission Requirements

Admission to the program is limited to applicants from Illinois who have had educational or economic disadvantages and who fall into one of the following categories:

- Beginning freshmen who meet the high school subject-pattern requirements for the college and curriculum of their choice and who meet the high school rank-test score combination for this program. (This information may be obtained from the high school counselor.)
- Students not meeting the above stated academic requirements may be considered for special admission even though they do not meet the high school subject-pattern requirements. For a student to be admitted on this basis, both the dean of the college involved and the director of admissions and records (or their designated representatives) must concur.

Equivalent SAT verbal and mathematics scores are acceptable in lieu of the composite ACT score. It should be noted that in some curricula such as education, professional pilot, music, occupational therapy, etc., additional requirements must be met. (See Admissions Chart on pages 35 through 42.)

Supportive Services

The program of supportive services will endeavor to meet the wide range of needs of students in the EOP. Supportive services are designed to provide academic and nonacademic assistance as needed. The basic elements of the supportive services program are as follows:

- Individual academic advising based upon information derived from the student's past records, test results, ability, and interests. The optimum class schedule and course selections will be determined by each student in consultation with special advisers in the various colleges.
- Development of specially designed course offerings by various departments of the University, including basic courses in rhetoric, mathematics, and psychology.
- Provision for the improvement of reading, writing, and study skills through expanded use of the Reading and Study Methods Clinic, the Writing Laboratory, and other sources of assistance.
- Development of a faculty and student tutoring system to assist students when needed. The tutors help the students learn the substance of the material, as well as help them learn how to approach and master the subject.
- Establishment of an office with trained staff to help and counsel students on the myriad problems and questions they face, including the complexities which arise from being part of a large and diverse university.
- Development of programs for precollege orientation to enable the students to begin their college experience with greater awareness of what it means to be a student at the University of Illinois at Urbana-Champaign.
- Specially trained staff to work closely with students to provide general assistance and counseling in a variety of areas: academic, social, personal, financial, and career.

Application

Applicants for participation in the program must submit completed application forms for admission to the University and arrange for their high school transcripts and test scores to be sent to the Office of Admissions and Records, University of Illinois at Urbana-Champaign, 10 Administration Building, Urbana, IL 61801. Students must also complete the Financial Aid Form, the Illinois State Scholarship

Commission application form, and the Basic Educational Opportunity Grant application. The Financial Aid Form from the University is mailed to all admitted students.

Application forms and additional information about the program may be obtained from the Office of Admissions and Records.

FACILITIES AND SERVICES FOR PHYSICALLY HANDICAPPED STUDENTS

The Division of Rehabilitation-Education Services provides appropriate facilities and services for students with all causes and manifestations of physical disability: paraplegics, quadriplegics, post polio, cerebral palsy, visually and hearing impaired, and others. Services include physical therapy and functional training; counseling; transportation; occupational therapy and prosthetics; Braille, tape, and reader service; and medical services. A very elaborate program of recreation and sports is also a part of the division's programming.

Physically disabled students ordinarily live in University Residence Halls with all other students, attend all regular classes, and may pursue any curriculum that is physically and academically feasible. The requirements and procedures for admission are the same as for all applicants.

Applicants are encouraged to contact the Office of the Associate Director, Division of Rehabilitation-Education Services, University of Illinois at Urbana-Champaign, Rehabilitation-Education Center, Champaign, IL 61820, to request detailed information about services and the guidelines for arranging services. Applicants are also strongly encouraged to visit the campus and the Rehabilitation-Education Center in order to gain a general orientation to campus and effectively plan for their needs well in advance of matriculation.

ATTENDANCE IN UNIVERSITY COURSES BY ILLINOIS HIGH SCHOOL STUDENTS

Qualified Illinois high school students are permitted, while still in high school, to attend University classes for college credit. They may also enroll for college credit in correspondence and extramural courses offered by the Office of University Continuing Education.

To qualify for high school and University concurrent enrollment, students must be recommended by their high school principals and have approximately a 4.25 (A = 5.0) grade-point average. Each case is considered on an individual basis. Academic advisement of these students is the responsibility of the University Honors Programs Office. Regular University tuition and fees are assessed for registration under this program.

The courses taken by these selected students involve work over and above the secondary school curriculum. Grades and course credits will be recorded on the permanent University of Illinois at Urbana-Champaign record of the student and will appear on any official transcript issued. If the student enters the University after graduating from high school the courses will be credited toward University graduation if applicable to the chosen degree.

Students applying for admission or readmission under the provisions of this program should be prepared to submit the following materials upon request.

- A \$20 check or money order payable to the University of Illinois in payment of the nonrefundable application fee.
- An application for admission or readmission to the University (not required of students enrolled under this plan in the immediately preceding semester or summer session).

- An official copy of the student's high school transcript covering all work completed in high school and courses in progress, together with ACT or SAT test scores if available. Acceptance under this program does not guarantee later acceptance as a degree candidate.
- A letter of recommendation from the high school principal. This recommendation must include a statement of the University course or courses to be taken and certify that the program will supplement the completion of requirements for graduation from high school.

Information and application papers for prospective students in this program may be obtained from the Associate Director, University Honors Programs, 1205 West Oregon Street, University of Illinois at Urbana-Champaign, Urbana, IL 61801.

Students interested in correspondence study should write directly to the Director, Guided Individual Study, University of Illinois at Urbana-Champaign, 104 Illini Hall, Champaign, IL 61820, for their application instructions. It is suggested that students comply as nearly as possible with the semester system of study and apply at least two weeks prior to the beginning of any semester in which they wish to pursue correspondence study. For the summer months, applications should be submitted no later than the middle of May. Regular University fees, as outlined on page 73, are assessed for these registrations.

A separate undergraduate admission application is required if these students desire to attend the University of Illinois at Urbana-Champaign after high school graduation, or in the Early Admission Program described below.

EARLY ADMISSION PROGRAM

Initially introduced on the University of Illinois at Urbana-Champaign campus as one of two major experimental programs supported by the Carnegie Corporation, the Early Admission Program was approved by the University of Illinois at Urbana-Champaign Senate as a permanent special educational opportunity effective with the 1976-77 academic year. The program is for mature high school students who are academically, socially, and emotionally prepared for college life and academic work at the collegiate level.

Under the program, high school students meeting competitive University admission requirements except receipt of the high school diploma are brought to the campus after their junior year, thus reducing the length of their combined high school and college education by at least one year. Although each application is treated as a special admissions case, prospective students in general must have completed the high school junior year, have earned approximately fifteen units toward the high school diploma, be in good academic standing, receive the recommendation of high school personnel able to evaluate their work, and satisfy the competitive University and college admission standards required of other students.

Those accepted in the program are enrolled in regular four-year curricula and are otherwise treated as regular first-year students except that some special counseling services are available to them. Early Admission Program students may take advantage of such means as CLEP and proficiency and advance placement examinations to complete degree requirements in less than eight semesters.

Students interested in applying for admission under this program should do so no sooner than the January preceding the fall term of planned entry; the admissions process must be delayed until that time so that the application can include the results of work completed during the first semester of the student's junior year. However, the application should be completed as soon as possible after the end of the fall term. Those admitted late may find their desired courses no longer available.

For complete information contact: University Honors Programs Office, Attn.: Early Admission Program, 1205 West Oregon Street, University of Illinois at

Urbana-Champaign, Urbana, IL 61801. The telephone number is (217) 333-1179 or 333-0824.

Parents and high school personnel will be interested to know that based on over four years of evaluation students in this program generally have performed as well academically as other students, have had approximately the same attrition rate as other students, and seem to have encountered no more personal or social problems than other students.

DELAYED ADMISSION

Beginning freshman applicants who have been approved for admission to the College of Liberal Arts and Sciences and the College of Fine and Applied Arts may request that their admission be delayed for a maximum of one year. Applicants who wish to consider this alternative should request further information from the Office of Admissions and Records at the time they accept an admission offer since the program is limited.

CONCURRENT ENROLLMENT

Students at Parkland College and the Urbana-Champaign Campus

Students in good academic standing at Parkland College and at the University of Illinois at Urbana-Champaign may concurrently enroll in courses offered by the opposite institution if such courses are not available at the student's primary campus. Approval for concurrent enrollment must be obtained from the dean of students at Parkland College and the office of the college concerned at the Urbana-Champaign campus.

Concurrent enrollees are part-time nondegree students who pay the tuition and fees regularly assessed at each institution in accordance with the amount of work taken.

STUDY AWAY FROM CAMPUS

The University permits students who have been enrolled on campus for at least a semester or summer session, with the approval of their adviser and the appropriate department and college offices, to undertake independent study away from campus, either in the United States or abroad.

Colleges and departments may establish variable credit courses which permit such students to continue enrollment in the University upon payment of an appropriate fee. Final determination of credit is made by the department and college concerned, on completion of the program of study.

Overseas study programs which are offered by each college are described in the individual college sections of this catalog.

INDEPENDENT STUDY AND INDIVIDUALIZED PROGRAMS

In order to increase flexibility within established curricula to meet the special needs of students, the faculty of each department may establish a special course for independent study on or off campus, for experimentation, or for seminars on topics not treated by regularly scheduled courses. Requests for initiation of the course and suggestions for areas of study may be made by students or the course may be ini-

tiated by faculty members. Such courses may be offered with the approval of the faculty member involved and the department head.

The various colleges may treat formal curriculum requirements with sufficient latitude to permit development of individualized programs while maintaining those aspects of the curriculum which are indispensable to the area of specialization being pursued. No prior administrative approval is required for such modifications. Faculty members may establish a modified curriculum for special groups of students, or a student may initiate a request for curriculum modification.

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INFORMATION SERVICES

Office of Admissions and Records

Staff members in the Office of Admissions and Records, 177 Administration Building (333-0302), provide admission counseling and general information about the University, including registration requirements, tuition and fees, identification cards, and student academic records.

Advisers

Every student has an academic adviser to provide information on college requirements and programs of study. Academic deans, heads of departments, and other faculty members also devote much of their time to student advising. During advance enrollment and registration, special advisers help students select courses and arrange class schedules.

Student Assistance Center

The Student Assistance Center in the lobby of the Student Services Building (333-4636) answers questions and offers information about the University. If a student does not know exactly where to find help, the center will refer the student to the proper department. The center also maintains a library of tape-recorded information on a wide variety of subjects. Tapes can be heard over the telephone by calling 333-2627 and asking for the specific subject.

COUNSELING SERVICES

Psychological and Counseling Center

The Psychological and Counseling Center is located at 206 Student Services Building (333-3704). Clinical and counseling psychologists provide students with professional counseling services to help them deal with personal problems and adjust to campus life. Special help is available for those who do not read as rapidly, concentrate as well, or study as efficiently as they are capable of doing. The center sponsors several programs and workshops dealing with the special problems of students.

Student Services

Staff in the Student Services Office at 130 Student Services Building (333-0050) provide general services counseling to all students. Special counselors are available for students enrolled in the Educational Opportunities Program. This office also administers the emergency loan program and the Emergency Dean Service, to provide students counseling and assistance 24 hours a day in the event of personal crises.

Financial Aid

Counselors at 420 Student Services Building (333-0100) provide information on the four main types of financial aid administered by the University — scholarships, grants, loans, and employment. Fundamental money management and employment-counseling and assistance are also available to all students, whether or not they

have applied for financial aid. For a more complete description of financial aid, see page 89 of this catalog.

CAREER SERVICES

Career Development and Placement

The Office of Career Development and Placement in 2 Student Services Building (333-0820) provides students a wide range of career-related services, including individual and group counseling, assistance on job search efforts, general informational services, and help in identifying postgraduate employment opportunities. A *Job Vacancy Bulletin* is published biweekly to inform job seekers of available openings nationwide. The 2,000 volume Career Resource Center has occupational literature and directory information, job search aids, government career information, and special interest resources to assist women and minorities with career and life planning. Each year, the office sponsors many on-campus career seminars, conferences, and fairs of interest to the University community. Staff here also maintain permanent credentials/recommendation files for students registering for this service.

Health Professions Information

The Health Professions Information Office at 2 Student Services Building (333-7079) provides advising and career counseling for students interested in dentistry, medicine, osteopathic medicine, optometry, pharmacy, and podiatry. This office maintains a complete collection of catalogs from U.S. health professional schools as well as information on foreign schools. A faculty evaluation service is provided for the prehealth professional major. Counselors are available on an appointment basis to advise students on the preprofessional curriculum and help them apply to professional schools.

Psychological and Counseling Center

The center, at 206 Student Services Building (333-3704), offers a number of vocational interest tests to help students select major fields of study and careers. Through review of test results and counseling sessions with the clinical psychologists, students can obtain information about their abilities, interests, and personalities.

College Placement Offices

Individual colleges and departments on campus sponsor their own job placement programs for majors. These offices provide employment counseling and job search training. Each office makes arrangements for employer representatives to conduct interviews on campus, and some departments furnish individual and group resume services.

EXTRACURRICULAR ACTIVITIES

Campus Programs and Services

This office at 110 Student Services Building (333-7060) is the headquarters for registered student organizations. Information is available on over 600 student

organizations, representing a wide variety of professional, social, recreational, athletic, and religious interests. Advisers for fraternities and sororities and the executive directors of the Mothers and Dads Associations are also located here.

Illini Union Board

This board, located at 284 Illini Union (333-3660), directs cultural, educational, social, and recreational all-campus programs for students at UIUC. Programs include regularly scheduled movies, noon-hour seminars, art lending libraries, import bazaars, College Bowl, and activity days. The Illini Union Board also sponsors the Block I group for football games, the Mother's Day Style Show, Dad's Day festivities, and the spring musical. Special programs and activities are scheduled for minority and international students.

SPECIALIZED SERVICES

Educational Opportunity Program

Students who enter the University of Illinois under the auspices of the Educational Opportunities Program (EOP) are eligible for extensive academic services through this office, located at 130 Student Services Building (333-0054). Participants who evidence an academic need may receive individual or small group tutorial assistance in a host of disciplines. The EOP staff provides academic, financial, and career counseling for all EOP students.

International Student-Staff Affairs

The Office of International Student-Staff Affairs, 331 Student Services Building (333-1303), orients international students to study and life in the United States and at UIUC. The staff offers counseling on immigration and financial problems and issues documents for maintaining student status and passport validity.

Veterans Affairs

The Office of Veterans Affairs at 344 Student Services Building (333-0058) administers the GI Bill Educational Benefits Program and other veterans affairs programs. A tutorial referral service is also available to veterans.

Women's Resources and Services

Information and services primarily for women students are administered at 346 Student Services Building (333-3137). Special programs include a comprehensive *Women's Resource Directory*, the Illini Symposia for Women, and Verdell Frazier Young awards for women who are continuing an interrupted education. Staff here have general information for re-entering students and maintain a library and resource file of materials of concern to women.

UNIVERSITY AIDS FOR IMPROVING ACADEMIC PERFORMANCE

Reading and Study Methods Clinic

Training in developmental and remedial reading and efficient study methods is available to students at the Reading and Study Methods Clinic, 219 Student Ser-

vices Building (333-3707), a department of the Psychological and Counseling Center. Training in study methods and reading is accomplished primarily in small groups; however, individual training is provided when necessary and the student is referred for individual counseling if needed.

Speech and Hearing Clinic

The clinical facilities and services of the Speech and Hearing Clinic, 901 South Sixth Street (333-2231), are available for examination, consultation, and therapy. Free services are extended to University students who have impaired hearing, speech deviations, or language problems. Students may call for information, or they may be referred by instructors or other interested individuals.

English Writing Clinic

Any University student who has a writing problem (organization, punctuation, grammar, and usage) may consult the English Writing Clinic at 311 English Building (333-1656). Office hours are posted and usually extend from 8:00 a.m. to 12:00 noon and 1:00 to 4:00 p.m., Monday through Friday. All work in the clinic is done in individual conferences and attendance is voluntary. Students may seek help on their own or they may be referred to the clinic by their instructors or by the deans of their colleges.

Writing Laboratory

Rhet. 103 (Writing Laboratory) is open to any Educational Opportunities Program (EOP) student in conjunction with regular rhetoric courses. Rhet. 103 is designed primarily as an adjunct to Rhet. 104, 105, and Sp. Com. 111, 112. A student may enroll on his or her own initiative, be placed in the course on the basis of test scores, or be referred by a rhetoric instructor.

The tutorial meets weekly and the student receives 1 semester hour of credit on a satisfactory/unsatisfactory basis. The tutorial is devoted to individual writing problems and may be repeated for a total of 2 semester hours of credit.

Supportive Instruction

Academic assistance is available to students in the Educational Opportunities Program (EOP) as described on page 55. Some departments have established special courses and/or special sections in existing courses for this purpose, and a faculty and student tutoring system has been developed.

MEDICAL AND HEALTH SERVICES

Students registered in University courses for residence credit at the Urbana-Champaign campus are assessed a Hospital-Medical-Surgical Insurance Fee for student health insurance and a McKinley Health Service Fee to cover the cost of medical and health services provided by the McKinley Health Center located on campus. See page 83 for a waiver of these fees.

Health Service

The McKinley Health Service fee supports the medical services available at the McKinley Health Center located on campus. Dependents are not eligible for care at the health center unless they are also enrolled students at the Urbana-Champaign campus. There are four basic types of care available at the McKinley Health Cen-

ter: routine office care (outpatient section), care requiring hospitalization (inpatient section), care for injuries or acute illnesses (emergency room), and mental health care (outpatient clinic and inpatient hospitalization).

Health service physicians are available for general medical care and advice while the student is on campus. They are experienced clinicians, most of them having practiced for years as family physicians. Students may consult the health service physician of their choice in his or her office by appointment. Care is similar to that offered by a private, general physician. A wide range of diagnostic tests is available to the health service physician, including laboratory procedures, x-ray examinations, and electrocardiograms. A limited pharmacy provides drugs for students when they are under the care of a health service physician and when he or she orders prescription medication available from the pharmacy.

The inpatient section of McKinley Health Center (McKinley Hospital) is a thirty-two-bed medical hospital owned by the University. It is fully accredited by the Joint Commission on Accreditation of Hospitals. The medical staff includes both community and health service physicians.

A health service physician is available twenty-four hours a day to provide emergency care to students or employees injured on the job.

Health service care provided by the McKinley Health Center does not depend on and is not reimbursed by any insurance plan the student may have.

Group Health Insurance

The University Insurance Plan provides worldwide hospital-medical-surgical coverage for students who have a free choice of any legally qualified hospital or licensed physician (McKinley health services excepted). The coverage is provided on a semester basis and includes all holidays in the semester and the period between semesters. The policy provides hospital-medical-surgical insurance up to \$50,000 as defined in the insurance brochure furnished to each student during on-campus registration. It is also available from the University Insurance Office, 100 Administration Building.

SUMMER COVERAGE

Students enrolled in the second semester who do not plan to attend the summer session may elect to extend the insurance for the entire summer vacation period by making application and paying the insurance fee to the Insurance Office, 100 Administration Building, between April 1 and through the fifth day of instruction of the summer session. Coverage of the insured student's eligible dependents may also be extended for this period. Extension of coverage is also available following the first semester provided the application and premium are received within the first ten days of instruction in the second semester.

EXEMPTION FROM THE INSURANCE FEES

Students presenting evidence of equivalent medical insurance coverage will be exempted from payment of the insurance fee upon approval of a petition submitted to the University Insurance Office within the first ten days of instruction in any semester, or within the first five days of instruction in the summer session. This also may be accomplished in the Armory during on-campus registration.

HOUSING

Housing for students at the University of Illinois at Urbana-Champaign is provided in University residence halls, fraternities, sororities, private residence halls, and homes, and cooperative houses.

Present regulations require that all single undergraduate men and women students live for the entire academic year in housing which is certified by the University, unless the student reaches the age of twenty-one or achieves 60 semester hours of academic credit by August 15 of the academic year.

Housing which is certified includes University residence halls, fraternities and sororities, and privately owned housing which meets University standards. Within this system, there is a wide range of rates and services offered. Room visitation guidelines subject to the desires of the housing operator and dependent upon parental consent are determined by student vote in each housing unit or section.

Information about *all* types of housing is given in greater detail in a brochure, *Student Housing*, which is mailed to each student with the Notice of Admission to the University of Illinois at Urbana-Champaign. If additional information is needed, the student may write to the Housing Information Office, University of Illinois at Urbana-Champaign, 420 Student Services Building, 610 East John Street, Champaign, IL 61820.

Students and parents are encouraged to visit the Housing Information Office to discuss housing arrangements with a housing consultant. Office hours are maintained from 8:00 a.m. to 12:00 noon and 1:00 p.m. to 5:00 p.m., Monday through Friday, except on all-campus holidays.

University Policy on Nondiscrimination in Housing

In the rental of housing which is University-owned or University-certified, or of uncertified housing (apartments, uninspected rooming houses, etc.) which is listed with the Housing Information Office, the University of Illinois policy on nondiscrimination shall be followed.

The University makes every effort to assure that accepted listings include only those owners or managers who comply fully with its nondiscriminatory housing policy. To implement this policy, the chancellor has appointed a Housing Discrimination Committee, consisting of eight staff and two student members. A member of the chancellor's staff and a member of the Housing Division staff serve as ex officio members. This committee is charged with overall concern for the University's policies on nondiscrimination as they affect the Urbana-Champaign campus.

If anyone has any reason whatsoever to believe that an owner or manager of certified housing or any other listed housing has illegally discriminated against an individual, this information should be communicated directly to the secretary of the Housing Discrimination Committee or to any other member of the committee. Names of the current members of the committee may be obtained from the Housing Information Office, University of Illinois at Urbana-Champaign, 420 Student Services Building, 610 East John Street, Champaign, IL 61820.

University Residence Halls

University-owned residence halls are planned to provide each student with the best possible living and learning conditions. High scholarship standards are encouraged. Student government experiences, intellectual and cultural programs, social programs, recreational facilities, and association with trained residence hall staff members provide opportunities for sound academic and social development.

Approximately 8,700 men and women live in University residence halls. Any single undergraduate student qualified to enter the University may apply for residence hall accommodations. Room assignments are made in accordance with the University of Illinois policy on nondiscrimination.

University residence halls are located at points convenient to most areas of the main campus. Individual halls accommodate from 250 to 650 students, largely in

rooms for two persons, although there are some single and triple rooms. Residence halls offer a room-and-board plan, with twenty meals served each week, but room-only contracts are available in two halls. Rates per person for room and board for the 1979-80 academic year were \$1,710 for a double accommodation, plus \$64 per person in the four newest halls. These rates are *subject to change*, and continuing inflation will most likely require future upward adjustments. Generally, rates have been increased annually to meet increased operating costs.

A University residence hall contract card and an assignment card are sent to each student who is accepted for admission. The completed cards should be returned promptly if the student desires University residence hall accommodations.

Privately Owned Certified Housing

Privately owned houses accommodating from five to sixty students are available. Some offer room and board; others provide a room only or a room with kitchen privileges. Other houses offer a cooperative work plan. In 1978-79, rates in these units varied from approximately \$1,700 to \$1,950 for room and board. A room with kitchen privileges generally costs from \$70 to \$115 per month. Houses with cooperative work plans required about seven hours of work per week and charged from \$840 to \$1,000 for room and board for the 1978-79 academic year.

Privately owned residence halls, ranging from large, coeducational room and board halls to small, supervised, suite-living arrangements, are also available. In 1978-79, rates ranged from approximately \$1,800 to \$2,400 for the academic year, depending on the type of accommodations selected.

A list of these accommodations is available from the Housing Information Office, University of Illinois at Urbana-Champaign, 420 Student Services Building, 610 East John Street, Champaign, IL 61820. Students and parents visiting the campus to make housing arrangements are encouraged to consult the staff at this office.

Sororities

Membership in sororities is by invitation. Invitations are issued following formal and/or informal rush parties. In most cases, upper-class students pledged by sororities move into the chapter house of their choice at the beginning of the following semester. Freshmen pledged to sororities usually move into the house at the beginning of the sophomore year.

The major formal rush occurs in the fall, with informal rush periods in the winter and spring. The dates for the rush periods and a description of the kinds of rush may be obtained by writing the Panhellenic Council, University of Illinois at Urbana-Champaign, 274 Illini Union South, Urbana, IL 61801.

Fraternities

There are forty-nine nationally affiliated fraternities with approximately 3,000 members at the Urbana-Champaign campus. These fraternities have living accommodations for most of their members, with an average occupancy of fifty men. The opportunity for membership in a fraternity exists whether the student lives in a fraternity house or not. Costs for room and board in fraternity houses vary, but are not significantly greater than those in other housing facilities.

The fraternity rush period for high school seniors normally occurs in April, beginning on a Friday evening and extending through Sunday afternoon. During this time, prospective members may visit various fraternity chapters which they have selected.

Information on fraternities and registration forms for the formal rush weekend are sent to eligible students after they have been admitted to the University.

After the spring rush weekend, men may also participate in informal rushing and pledging at other times during the summer and the school year. Additional information on fraternities may be obtained from the Interfraternity Council, University of Illinois at Urbana-Champaign, 274 Illini Union South, Urbana, IL 61801.

Housing for Student Families

There are approximately 1,000 University-owned apartments, some of which are available to undergraduate students under a priority system. There are also a variety of privately owned housing facilities in the community. An application brochure for University-owned apartments can be obtained by writing to the Family Housing Office, University of Illinois at Urbana-Champaign, 1902a Orchard Street, Urbana, IL 61801.

A listing of privately owned furnished and unfurnished apartments with rental rates, distance to campus, etc., is available for review in the Housing Information Office, 610 East John Street, Champaign, IL 61820.

Generally, March 15 to July 1 and November 1 to December 15 are considered the most desirable times to visit the campus to arrange for apartment accommodations for the first and second semesters, respectively.

The following price ranges for furnished and unfurnished apartments reflect local housing costs.

One- and two-room units — \$130-\$190 per month

Three-room units (one bedroom) — \$160-\$270 per month

Four rooms and larger (2 and 3 bedrooms) — \$215-\$380 per month

ILLINI UNION

The Illini Union is a center of services and activities on campus. It provides students opportunities to organize, develop, and enjoy a wide variety of extracurricular programs. It is a common meeting ground for the entire University community, serving students, faculty, staff, guests, and visitors to the University.

The Union has a cafeteria, snack bar, two dining rooms, a vending room, bowling lanes, billiards room, art gallery, browsing library, two bookstores, a campus information desk, ticket box office, University lost-and-found, checkrooms, lounges, guest rooms, a travel center, and numerous multipurpose rooms for entertainment, luncheons, dinners, and presentations. The Illini Union also has special facilities for conferences, short courses, and meetings sponsored by University departments.

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Class and Conflict

STUDENT EXPENSES

The average cost for an Illinois resident enrolled for two semesters as a full-time undergraduate student at the Urbana-Champaign campus is \$3,806; for a non-resident it is \$5,074. Although these costs can be expected to increase because of inflation, the budget in Table 2 gives a breakdown of average expenses which can be used for planning purposes. This budget does not include expenses for major items of clothing or for recreation which vary widely for individual students. Expenses cited for textbooks and school supplies may run somewhat higher for students enrolled in fields of study such as art, architecture, and engineering.

Students have the opportunity to pay tuition, fees, and University residence hall charges on an installment basis as explained on page 77.

Lack of money need not prevent students from continuing their education, but it is important that they investigate various possibilities for assistance and apply at the right time and in the proper manner as explained in the financial aid section of this catalog, beginning on page 89.

Table 2: ESTIMATED UNDERGRADUATE STUDENT EXPENSES FOR ONE ACADEMIC YEAR FOR A FULL PROGRAM OF STUDY, (Subject to Change)¹

	<i>Illinois Residents</i>	<i>Non- Residents</i>
Tuition	\$ 634	\$1,902
Service Fee	164	164
Hospital-Medical-Surgical Insurance Fee	38	38
McKinley Health Service Fee	80	80
Textbooks and other school supplies	250	250
Meals and housing (includes \$1,710 for double room and board, \$8 Residence Hall Association dues, and money for Sunday evening meals and meals during fall and spring registration which are not provided by University residence hall contracts)	1,898	1,898
Travel allowance (to and from home)	120	120 ¹
Personal expenses (includes cost of clothing maintenance, and personal care and expenses at moderate level)	640	640
Total, two semesters	\$3,824	\$5,092

¹An additional \$120 travel allowance must be provided for students from states not contiguous to Illinois.

TUITION AND FEES

Tuition and fees for students enrolled in terms of different lengths at the Urbana-Champaign campus are given in Table 3. These amounts are subject to legislative approval. These charges are for students registered on campus and are assessed on the basis of their college of enrollment (undergraduate, graduate, or professional college), their classification as a resident or nonresident of Illinois, and their credit range, which is determined by the total number of semester hours of credit and/or graduate units of credit for which students are enrolled.

Credit for undergraduate course work is counted in semester hours. A full-time undergraduate student is one who is registered for 12 or more semester hours—Range 1 in the semester fee schedule shown in Table 3.

Credit for graduate work is counted in units, and for fee assessment purposes 1 unit is equivalent to 4 semester hours.

Table 3: UNDERGRADUATE, GRADUATE, LAW, AND VETERINARY MEDICINE, TUITION AND FEES (*Subject to Change*)¹

SEMESTER	<i>Full Program</i>		<i>Partial Programs</i>				
	Range I 12 semester hours and above 3 units and above		Range II Above 5 but less than 12 semester hours Above 1¼ but less than 3 units		Range III Above 0 through 5 semester hours Above 0 through 1¼ units		Range IV 0 credit only
	Illinois resident	Non- resident	Illinois resident	Non- resident	Illinois resident	Non- resident	Resident and non- resident
Undergraduate							
Tuition	\$317	\$951	\$216	\$648	\$116	\$348	\$ 58
Service Fee	82	82	56	56	23	23	14
Hospital-Medical-Surgical Insurance Fee	19	19	19	19	19	19	19
McKinley Health Service Fee	40	40	40	40	40	40	40
Total	\$458	\$1,092	\$331	\$763	\$198	\$430	\$131
Graduate and Law							
Tuition	\$340	\$1,020	\$232	\$696	\$123	\$369	\$ 62
Service Fee	82	82	56	56	23	23	14
Hospital-Medical-Surgical Insurance Fee	19	19	19	19	19	19	19
McKinley Health Service Fee	40	40	40	40	40	40	40
Total	\$481	\$1,161	\$347	\$811	\$205	\$451	\$135
Veterinary Medicine							
Tuition	\$430	\$1,290	\$292	\$876	\$153	\$459	\$ 77
Service Fee	82	82	56	56	23	23	14
Hospital-Medical-Surgical Insurance Fee	19	19	19	19	19	19	19
McKinley Health Service Fee	40	40	40	40	40	40	40
Total	\$571	\$1,431	\$407	\$991	\$235	\$541	\$150

¹ Separate tuition and fee schedules for students in the Executive MBA Program and the Schools of Basic Medical Sciences and Clinical Medicine are available from the Fee Assessment Office, 100 Administration Building, telephone (217) 333-4381.

Table 3 (cont.)

EIGHT-WEEK SUMMER SESSION	<i>Full Program</i>		<i>Partial Programs</i>				
	Range I 6 semester hours and above 1½ units and above		Range II Above 2½ but less than 6 semester hours Above ⅝ but less than 1½ units		Range III Above 0 through 2½ semester hours Above 0 through ⅝ unit		Range IV 0 credit only
	Illinois resident	Non- resident	Illinois resident	Non- resident	Illinois resident	Non- resident	Resident and non- resident
Undergraduate							
Tuition	\$159	\$477	\$108	\$324	\$ 58	\$174	\$ 29
Service Fee	44	44	33	33	14	14	9
Hospital-Medical-Surgical Insurance Fee	19	19	19	19	19	19	19
McKinley Health Service Fee	40	40	40	40	40	40	40
Total	\$262	\$580	\$200	\$416	\$131	\$247	\$ 97
Graduate and Law							
Tuition	\$170	\$510	\$116	\$348	\$ 62	\$186	\$ 31
Service Fee	44	44	33	33	14	14	9
Hospital-Medical-Surgical Insurance Fee	19	19	19	19	19	19	19
McKinley Health Service Fee	40	40	40	40	40	40	40
Total	\$273	\$613	\$208	\$440	\$135	\$259	\$ 99
Veterinary Medicine							
Tuition	\$215	\$645	\$146	\$438	\$ 77	\$231	\$ 39
Service Fee	44	44	33	33	14	14	9
Hospital-Medical-Surgical Insurance Fee	19	19	19	19	19	19	19
McKinley Health Service Fee	40	40	40	40	40	40	40
Total	\$318	\$748	\$238	\$530	\$150	\$304	\$107

Table 3 (cont.)

**TWELVE-WEEK SUMMER TERM (SOCIAL WORK AND INSTITUTES
AND ELEVEN-WEEK SUMMER LAW PROGRAM)²**

	<i>Full Program</i>		<i>Partial Programs</i>				Resident and non- resident
	Range I 9 semester hours and above 2 units and above		Range II Above 4 but less than 9 semester hours Above 1 but less than 2 units		Range III Above 0 through 4 semester hours Above 0 through 1 unit			Range IV 0 credit only
	Illinois resident	Non- resident	Illinois resident	Non- resident	Illinois resident	Non- resident	
Undergraduate							
Tuition	\$211	\$633	\$144	\$432	\$ 77	\$231	\$ 39
Service Fee	64	64	44	44	23	23	14
Hospital-Medical-Surgical Insurance Fee	19	19	19	19	19	19	19
McKinley Health Service Fee	40	40	40	40	40	40	40
Total	\$334	\$756	\$247	\$535	\$159	\$313	\$112
	Illinois resident	Non- resident	Illinois resident	Non- resident	Illinois resident	Non- resident	Resident and non- resident
Graduate and Law							
Tuition	\$227	\$681	\$155	\$465	\$ 82	\$246	\$ 41
Service Fee	64	64	44	44	23	23	14
Hospital-Medical-Surgical Insurance Fee	19	19	19	19	19	19	19
McKinley Health Service Fee	40	40	40	40	40	40	40
Total	\$350	\$804	\$258	\$568	\$164	\$328	\$114

² Students registered in either one of the five and one-half week summer law terms pay one-half of the tuition and service fee established for the eleventh-week term, rounded to the next higher even dollar, and one-half of the credit amounts indicated apply in Ranges I, II, and III. They are assessed the same Hospital-Medical-Surgical Insurance Fee and McKinley Health Service Fee applying to registrants in the eight-week summer session.

Table 3 (cont.)

**FIVE AND ONE-HALF WEEK SUMMER SENIOR
VETERINARY MEDICINE PROGRAM**

	<i>Full Program</i>		<i>Partial Programs</i>				
	Range I		Range II		Range III		Range IV
	4 semester hours and above 1 1/8 units and above		Above 2 but less than 4 1/2 semester hours Above 1/2 but less than 1 1/8 units		Above 0 through 2 semester hours Above 0 through 1/2 unit		0 credit only
	Illinois resident	Non-resident	Illinois resident	Non-resident	Illinois resident	Non-resident	Resident and non-resident
Veterinary Medicine							
Tuition	\$144	\$432	\$ 98	\$294	\$ 51	\$153	\$ 26
Service Fee	33	33	22	22	12	12	8
Hospital-Medical-Surgical Insurance Fee	19	19	19	19	19	19	19
McKinley Health Service Fee	40	40	40	40	40	40	40
Total	\$236	\$524	\$179	\$375	\$122	\$224	\$ 93

Information concerning the payment of tuition, fees, and housing charges on the installment basis, refunds of tuition and fees for students withdrawing from the University or reducing their registration to a lower credit range, and the requirements for tuition and fee waivers and exemptions follows Table 3.

Prospective and currently enrolled students should be aware that the tuition and fees published in this catalog may be changed without prior notice. Current information about tuition and fee charges for any academic term including fees for flight instruction and special programs, waivers and exemptions, and refunds is available from the Fee Assessment Office, 100 Administration Building, telephone (217) 333-4381.

Application Fee

Each applicant for admission or readmission to the University of Illinois at Urbana-Champaign must submit with his or her application a nonrefundable application fee of \$20. Information about exemptions and waivers of the application fee is found on page 81. This fee is used to help defray processing costs and is nonrefundable to both approved and denied applicants who submit partial as well as complete applications prior to the date all spaces are filled in the college and curriculum of their choice. Application fees will be returned to students applying for admission to programs for which applications are not being considered either because all spaces are filled or the desired program is not being offered.

INSTALLMENT PLAN FOR PAYING TUITION, FEES, AND HOUSING CHARGES

An installment plan for the payment of tuition and fees, single student residence hall charges, and flight instruction fees is available to students enrolled on campus. The installment plan does not apply to registration in extramural, correspondence,

and intercession courses, or to specific students for whom this privilege has been denied.

The installment plan for the payment of tuition and fees, residence hall charges (single student housing only), and flight instruction fees requires that charges for each semester be collected in three installments, the first payable during the first ten days of instruction and the remaining installments payable in each of the two following months. One-half of the summer session charges is payable during the first ten days of instruction with the remainder payable during the following month.

Students electing the installment plan for the payment of tuition and fees, flight instruction fees, and/or residence hall charges are assessed a finance charge of 1 percent of the amount deferred or a minimum charge of \$2, whichever is greater.

Students who have been permitted to pay their tuition and fee charges on the installment basis and later withdraw from the University or reduce their registration to a lower credit range after the established refund deadline date for an academic term are liable for the full amount of tuition and fees assessed.

An installment payment of tuition and fees, residence hall charges, and/or flight instruction fees, and other charges to a student account are delinquent on the first day of the month following the date that payment is due.

A delinquent service charge of 1 percent per month or a minimum monthly charge of \$1, whichever is greater, is added to delinquent student accounts. The delinquent service charge is applied to all items charged to the student account and for which payment is delinquent.

REFUNDS

Cancellation of Registration

Students who sign and return their registration agreement and later decide not to attend the University may cancel their registration before the first day of classes; they will not be assessed tuition and fee charges.

Withdrawal from the University

A student who has been charged tuition and/or fees for any academic term and later withdraws from the University for reasons other than active military service or other approved national defense service, during any refund period, shall be assessed a nonrefundable charge in the amount of one-half of the service fee plus the Hospital-Medical-Surgical Insurance Fee and the McKinley Health Service Fee (rounded if necessary to the next higher even dollar) or \$30, whichever is greater. The student who withdraws continues to be covered by the health insurance program and is eligible to receive McKinley Health Center services, if fees for insurance and health services were paid, until the first day of on-campus registration for the next term. For students who have not paid these fees, the nonrefundable charge shall be reduced by the amount of the appropriate fee(s).

Refund periods are as follows:

- In a semester, twelve-week term, or eleven-week summer law program, *full refund*, except for the nonrefundable charge, during the first ten days of instruction; no refund thereafter;
- In an eight-week summer session, *full refund*, except for the nonrefundable charge, during the first five days of instruction; no refund thereafter; and
- For University terms of different lengths, refund periods are determined proportionately in accordance with the above principles.

In case of extenuating circumstances, such as medically documented serious illness or injury, exceptions to these refund periods may be made by the director of

admissions and records. The petition form that must be submitted to request a refund after the deadline date is available at the Fee Assessment Office, 100 Administration Building.

Withdrawal for Military and Other National Defense Service

Special refunds are authorized students who withdraw to enter active duty in the armed forces or other approved national defense service as described in the *Code on Campus Affairs and Regulations Applying to All Students*.

Reduction of Program

Students who have paid tuition and/or fees and who reduce their registration to a lower credit range receive a refund of the full amount of the difference in tuition and fees specified for such schedules provided the change is made during the periods designated above for refund of tuition and fees in case of withdrawal from the University. Thereafter, no refund is allowed.

In case of extenuating circumstances, such as medically documented serious illness or injury, exceptions to these refund periods may be made by the director of admissions and records. The petition form that must be submitted to request a refund after the deadline date is available at the Fee Assessment Office, 100 Administration Building.

Incomplete Registration

A postregistration statement of tuition, fees, and other charges is mailed on the first day of instruction to students who signed and submitted a Registration Agreement by the close of on-campus registration. A student's registration is not complete until the Office of Business Affairs has received the postregistration statement with the appropriate payment by the due date indicated on that statement.

Students who fail to complete their registration must pay the nonrefundable charge in the amount of one-half of the Service Fee plus the Hospital-Medical-Surgical Insurance Fee and the McKinley Health Service Fee or \$30, whichever is greater.

Visitors

Persons registered as visitors who desire to withdraw receive a full refund of the visitor's fee, if originally charged, provided they make a personal request for a refund at the Office of Admissions and Records during the first ten days of instruction in a semester and during the first five days of instruction in an eight-week summer session; thereafter no refund is allowed.

Flight Training

A student who withdraws from a flight training course receives a refund of the full flight training fee during the first ten days of instruction in a semester or the first five days of instruction in the eight-week summer session; thereafter no refund is allowed.

SEAL Fund (Students for Equal Access to Learning)

Students registered on campus pay a \$2 fee during each registration to supplement existing financial aid for needy students. During the first and second semesters, a

refund is available at the Office of Business Affairs to those students who do not desire to participate, beginning with the second week of instruction and ending two weeks later. Refunds for the summer session begin with the third week of instruction and end one week later. Thereafter, no refund is allowed.

Student Organization Resource Fee (SORF)

Students registered on campus pay a \$3 fee during each registration to support the Student Legal Service and to help fund programs and/or services of registered organizations. During the first and second semesters, a refund is available at the Office of Business Affairs to those students who do not desire to participate, beginning with the fifth week of instruction and ending two weeks later. Refunds for the summer session begin with the second week of instruction and end one week later. Thereafter, no refund is allowed.

EXEMPTIONS AND WAIVERS OF TUITION AND FEES

Under certain conditions students are eligible for exemptions and/or waiver of their tuition and fees. Appearing below are the available waivers and exemptions and the conditions under which they are granted. Students are urged to consult the Fee Assessment Unit at 100 Administration Building if they feel they qualify for any of them.

Unless otherwise exempted by Board of Trustees authorization, the payment of tuition and fees is required of academic employees of the University or allied agencies under appointment for less than 25 percent of full-time services, and of nonacademic employees under appointment for less than 50 percent of full-time services.

For tuition and fees assessment purposes, a staff appointment must be to an established position for a specific amount of time and a salary commensurate with the percentage of time required, and it must require service for not less than three-fourths of the academic term. Specific dates marking completion of service for three-fourths of the term are established by the chancellor or his designee. *Staff tuition and fees privileges do not apply to students employed on an hourly basis in either an academic or nonacademic capacity, or to persons on leave without pay.*

University employees appointed to established civil service positions whose rates of pay are determined by negotiation, prevailing rates, and union affiliation are *not* considered as paid on an hourly basis and are entitled to the same tuition and fees privileges accorded to other staff members under the regulations.

Students who resign their staff appointment, or whose appointment is cancelled, before rendering service for at least three-fourths of the term become subject to the full amount of the appropriate tuition and fees for that term unless they withdraw from University classes at the same time or before the appointment becomes void, or they file a clearance form for graduation within one week following the resignation date. A term is defined as running from the first day of registration through the last day of final examinations. Three-fourths of a term is defined as ninety-one days in a semester and forty-one days during the eight-week summer session.

Students holding appointments, either as employees or as fellows, to the close of the second semester, and for whom tuition and/or the service fee have been provided by exemption, waiver, or cash payment by an outside agency, are entitled to the same exemption of tuition and/or the service fee for the summer session or term immediately following, providing they hold no appointments during that summer session or term.

Because the Executive MBA Program is a self-supporting program, tuition and fee waivers are not granted for that program.

Application Fee

Excluded from payment of the application fee are:

- Faculty and academic/professional staff members appointed to established positions for at least 25 percent of full-time services for not less than three-fourths of the academic term, and persons retired from the academic staff.
- Permanent nonacademic employees who have been assigned to established permanent and continuous nonacademic positions and who are employed for at least 50 percent of full time.
- Staff members of allied agencies so long as they retain tuition and fee waiver privileges.
- Extramural nondegree applicants.
- Summer-session-only graduate degree applicants after their first registration for on-campus work.
- Students registered on one campus of the University who wish to attend another campus for the summer session only.

Waivers of the application fee are authorized for:

- Applicants who, because of extreme financial hardship, cannot meet the cost of the fee. In general, evidence of extreme financial hardship is a family income at or below the Bureau of Labor Statistics low standard family budget or the receipt of a testing waiver from the American College Testing Program or the College Entrance Examination Board. Applicants presently attending another collegiate institution may provide evidence of the financial package received at that institution.
- Applicants under approved foreign exchange programs in which the University participates, such as the Latin American Scholarship Program of American Universities (LASPAU) and the African Scholarship Program of American Universities (ASPAU), and foreign students participating in approved exchange programs where the waiver of fees is reciprocal.
- Intercampus transfers at the same level: undergraduate to undergraduate or graduate to graduate.
- Applicants requesting a change in admission consideration from one campus of the University of Illinois to another for the same level and term. This would include applicants denied admission on one campus as well as applicants wishing to cancel admission or admission consideration on one campus for similar consideration on another campus. Students applying simultaneously to two campuses must pay the application fee at each campus. Undergraduate students applying for admission to a professional or graduate college on any of the three campuses must pay the application fee.
- Students from other universities participating in the Committee on Institutional Cooperation (CIC) program by taking courses at the University of Illinois.
- Graduate and professional applicants whose entry is advanced or delayed by action of their major departments are not required to pay a second application fee.
- University of Illinois students applying for work on a second campus as concurrent registrants, and non-University of Illinois students applying as concurrent registrants from another institution with which the University has a reciprocal agreement, and students who have been concurrent enrollees the immediately preceding term and who plan to return to their primary campus the following term.
- Cooperating teachers and administrators who receive assignment of practice teachers, cooperating librarians, school-nurse teachers, social welfare supervisors, recreation field supervisors, and physicians participating without salary in the School of Basic Medical Sciences.
- Students on leave of absence status on reentry.

Waiver of Tuition

Tuition is waived for:

- All academic employees of the University or allied agencies on appointment for at least 25 percent but not more than 67 percent of full-time services provided the appointments require service for not less than three-fourths of term. This waiver covers graduate teaching and research assistants. Caution: Academic appointments are cumulative. For example, if a person holds two appointments, a 25 percent and 50 percent appointment, he or she is ineligible for a tuition waiver.
- Full-time academic/professional staff of the University of Illinois who enroll in course work related to their career development within the University. A waiver may be granted for course work to a maximum of 8 hours or 2 units of credit or two courses.
- University academic employees registered at the request of their departments in zero-credit courses especially established to improve the work of the employee.
- Academic staff members emeriti.
- Holders of tuition waiver scholarships.
- Holders of graduate tuition and fee waivers awarded by the Graduate College.
- Holders of grants or contracts from outside sponsors which provide payments to cover the total costs of instruction.
- Cooperating teachers and administrators who receive an assignment of practice teachers or who receive assignment of students meeting the clinical experience requirement in teacher education curricula, or who cooperate in research projects related to teacher education are exempted for one semester, quarter, or summer session for each semester, quarter, or summer session of service rendered. The exemption shall apply to the semester, quarter, or summer session of registration as designated by the student which is concurrent with, or following, the term of service, but must be applied no later than one calendar year from the beginning of the term of service. Concurrent registration on more than one campus of the University or in University extramural courses constitutes one semester, quarter, or session of eligibility for exemption. A similar waiver is authorized for cooperating librarians, school-nurse teachers, social welfare field supervisors, recreation field supervisors, health and education field supervisors, and physicians who participate without salary in the instructional program of the School of Basic Medical Sciences.
- Nonacademic employees of the University in status appointments or in appointments designed to qualify for status in an established class (e.g., trainee, intern) for at least 50 percent of full-time services who register in regular University courses for not to exceed:
 - Six credit hours or two courses in a semester or quarter if on full-time appointment,
 - Four credit hours if on a 75 percent to 99 percent time appointment, or
 - Three credit hours if on a 50 percent to 74 percent time appointment, provided that they (1) meet conditions and eligibility for admission as prescribed by the Office of Admissions and Records, (2) are not students as defined in Civil Service Rule 7.7c, and (3) have approval by their employing departments of enrollment and of a makeup schedule to cover any time in course attendance during their regular work schedule.

The waiver of tuition also applies to any additional hours of registration by employees which keep them within the same fee assessment credit range. Employees whose total registration is in a higher range than that authorized by their tuition waiver pay only the difference between the waiver authorization and the higher range in which their total registration places them.
- Nonacademic employees in a status, learner, trainee, apprentice, or provisional appointment may enroll without payment of tuition in regular courses directly related to their University employment for not to exceed 10 credit hours per

semester provided they have made application and received prior approval for enrollment as required by procedures issued by the director of nonacademic personnel and set forth in *Policy and Rules — Nonacademic*.

WAIVER OF THE NONRESIDENT PORTION OF TUITION

Nonresident portion of tuition (if subject to payment of tuition) is waived for:

- All staff members (academic, administrative, or permanent nonacademic) on appointment for at least 25 percent of full-time services with the University or allied agencies, provided the appointment requires service for not less than three-fourths of the term.
- The faculties of state-supported institutions of higher education in Illinois holding appointments of at least one-quarter time, provided the appointment requires service for not less than three-fourths of the term.
- The teaching and professional staff in the private and public elementary and secondary schools in Illinois, such as counselors, school psychologists, school social workers, librarians, and administrators who hold such an appointment at least one-quarter time, and for not less than three-fourths of the term.
- The spouses and dependent children of all staff members (academic, administrative, or nonacademic) on appointment with the University or allied agencies for at least 25 percent full-time service, and of those listed in the second item above. (Dependent children are those who qualify as dependents for federal income tax purposes.)
- The spouses and dependent children of fellows and trainees who are employed as teaching assistants to the fullest extent permitted by their fellowship appointment.
- Persons actively serving in one of the armed forces of the United States who are stationed and present in the state of Illinois in connection with that service and their spouses and dependent children, as long as the military person remains stationed, present, and living in this state.

Service Fee Waivers

The service fee is waived for:

- All academic staff members of the University or allied agencies on appointment for at least 25 percent of full-time services, provided the appointments require service for not less than three-fourths of the term. This includes graduate teaching and research assistants.
- Holders of graduate tuition and fee waivers awarded by the Graduate College.
- Students registered in absentia.
- Students registered in approved off-campus courses.
- Holders of grants or contracts from outside sponsors which provide payments to cover the total cost of instruction if this fee is charged to the contract or grant funds.
- Cooperating teachers and administrators. (See Waiver of Tuition on page 82.)
- University academic employees registered at the request of their departments in zero-credit courses especially established to improve the work of the employee.
- Academic staff members emeriti.
- Nonacademic employees of the University exempted from tuition as specified in the last two categories under Waiver of Tuition on page 82.

Waiver of Insurance and Health Service Fees

The insurance and health service fees are waived for:

- Persons registered for doctoral thesis research in absentia.

- Holders of grants or contracts from outside sponsors which provide payments to cover the total cost of instruction if this fee is charged to the contract or grant funds.
- Students for whom this fee has been assumed by the Graduate College.
- University employees registered at the request of their departments in zero-credit courses especially established to improve the work of the employee.
- Persons registered in off-campus courses for zero credit.

Staff members who are registered as students and who are eligible for the mandatory State of Illinois Employees Insurance Program are ineligible for the student insurance program and the student health services provided by the McKinley Health Center.

Students registered on the Urbana-Champaign campus for courses which are taught entirely off campus during a given term are required to pay the \$19 insurance fee but not the \$40 McKinley Health Service Fee.

Students presenting evidence of equivalent medical insurance coverage will be exempted from payment of the \$19 fee for the University Insurance Plan upon approval of a petition which must be submitted to the University Student Insurance Office, Window 20, Administration Building, by the final date for a refund of tuition and fees. This also may be accomplished during on-campus registration.

Teaching and research assistants are not entitled to a waiver of the insurance and health service fees unless they also have a fellowship or grant that specifically pays for these fees.

Summer Session Tuition and Service Fee Waivers

The summer session tuition and service fee charges are waived for:

Students holding appointments to the close of the final term of an academic year either as employees or fellows, and for whom tuition and/or the service fee have been provided through waiver or through cash payment by an outside agency, are entitled to a waiver of the same kinds of tuition and fees for the summer session or summer term immediately following, provided they hold no appointments during that summer session. Students holding summer session appointments as fellows or as employees are subject to such tuition and fees as would be assessed in accordance with the information above.

SPECIAL FEES (Subject to Change)

Application Fee

Applicants for admission or readmission to the University must submit with their application a nonrefundable fee of.....\$20.00

Bicycle Code Violations

Violation for which other penalty is not provided.....\$3.00
Failure to pay or appeal violation assessment within five school days after notice, penalty increased to.....\$5.00

College-Level Examination Program (CLEP)

Each CLEP examination.....\$7.00

Concurrent Registrations

Students concurrently enrolled at the University of Illinois at Urbana-Champaign and another collegiate institution pay the tuition and fees regularly assessed at each institution in accordance with the amount of work taken. Students concurrently enrolled at more than one campus of the University pay at their primary campus the applicable tuition and fees for their total combined registrations.

Correspondence Courses — Tuition

For each semester hour of credit.....	\$22.00
For each quarter hour of credit.....	\$15.00
Persons granted a six-month extension of the enrollment period pay for each course an additional charge not covered by scholarships or tuition exemptions.....	\$5.00

Deposits**Advance Deposit on Tuition and Fees**

Law students.....	\$100.00
Advance Deposit on Total Registration Fee for Experimental Youth Fitness Summer Day School.....	\$10.00

Housing Contract Deposit (to confirm a contract for University housing)

First semester.....	\$40.00
One-half of this amount (\$20) is applied on the first semester's rent; the other half (\$20) is applied on the second semester's rent.	
Second semester only.....	\$20.00
Summer session.....	\$20.00

Executive Master of Business Administration Program

Annual tuition and general fee rate (tuition and fee waivers not granted for this program)	\$3,760.00
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Extramural Courses — Tuition

Students who register concurrently in more than one correspondence or extramural course pay the full amount of tuition for each course. Students who register concurrently for courses on campus and for correspondence or extramural study pay the full amount of tuition and fees applicable for each registration.

Holders of staff appointments with the University or allied agencies; holders of tuition scholarships, unless such scholarships are specifically limited by law to courses for residence credit only; and holders of tuition and fee waivers which exempt them from tuition for campus work are also exempt from tuition or the visitor's fee for extramural or correspondence courses begun within the term of the appointment.

A nonacademic employee registered concurrently for campus and extramural or correspondence courses whose total registration exceeds the range authorized by his or her tuition waiver pays the difference between the waiver authorization and the higher range in which his or her total registration places him or her.

Resignation or cancellation of an appointment within the term in which the student registered which has provided exemption from tuition for a correspondence course or extramural course, and prior to completion of at least three-fourths of the required lessons in a correspondence course, or prior to completion of at least three-fourths of an extramural term, shall make the student liable for the full amount of the tuition for the course.

Students exempted from tuition for a correspondence course by reason of a scholarship, staff appointment, or other waiver, who fail to complete the course within the normally allotted time of one year and arrange for extension of the enrollment period, shall become subject to payment of the full tuition for the course at the time they request extension of the enrollment period if they no longer hold an appointment which entitles them to exemption. The additional \$5 fee required for extension of the enrollment period is considered a fine and is not included in the tuition exemption privileges.

Credit Courses

For each semester hour or ¼ graduate unit.....	\$22.00
For each ¼ hour.....	\$15.00

Noncredit Courses

For each 16 hours of instruction.....	\$22.00
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Visitors

Visitors in extramural courses pay the same tuition as students registered in the course for credit. In the case of multiple credit courses, the visitor pays the fee applicable to the lowest credit provided in the course.

Flight Training Courses

In addition to the regular tuition and fees, students taking flight training pay:

Avi. 101 — Private Pilot.....	\$700
Avi. 102 — Orientation Refresher.....	\$420
Avi. 105 — Soaring I.....	\$325
Avi. 115 — Soaring II.....	\$325
Avi. 120 — Secondary Flight.....	\$805
Avi. 130 — Intermediate Flight.....	\$855
Avi. 140 — Advanced Flight.....	\$895
Avi. 200 — Basic Instrument Flight.....	\$985
Avi. 210 — Advanced Instrument Flight.....	\$1,145
Avi. 220 — Flight Instructor.....	\$670
Avi. 222 — Instrument Flight Instructor.....	\$365
Avi. 224 — All Attitude Orientation.....	\$390
Avi. 280 — Special Ratings MEL.....	\$690
Avi. 291 — Special Ratings and/or Specialized Flight.....	\$850

(These fees are not included in scholarship and staff fee provisions.)

Identification Photo Cards — replacements.....\$6.00

Installment Payment Service Charge (See page 77.)

Late Registration

All students, including those holding staff appointments and those submitting applications too late to be processed before on-campus registration, who complete registration for work in residence later than the designated on-campus registration days in any semester pay a late registration fine of.....\$15
(The fine is not covered by scholarships or tuition waivers. It may be waived under exceptional circumstances upon petition to the director of admissions and records.)

Motor Vehicles (See page 122.)**Automobiles**

Nonrefundable annual registration fee, September 1 to August 31.....	\$5.00
Penalty for nonregistration.....	\$5.00
Parking lot rental per academic year.....	\$24.00

Motorcycles (including motor scooters and motor-driven bicycles)

Registration for the year.....	\$3.00
For the second semester only.....	\$1.50
Violation of operating or parking regulation.....	\$3.00

NROTC Student Activity Fund Assessment collected by Navy Council....\$5.00

Off-Campus Courses

Students registered for credit in off-campus work only are exempt from the Service Fee and the McKinley Health Service Fee. They pay the same tuition, resident or nonresident, assessed for campus registration of equal credit, and the \$19 Hospital-Medical-Surgical Insurance Fee.

Students registered in zero-credit off-campus courses pay Range IV tuition but no service, insurance, or McKinley Health Service fees.

For the purpose of fee assessment, the designation *off-campus course* refers to field courses, programs of study abroad, or special programs established which require that the participants be absent from the campus for the entire semester, term, or session.

Residence Hall Fee

Undergraduate student residents of University residence halls pay each semester a mandatory fee as part of their residence hall contract for their educational, social, cultural, and recreational needs.....\$4.00

SEAL Fund (Students for Equal Access to Learning)

Students registered on campus pay a \$2 fee during each registration to supplement existing financial aid for needy students. During the first and second semesters a refund is available at the Office of Business Affairs to those students who do not desire to participate, beginning with the third week of instruction and ending two weeks later. Refunds for the summer session begin with the third week of instruction and end one week later.....\$2.00

SORF Fee (Student Organization Resource Fee)

Students registered on campus pay a \$3 fee during each registration to support the Student Legal Service and to help fund programs and/or services of registered organizations. During the first and second semesters, a refund is available at the Office of Business Affairs to those students who do not desire to participate, beginning with the fifth week of instruction and ending two weeks later. Refunds for the summer session begin with the second week of instruction and end one week later.....\$3.00

Special Examination

Courses which have been failed.....\$10.00
Graduate Student Language Examinations, for students who fail the first examination.....\$6.50

Transcript

Students who have paid all their University fees are entitled upon request to receive without charge one transcript of their record. For each additional transcript the fee is.....\$1.00

No charge is made if the request for a transcript is accompanied by a teacher's certificate application blank, and no charge is made for transcripts of records issued for purposes of admission to the Chicago Circle or the Medical Center campuses of the University of Illinois.

University Fee for High School Students

High school students, including University High School students, attending the University under the Early Admission Program, pay the same tuition and fees assessed against University students registered for the same amount of credit.

University High School Instruction

University students at Urbana-Champaign who also register in University High School pay, in addition to their University fees, for each half unit each semester (provided that the total additional charges shall not exceed \$25 a semester) ..\$10.00
Students other than those registered in the University pay a tuition fee for each semester, as follows:

For one course only.....\$10.00
For a full-time high school program.....None

Unredeemed Check Service Charge

For each check returned by a bank to the Office of Business Affairs for insufficient funds or other reasons.....\$5.00

Visitor's Fee (Campus Courses)

Persons holding scholarships, tuition waivers, or staff appointments which exempt them from tuition for campus work, unless such scholarships are specifically limited by law to courses for residence credit only, may attend University classes as visitors

only, without charge. Persons registered on campus for a full program of courses (Range I) may also attend other courses as visitors without additional charge.

The visitor's fee is waived for persons presenting evidence at 69 Administration Building (west basement) of being sixty-five years of age or older.

Persons not otherwise registered in University courses and students registered on campus on a partial program fee schedule (Range II, III, or IV) are charged for each course attended, as a visitor only, a fee of \$15.00

Students who change from credit registration to visitor status *in the same course*, who are not eligible for refund of tuition or fees for the credit registration dropped, are not charged the visitor's fee.

Financial Aid

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ALMA MATER

TO THY HAPPY CHILDREN
OF THE FUTURE
THOSE OF THE PAST
SEND GREETINGS

Student aid programs are designed to provide financial assistance to students who desire to pursue and are capable of acquiring a postsecondary education but who would not be able to do so without financial assistance. University-administered aid programs are designed to supplement what the student and his or her family reasonably can be expected to contribute toward meeting educational expenses. Therefore, one of the basic principles of most student financial aid programs, including the program administered by the University of Illinois at Urbana-Champaign, is that the parents and the student are responsible, insofar as they are capable, for contributing from their income and assets to meet the costs of education.

While the costs of a college education are substantial, it is important to recognize that a significant portion of the expenses of attending the University of Illinois at Urbana-Champaign, a state-supported school, are borne by the state. Historically, by not requiring students to pay *actual* tuition costs, the state has subsidized every undergraduate who was an Illinois resident. Recently, the annual value of that subsidy was more than \$1,500.

Even with relatively low tuition and fee charges, the cost of a college education can be a financial burden which many families cannot bear alone. Estimated expenses for a single undergraduate student attending UIUC appear in Table 2 on page 73.

However, no student should fail to apply for admission because his or her family is unable to pay the full costs of a college education. The Office of Student Financial Aids (OSFA) at the Urbana-Champaign campus administers a strong and versatile financial aid program, adhering to the basic principle that applicants must demonstrate financial need for aid dollars. As long as the family's financial resources are judged insufficient to meet necessary educational expenses, financial aid in the form of loans, employment, grants, and/or scholarships usually can be made available. The major sources of this aid are the federal and state government programs and University-administered funds.

The Office of Student Financial Aids at UIUC administers four basic categories of financial aid, two which are considered gift aid and two which are non-gift aid. The gift aid category includes scholarships and grants; non-gift aid includes loans and employment. In most instances the OSFA staff determines the amount and types of aid which an applicant will receive through the University; there also are funds for which a student applies directly to the awarding agency. These include certain grants and scholarship funds for which scholastic performance is neither the sole nor primary consideration; need is an overriding criterion, and additional criteria are applicable to certain awards.

THE APPLICATION PROCESS

In order to be considered for any University-administered financial aid, a student must complete all forms required according to his or her class level and residency status.

An undergraduate¹ Illinois resident must file:

- Student Eligibility Report (SER) from Basic Educational Opportunity Grant program²
- Illinois State Scholarship Commission (ISSC) Monetary Award Application
- Family Financial Statement (FFS) or Financial Aid Form (FAF)
- Application for Financial Aid at UIUC (AFA)

¹ Including veterinary medicine students without a bachelor's degree.

² All BEOG applicants receive a Student Eligibility Report which indicates whether or not a grant will be awarded. To be considered for University-administered aid, the applicant must submit all three copies of the SER to the Office of Student Financial Aids.

An undergraduate¹ non-Illinois resident must file:

- All of the above with the exception of the Illinois State Scholarship Commission Application

A graduate/professional resident or nonresident must file:

- Family Financial Statement (FFS) or Financial Aid Form (FAF)
- Application for Financial Aid at UIUC (AFA)

The OSFA does not administer scholarships or grants for students in the Graduate College. These students should contact their department heads for information and applications for available scholarships, grants, fellowships, assistantships, and other forms of financial assistance. Graduate, law, and veterinary medicine students may apply to the OSFA for University-funded, long-term loans; they may also receive an employment award under the College Work-Study program.

Additional information on financial aid is available in the *Graduate Programs* catalog and the College of Law catalog.

Independent students:

Applicants who feel that they may qualify to apply as independent students must indicate on either the Family Financial Statement or the Financial Aid Form the conditions under which they qualify. Further documentation may be requested by the OSFA.

How to Obtain Forms

- Family Financial Statement or Financial Aid Form is available from high school and community college counselors or from the UIUC Office of Student Financial Aids.
- Illinois State Scholarship Commission Monetary Award application is available from high school and community college counselors or from the ISSC office at 102 Wilmot Road, Deerfield, IL 60015 or from the UIUC Office of Student Financial Aids.
- Application for Financial Aid is sent automatically to beginning freshmen with their Notice of Admission to the University. Currently enrolled, readmitted, or transfer students may obtain the AFA from the UIUC Office of Student Financial Aids.

Note: While either the Family Financial Statement (FFS) or the Financial Aid Form (FAF) is acceptable, at UIUC the FFS is preferred because it conforms more readily to the University's computer system.

Application Dates

Students seeking financial assistance through the University are encouraged to submit their applications as early as feasible. When applications become available, they should be submitted for the next academic year as soon after the following dates as possible:

December 1: Application for Financial Aid at UIUC; Illinois State Scholarship Commission Monetary Award

January 1: Family Financial Statement or Financial Aid Form (either also can be used to apply for a Basic Educational Opportunity Grant)

Deadline dates for first priority processing and equal consideration of financial aid applications:

Mid-March, prior to the academic year for which aid is desired by freshmen and continuing students

Mid-May, prior to the academic year for which aid is desired by transfer and readmitted students

Subject to the availability of funds, applications completed after mid-March

¹ Including veterinary medicine students without a bachelors degree.

(mid-May for transfer and readmitted students) but before mid-October, the final deadline date, will be considered for UIUC financial aid on a first-come, first-served basis.

At least four to six weeks are needed from the date of submitting the ISSC and FFS (or FAF) forms to process them and to send the results to the Office of Student Financial Aids. Students should allow for this processing time in submitting required forms in order to meet the deadline dates for priority processing of their application for aid from the University. In addition, all applicants for aid must send all three copies of the Student Eligibility Report to the OSFA, even if the Student Eligibility Report indicates ineligibility for BEOG funds.

The Office of Student Financial Aids is available to current or prospective students, parents, and others who desire information and counseling regarding matters of financial assistance.

Office hours: Monday through Friday, 8:00 a.m. to noon; 1:00 to 5:00 p.m., except all-campus holidays.

Address: 420 Student Services Building, 610 East John Street, Champaign, IL 61820

Telephone: (217) 333-0100

SOURCES OF FINANCIAL ASSISTANCE

Several types of financial aid are available to UIUC students. However, since the University's funds are limited, students are encouraged to seek monetary awards provided by national, state, and local organizations. Some of these awards are made solely on the basis of scholastic achievement, while others carry different or additional criteria.

Scholarships

Most scholarships require high scholastic achievement. While many scholarship funds are maintained by individual University departments or units, the OSFA also administers several such awards which are listed in Appendix B of this catalog.

Although students should contact their respective departments for information and applications for scholarships, students do not apply through the OSFA for a specific scholarship. The OSFA staff makes these award decisions based upon information supplied from all applicants for University-administered aid and attempts to distribute the funds as extensively and equitably as possible.

Grants

Grant funds are made available to students with exceptional financial need regardless of academic performance. There are several grant programs, two of which provide extensive financial assistance to UIUC students.

BASIC EDUCATIONAL OPPORTUNITY GRANT (BEOG)

One of the major sources of financial assistance for students at the Urbana-Champaign campus is the Basic Educational Opportunity Grant (BEOG). This federally funded program provides awards which may range from approximately \$200 to \$1,400 per academic year; this grant can be applied to tuition and fees, room and board, textbooks, or other educationally related expenses.

As mentioned in the application process description (see page 91) the BEOG application is an integral part of the financial aid awarding process at UIUC. Any student applying for University-administered aid also must apply for a BEOG; an

award or denial of a BEOG (which appears on the Student Eligibility Report) must be on file with the Office of Student Financial Aids for an applicant to be considered for University assistance. This stipulation applies to all undergraduate award programs administered by the OSFA.

Although a separate BEOG application may be submitted, applicants may apply for a BEOG by simply indicating the appropriate response on one of the required forms, either the Family Financial Statement or the Financial Aid Form.

As with all financial assistance provided through the OSFA, a student must complete such an application for aid for each academic year.

ILLINOIS STATE SCHOLARSHIP COMMISSION (ISSC) MONETARY AWARD

The Illinois State Scholarship Commission (ISSC) Monetary Award is another major source of grant assistance to Illinois residents attending undergraduate colleges and universities in the state of Illinois.

This award may range from \$120 to the full cost of tuition and fees at the Urbana-Champaign campus and is granted solely on the basis of demonstrated financial need. (The commission also administers a State Scholar Program which recognizes scholastic achievement; it is not necessary for a student to be named a state scholar to be eligible for a monetary award; nor does receiving such recognition guarantee eligibility for a monetary award.)

As an illustration of the importance of these monetary awards, the following table shows the percentage of successful applicants according to the income ranges of parents or independent applicants. These figures are for the 1977-78 academic year (latest data available) and represent students at public institutions.

<i>Income Range (Dollars)</i>	<i>Percent Receiving Awards</i>	<i>Income Range (Dollars)</i>	<i>Percent Receiving Awards</i>
\$ 0- 1,999	94.4	\$16,000-17,999	83.9
2,000- 3,999	95.9	18,000-19,999	69.7
4,000- 5,999	94.8	20,000-21,999	49.8
6,000- 7,999	95.4	22,000-23,999	30.3
8,000- 9,999	95.3	24,000-25,999	26.4
10,000-11,999	93.7	26,000-27,999	21.2
12,000-13,999	92.8	28,000-29,999	13.5
14,000-15,999	90.6	30,000-up	4.0

Grant Programs Administered by OSFA

Awards from two grant programs are made by the Office of Student Financial Aids at UIUC. An aid applicant, having filled out all the necessary forms for University-administered aid (see The Application Process, page 91), may receive grant funds from either of these two programs. Under these programs, a student does not apply for a specific grant; the OSFA staff selects the most worthy applicants and distributes the available funds as equitably as possible.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT (SEOG)

The SEOG is a federally funded grant distinctly separate from the Basic Educational Opportunity Grant (see above). The financial need requirements for the SEOG are rigorous. A student receiving an SEOG must accept an equal portion of either scholarship, grant, employment, or loan assistance controlled or approved by the University.

STUDENTS FOR EQUAL ACCESS TO LEARNING (SEAL) GRANT

The SEAL grant is a program jointly funded by voluntary UIUC student contributions and matching funds provided by the state through the Illinois State Scholarship Commission. Students initiated this program by referendum in 1970 and reaffirmed it by referenda in 1974 and 1978. SEAL grants are awarded on the basis of need and in accordance with rules prescribed by students and the ISSC.

EMPLOYMENT: A FORM OF NON-GIFT AID

The Employment Division within the Office of Student Financial Aids provides assistance to any University student seeking part-time work. Staff members are available to assist students even if they have not applied for University-administered aid. Employment counseling is available from 9:00 a.m. to noon and from 1:00 to 4:00 p.m., Monday through Friday, except all-campus holidays.

The University of Illinois at Urbana-Champaign employs several thousand part-time student workers in offices, libraries, laboratories, farms, and food service units. Each year these student employees earn more than \$4 million in wages. In addition, many students work in the local community.

Hourly wages for student workers vary according to the type of work and the responsibility involved. Most jobs require from ten to twenty hours of work per week. Earnings are estimated to average from 20 to 30 percent of a student's college expenses.

Students seeking employment must realize that many of the more responsible and desirable positions are filled by upperclassmen who have special training and experience. However, underclassmen may enhance their employment opportunities by taking temporary jobs while waiting for a more permanent position.

Freshmen in curricula for which laboratory periods occupy most of the daytime hours generally find either food handling work done at mealtime hours or temporary odd jobs before or after regular University hours to be most convenient and time-conserving. Students in other curricula may improve their employment opportunities by arranging class schedules which leave consecutive hours free each day for working.

Working during college years may have advantages in addition to financing a college education. Sometimes part-time employment experience helps a student to choose a vocation or is helpful later when attempting to secure full-time employment in one's chosen career.

CAMPUS EMPLOYMENT: COLLEGE WORK-STUDY

The University of Illinois participates in College Work-Study (CWS), a federal program of financial aid in the form of jobs for students. A student is authorized to participate in the College Work-Study program if he or she is awarded this type of financial aid by the OSFA. As with other awards made by the OSFA, a student does not apply directly for College Work-Study assistance.

All applicants for aid automatically receive consideration for CWS as well as for scholarships, grants, and loans.

Most students in the CWS program are employed on campus.

If College Work-Study is included in an aid offer, the recipient must check with the Employment Division of the OSFA as close as possible to the beginning of the academic term to obtain assistance in job placement.

CAMPUS EMPLOYMENT: UNIVERSITY EMPLOYMENT AWARDS

As a portion of their financial aid package, some students will receive a University Employment award. The major distinction between CWS and University Employ-

ment is in funding. Under CWS the federal government funds 80 percent of a student employee's salary, with the University supplying the remaining 20 percent. However, hourly rates, pay increases, and work policies are the same for both employment programs.

A recipient of a University Employment award must check with the Employment Division of the OSFA as close as possible to the beginning of the academic term to obtain assistance in job placement.

STUDENT EMPLOYMENT ON CAMPUS AND IN THE COMMUNITY

The vast majority of students working to earn a portion of their expenses during the school term do not secure jobs through an award of College Work-Study or University Employment. Students without a financial aid award who wish to work part time may check the OSFA listings of on-campus and community jobs.

For referral to an on-campus job, a student must be carrying a minimum of 12 credit hours and must register with the financial aids employment staff before contacting the prospective employer.

Community job listings contain complete information for self-referral. In addition, students may register to be contacted about jobs of short duration (housework, babysitting, yardwork, clerical/typing, odd jobs) by completing a "skill bank" card at the Employment Desk. Students then are called as jobs become available and as staff time permits.

STUDENT LOANS: ANOTHER FORM OF NON-GIFT ASSISTANCE

Low-Interest Loans Awarded by the University

The Office of Student Financial Aids authorizes loans to students who demonstrate financial need. All applicants for University aid automatically are considered for University-funded, long-term loans. An applicant does not apply for a specific loan fund. The Office of Student Financial Aids (acting for the University of Illinois as lender) determines who is eligible and the source and amount of the loan to be offered.

These loans carry an interest rate of 3 percent, well below that of a conventional loan, and repayment is deferred until after the borrower ceases to be a full-time student. A list of loan funds administered by the University is given for information only in Appendix C of this catalog.

In addition to the University's Long-Term Loan (UILT) Program, UIUC students also may participate in the federally funded National Direct Student Loan (NDSL) program. Funds are made available to the University by the federal government which, in addition to permitting deferred repayments, also carry a 3 percent interest rate. An NDSL is awarded by the OSFA on the basis of financial need. Again, a student does not apply specifically for either an NDSL or a UILT, but simply indicates on the UIUC aid application a willingness to accept loan assistance.

The Guaranteed Student Loan Program

For students attending college full time, the federal government has encouraged state governments to operate guaranteed long-term loan programs in conjunction with commercial lenders. This encouragement is in the form of an interest subsidy; that is, the federal government pays the 7 percent interest to the lender until repayment of the principal begins.

For Illinois residents, the state of Illinois has such a loan program which is administered through the Illinois State Scholarship Commission. A student who

is not an Illinois resident should check with the OSFA for information on guaranteed loan programs offered in other states.

Formerly, the interest subsidy was restricted to students from families with incomes of no more than \$25,000. In November 1978, legislation signed by the president removed this income ceiling. Therefore, any student, regardless of the family's income, is eligible for the interest subsidy on a guaranteed loan.

While the federal government, the state, and private corporations subsidize and guarantee these loan programs, the loan is arranged for and made by the student from a participating commercial lending institution (bank, savings and loan association, or credit union) in the student's home community. A student should, therefore, first contact a lending institution to obtain a loan application.

General Terms of Long-Term Loan Programs

Students who contemplate borrowing money for educational purposes should consider carefully the general terms and repayment requirements of the loan programs listed below. (For specific terms pertaining to any loan program, a borrower should always read the conditions which appear on the promissory note and question any provisions which seem unclear.)

NATIONAL DIRECT STUDENT LOAN (NDSL)

Aggregate maximum: \$10,000

Interest rate: 3 percent per year simple interest on the unpaid principal balance; begins with the first repayment

Forgiveness: Yes, in some cases. Contact Student Loans, 168 Administration Building

Begin repayments: Nine months after ceasing to be a full-time student

Deferments: Up to three years for military service, Peace Corps, Vista, and for period of return to full-time student status

Minimum repayment: \$30 plus interest per month or amount needed to repay principal and interest in ten years

UNIVERSITY OF ILLINOIS LONG-TERM LOAN

Aggregate maximum: \$7,500

Interest rate: 3 percent per year simple interest on the unpaid principal balance, with some exceptions; begins with first repayment

Forgiveness: None

Begin repayments: Four months after ceasing to be a full-time student

Deferments: By arrangement with Student Loans, 168 Administration Building

Minimum repayments: \$30 plus interest per month or amount needed to repay principal and interest in seven years

GUARANTEED LOANS

Illinois Guaranteed Loan; United Student Aid Fund Loan; Federally Insured Loan; Other state-guaranteed loan programs

Aggregate maximum: Varies; usually \$7,500 to \$15,000

Interest rate: 7 percent per year simple interest on the unpaid principal balance

Forgiveness: None

Begin repayments: Vary; usually nine months after ceasing to be a full-time student

Deferments: Vary; usually up to three years for military service, Vista, Peace Corps, and for period of return to full-time student status

Minimum repayments: Vary; usually \$30 per month or amount required to repay

principal and interest in ten years. The Illinois Guaranteed Loan must be repaid on a five-year repayment schedule.

Approximate Monthly Payments Required by Loan Programs

Monthly repayment schedules under the various loan programs are somewhat comparable; variances occur depending upon the length of time allowed to repay the entire loan amount and the interest charged. The monthly payments which are given below are approximations and are provided only to help potential borrowers estimate the monthly obligation they will incur should they participate in a particular loan program.

NATIONAL DIRECT STUDENT LOAN PROGRAM

A borrower has up to ten years to repay this loan, with a minimum monthly repayment of \$30 plus 3 percent per year simple interest. A student borrowing \$4,000 and taking the full 120 months to repay the loan would make monthly payments of approximately \$35 plus interest. For each additional thousand dollars borrowed, the monthly payment increases by approximately \$10.

UNIVERSITY OF ILLINOIS LONG-TERM LOAN PROGRAM

A borrower has up to seven years to repay this loan, with a minimum monthly repayment of \$30 plus 3 percent per year simple interest. A student borrowing \$4,000 and taking the full eighty-four months to repay the loan would make monthly payments of approximately \$50 plus interest. For each additional thousand dollars borrowed, the monthly payment increases by approximately \$10.

ILLINOIS GUARANTEED LOAN PROGRAM; FEDERALLY INSURED LOAN PROGRAM; UNITED STUDENT AID FUND LOAN PROGRAM; OTHER STATE GUARANTEED LOAN PROGRAMS

Each of these loan programs carries a 7 percent per year simple interest rate. Under the Illinois Guaranteed Loan Program, the borrower has up to five years to repay the loan; other programs allow the borrower up to ten years to repay, with a minimum monthly payment of \$30. A student borrowing \$4,000 and taking the full sixty months to repay an Illinois Guaranteed Loan would make monthly payments of approximately \$80 *including* interest. For each additional thousand dollars borrowed, the monthly payment increases by approximately \$20, including interest.

Responsibility for Repayment

Any recipient of a student loan, regardless of the program, must recognize that such a loan is a debt incurred by the student, not the parents. The responsibility for understanding the conditions and regulations of the loan process, as well as the repayment schedule, rests with the student borrower. Additional information on the National Direct Student Loan Program or the University Long-Term Loan Program may be obtained from the Office of Student Financial Aids at UIUC. Applications and additional information on the Illinois Guaranteed Loan Program are available from local lending institutions.

Emergency Short-Term and Intermediate Loans

In emergencies, full-time UIUC students may borrow up to \$100 for up to sixty days or until the last day of instruction for the semester, whichever comes first. However, in order to make more money available to a maximum number of stu-

dents, applicants should keep the purpose of the loan in mind (short-term emergency) and are encouraged to borrow as little as necessary for as short a period of time as possible. A service fee of \$1 is charged for short-term loans. There is a 6 percent interest charge on overdue loans.

Students who are U.S. citizens should apply in person to the Student Services Office, 130 Student Services Building. International students (noncitizens who are not in the United States as permanent residents) should contact the Office of International Student-Staff Affairs for information on financial aid. These funds, which are made available immediately, must be used for educational expenses.

A special provision permits graduating seniors and graduate students to borrow up to \$250 to meet expenses incurred as a result of employment interviews. Applicants for this type of short-term loan must show evidence that the prospective employer will reimburse the applicant for expenses incurred.

Intermediate loans in amounts not to exceed \$200 may be made, if funds are available, to help meet the special financial needs of students who can demonstrate evidence of interrupted cash flow during an academic year and who can also demonstrate evidence of being able to completely repay the loan during the semester or academic year. A service charge of \$5 will be assessed. There is a 6 percent interest charge on overdue loans. The application procedure for intermediate loans is the same as for short-term loans.

Listed in Appendix D on page 501 are the funds which have been established for short-term and intermediate loans with the names of the donors whose generosity has made this type of aid possible.

SPECIALIZED AID PROGRAMS

Although most financial aid award decisions for UIUC students are made by the OSFA staff after aid applicants have completed basic, required forms, there are some aid programs administered by groups or agencies to which the student directly applies. (These are in addition to the two major grant programs described earlier: BEOG and ISSC monetary awards.)

The list of programs and descriptions which follow are intended to give potential aid applicants basic information so that they may gauge their own possible eligibility for assistance. Students are encouraged to contact the offices or agencies indicated for further details.

Programs for Veterans

ILLINOIS VETERANS SCHOLARSHIPS

An Illinois statute provides a scholarship for each veteran who served in World War I if he or she entered the service between April 6, 1917, and November 11, 1918; and for each veteran who served in the armed forces at any time after September 16, 1940, provided certain eligibility requirements are met.

Value: The cost of resident tuition (but not fees) for a period of time that is equivalent to four calendar years of full-time enrollment, including summer terms. A point system, with a maximum of 120 points or twelve years from the date of initial usage (whichever comes first), determines the duration of eligibility.

Undergraduate veterans should apply first for Illinois State Scholarship Commission grants which can pay fees as well as tuition (see page 94).

Scope: Any state-supported college, university, or Class 1 junior college in Illinois.

Eligibility: A veteran must have had at least one year of active service and have been honorably discharged (or separated) from such service or received an honorable discharge for medical reasons directly connected with active service.

Before entering active service, he or she must have been:

1. A resident of Illinois; or
2. A resident until at least six months before entering active service; or
3. A student at one of the state-supported colleges or universities or Class 1 junior colleges in Illinois at the time of entering active service.

In addition to one of the requirements above, the veteran must have returned to Illinois within six months of leaving the armed forces.

Members of the armed forces currently on active duty also are entitled to an Illinois Veterans Scholarship provided they have served at least one year and would be qualified for the scholarship if discharged.

How to apply: Contact the Office of Student Financial Aids.

VETERANS BENEFITS (GI BILL)

Students seeking information regarding veterans' educational benefits should contact the Office of Veterans Affairs, University of Illinois at Urbana-Champaign, 344 Student Services Building, 610 East John Street, Champaign, IL 61820.

Other Specialized Scholarship and Grant Programs

ATHLETIC GRANTS-IN-AID

Certain fields of athletic activity have been approved for grants-in-aid. These fields are baseball, basketball, cross-country, football, golf, gymnastics, swimming, tennis, track, and volleyball. Applications should be made directly to: Director of Athletics, University of Illinois at Urbana-Champaign, 112 Assembly Hall, Champaign, IL 61820.

AVERY BRUNDAGE SCHOLARSHIPS

Avery Brundage, honorary president of the International Olympic Committee and an alumnus of the University of Illinois, established this fund to recognize and assist University of Illinois students who are both academically gifted and exceptional amateur athletes.

Value: Can vary; \$600 to each recipient in 1978-79; available to undergraduate and graduate students; renewable.

Scope: May be used at any of the three campuses of the University of Illinois.

Eligibility: Selection made by a University committee; judged on the basis of scholastic records, participation in amateur athletics, and personal recommendation.

How to apply: Obtain applications from the Office of Student Financial Aids. Applications become available January 1 and must be submitted by February 28 for the next academic year.

FRED S. BAILEY SCHOLARSHIPS

Value: Varies.

Scope: Applicable only to the University of Illinois at Urbana-Champaign.

Eligibility: Men and women students in any program of study are eligible to apply. Awards are based on financial need, character, and superior scholarship.

How to apply: Contact the University Young Men's Christian Association, 1001 South Wright Street, Champaign, IL 61820.

CHILDREN OF VETERANS SCHOLARSHIPS

Three scholarships may be awarded by the University of Illinois in each county: one to a child of a veteran of World War I, one to a child of a veteran of World War II, and one to a child of a veteran who served at any time during the national emergency between June 25, 1950, and January 31, 1955.

Value: Waiver of tuition (but not fees) for four years. Applicants with financial need also should apply to the Illinois State Scholarship Commission for awards which can cover fees as well as tuition (see page 94).

Scope: May be used in any course of study at any of the three campuses of the University of Illinois.

Eligibility: Candidate must be a resident of Illinois and of the county where the application is made. Preference is given to candidates whose fathers are deceased or disabled. Children of veterans may compete even if they have completed college work at the University of Illinois or any other college.

How to apply: Contact the local county Superintendent of Educational Service Region. Applications are available September 15 through December 15 for the next academic year.

GENERAL ASSEMBLY SCHOLARSHIPS

Value: Waiver of resident tuition (but not fees) for varying continuous periods of time, not to exceed four years.

Scope: Each member of the General Assembly of Illinois may award one scholarship each year applicable only to the University of Illinois and one each year applicable to any other state-supported college or university.

Eligibility: Recipient must be a resident of the district represented by the nominating legislator.

How to apply: Contact a member of the General Assembly of Illinois who represents the district in which you reside.

ILLINOIS DEPARTMENT OF CHILDREN AND FAMILY SERVICES ASSISTANCE

Value: Cost of resident tuition for four years. The department also will provide maintenance and payment of school expenses to supplement the student's earnings and other resources.

Scope: Any state-supported college or university in Illinois. (Only the maintenance allowance can be furnished if the student attends a non-state-supported institution.) Minimum of twelve scholarships is awarded each year.

Eligibility: Recipients must be under the guardianship of the Illinois Department of Children and Family Services.

How to apply: Contact local caseworker or Illinois Department of Children and Family Services, 425 South Second Avenue, Springfield, IL 62706.

ILLINOIS NATIONAL GUARD/NAVAL MILITIA SCHOLARSHIPS

Value: Cost of resident tuition for not more than the equivalent of four years of full-time enrollment.

Scope: Can be used at any state-supported university or community college in Illinois.

Eligibility: Must currently be an enlisted member, neither an officer nor a warrant officer, who has served for at least one year in the Illinois National Guard/Naval Militia while receiving educational benefits.

How to apply: Obtain application from any Illinois National Guard Armory or Naval Militia Unit. Return completed application to the Illinois State Scholarship Commission, 102 Wilmot Road, Deerfield, IL 60015.

ILLINOIS RESERVE OFFICERS' TRAINING CORPS SCHOLARSHIPS

Value: Waiver of cost of resident tuition (but not fees) over a period during which the recipient is enrolled in an ROTC program.

Scope: May be used in any course of study at any state-supported college or university in Illinois which offers one or more ROTC programs.

Eligibility: Must be an Illinois resident, enrolled in a university or college, and in the Army, Navy, or Air Force ROTC.

1. Students may apply after a minimum of one semester of ROTC. If awarded, scholarships are retroactive to the beginning of the school year.
2. Students may enter from an Illinois junior college and must have completed all possible work at the junior college.

Obligation: Military obligation is not incurred by acceptance of this scholarship. (See also the Army, Navy, and Air Force Reserve Officers' Training Corps sections in this catalog for federal scholarship opportunities.)

How to apply: Application forms are available at each ROTC unit.

ILLINOIS DIVISION OF VOCATIONAL REHABILITATION SCHOLARSHIPS

Value: Varies; based on need. Time covered varies according to individual needs and program requirements.

Scope: May be used at any postsecondary school.

Eligibility: Recipient must have a disability that is a handicap to employment.

How to apply: Illinois residents should contact the State of Illinois Division of Vocational Rehabilitation, 623 East Adams Street, Springfield, IL 62701. Students from other states should contact their state Division of Vocational Rehabilitation.

TEACHER IN SPECIAL EDUCATION ASSISTANCE

Value: Waiver of resident tuition (but not fees) for four calendar years.

Scope: May be used at any Illinois state-supported college or university. Two hundred fifty scholarships are awarded at large throughout the state each year.

Eligibility: Candidate must be a recent graduate of an Illinois high school in the upper half of his or her graduating class or must hold a valid Illinois Teacher's Certificate.

Obligation: Recipients must agree to take courses in preparation for teaching in special education programs and, upon graduation or termination of enrollment, teach in any recognized public, private, or parochial school in Illinois for at least two of the five years immediately following graduation or termination.

How to apply: Recent high school graduates should contact their high school principal. Holders of an Illinois Teacher's Certificate may obtain further information and applications from their local county Superintendent of Educational Service Region.

VERDELL-FRAZIER-YOUNG AWARDS

Value: Varies; maximum grant \$500.

Scope: Applicable only to the University of Illinois at Urbana-Champaign.

Eligibility: For women who have experienced an interruption in their academic careers; preference to those with an interruption of at least two years.

How to apply: Contact the Office for Women's Resources and Services, 346 Student Services Building, 610 East John Street, Champaign, IL 61820.

FOR MORE INFORMATION ON FINANCIAL AID PROGRAMS

There are many scholarship programs which operate independently of any college or university. Recipients usually are free to attend the schools of their choice.

Each year University of Illinois undergraduates receive approximately \$500,000 in awards of this type. College and University department heads can provide information on awards relating to a particular course of study. In addition, high school and community college counselors can advise students of various scholarship

programs and can suggest publications which students may wish to obtain for their personal investigation.

PRIZES AND AWARDS

Competitive prizes, fellowships, and miscellaneous awards available to students in the University are listed below; those which are offered only to students in a particular college, curriculum, or department are described in the sections of this catalog applying to the individual colleges and the Reserve Officers' Training Corps (ROTC).

Alpha Lambda Delta Prize. The national organization of Alpha Lambda Delta, honor society for freshman women, gives a book each year to the Alpha Lambda Delta senior woman who achieves the highest scholastic average for seven semesters at the University of Illinois. Certificates of award may be given to the senior women maintaining the Alpha Lambda Delta average for seven semesters.

National Alpha Lambda Delta annually awards eight \$2,000 fellowships for graduate study to recent Alpha Lambda Delta graduates. Additional information is available from the Office of Campus Programs and Services.

H. R. Brahana Prize. A fund has been established in the University of Illinois Foundation in acknowledgment of the contributions to the University and to the Department of Mathematics by H. R. Brahana, professor of mathematics, emeritus. Income from the fund is used each October to award a prize of \$100 to an undergraduate within one year of a bachelor's degree in recognition of outstanding performance in mathematics. The recipient is selected by the Department of Mathematics.

Bryan Prize. In 1898, William Jennings Bryan gave to the University the sum of \$250 whose income provides a \$50 prize for the best essay written by an undergraduate student on a topic relating to the science of government. The prize, which was last awarded in 1972, is ordinarily offered every fifth year. Interested students should consult the Department of Political Science for additional information.

Thomas Arkle Clark Prize. The freshman honor society, Phi Eta Sigma, gives a prize of \$25 to its sophomore member who has attained the highest scholastic average during that person's first three semesters in the University. In case two members have the same average, other factors such as extracurricular activities and outside work are considered.

Thacher Howland Guild Memorial Prize. The Department of English offers a prize of \$25 for the best play of the year written by an undergraduate student. The award may be withheld in any year if no production is found worthy of a prize.

George Huff Certificates of Award. The University of Illinois Alumni Association annually presents framed certificates of award for proficiency in scholarship and athletics to students who earn a varsity letter in any sport and who receive a scholastic grade-point average of at least 4.0 (A = 5.0) for two consecutive semesters. The awards are presented at the final home basketball game.

Illini Mothers Association Book Award. In recognition of outstanding academic achievement the association presents a book or books to the high school library of each first semester freshman who completes a minimum of 14 semester hours and achieves a 5.0 semester grade-point average.

Illini Poetry Prize. The Department of English offers a prize of \$25 for an award-winning poem or group of poems written by an undergraduate student. The award may be withheld in any year if no production is found worthy of a prize.

Intercollegiate Conference Medal. The Intercollegiate Conference, through its faculty representative at each conference institution, awards annually a medal to the student in the graduating class who has attained the greatest proficiency in athletics and in scholastic work.

Phi Kappa Phi Awards. The local chapter of Phi Kappa Phi, national all-university scholastic honor society, gives two annual awards of \$200, one to a junior and one to a senior member of the local chapter. The students are selected on the basis of ability, character, and need. Applications should be addressed to the local secretary of the society early in the second semester.

Phi Kappa Phi (Sparks Memorial) Fellowships. Four fellowships of \$2,500 each, for graduate study in any American institution of recognized standing, are awarded annually by Phi Kappa Phi, national all-university scholastic honor society, in competitions open to members of the society in any American college or university where a chapter of the society exists. Prospective candidates should file their applications with the local secretary of the society early in the second semester of their senior year.

Leah Fullenwider Trelease Memorial Award. Three prizes are awarded for the best short stories submitted to the Department of English by undergraduate students. Funds are derived from gifts of friends of the late Leah Fullenwider Trelease.

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Academic administrative and conduct regulations applying to students at the Urbana-Champaign campus of the University of Illinois are published in the *Code on Campus Affairs and Regulations Applying to All Students*. Students are responsible for complying with these regulations of the University, and those of the colleges and departments from which they take courses. The *Code on Campus Affairs and Regulations Applying to All Students* is available to students during registration and may be obtained at the campus Student Assistance Center in the Student Services Building, 177 Administration Building, and the Postregistration Center in the Illini Union.

BACHELOR'S DEGREES AND CERTIFICATES CONFERRED

Candidates for a bachelor's degree must meet the general requirements of the University with respect to registration, residence, general education, and English; and the minimum scholarship requirements which the University has approved for their college or division; must pass the subjects which are prescribed in their curriculum; and must conform to the requirements of that curriculum in regard to electives and the total number of hours required for graduation.

At any point prior to the conferral of the degree, the Senate Committee on Student Discipline has the right to withhold privileges of the academic community, including the conferral of the degree itself. In instances where dismissal is a possibility for disciplinary infractions, the conferral of the degree is withheld until the disciplinary action has been resolved.

Bachelor's Degrees

The baccalaureate degrees conferred at the Urbana-Champaign campus with the minimum number of hours required for graduation are listed below by college. Also indicated is the number of semester hours of credit in basic and/or advanced military courses offered by the Air Force, Army, and Naval Reserve Officer Training programs which each college will accept for graduation.

UNDERGRADUATE COLLEGES	SEMESTER HOURS REQUIRED FOR GRADUATION
College of Agriculture	
<i>Maximum advanced military credit accepted:</i> no maximum	
Bachelor of Science (B.S.) in	
Agriculture	126
Food Industry	130
Food Science	130
Forestry	126
Human Resources and Family Studies	120
Home Economics Education	126
Interior Design	120
Ornamental Horticulture	130
Restaurant Management	126
College of Applied Life Studies	
<i>Maximum advanced military credit accepted:</i> 6 semester hours	
Bachelor of Science (B.S.) in	
Health and Safety Education	128
Leisure Studies	132
Physical Education	128

College of Commerce and Business Administration*Maximum advanced military credit accepted: no maximum***Bachelor of Science (B.S.) in**

Accountancy	124
Business Administration	124
Economics	124
Finance	124

College of Communications*Maximum advanced military credit accepted: no maximum***Bachelor of Science (B.S.) in**

Advertising	124
Journalism	124
Radio and Television	124

College of Education*Maximum advanced military credit accepted: no maximum***Bachelor of Science (B.S.) in**

Business Education	126
Early Childhood Education	124
Special Education	125
Elementary Education	124
Occupational and Practical Arts Education	128
Secondary Education	120

College of Engineering*Maximum advanced military credit accepted: 0 to 6 semester hours (depending on curriculum)***Bachelor of Science (B.S.) in**

Aeronautical and Astronautical Engineering	134
Agricultural Engineering	128
Ceramic Engineering	132
Civil Engineering	129
Computer Engineering	128
Computer Science	122
Electrical Engineering	128
Engineering Mechanics	128
Engineering Physics	128
General Engineering	127
Industrial Engineering	130
Mechanical Engineering	130
Metallurgical Engineering	128
Nuclear Engineering	127

College of Fine and Applied Arts*Maximum advanced military credit accepted: 6 semester hours***Bachelor of Arts (A.B.) in**

Teaching of Dance	130
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Bachelor of Fine Arts (B.F.A.) in

Art Education	130
Crafts	122
Dance	130
Graphic Design	122
History of Art	122
Industrial Design	122

Painting	122
Sculpture	122
Theatre	128
Bachelor of Landscape Architecture (B.L.A.)	128
Bachelor of Music (B.Mus.)	130
Bachelor of Science (B.S.) in	
Architectural Studies	124
Music Education	130
Bachelor of Arts in Urban Planning (B.A.U.P.)	120

College of Liberal Arts and Sciences

Maximum advanced military credit accepted: 6 hours

Bachelor of Arts (A.B.) in	
Liberal Arts and Sciences	120
Speech and Hearing Science	124
Teaching of English	128
Teaching of French	120
Teaching of German	120
Teaching of Latin	120
Teaching of Russian	123
Teaching of Social Studies	120
Teaching of Spanish	123
Teaching of Speech	128
Bachelor of Science (B.S.) in	
Chemical Engineering	129
Chemistry	130
Geology	126
Home Economics	120
Liberal Arts and Sciences	120
Physics	126
Speech and Hearing Science	128
Teaching of Biology	120
Teaching of Chemistry	125
Teaching of Earth Science	125
Teaching of Geography	123
Teaching of Mathematics	120
Teaching of Physics	126

School of Social Work

Maximum advanced military credit accepted: no maximum

Bachelor of Social Work	120
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Certificates

Certificates of Completion are conferred at Urbana-Champaign upon completion of certain curricula in the Institute of Aviation. Candidates for a certificate must meet the general requirements of the University with respect to registration; satisfy the minimum scholarship requirements which the University has approved for their curriculum; complete all special requirements established for that curriculum; pass in the subjects which are prescribed in the curriculum; and conform to the requirement of that curriculum in regard to electives and the total number of hours required for graduation, as listed below:

Institute of Aviation	SEMESTER HOURS REQUIRED FOR GRADUATION
<i>Maximum basic and advanced military accepted:</i> 0 hours	
Certificate of Completion of	
Curriculum in Aircraft Maintenance.....	72
Curriculum in Aviation Electronics.....	55
Curriculum for the Professional Pilot.....	66
Combined Flight-Maintenance Program.....	84

RESIDENCE REQUIREMENTS FOR GRADUATION

First Bachelor's Degree

In addition to specific courses and scholastic average requirements, each candidate for a bachelor's degree from the University of Illinois at Urbana-Champaign must spend either the first three years earning not less than 90 semester hours or the last year (two semesters, or the equivalent) earning not less than 30 semester hours in residence at the Urbana-Champaign campus, uninterrupted by any work in another institution. Only those courses which are applicable toward the degree sought may be counted in satisfying the above minimum requirements. (Either three twelve-week terms or four eight-week sessions are the equivalent of two semesters.)

Concurrent attendance at the University of Illinois and another collegiate institution does not interrupt University of Illinois at Urbana-Champaign residence requirement for graduation.

Credit earned through the Advanced Placement Program is included in the first 90 semester hours and is not considered as interrupting residence.

Credit allowed toward graduation for completion of courses of study offered by the religious foundations located in Urbana-Champaign is not counted as interrupting residence or counted toward satisfying minimum residence requirements for graduation.

Attendance at another institution under the CIC Program or participation in the University of Illinois foreign study programs or the Study away from Campus Programs for which students are registered in Urbana-Champaign courses does not interrupt residence, and credits earned through these programs are counted as residence credit toward graduation, provided that within the last two years of study at least 30 semester hours have been earned in courses taken on the Urbana-Champaign campus.

Transfers from junior colleges must, after attaining junior standing, earn at the University of Illinois at Urbana-Champaign or any other approved four-year institution at least 60 semester hours acceptable toward their degree, in addition to meeting the usual residence requirement for a degree from the University of Illinois at Urbana-Champaign.

Students transferring from the Chicago Circle campus to Urbana-Champaign as candidates for degrees must satisfy the residence and academic requirements for graduation established for the curriculum entered on the Urbana-Champaign campus. Since the two campuses do not have identical academic programs, the student who is contemplating a transfer should consult with the college to which he or she expects to transfer.

A student attending as a visitor only is not considered a student in residence.

A student who requests that the residence requirement for graduation be waived must submit a petition to the dean of his or her college, who will take action on the petition.

A person who wishes to obtain a degree in a given semester but is not eligible to take courses that semester on the Urbana-Champaign campus without applying

for readmission must apply to the director of admissions and records for readmission to the campus for the purpose of obtaining a degree. Students who are on drop status may not graduate until they have been readmitted to their college.

Second Bachelor's Degree

A student who has received one bachelor's degree may be permitted to receive a second bachelor's degree from the University of Illinois at Urbana-Champaign provided all specified requirements for both degrees are fully met and provided also that the curriculum offered for the second degree includes at least the final 30 semester hours which are earned in residence at the Urbana-Champaign campus and not counted for the other degree.

The second bachelor's degree may be earned either concurrently with or subsequent to the first degree.

Candidates for a second bachelor's degree from the University of Illinois at Urbana-Champaign must meet the same residence requirements as for the first degree. If any of the first three years of credit has been transferred from another institution, the student must spend the last year (two semesters, or the equivalent) earning a minimum of 30 semester hours in uninterrupted residence at the Urbana-Champaign campus.

Only those courses which are acceptable toward the degree sought may be counted in satisfying the above minimum requirements. This includes the 30 additional hours required for the second degree.

GENERAL EDUCATION REQUIREMENTS

A minimum of 6 hours each in the humanities, the social sciences, and the natural sciences is required for graduation in all undergraduate curricula. Approved courses should be distributed over at least three years. Upon request the individual colleges will provide students with the general education requirements for their curriculum and the list of courses acceptable for this purpose.

ENGLISH REQUIREMENT FOR GRADUATION

Satisfactory proficiency in the use of English is a requirement for all undergraduate degrees awarded at the Urbana-Champaign campus of the University. This proficiency can be certified by the satisfactory completion of a one-semester, 4-hour course of either Rhetoric 105 or 108 or by the satisfactory completion of the two-semester, 6-hour sequence of Speech Communication 111 and 112 (Verbal Communication). A student may also satisfy the English requirement for graduation by achieving a sufficiently high score on the ACT English Subtest or on the SAT Verbal Test.

If the academic credentials of a transfer student do not indicate fulfillment of course work equivalent to the University of Illinois English graduation requirement, the student may be administered the Rhetoric Placement and Proficiency Examination or the English Placement Test (EPT).

Under certain conditions students may satisfy the English requirement for graduation through satisfactory completion of courses offered by the Division of English as a Second Language (ESL). Satisfactory completion of ESL courses (ESL 114-ESL 115) satisfies the English graduation requirement. Evidence that a student is eligible to enroll in these courses is established by a satisfactory score on the English Placement Test, a test of oral and written English administered by the Division of English as a Second Language. On the basis of this test, the student will be enrolled in the course or courses appropriate to his or her English needs.

If a student's score on the EPT is higher than the proficiency level of students in ESL 115, that student must take the Rhetoric Placement and Proficiency Examination offered by the Department of English.

Those students whose deficiency in English requires that they take one or more of the ESL noncredit courses (ESL 109, ESL 110, and ESL 111) are not allowed to register for a full academic program and must complete their noncredit requirements before enrolling in the ESL 114-115 sequence.

FOREIGN LANGUAGE COURSES

Except as prohibited or limited by the established policy of the student's college, credit in University foreign language courses taken to remove high school entrance deficiencies may, at the discretion of the college, be counted in the total hours required for graduation and be accepted in partial or complete satisfaction of the foreign language requirement for the degree.

Normally no more than 10 hours of proficiency credit for the study of a single foreign language at the elementary and intermediate level shall be counted for graduation in the College of Liberal Arts and Sciences. Additional credit may be granted for advanced courses emphasizing literature and language structure rather than communicative competence in the language.

PHYSICAL EDUCATION COURSES

Credit in physical education courses is not a general requirement for a degree at the Urbana-Champaign campus of the University, but may be required in some curricula. Credit earned in physical education courses may, at the discretion of the individual college, be included in the scholastic average of the student and in the total hours required for graduation.

RELIGIOUS FOUNDATION COURSES

Courses of study offered by the religious foundations located in Urbana-Champaign which have been approved by the College of Liberal Arts and Sciences Committee on Courses and Curricula are accepted for credit by the University *provided the student is currently registered in University courses*. Registration in these courses is limited to registered students of sophomore standing or above who are currently registered in University courses and must be approved in advance by the dean of the student's college. Grades in these courses are not included in the student's all-University scholastic average, and the courses are not counted as interrupting residence or toward satisfying minimum residence requirements for graduation.

A maximum of 10 semester hours of credit in religious foundation courses may, with the approval of the dean of the college concerned, be counted toward graduation.

The above credit limitations and other restrictions apply to religious foundation courses only and not to courses offered by the University of Illinois Program in Religious Studies.

CORRESPONDENCE AND EXTRAMURAL COURSES

After matriculation students may count toward their degree, with the approval of the dean of their college, as many as 60 semester hours of credit earned in extramural and/or correspondence study, provided:

- They complete all the remaining requirements for the degree in residence at the University of Illinois at Urbana-Champaign, *or*
- They present acceptable residence credit for work done elsewhere and complete the requirements needed for their degree in residence at the University. In all cases, the senior year (two semesters of not less than 30 semester hours) must be done in residence at the University of Illinois at Urbana-Champaign.

Students who have completed their first three years in residence in the University of Illinois at Urbana-Champaign, earning a minimum of 90 semester hours, may do all or part of their senior year in correspondence or extramural study, subject to meeting all the requirements for their degree.

Credit for correspondence work taken with fully accredited institutions may be allowed, but only on approval of the dean of the student's college.

THESES

If a thesis is to be submitted in partial fulfillment of the requirements for a bachelor's degree, the subject must be announced by the end of the sixth week of instruction in the first semester of the student's senior year. The work must be done under the direction of a professor in the department concerned and must be applicable to the curriculum in which a degree is expected. A maximum of 10 hours of credit in thesis work may be counted toward a bachelor's degree.

UNDERGRADUATE CREDIT FOR SERVICE AND EDUCATION IN THE ARMED FORCES

The University recognizes for college credit certain training and experience in the armed forces of the United States. The completion of military service in the U.S. Air Force, Army, Marine Corps, or Navy, including basic or recruit training of six months or more, is awarded 4 semester hours credit in basic military science and up to 4 semester hours of credit in physical education upon presentation of evidence on form DD-214 of honorable discharge or transfer to the reserve component.

Correspondence courses prepared by the United States Armed Forces Institute which are baccalaureate-oriented and which correspond in level and content to courses offered at the University of Illinois at Urbana-Champaign are recognized for credit.

Credit recommendations in the *Guide to the Evaluation of Education Experiences in the Armed Forces* (published by the American Council on Education) for military service school training will be considered for transfer credit as follows: (1) credit will be granted for college-level baccalaureate-oriented training and education, (2) vocational credit related to the student's curriculum choice will be referred for consideration to the dean of the college in which the student is enrolled, and (3) duplicate credit will be deleted. Applicability of military credit toward a particular degree is determined by the dean of the college. Additional information may be obtained from the Office of Admissions and Records, 177 Administration Building.

GRADE-POINT REQUIREMENTS FOR THE BACHELOR'S DEGREE

All candidates for a degree must have at least a 3.0 (A = 5.0) grade-point average on all University of Illinois at Urbana-Champaign credits counted for graduation requirements and at least a 3.0 grade-point average on the combined transfer and University of Illinois at Urbana-Champaign credits counted for graduation require-

ments. Certain colleges have established higher scholastic graduation requirements for specific curricula. (Grades in courses taken at the other campuses of the University are counted as transferred.)

Where a course has been repeated, both the original and subsequent grades are included in the average if the course is acceptable toward graduation, but the credit is counted only once. An original failing grade is not removed from the student's record for a course subsequently passed by special examination.

A student at the Urbana-Champaign campus who does not meet the requirements stated above may graduate if he or she has the minimum grade-point average calculated by either of the following alternate methods:

- Exclude courses in which grades of D or E have been recorded not to exceed a total of 10 semester hours completed prior to the last 30 hours of work completed at the University of Illinois at Urbana-Champaign and counted for graduation requirements, *or*
- A grade-point average of no less than 3.1 for the last 60 semester hours of work counted for graduation requirements and completed at the University of Illinois at Urbana-Champaign, except in those curricula where a higher scholastic graduation requirement is specified.

Each college office, on request, informs the student regarding the scholarship regulations of that office.

GRADUATION WITH HONORS

Recognition for superior academic achievement at the University of Illinois at Urbana-Champaign is given both by the University and by the colleges and departments. Honors activities are under the general supervision of the Office of University Honors Programs, which is affiliated with the National Collegiate Honors Council and the Honors Council for the Illinois area.

Each college, with the approval of the Urbana-Champaign Faculty Senate and the Board of Trustees, prescribes the conditions under which candidates for its degrees may be recommended for graduation with honors. Detailed information concerning the requirements for graduation with honors is included in the sections of this catalog applying to the individual colleges and departments. These distinctions are noted on the student's baccalaureate diploma, permanent University record, and official transcripts of credits.

THE BRONZE TABLET

Continuous academic achievement is recognized by inscribing the student's name on the Bronze Tablet, which hangs on a wall of the Library. To be eligible, undergraduate students must:

- Have at least a 4.5 (A = 5.0) cumulative grade-point average for all work taken at the University through the semester prior to their graduation, and
- Rank, on the basis of their cumulative average, through the semester prior to their graduation, in the top 3 percent of the students in their college graduating class.

Transfer students, in addition to meeting the general rules for qualification, must satisfy two additional requirements: they must have cumulative University of Illinois at Urbana-Champaign grade-point averages as high as the lowest ones listed for students in their college who qualify on the basis of having completed all of their work at the University of Illinois at Urbana-Champaign; they must earn 40 or more semester hours at the University of Illinois at Urbana-Champaign through the academic term prior to their graduation.

For the purpose of this award, *college graduating class* means all students receiving bachelor's degrees from the same University of Illinois at Urbana-Champaign college between July 1 of each year and June 30 of the next.

For the purpose of this award, *academic term prior to graduation* means: for August graduates, the preceding spring semester; for October graduates, the preceding spring semester; for January graduates, the preceding summer session; for May graduates, the preceding fall semester. The list will be determined each year following the availability of grades for the fall semester.

A review of the criteria for Bronze Tablet recognition is now taking place under the direction of the Campus Honors Council, and some change in requirements may occur prior to the next edition of this publication.

THE DEAN'S LIST

The names of eligible undergraduates who have achieved a grade-point average for a given semester in the top 20 percent of their college class will be included on a list prepared for the dean of the college. (In the College of Fine and Applied Arts, the names of eligible undergraduates who have achieved a grade-point average for a given semester in the top 20 percent of all students in their curriculum will be listed.) This list is publicized within the University and is sent to the Campus Office of Public Affairs for distribution to news agencies throughout the state. Names of James Scholars are preceded by an ampersand (&).

To be eligible for Dean's List recognition, students must complete successfully 14 academic semester hours of which at least 12 must be taken for letter grade (A, B, C, D, E, Ab). Only grades in hand at the time the list is compiled will be considered in determining eligibility unless it can be established the final grade average will be above the minimum required regardless of the grade eventually received; students with Ex, Df, or missing grades will be added as soon as letter grades are received and eligibility can be determined. Credits earned during the semester through proficiency, CLEP, and advanced placement examinations may not be counted toward the 14 semester hour requirement.

Individual colleges may modify the above criteria, and interested students should contact their college offices for further information.

The College of Liberal Arts and Sciences has entirely different eligibility requirements which are given in detail in the *LAS Student Handbook*.

GRADING SYSTEM

Faculty members have the responsibility to provide the University with an individual evaluation of the work of each student in their classes. Final course grades are entered on the student's permanent University record at the close of each semester, term, or session. The University of Illinois at Urbana-Champaign grading system is as follows:

Courses in All Colleges Except the College of Law

A = excellent; B = good; C = fair; D = poor (lowest passing grade); E = failure, including courses dropped for academic irregularities; Ab = absent from the final examination without an acceptable excuse (counts as a failure). If a student is absent from a final examination and it is clear that taking that examination could not have resulted in a passing grade for the course, a grade of E may be given instead of Ab. Plus and minus signs are not authorized with these grades.

Courses in the College of Law

In addition to the above grades, instructors in the College of Law are authorized to assign grades of B+ and C+.

Computation of Scholastic Averages

For numerical computation of scholastic averages, the following values are designated: A = 5.0; B+ = 4.5; B = 4.0; C+ = 3.5; C = 3.0; D = 2.0; E and Ab = 1.0.

UNIFORM METHOD FOR CALCULATION

A uniform method for calculating undergraduate grade-point averages has been established for all undergraduate colleges at the Urbana-Champaign campus. These averages are calculated on the basis of all courses attempted for which grades and credits are assigned and which carry credit in accordance with the *Courses Catalog*. Since courses offered by the religious foundations on or near the Urbana-Champaign campus are not official University courses and are not included in the *Courses Catalog*, the grades earned in such courses will not be included in the calculation of any grade-point averages. Grades of S, U, CR, NC, and Pass are reported on the official University transcript but are not included in the grade-point averages since grade-points are not assigned to these letter grades. This method of calculation is used to determine honors, probation and drop status, financial aid and scholastic awards, and transfer between colleges on this campus.

For the purpose of computing a grade-point average for graduation, only the grades received in those courses counting toward the degree, including grades in repeated courses, are included in the average. (See Grade-Point Requirements for the Bachelor's Degree on page 113.)

For the special method used to determine eligibility for transfer into the University, refer to Transfer Admissions Policy on page 23.

Other Symbols in Use (not included in computation of averages)

W — Approved withdrawal without credit.

Ex — Temporarily excused. Approved extension of time to complete the final examination or other requirements of the course. Applies to *both* undergraduate and graduate students. Entitles the student to an examination later without fee, or additional time to complete other requirements of the course.

Undergraduate students: Only the dean of the student's college may authorize such an extension of time in individual cases. A grade of Ex which is not removed by the end of the first eight weeks of instruction in the semester following the receiving of the excused grade, if the student is enrolled in an undergraduate college at the Urbana-Champaign campus of the University in that semester, automatically becomes a grade of E. If the student receiving an excused grade does not reenroll at the Urbana-Champaign campus the excused grade, if not removed, becomes an E after one calendar year.

Graduate students: Graduate students who are unable to take the final examination at the scheduled time or to complete other requirements of a course must make individual arrangements with their instructors.

An excused grade for graduate students must be replaced by a letter grade no later than the end of the next semester in which the student is registered. If the student does not enroll the following term (semester or summer session) the excused grade becomes an E after one calendar year.

CR — Credit earned. To be used only in courses taken under the credit-no credit grading option. (Instructors report the usual letter grades. Grades of A, B, and C will automatically be converted to CR.)

NC — No credit earned. To be used only in courses taken under the credit-no credit grading option. (Instructors report the usual letter grades. Grades of D, E, or Ab will automatically be converted to NC.)

Df — Grade temporarily deferred. To be used only in those thesis, research, and special problems courses extending over more than one semester which are taken by graduate students as preparation for the thesis and by undergraduate students in satisfaction of the requirements for graduation with honors, and in other *approved courses which extend over more than one semester*.

Requests for use of the Df grade in other courses which extend over more than one semester, and which therefore require postponement of the final grade report, must be submitted in writing by the executive officer of the department offering the course to the director of admissions and records prior to the beginning of the final examination period for which the approval would first apply. A current list of courses which have received such approval is maintained in the Office of Admissions and Records.

Graduate students: The symbol Df in courses other than thesis (499) must be converted to a permanent grade no later than the end of the next semester in which the student is registered. If no grade change is submitted within that period, the Df will be converted to an E. The Df symbol for thesis courses (499) stands indefinitely until a Supplemental Grade Report Form is submitted by the adviser at the completion (successful or unsuccessful) of the thesis.

S — Satisfactory, and

U — Unsatisfactory. To be used only as final grades in graduate thesis research courses, in graduate and undergraduate courses given for zero credit, and in other courses which have been specifically approved by the head or the chairperson of the department concerned, with concurrence of his or her dean. A current list of courses which have received such approval is maintained in the Office of Admissions and Records.

O — Outstanding. To be used only as a final grade in the Med. S. 300 and 301 courses.

Pass — To be used only in courses passed by special or proficiency examinations. A minimum grade of C is required to pass.

Fail — To be used only in courses attempted but not passed by special examinations. Failures in proficiency examinations are not reported.

CREDIT-NO CREDIT GRADING OPTION

This credit-no credit grading option is designed to encourage student exploration into areas of academic interest which they might otherwise avoid for fear of poor grades. All students considering this option are cautioned that many graduate and professional schools consider applicants whose transcripts bear a significant number of nongrade symbols less favorably than those whose transcripts contain none or very few. Likewise, in computing a preadmission grade-point average some of these schools may convert the NC symbol to a failing grade since they do not know whether the actual grade was a D, E, or Ab.

A full-time undergraduate student in good academic standing (not on probation) may, with the approval of his or her adviser, take a maximum of two courses each semester under the credit-no credit grading option. Part-time students may take one course each semester under this option. Summer session students may take one course under the credit-no credit option.

A maximum of 18 semester hours earned under the credit-no credit grading

option may be applied toward a baccalaureate degree at the Urbana-Champaign campus of the University. A correspondence course taken on a credit-no credit basis will be included in the 18 semester hour maximum credit-no credit limit allowed.

Any lower or upper division course may be chosen under the credit-no credit option except courses used to satisfy the University's general education requirements, or in courses designated by name or area by the major department for satisfying the major or field of concentration, or those specifically required by name by the college for graduation. In cases of subsequent change of major or field of concentration, courses previously taken under the credit-no credit option in the new field may qualify for meeting major requirements.

Undergraduate students must exercise the credit-no credit option for a course taken in residence only during on-campus registration, within the first eight weeks of instruction in a semester, during the first four weeks of an eight-week course taught in a fall or spring semester, or during registration or within the first four weeks of instruction during the summer session. Students may elect to return to the regular grade option by filing an amended request within the first eight weeks of instruction in a semester, within the first four weeks of instruction in an eight-week course taught during a semester, or within the first four weeks of instruction during the summer session. The credit-no credit option form must be properly approved and deposited in the college office.

Instructors are not informed of those students in their classes who are taking work under the credit-no credit option, and they report the usual letter grades at the end of the course. These grades are automatically converted to CR or NC. Grades of C or better are required in order to earn credit. Credit-no credit courses are not counted toward the grade-point average but are included as part of the total credit hours. Final grades of CR or NC (for credit or no credit) are recorded on the student's permanent academic record and subsequently will not be changed to letter grades.

TRANSCRIPTS OF ACADEMIC RECORDS

Former and currently enrolled students at the University of Illinois at Urbana-Champaign who have paid all outstanding charges or debts to the University are entitled to receive on written request, without charge, one transcript of their academic record. For each additional transcript, a fee of \$1 is charged. No charge is made for transcripts issued for the purpose of admission to any campus of the University of Illinois or if the request is accompanied by an application for teacher certification.

Students, upon graduation or withdrawal from the University, with outstanding loans will not be issued a transcript until they have completed an exit interview with the Office of Business Affairs. Each transcript includes the student's entire academic record to date and current academic status. Partial transcripts are not issued.

Telephone requests for transcripts cannot be honored. Written requests accompanied by a check or money order made payable to the University of Illinois, if a charge is required, should be sent to the Office of Admissions and Records, University of Illinois at Urbana-Champaign, 10 Administration Building, Urbana, IL 61801.

STUDENT RECORDS POLICY

It is University policy to fully comply with the Family Educational Rights and Privacy Act of 1974 as amended. Guidelines and regulations for discharge of the

University's obligation under this Act are contained in the *Code on Campus Affairs and Regulations Applying to All Students* which is available to students at registration and at 177 Administration Building.

Under these guidelines:

- Students have the right to inspect their education record.
- The University may release without the student's consent information which appears in student directories and publications which are available to the public except when requested by a student to suppress this information. Forms for suppressing this information are available at the Information Desk in the Armory during on-campus registration and at the Postregistration Service Center in the Illini Union. They must be completed within the first five days of classes in a semester.
- Certain student records may be released only with the prior consent of the student.
- Certain student records can be released with or without the student's consent.
- Under certain conditions, parents may be granted access to a student's record with or without the student's consent.
- Procedures exist for students to challenge the contents of their education record.

RELEASE OF STUDENT INFORMATION AND ACADEMIC RECORDS

Except when requested by the student to hold such information confidential until the first day of classes of the following semester, the University may release by telephone or in writing without the student's consent information concerning former or currently enrolled students which appears in student directories and publications which are available to the public.

For currently enrolled students, directory information includes the student's name; addresses; telephone numbers; college, curriculum and major field of study; class level; date of birth; dates of attendance; eligibility for membership in registered University honoraries; degrees; honors; certificates received or anticipated; weight and height if he or she is an athletic team member; participation in officially recognized activities and sports; and institutions previously attended.

For former students, directory information may include the student's name; date of birth; last known addresses and telephone numbers; college, curriculum, and major field of study; dates of attendance; class level; honors; certificates or degrees earned at the University and the date(s) conferred; weight and height if she or he was an athletic team member; participation in officially recognized activities and sports; and institutions previously attended.

During on-campus registration or within five days thereof, students have the right to request that directory information be kept confidential. Each request will be in force until the first day of classes of the second semester. On the fifth day following the end of on-campus registration all directory information that has not been placed in a confidential category by students may be released without the student's consent in each individual instance.

Transcripts are released only by written request to whomever a student or former student designates.

Upon written authorization of the student concerned, representatives of outside agencies, including governmental agencies, may see student records in the Office of Admissions and Records, or such information may be sent to them. The listing on a document bearing the student's signature of the University of Illinois as a reference which may be contacted will be considered as written authorization by the student.

The director of admissions and records may release student academic information to organizations conducting studies for, or on behalf of, educational agencies or institutions for the purpose of developing, validating, or administering predictive

tests, administering student aid programs, and improving instruction, if such studies are conducted in such a manner as will not permit the personal identification of students and their parents by persons other than representatives of such organizations and such information will be destroyed when no longer needed for the purpose for which it is conducted.

The director of admissions and records may release student academic information in the interest of financial assistance without written student consent.

Copies of student records will not be provided to parents without the student's prior written consent; however, parents of a dependent student, as defined in Section 152 of the Internal Revenue Code of 1954, may be granted access to the student's record without such consent under the following procedure:

Any parent who states in writing that he or she is the parent of a student who was claimed as an exemption at the time of the filing of the last federal income tax statement may be sent a copy of that student's transcript on the payment of the regular fee or may be given the same access to other records pertaining to the student as are available to the student.

CLASSIFICATION OF STUDENTS

Classification of undergraduate students is made at the end of each semester and is based on the number of credits earned, including physical education and military. Classification for registration purposes is based on the following scale:

Freshman standing.....	0-29 hours
Sophomore standing.....	30-59 hours
Junior standing.....	60-89 hours
Senior standing.....	90 or more hours

ADMISSION OR READMISSION DENIED BECAUSE OF MISCONDUCT

The University reserves the right to deny admission or readmission to any person because of previous misconduct which may substantially affect the interest of the University, or to admit or readmit such a person on an appropriate disciplinary status. The admission or readmission of such a person will not be approved or denied until his or her case has been heard by the appropriate disciplinary committee. (This applies to a person not now enrolled in the University who might apply for admission or readmission, or to a person who has pre-enrolled whether or not he or she has paid a deposit.) A favorable action of the appropriate disciplinary committee does not abrogate the right of any dean or director to deny admission or readmission on the basis of scholarship.

RESIDENCE CLASSIFICATION FOR ADMISSION AND TUITION ASSESSMENT

The residence classification of an applicant for admission is determined on the basis of the information given on his or her application for admission and other credentials. Eligibility for admission to the University is determined and tuition is assessed in accordance with this decision.

A student who takes exception to the residency status assigned and/or tuition assessed shall pay the tuition assessed but may file a claim in writing to the director of admissions and records for a reconsideration of residency status and/or an adjustment of the tuition assessed. For purposes of admission, the written claim must be filed within twenty calendar days from the date of notification of residency

status. For purposes of assessment of tuition, the written claim must be filed within twenty days of the date of assessment of tuition or the date designated in the official University calendar as that upon which instruction begins for the academic period for which the tuition is payable, whichever is later. Students who file after the twenty-day period lose all rights to a change of status and/or adjustment of the tuition assessed for the term in question. If the student is dissatisfied with the ruling in response to the written claim made within said period, the student may appeal the ruling to the University Counsel by filing with the director of admissions and records within twenty days of the notice of the ruling a written request. If such a written request is filed within said period, the question of residency status under the provisions of these regulations and of applicable laws shall be referred by the director of admissions and records through the Campus Legal Counsel to the University Counsel, whose decision shall be final.

The University of Illinois residency regulations appear in Appendix F.

FALSIFICATION OF UNIVERSITY DOCUMENTS

Any student who, for purposes of fraud or misrepresentation, falsifies, forges, defaces, alters, or mutilates in any manner any official University document or representation thereof may be subject to discipline. Some examples of official documents are identification cards, program cards, change slips, receipts, transcripts of credits, library documents, etc.

Any student who knowingly withholds information or gives false information on an application for admission or readmission may become ineligible for admission to the University or may be subject to discipline.

IDENTIFICATION CARDS

New students are issued a plastic photo identification card which is validated for every subsequent term in which they register. This ID card must be retained by students while they are registered at the University. The ID card is issued by the Office of Admissions and Records and remains the property of the University. Students who alter or intentionally mutilate a University ID card, who use the ID card of another, or who allow their ID card to be used by another may be subject to discipline.

A charge of \$6, payable at the ID Center, Office of Admissions and Records, 100 Administration Building, is made for replacing each lost, mutilated, or stolen photo ID card.

STUDENTS IN DEBT TO THE UNIVERSITY

A monetary penalty of \$5 is assessed the student for each check he or she presents to the University which is returned by the bank to the Office of Business Affairs for insufficient funds or other reasons. Additional penalties, including dismissal from the University, may be imposed on students who permit their University accounts to become delinquent or who issue checks which are returned to the University unpaid.

A student who is in debt to the University at the end of any academic term shall not be permitted to register in the University again and shall not be entitled to receive her or his diploma or an official statement or transcript of credits until the indebtedness has been paid or suitable arrangements for payment have been made.

FINANCIAL AID REVOCATION

Students are advised that federal and state legislation provides for revocation of scholarships and other forms of financial aid of those students who participate in disorderly, disruptive, or unlawful actions. Further information concerning these laws is provided by the Office of Student Financial Aids to recipients of financial awards.

AUTOMOBILES, MOTORCYCLES, MOTOR SCOOTERS, MOTOR-DRIVEN BICYCLES, AND BICYCLES

All students and their spouses and dependent children with valid vehicle operator permits that legally permit them to operate automobiles, motorcycles, motor scooters, and motorbikes in the state of Illinois may operate them on the Urbana-Champaign campus provided they comply with University and state regulations. However, public parking facilities are extremely limited near the campus and unless students register their car with the University there is little opportunity for them to park near the campus when classes are in session or overnight. By registering their motor vehicles with the University, students may park or store their vehicles in University-operated metered parking lots or rental parking/storage lots.

Bicycles provide the most effective means of transportation on campus since bike paths connect the major buildings on campus. All student bicycles must be registered, but without cost to the student.

Complete information about the operation of motor vehicles and bicycles by students is available from the Division of Parking and Transportation, University of Illinois at Urbana-Champaign, 601 East John Street, Champaign, IL 61820, telephone (217)-333-7216.

STUDENT/CONSUMER INFORMATION

The University of Illinois at Urbana-Champaign has student/consumer information available at the following campus locations.

- Admissions — Office of Admissions and Records, Administration Building, 333-0302, or your individual college office
- Financial aid — Office of Student Financial Aids, Room 420 Student Services Building, 333-0100
- Housing — Housing Information Office, 420 Student Services Building, 333-1420
- Other information — the Student Assistance Center, lobby of the Student Services Building, 333-4636

Reserve Officers' Training Corps

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THE FORCES WHICH MAGNIFY THE ACT OF LEARNING ARE THE REAL OBJECT OF UNIVERSITY EDUCATION



ARMY ROTC

Military training has been given at the Urbana-Champaign campus since the University opened in 1868. Originally mandatory for all male undergraduates under the land-grant charter, the program became entirely voluntary in 1964 when Congress passed the ROTC Vitalization Act.

Although military science courses are open to all students of the University of Illinois, those individuals desiring a commission in the Army of the United States must complete the program outlined below. The student's major must be in any field of study recognized by the University and for which a degree is granted.

The Department of Military Science offers undergraduate and graduate students an opportunity to earn a regular or reserve commission as a second lieutenant in the U.S. Army by completing a four- or two-year program of study and training. Financial assistance scholarships are available to qualified students.

Normal Four-Year Program

Students enrolling in the basic course must:

- Be citizens of the United States at least seventeen years of age.
- Be able to complete both the basic and advanced program requirements and receive a baccalaureate degree prior to reaching twenty-eight years of age.
- Be physically fit and of good moral character.

Students enrolling in the advanced course must:

- Have completed the basic course requirements through on-campus instruction. (This requirement can be waived for those presenting evidence of equivalent instruction.)
- Sign a contract to serve for the prescribed period.
- Agree in writing to accept an appointment, if offered, as a commissioned officer.
- Plan on at least two more academic years of study at the University.
- Be selected by the professor of military science and the University.

The basic course fulfills the necessary requirements for admission to the advanced program of study and consists of the following required courses normally taken during the freshman and sophomore years:

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Mil. S. 100 — Leadership Laboratory	.....0		Mil. S. 102 — Map and Aerial	
Mil. S. 101 — Introduction to Military			Photo Analysis	2
Science (U.S. Defense Establishment).....	1		Mil. S. 125 — Leadership Laboratory.....	0
SECOND YEAR				
Mil. S. 103 — Basic Tactics	1		Mil. S. 201 — Fundamentals of Learning	
Mil. S. 150 — Leadership Laboratory	0		and Military Instruction.....	1
			Mil. S. 175 — Leadership Laboratory	0

The advanced course is a two-year course of instruction and includes an advance camp of six weeks' duration. Normally this summer training is taken between the junior and senior year. Successful completion of the advanced course leads to a commission as a second lieutenant in the U.S. Army. It consists of the following required courses normally taken during the junior and senior years:

THIRD YEAR

Mil. S. 200 — Leadership Laboratory	0	Mil. S. 202 — Intraductory Military	
Mil. S. 203 — Principles of Leadership.....	2	Operations (Fundamentals and Dy-	
		namics of the Military Team).....	3
		Mil. S. 225 — Leadership Laboratory	0

FOURTH YEAR

Mil. S. 211 — Proseminar.....	2	Mil. S. 288 — The Military and Society.....	3
Mil. S. 250 — Leadership Laboratory	0	Mil. S. 275 — Leadership Laboratory	0

BENEFITS FOR ADVANCED COURSE CADETS

Advanced course cadets are eligible for the following benefits:

- Commission in either the Regular Army or in the United States Army Reserve.
- Subsistence pay at the rate of \$100 per month during the junior and senior years (10 months out of a year), and pay during summer camp at the same rate as cadets at the United States Military Academy, plus a travel allowance for the summer camp. When the cadet is called to active duty, a uniform allowance of \$300 is authorized.
- Academic credit for military science courses is granted according to the regulations of the individual colleges.
- Opportunity to attend Airborne (parachute), Air Assault, and other military training.

Scholarship Program

FEDERAL GOVERNMENT AWARDS

This program is designed to offer financial assistance to outstanding young students in the Army ROTC program who are interested in the army as a career. The program provides free tuition, books, laboratory fees, and a subsistence allowance of \$100 per month for the period that the scholarship is in effect. Scholarships may be awarded for one, two, three, or four years. Four-year scholarships are open to all students entering Army ROTC as freshmen or during the freshman year for those students enrolled in a five-year University curriculum. Application is normally made for the scholarship during the first semester of the senior year in high school. One-year, two-year, and three-year scholarships are available only to students who have completed prerequisite basic or advanced course study.

ELIGIBILITY

Any citizen of the United States who can meet the following criteria is eligible to compete for an Army ROTC scholarship.

- Be at least seventeen years of age prior to the date on which the scholarship will become effective.
- Be able to complete all requirements for a commission and a college degree and be not more than twenty-eight years of age on June 30 of the year in which he or she becomes eligible for appointment as an officer.
- Enlist in the United States Army Reserve for a period of time necessary to complete the requirements for a commission.
- Agree to complete the requirements for a commission, to accept either a Regular Army or a reserve commission, whichever is offered, and to serve on active duty for a period prescribed at the time of commissioning.
- Be physically qualified in accordance with standards set for scholarship students.
- Be a high school graduate or have received equivalent credit from an acceptable state or national agency.

In addition, applicants for the three-year scholarships must:

- Have completed at least one academic year of college, or, if enrolled in a five-year baccalaureate degree program, have completed not more than two years at the time of enrollment as a scholarship cadet.
- Be able to complete all requirements for a baccalaureate degree in three academic years if enrolled in a four-year degree program or four academic years if enrolled in a five-year degree program.

Applicants for two-year scholarships, in addition to meeting the above eligibility requirements must:

- Be accepted by the professor of military science for enrollment in the advanced course.
- Have at least two years of academic study remaining to qualify for a degree.

Applicants for the one-year scholarships, in addition to meeting the eligibility requirements outlined above, must have completed one year of the advanced program and must be able to complete the requirements for a baccalaureate degree in one year if enrolled in a four-year degree program or in two years if enrolled in a five-year degree program.

CRITERIA FOR SELECTION

Application for the four-year scholarship is made during the fall semester of the senior year in high school and selection is based upon the following:

- Results of the CEEB Scholastic Aptitude Test or the assessment of the American College Testing (ACT) Program.
- High school academic record.
- Participation in extracurricular athletic and nonathletic activities.
- Personal observations.
- Physical examination.
- Interviews.

Selection for the one-, two-, and three-year scholarships will be based upon the applicant's college record, personal observations, and other criteria which the professor of military science may establish.

State Army ROTC Scholarship

For information regarding the state Army ROTC scholarships see page 101.

Two-Year Program

This program is designed specifically to meet the needs of junior college graduates and students of four-year colleges who have not taken Army ROTC during their first two years. Students with a baccalaureate degree who will have two or more years in graduate school are also eligible to apply for the two-year program. A six-week basic summer camp substitutes for the first two years of the four-year program. An early commissioning program for reserve duty is available.

PREREQUISITES FOR ENROLLMENT

In addition to being a graduate of a junior college, or a student in a four-year college who has completed all requirements through the sophomore year, or a graduate student with two or more years remaining in graduate school, the student must meet the following prerequisites:

- Be physically and mentally qualified.
- Be of sound character.
- Be at least seventeen years of age. Student must not be more than twenty-eight years of age when commissioned.
- Be recommended by a board of officers.
- Successfully complete an equivalent training program in lieu of the basic course.

STEPS REQUIRED FOR PARTICIPATION

Each student must:

- Complete the ROTC questionnaire, which is available at junior colleges and from the Office of Military Science, University of Illinois at Urbana-Champaign, 113

Armory, Champaign, IL 61820. (After applying, the student will be notified when and where to complete the remaining steps.)

- Take the ROTC qualifying examination.
- Take the medical examination.
- Attend a personal interview.
- Attend the basic summer camp or equivalent training.

Additional Information

For additional information regarding any of these programs, contact the Professor of Military Science, University of Illinois at Urbana-Champaign, 110 Armory, Champaign, IL 61820.

Prizes and Awards

American Legion Medals. The American Legion annually awards medals for military and scholastic excellence to two advance course cadets.

Reserve Officers' Association Medal. The Department of Illinois annually presents a medal to the outstanding senior cadet based on excellence in scholarship and achievement in leadership.

Superior Cadet Decoration Award. The Department of the Army annually awards a medal and ribbon to the outstanding freshman, sophomore, junior, and senior cadets.

University Gold Medal. The Board of Trustees annually provides a gold medal to be awarded to the retiring battalion commander.

Veterans of Foreign Wars of the United States Auxiliary Award. A medal and a \$25 government bond are awarded to the outstanding army sophomore in Pershing Rifles.

Clair M. Worthy Military Science Award. The Clair M. Worthy award is presented to a senior for outstanding military leadership. The recipient must rank academically in the upper fourth of his military science class.

NAVAL ROTC

The Naval ROTC is a professional education program which gives the student an opportunity to earn a regular or a reserve commission in the United States Navy or Marine Corps while earning a degree. This professional foundation is then developed and broadened during active service as a commissioned officer after graduation and commissioning. Students may be enrolled in either the Navy Scholarship Program or the Navy College Program (nonscholarship). There are four-year programs for the entering freshman and two-year programs for students who have already completed part of their college education. No military obligation is incurred until the beginning of the junior year. Naval science courses are also open to any student who meets the course prerequisites even though not enrolled in either of these programs.

Four-Year Navy-Marine Scholarship Program

The Navy-Marine Scholarship Program provides students with full tuition, fees, books, and a tax-free subsistence pay (currently \$100 per month) for up to four years. Students enrolled in a degree program which requires longer than four years to complete are permitted to take a leave of absence of up to a year to finish their baccalaureate degree. Upon graduating, scholarship students are commissioned in

the Regular U.S. Navy or U.S. Marine Corps and serve four years on active duty. Newly commissioned officers who qualify have the opportunity to continue their education toward an advanced degree.

Scholarship selection is based on the applicant's Scholastic Aptitude Test (SAT) or American College Testing (ACT) Program score, high school and college records, aptitude for the naval service as judged by interviews, and by certain physical qualifications.

Scholarship students have an opportunity during the summer to practice what they have learned in the classroom. Three summer training periods of approximately four weeks each are taken by the students either at sea aboard a U.S. Navy vessel, at a naval air station, squadron, or amphibious base, or on board a nuclear submarine. Students who choose to enter the U.S. Marine Corps spend their last summer training period at the Marine Corps Officer Candidate School.

Four-Year Navy-Marine College Program

Navy-Marine College Program students receive all required uniforms and naval science textbooks, and a retainer pay (currently \$100 per month) during their junior and senior years. If their degree program requires longer than four years to complete, they will be permitted up to a year's leave of absence to finish their baccalaureate degree. Upon graduation, college program students are commissioned in the U.S. Naval or U.S. Marine Corps Reserve and serve three of their six-year reserve obligation on active duty.

A student may apply for admission to the college program through the professor of naval science, who makes the final selection. This selection is based on mental, physical, and aptitude criteria. College program students also attend one summer training session, usually after their junior year.

College program students are eligible to be selected for the scholarship program through recommendation of the professor of naval science and decision by the chief of naval education and training. These students are also eligible to receive an Illinois State ROTC Scholarship (if a resident of this state) after at least one semester in the college program. These scholarships are awarded annually on a competitive basis and cover tuition only.

Two-Year College Program

This program provides a student with all required uniforms, naval science textbooks, and a retainer pay (currently \$100 per month). Applicants should have two remaining years of study at the Urbana-Champaign campus. During the summer prior to their junior year, students attend a six-week Naval Science Institute conducted at Newport, Rhode Island. Transportation costs and a salary are paid to the students. After successful completion, they join their contemporaries in the college program and are also eligible for appointment to scholarship status. They participate in the six-week summer at sea training period between their junior and senior years.

Two-Year Scholarship Program

Acceptance into the NROTC Two-Year Scholarship Program training option guarantees a student a two-year NROTC scholarship. Summer training and other benefits, as well as NROTC training during the junior and senior years, are the same as that for the college and nuclear power two-year programs. Qualifications for this option include at least one year each of calculus and physics, with a C average or better. Overall GPA should be C or better with a preferred major of mathematics, chemistry, physics, or engineering.

State Navy ROTC Scholarship

For information regarding the state Navy ROTC scholarships see page 101.

Requirements

In addition to mental, physical, and aptitude requirements, NROTC students must:

- Be citizens of the United States (women are eligible to apply for NROTC).
- Have attained their seventeenth birthday on or before June 30 of the year of enrollment and not have passed their twenty-first birthday by that date. If under eighteen, they must have the consent of their parents. Students must be less than twenty-five years of age on June 30 of the calendar year in which they are commissioned. The only exception to this age rule is for two-year college program students; they must be less than twenty-seven and one-half years of age on June 30 of the calendar year in which commissioned.
- Have no moral obligations or personal convictions that will prevent them from executing the oath of office.

NROTC students have a two-hour laboratory course, N.S. 100, each week for which there is no credit, and also take the following naval science and University academic courses.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
N.S. 100 — Naval Orientation	2	N.S. 112 — Naval Ship Systems I	.....3
SECOND YEAR				
N.S. 121 — Naval Ship Systems II	3	N.S. 124 — Sea Power and Maritime Affairs	.....1
THIRD YEAR (NAVY)				
N.S. 231 — Naval Operations and Navigation I	3	N.S. 232 — Naval Operations and Navigation II	.....3
THIRD YEAR (MARINE)				
N.S. 291 — Evolution of Warfare	3		
FOURTH YEAR (NAVY)				
N.S. 241 — Naval Leadership and Management I	2	N.S. 242 — Naval Leadership and Management II	.....2
FOURTH YEAR (MARINE)				
N.S. 293 — History of Amphibious Warfare	3		

Each scholarship student's degree program must also include the following University courses depending on the student's major (not required for Marine Corps option students):

	HOURS
Calculus	.....13
Physics	.....12
Two additional science or engineering courses	
Hist. 296 — American Military Affairs	.....3
Pol. S. 295 — National Security Policy	.....3

College program (nonscholarship) students are not required to take the calculus and physics sequences.

Additional Information

Further information regarding Naval ROTC may be obtained in person from or by writing to the Professor of Naval Science, University of Illinois at Urbana-Champaign, 236 Armory, Champaign, IL 61820, telephone (217) 333-1061.

Prizes and Awards

American Legion. The Illinois Department of the American Legion annually awards medals for military and scholastic excellence to two freshmen and two sophomore midshipmen.

American Veterans of World War II. A medal and certificate are presented to the most outstanding junior demonstrating diligence in the discharge of duties and willingness to serve God and country for the mutual benefit of all.

Armed Forces Communications and Electronics Association Awards. A \$500 scholarship awarded annually to selected second-year ROTC students majoring in communications, electronics, and electrical engineering, based on national competition. The association also presents medals and certificates of achievement to outstanding graduating ROTC seniors in these engineering curricula.

Commander Maurice L. Horner, Jr., Memorial Award. A substantial monetary award is presented to the outstanding third-year midshipman, based on aptitude for naval service, naval science grades, other academic grades, and leadership. This award is administered by Illinois Commandery Foundation, Naval Order of the United States.

Navy League of the United States. A sword and scabbard is presented annually to the naval midshipman of the senior class with the highest cumulative naval science grade-point average.

University Gold Medal. The Board of Trustees presents a sword and scabbard to the midshipman battalion commander in recognition of his outstanding leadership and overall contribution to the battalion.

Veterans of Foreign Wars of the United States. The Illinois department of this organization annually presents an engraved wristwatch to the midshipman who was battalion commander the preceding fall semester.

AIR FORCE ROTC

The Air Force ROTC program at the University of Illinois at Urbana-Champaign offers the opportunity of a professional training program for those college men and women who desire to serve in the U.S. Air Force as commissioned officers. The educational experience gained will provide the necessary background to enable the young officers to function effectively in an Air Force career.

General Military Course (GMC)

The first- and second-year educational program in air force aerospace studies includes instruction in A.F.A.S. 111, 112, 121, and 122. These courses are designed to give students basic information on world military systems and the role of the U.S. Air Force in the defense of the free world.

Professional Officer Course (POC)

The third and fourth years of air force aerospace studies instruction, consisting of A.F.A.S. 231, 232, 241, and 242, are designed to develop skills and attitudes vital to the career professional officer. Final selection of students rests with the professor of aerospace studies. Requirements for the Professional Officer Course are as follows:

- Each member of the POC must be a citizen of the United States.
- Members must be enrolled as full-time students in the University.

- Students must have at least two years remaining at the University as an undergraduate and/or graduate student upon entry into the program.
- Students must pass either a flight physical or a general service-type physical examination.
- Students must be able to complete all requirements for appointment as an officer in the United States Air Force prior to reaching twenty-six and a half years of age if flying-qualified or thirty years if nonflying-qualified.
- Successful completion of field training, held at selected Air Force bases, is a prerequisite for entrance into the two-year Professional Officer Course.
- Students must achieve qualifying scores on the Air Force Officer Qualifying Test.
- Students who are qualified and accepted in a category leading to pilot training must agree to participate in, and pursue toward completion, a course of orientation flight training which is provided by the University under contract with and at the expense of the U.S. Air Force.
- Students must execute a written statement with the U.S. government agreeing to complete the Professional Officer Course (contingent upon remaining in school), to attend summer field training at the time specified, to accept a reserve commission in the United States Air Force upon graduation, and to serve four years on active duty after graduation if in a nonflying category, or to serve six years if in a flying category once the flying training (approximate duration of one year) has been completed.
- Students must enlist in the Air Force Reserve before they can become members of the Professional Officer Course. This enlistment is terminated upon acceptance of a commission in the United States Air Force.
- Students must possess and maintain a quality grade-point average which is as high as, but preferably higher than, that required by their college for good standing. The scholastic record must be free from academic deficiency at the time of admission.
- Members must not be conscientious objectors.

BENEFITS AND ALLOWANCES FOR CADETS IN THE PROFESSIONAL OFFICER COURSE (POC) PROGRAM

Cadets in this program are eligible for the following benefits and allowances.

- Commission in the Air Force Reserve upon completion of the program.
- All AFROTC textbooks provided free.
- An officer-type uniform is furnished by the University during training which may be kept by the student for use on active duty.
- A nontaxable subsistence allowance of \$100 a month during the two-semester academic year.
- A salary for attendance at summer training and travel allowance to and from the training.
- A maximum of 3 hours academic credit each semester, according to the regulations of each college.
- Space-available travel on military aircraft within the continental United States.

AFROTC College Scholarship Program

FRESHMEN

This program provides scholarships for a limited number of high school students accepted for admission at the University of Illinois. During their participation in AFROTC they will receive \$100 per month along with paid tuition, fees, and laboratory expenses, and reimbursement for required textbooks.

Eligibility requirements for the scholarship program are:

- Be a citizen of the United States.

- Be at least age seventeen on date of enrollment and under age twenty-five on June 30 of estimated year of commissioning.
- Have completed or will complete high school during the current academic year. High school students who will not be ready to enter college in the fall semester are not eligible and should not apply.
- Have no moral obligations or personal convictions that will prevent bearing arms and supporting and defending the Constitution of the United States against all enemies, foreign and domestic. Applicants must not be conscientious objectors.
- Be accepted for enrollment at the University of Illinois.
- Achieve a qualifying score on the Air Force Officer Qualifying Test.
- Pass a medical examination administered by a physician of the United States Air Force.
- Enlist in the Air Force Reserve for a period of eight years. This commitment is terminated once commissioned as a second lieutenant in the U.S. Air Force.

Those interested should apply directly to Headquarters, AFROTC (SDSF), Maxwell Air Force Base, AL 36112. Applications should be received no later than December 15 of the year preceding enrollment for the fall semester of the following academic year.

SOPHOMORES AND JUNIORS

This program provides scholarships for a selected number of cadets who are enrolled in AFROTC. During their participation in the program they will receive a \$100 tax-free allowance each month, along with paid tuition, fees, and laboratory expenses, and reimbursement for required textbooks.

Eligibility requirements for the scholarship program are:

- Be actually enrolled in the AFROTC four-year program on campus.
- Achieve a qualifying score on the Air Force Officer Qualifying Test.
- Pass a physical examination administered by the Air Force.
- Meet, and be selected by, a board of Air Force officers and University representatives.
- Possess and maintain a quality grade-point average established by the University as meeting the requirement for good standing.

In addition each applicant selected must:

- Execute a written contract with the U.S. government agreeing to complete the Professional Officer Course, to attend summer field training at the specified time, to accept a reserve commission in the Air Force upon graduation, and to serve four years on active duty after graduation if a nonflying category, or six years if in a flying category once the flying training (approximate duration of one year) has been completed.
- Enlist in the Air Force Reserve for the period of eight years. This enlistment is terminated upon completion of the AFROTC program and acceptance of an Air Force commission.
- Students who are qualified and accepted in a category leading to pilot training must also agree to participate in, and pursue, a course of orientation flight training which is provided by the University under contract with and at the expense of the U.S. Air Force.

Staff and Equipment

Air Force personnel are assigned by Headquarters USAF as instructors or administrators in the AFROTC unit after acceptance by the Military Education Council, University of Illinois at Urbana-Champaign. The senior officer is designated as the professor of aerospace studies. All other officers hold appropriate subordinate academic and military positions on the staff. All officers must possess a minimum of a

master's degree and have completed the Air University's academic instructor course.

The Armory at the University of Illinois contains offices, classrooms, and a leadership laboratory. All classes are conducted in the Armory.

Additional Information

Further inquiry concerning the AFROTC program at the University should be directed to the Professor of Aerospace Studies, AFROTC, University of Illinois at Urbana-Champaign, 229 Armory, Champaign, IL 61820.

Prizes and Awards

American Legion Auxiliary Awards. The Illinois Department of the American Legion Auxiliary makes an award of \$50 to the retiring AFROTC cadet commander. Unit Number 24 of Champaign presents a \$25 award to the best-drilled second-year Air Force cadet. Unit Number 71 of Urbana presents a \$25 bond to the most outstanding first sergeant of the AFROTC cadet wing.

Daughters of the American Revolution Award. The Daughters of the American Revolution present a ring to the outstanding senior Air Force ROTC cadet who has demonstrated dependability, good character, military discipline, leadership ability, and patriotism.

University Gold Medal. A class ring is awarded each year to the cadet selected to be the Air Force cadet commander for the coming year.

Veterans of Foreign Wars of the United States Award. The Illinois Department of the Veterans of Foreign Wars of the United States awards a watch, a silver citizenship medal, and a certificate of merit to the outstanding group staff cadet officer.

Veterans of Foreign Wars of the United States Auxiliary Award. A medal and a \$25 bond are awarded to the member of the Arnold Air Society Squadron who has made the most valuable contributions to the successful operation of the organization.

Woman's Relief Corps Award. The Woman's Relief Corps, Department of Illinois, annually presents a camera to the outstanding senior ROTC cadet in any branch of service who has excelled in military scholarship.

Council on Teacher Education

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Five colleges of the University of Illinois at Urbana-Champaign offer bachelor's degree programs in teacher education. These five colleges are the Colleges of Agriculture, Applied Life Studies, Education, Fine and Applied Arts, and Liberal Arts and Sciences. The Council on Teacher Education is responsible for the coordination of teacher education curricula at the Urbana-Champaign campus and for liaison between the campus and state certification authorities. The offices of the council are located in 120 and 140a Education Building.

Students may consult their teacher education adviser or the coordinator of the Council on Teacher Education, 120 Education Building, for additional information concerning academic regulations and other policies affecting teacher education.

ADMISSION REQUIREMENTS

Applicants to teacher education curricula must meet the admission requirements of the colleges and departments offering the chosen curricula. General admission requirements are presented in the Admissions Chart which begins on page 35. Students whose cumulative grade-point average is less than the stated minimum may apply for admission, but will be considered individually on a petition basis if enrollment vacancies exist in the college and curriculum to which admission is being sought. If admitted, such students may be placed on provisional status by the Council on Teacher Education.

REQUIREMENTS FOR CONTINUATION IN TEACHER EDUCATION

The Council on Teacher Education reviews each student's academic progress every semester. At the time of each assessment, students are normally assigned the status of *good standing in teacher education* if their University of Illinois at Urbana-Champaign grade-point average, cumulative grade-point average, and major field grade-point average meet council and curriculum criteria. Students who do not meet those criteria may be placed on *provisional status in teacher education* or *disqualified*. Students placed on disqualified status may transfer to a non-teacher education curriculum within the University if they are academically eligible.

Typically, the grade-point average earned at the University of Illinois at Urbana-Champaign, the semester average, and the cumulative average required for good standing in teacher education is 3.5 (A = 5.0). However, there are variations among curricula in the minimum academic requirements. In certain instances, curriculum descriptions elsewhere in this catalog may indicate special academic requirements for good standing in teacher education.

It is common knowledge that teaching effectiveness is influenced not only by academic proficiency but also by the personal characteristics and health of the teacher. Recognizing the importance of these personal factors, counseling and medical services are available for all students. Students wishing additional information regarding these services may make an appointment by calling the coordinator of the Council on Teacher Education (217) 333-2800, or by visiting 120 Education Building.

Since it is essential that counseling and medical services be offered as soon as the need becomes apparent, teacher education advisers and faculty are asked to participate in this effort. Staff members are invited to recommend for assistance or examination any students about whom concern is felt. Students who are recommended for assistance or examination will receive a written request to make an appointment to discuss matters in which a counselor or physician may be of assistance. Students who receive a letter of this nature must respond to the request as a requirement of the Council on Teacher Education. Failure to respond will jeopardize the continuation of students in teacher education. During the appointment

students will be informed of the services available on this campus. The use of these services will usually be optional. In exceptional cases, however, students may be required to satisfactorily complete a mental health or physical examination with one of the campus services. Such referrals are mandatory for students who wish to continue in teacher education.

STUDENT TEACHING

Students should apply for tentative student teaching assignments on completion of 60 semester hours of credit. Student teaching application forms may be obtained from the appropriate student teaching office. (Referral to the appropriate office may be obtained by contacting the central Office of Student Teaching, 120 Education Building, 333-4898.) Normally, after earning 60 semester hours, eligible students will receive an invitation to apply for student teaching assignment. Students who are eligible to apply for assignment, but who have not received an invitation to do so, should contact the appropriate office of student teaching early in the fall semester. Students who will not be on campus during the fall semester, but who expect to enroll in educational practice (student teaching) during the next school year, should secure application forms from their office of student teaching before they leave campus. On completion of 75 or more semester hours, students who are in good standing in teacher education and who have applied for student teaching assignments will receive notification of their assignments. The latest date for any currently enrolled, eligible student to apply for a student teaching assignment for the next academic year is the end of the second week in December. Students who apply after this date cannot be guaranteed a student teaching assignment during the next academic year.

Students disqualified for teacher education and students not officially registered in teacher education curricula are not eligible for student teaching. Students on academic or disciplinary probation or discontinued or provisional status are not eligible for student teaching during the semester in which the probationary status is in effect and are not permitted to engage in student teaching activities.

Students in teacher education should anticipate and plan for student teaching assignments off campus. For most students, an additional expense will be incurred during the semester in which student teaching is scheduled. Only a very limited number of assignments for student teaching are available in the vicinity of the campus. Students will be assigned to local schools as student teachers only in cases of special need. It is not presently possible to arrange local assignments for all whose need would justify such assignment.

Students who may wish to complete student teaching through another university, yet receive a University of Illinois degree, must have the written consent of their adviser, college, and the Council on Teacher Education.

TEACHER EDUCATION CURRICULA

Students seeking degrees must complete the requirements of their chosen curriculum and the Council on Teacher Education. If the curriculum requires a second teaching field, it must be selected from the list of approved teacher education minors on page 139. In the presence of compelling circumstances, students may consult with appropriate faculty to propose unique minors. Such proposals and their rationale must be submitted by petition for the council's approval. Teacher education curricula and the colleges which offer them are listed on page 139. The state recognizes minor teaching fields which are not listed on page 139. Information about state minimum requirements may be obtained from the Council on Teacher Education, 120 Education Building.

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TEACHER CERTIFICATION

General Requirements

The *School Code of Illinois* specifies that each person who applies for certification must be a citizen of the United States or must have filed a declaration of intent to become a citizen of the United States.

Students who enroll in advanced foreign language, chemistry, or mathematics courses as a result of performance on a placement examination are often eligible to receive prerequisite credit for teacher certification purposes only. Those who are qualified to receive prerequisite credit, and who have declared one of these areas as their major or minor, should report their circumstances to their teacher education adviser during the second semester prior to graduation. Transfer students should go directly to the appropriate department office to initiate the procedure.

Approval Status

All teacher education curricula listed on page 139 have been approved by the National Council for the Accreditation of Teacher Education (NCATE) through 1981 and by the Illinois Office of Education through September 1979. Students are invited to contact the coordinator of the Council on Teacher Education to ascertain the approval status of each program with the Illinois Office of Education after September 1979.

Application Information

Questions concerning teacher certification should be directed to the Council on Teacher Education, University of Illinois at Urbana-Champaign, 140a Education Building, Urbana, IL 61801, telephone (217) 333-2800.

Students who wish to teach in the city of Chicago should write to the Board of Examiners, Board of Education, 228 North LaSalle Street, Chicago, IL 60601.

EDUCATIONAL PLACEMENT

The University's Educational Placement Office serves University students and alumni who are seeking employment in educational institutions. Services offered include: (1) the storage and distribution of professional credentials, (2) the publication of a weekly vacancy bulletin containing current job openings in education, (3) consultants who are available to provide employment assistance and career counseling, and (4) programs designed to cover a variety of topics related to employment in education. Students seeking educational careers and employment should contact the Educational Placement Office, 17 Education Building, for further information and registration materials.

COLLEGES AND OTHER ACADEMIC UNITS

The undergraduate programs offered by the colleges, the Institute of Aviation, and the schools at the Urbana-Champaign campus of the University of Illinois are described in detail on the following pages. Frequent reference is made to course numbers and titles; below are the course abbreviations used in these curricular listings.

Accy.	Accountancy	C. Lit.	Comparative literature
A.H.C.E.	Administration, higher, and continuing education	C.S.	Computer science
Adv.	Advertising	Cop.	Coptic
A.A.E.	Aeronautical and astronautical engineering	Czech	Czech
Afr. St.	African studies	D.S.	Dairy science
Ag. Com.	Agricultural communications	Dance	Dance
Ag. Ec.	Agricultural economics	E.E.E.	Ecology, ethology, and evolution
Ag. E.	Agricultural engineering	Econ.	Economics
Ag. M.	Agricultural mechanization	Educ.	Education
Agr.	Agriculture	Ed. Pr.	Educational practice
Agron.	Agronomy	Ed. Psy.	Educational psychology
A.F.A.S.	Air force aerospace studies	E.E.	Electrical engineering
An. S.	Animal science	El. Ed.	Elementary education
Anth.	Anthropology	Eng.	Engineering
Arab.	Arabic	Eng. H.	Engineering honors
Arch.	Architecture	E.P.S.	Educational policy studies
Art	Art and design	E.S.L.	English as a second language
As. St.	Asian studies	Engl.	English literature and American literature
Astr.	Astronomy	Entom.	Entomology
Atmos.	Atmospheric sciences	Env. St.	Environmental studies
Avi.	Aviation	F.A.C.E.	Family and consumer economics
Bands	Bands	Fin.	Finance
Bioch.	Biochemistry	F.A.A.	Fine and applied arts
Bioen.	Bioengineering	F.N.	Foods and nutrition
Biol.	Biology	F.S.	Food science
Bioph.	Biophysics	For.	Forestry
Bot.	Botany	Fr.	French
Bus.	Business	G.E.	General engineering
B. Adm.	Business administration	Geog.	Geography
B.&T.W.	Business and technical writing	Geol.	Geology
Catal.	Catalan	Ger.	German
Cer. E.	Ceramic engineering	Gmc.	Germanic
Ch. E.	Chemical engineering	Grk.	Greek
Chem.	Chemistry	H. Ed.	Health education
Chin.	Chinese	Hebr.	Hebrew
C.E.	Civil engineering	Hindi	Hindi
Cl. Arc.	Classical archaeology	Hist.	History
Cl. Civ.	Classical civilization	Hort.	Horticulture
Comm.	Communications	H.D.F.E.	Human development and family ecology

Human.	Humanities	Pol. S.	Political science
H.R.F.S.	Human resources and family studies	Port.	Portuguese
I.E.	Industrial engineering	Psych.	Psychology
I.D.	Interior design	R. TV	Radio and television
Ital.	Italian	Relst.	Religious studies
Japan.	Japanese	Rhet.	Rhetoric and composition
Journ.	Journalism	Ruman.	Rumanian
Korea.	Korean	R. Soc.	Rural sociology
L.I.R.	Labor and industrial relations	Russ.	Russian
L.A.	Landscape architecture	S. Ed.	Safety education
Lat.	Latin	Sansk.	Sanskrit
L.A. St.	Latin American studies program	Scan.	Scandinavian
Law	Law	Se. Ed.	Secondary education
Law So.	Law and society	S. Cr.	Serbo-Croatian
Leist.	Leisure studies	Slav.	Slavic
L.A.S.	Liberal arts and sciences	Soc. S.	Social sciences
Lib. S.	Library science	Soc. W.	Social work
Ling.	Linguistics	Soc.	Sociology
Math.	Mathematics	Span.	Spanish
M.E.	Mechanical engineering	Sp. Com.	Speech communication
Med. S.	Medical sciences	Sp. Ed.	Special education
Met. E.	Metallurgical engineering	Sp. H.S.	Speech and hearing science
Mcbio.	Microbiology	Swhli.	Swahili
Mil. S.	Military science	T.C.	Textiles and clothing
Min. E.	Mining engineering	Theat.	Theatre
M. Grk.	Modern Greek	T.A.M.	Theoretical and applied mechanics
M. Hbr.	Modern Hebrew	Ukr.	Ukrainian
Music	Music	U.P.	Urban and regional planning
N.S.	Naval science	V.B.	Veterinary bioscience
Nuc. E.	Nuclear engineering	V.C.M.	Veterinary clinical medicine
Nur.	Nursing	V.M.S.	Veterinary medical science
Nutr. S.	Nutritional sciences	V.M.	Veterinary medicine
O.T.	Occupational therapy	V.P.H.	Veterinary pathology and hygiene
Pers.	Persian	Vo. Tec.	Vocational and technical education
Phil.	Philosophy	Yruba.	Yoruba
P.E.	Physical education	Zool.	Zoology
Physc.	Physics		
Physl.	Physiology		
Pl. Pa.	Plant pathology		
Pol.	Polish		

College of Agriculture

University of Illinois at Urbana-Champaign
104 Mumford Hall
Urbana, IL 61801

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The College of Agriculture is the land-grant agricultural college for the state of Illinois. It provides both undergraduate and graduate instruction in agriculture and in human resources and family studies. It is by law responsible for the Illinois Agricultural Experiment Station and the Cooperative Extension Service in agriculture and human resources and family studies. The college also supports agricultural assistance work in developing countries throughout the world.

Undergraduate students enroll either as new freshmen or as transfer students from other junior or senior institutions. The program for the bachelor's degree usually requires a total of four years of study, although this can be reduced by passing proficiency examinations, receiving advance placement credit, attending summer sessions, and carrying heavier than normal course loads.

Flexibility in course programming is possible for academically talented students through the agricultural science curriculum and through honors programs in all curricula.

Students study in the other colleges of the University and have for their use the resources of the great library of the University. A wealth of cultural and social opportunities present themselves to those students alert to their value.

The college, located in one of the greatest agricultural regions of the world, is in an advantageous position for teaching and research in agriculture and its related occupations. A great diversity of agricultural instruction is available here; instruction in agricultural subjects is organized under nine departments. Students can choose from thirty-three curricula, majors, and options within the college, and select from over 275 courses in agricultural subjects. The College of Agriculture maintains farms and plots, a forest plantation, orchards, greenhouses, herds and flocks of food-producing animals, and laboratories to assist in instruction.

The School of Human Resources and Family Studies offers 75 undergraduate and graduate courses and provides for the baccalaureate degree through either the College of Agriculture or the College of Liberal Arts and Sciences. Excellent facilities for study are provided in Bevier Hall, the large, modern home economics building, and in the fine Child Development Laboratory.

DEPARTMENTS, OFFICES, AND CURRICULA

Agriculture

The Office of Agricultural Communications offers courses in agricultural communications media and methods, information program planning, rural-urban communications, teaching of college-level agriculture, and extension communications

management. Students in the agricultural communications curriculum prepare for careers in agricultural writing and editing, radio and television broadcasting, advertising and marketing communications, public relations, and photography.

The Department of Agricultural Economics offers courses in farm management; farm business accounting and organization; farm appraisals; land economics; agricultural finance; prices and statistics; marketing agricultural commodities; commodity futures markets; agribusiness management; agricultural policies; economic development (international) and agricultural history (American); rural sociology; agricultural law; and farm taxation.

The Department of Agricultural Engineering offers courses in agricultural engineering and agricultural mechanization which cover the principles of engineering as applied to agriculture, including problems in the areas of soil and water control, farm buildings and housing, field machinery, tractors, crop processing, and farmstead mechanization. Instruction in farm shop practices and techniques is offered.

The Department of Agronomy offers courses in both crops and soils. Instruction includes courses in plant breeding and genetics; crop evaluation; crop protection; production and evaluation of cereals, corn, soybeans, and forage crops; crop physiology; design of field experiments; weeds and their control; the origin and development of soils; land appraisals; soil conservation; soil chemistry; soil physics; soil fertility and fertilizer use; soil management; and soil microbiology.

The Department of Animal Science offers courses in the areas of animal evaluation, genetics, nutrition, physiology, meat science, and other courses concerned with the application of scientific principles to the management of beef cattle, horses, poultry, sheep, swine, and companion animals. The major is available with options in general animal science, industrial animal science, or companion animal biology.

The courses offered by the Department of Dairy Science are concerned with the breeding, feeding, and management of dairy cattle, including genetics, nutrition, physiology, and lactation; and the biochemical and microbiological phases of milk production and utilization.

The Department of Food Science offers courses in the application of biology, engineering, chemistry, physics, microbiology, and nutrition to the processing, formulation, packaging, and distribution of food. Two undergraduate curricula, food science and food industry, are offered.

The Department of Forestry curriculum in forest science prepares students for all phases of the management of forest properties (private or public, large or small) for the production of valuable wood products or for watershed protection, wildlife habitat, recreational enjoyment, or other benefits. The curriculum in wood science is concerned with the properties of wood as a raw material and its manufacture into useful products.

Courses in the Department of Horticulture provide instruction in pomology, vegetable crops, floriculture and ornamental horticulture, and in subjects common to all these divisions, such as plant propagation, plant genetics, plant materials, plant anatomy and morphology, and the physiology and ecology of horticultural plants, as well as special problems in experimental horticulture.

The courses offered by the Department of Plant Pathology are designed to prepare students for graduate work in plant pathology and to provide supplementary training for students specializing in related fields such as agronomy, food science, forestry, horticulture, and plant protection. A special option in crop protection is available to students interested in a broad comprehensive approach to controlling diseases, weeds, and insects, plus managing cultural practices to maximize yields.

A program to prepare secondary teachers of agricultural occupations is offered jointly by the College of Agriculture and the College of Education. Students may follow one or more of the five specialty options — agricultural production, agricultural mechanization, agricultural supply and products, ornamental horticulture, and agricultural resources and forestry. Upon successful completion of an option in the

curriculum in agricultural occupations for secondary teachers, students are qualified for an Illinois secondary teaching certificate.

School of Human Resources and Family Studies

The School of Human Resources and Family Studies offers courses concerned with the cognitive, emotional, and creative development of human beings; the relationship of food and nutrition to health; the consumption of human and material resources; the effect of technology on food, clothing, shelter, and interpersonal relationships; and the physical characteristics of man's near environment in terms of his material, behavioral, and aesthetic needs.

ADMISSION REQUIREMENTS

Besides meeting the general admission requirements of the University, students entering the College of Agriculture must have taken prior to entry the subjects prescribed in the Admissions Chart on page 36. It is highly recommended that prospective students take 4 units of English and 1 or more additional units of mathematics beyond algebra and plane geometry. At least 2 and preferably 3 units of science are desirable (biology, chemistry, and physics), and two units of social science are recommended. If available, vocational agriculture can be quite useful, particularly for students planning to enter the core curriculum.

Students entering as freshmen must meet the minimum selection index for the curriculum they wish to enter as determined by high school rank and test scores.

Transfer students entering the agricultural science, agricultural occupations, and home economics education curricula must have a scholastic grade-point average in their collegiate baccalaureate-level work of not less than 3.5 in terms of the grading system of the University of Illinois ($A = 5.0$). The admission of transfer students to curricula in the College of Agriculture other than those listed above will follow the general University requirement of a 3.25 grade-point average.

SPECIAL PROGRAMS

Combined programs may be arranged in agriculture and business administration, and agriculture and agricultural engineering.

Extramural courses for advanced undergraduate or graduate credit are offered each semester at several locations in the state.

Many specialized noncredit short courses, conferences, and special events of interest to rural and urban people, homemakers, and the agricultural industries are available.

The College of Agriculture does not offer instruction by correspondence courses.

HONORS PROGRAMS

Honors at Graduation

Honors awarded to superior students at graduation are designated on the diploma as Honors, High Honors, and Highest Honors. For the degree with Honors, the student must have a minimum cumulative grade-point average of 4.2 ($A = 5.0$); for the degree with High Honors a minimum cumulative grade-point average of 4.5; and for the degree with Highest Honors a minimum cumulative grade-point average of 4.8.

Edmund J. James Scholars

The James Scholar Program in the College of Agriculture is designed for undergraduate agriculture students who have demonstrated exceptional ability through superior academic performance. The program provides opportunities for these students to utilize their time and talents in ways that can further enrich their educational experience.

Freshmen may elect to participate in the program as James Scholar designates.

Resident and transfer students who have not previously participated in the program but who have maintained a high scholastic record are also eligible to become James Scholars. They may obtain information about the program from the honors coordinators and academic advisers in the individual departments and from the director of resident instruction of the College of Agriculture.

Awards

Alpha Zeta Award. Each year the name of the freshman in the College of Agriculture who makes the highest grade average for both semesters is inscribed on the Alpha Zeta plaque in the Agriculture Library.

American Society of Animal Science Scholarship Awards. Each year the society presents an official pin to students in animal science who have exhibited outstanding scholastic achievement. Names of winners are published in the *Journal of Animal Science*.

Wilbur H. Coultas Memorial Award. Income from a fund established in memory of the late Wilbur H. Coultas, a graduate of the College of Agriculture in the class of 1923, is awarded as a prize to an outstanding graduating senior in the College of Agriculture. The name of the winner is inscribed on a memorial plaque in the Agriculture Library.

C. J. Elliott Memorial Award. Income from a fund established in memory of the late C. J. Elliott, a graduate of the College of Agriculture in the class of 1912, is awarded as a prize to an outstanding senior in the College of Agriculture.

Fighting Illini Pork Club Awards. Cash awards are presented annually to freshmen or transfer students majoring in animal science who exhibit talent in the field of meat animal evaluation and selection.

Forest Products Research Society (FPRS) Outstanding Student Award. Each year the Midwest Section of FPRS presents a one-year membership to two seniors, one junior, and one junior or sophomore in the wood technology and utilization curriculum who have excelled in scholarship and have shown superior professional attributes.

Gamma Sigma Delta Award. Each year the senior in the College of Agriculture who ranks highest in scholarship, on the basis of a minimum of four semesters of work in residence at the University, has his or her name inscribed on the Gamma Sigma Delta plaque in Mumford Hall.

Isabel Bevier Home Economics Plaque. The name of the freshman student achieving the highest scholastic average during the first two semesters at the University is inscribed on the Isabel Bevier Home Economics Plaque. It hangs in the Student Records Office, 268 Bevier Hall.

Janice M. Smith Outstanding Senior Award. The Janice M. Smith Outstanding Senior Award is presented in honor of Dr. Janice M. Smith, head of the Department of Home Economics from 1949 to 1971. Criteria for selection are scholarship and contribution to school and University activities. Seniors enrolled in one of the curricula of the school with a cumulative grade-point average of 4.0 or better are considered for nomination by the HRFS Student Council. Five outstanding

seniors are nominated, one of whom is elected by the members of the senior class. The name of the recipient is inscribed on a plaque on display in 268 Bevier Hall.

National Block and Bridle Merit Trophy Award. A plaque is presented annually to the outstanding senior in the animal science major, based on scholarship and student activities.

Omicron Nu Awards. The senior student who has maintained the highest scholastic average during the first seven semesters is recognized by having his or her name inscribed on the Omicron Nu Scholarship Plaque. This plaque is also on display in 268 Bevier Hall.

Harry G. Russell Award. The income from an endowment fund is used to present cash awards to one outstanding sophomore and one outstanding junior who are members of the Hoof and Horn Club and have excelled scholastically and shown leadership potential in meat animal science. Names of winners are inscribed on a plaque included in the Hoof and Horn Club Awards Exhibit.

Sleeter Bull Meats Award. Income from a fund established in the memory of the late Sleeter Bull, a faculty member, is awarded annually as a prize to an outstanding undergraduate or graduate student in animal science who is interested in a career in the meat industry. Names of winners are inscribed on a plaque included in the Hoof and Horn Club Awards Exhibit.

Society of American Foresters (SAF) Outstanding Senior Award. The Central States Section of SAF annually awards a one-year membership and an official society tie pin to the senior in the forest production curriculum who has excelled scholastically and has shown superior promise professionally.

Xi Sigma Pi Outstanding Freshman Award. The forestry student with the highest scholastic record receives a double-bitted cruiser's ax with an engraved brass plate on the helve from Alpha Alpha chapter.

GRADUATION REQUIREMENTS

Students who have satisfied the general University requirements for graduation, have maintained a satisfactory record of scholarship and moral character, and have completed a curriculum in the College of Agriculture, including the prescribed studies and sufficient electives, are graduated with the degree of Bachelor of Science.

The total credit-hour requirements for the various degrees are listed on page 107. (See credit limitations on page 152.)

Physical education is voluntary, except in teacher education curricula. The college will count up to 3 semester hours of credit in physical education basic instruction courses (numbered 100 through 110). There is no limit on the number of hours of *professional* courses. For teacher certification each student must complete a minimum of 3 hours of physical and/or health education. Both the hours and grades earned in these courses will be counted in the semester grade-point average and the cumulative grade-point average.

Students registered in the University prior to June 1, 1972, who have completed one or more semesters of physical education will not be permitted to count these courses toward graduation. Likewise, transfer students entering the University after June 1, 1972, will not be allowed to count any courses in physical education taken prior to June 1, 1972. This does not prohibit continuing or transfer students from taking physical education courses for credit after June 1, 1972, within the rules and regulations stated above.

A candidate for graduation must complete all special examinations to remove failures, all proficiency examinations, all excused grades, and all course substitutions by the beginning of the tenth week of his or her final semester.

Students who have transferred from other educational institutions to the Uni-

versity of Illinois at Urbana-Champaign and who are candidates for the degree of Bachelor of Science in an agriculture curriculum are required to complete in residence at least half of the technical agriculture credit required for the degree. Transfer students must satisfy University residence requirements.

Courses in agriculture include those courses listed in the following departments: Agricultural Communications, Agricultural Economics, Agricultural Engineering, Agricultural Mechanization, Agriculture, Agronomy, Animal Science, Dairy Science, Food Science, Forestry, Horticulture, and Plant Pathology.

Each candidate for graduation must have a grade-point average of not less than 3.0 (A = 5.0) including grades in courses transferred from other institutions, and a grade-point average of not less than 3.0 in all courses taken at the University of Illinois at Urbana-Champaign. For exceptions, see page 105 of this catalog.

CREDIT LIMITATIONS IN CERTAIN COURSES

The following credit limitations apply to all curricula of the College of Agriculture:

- No credit in typing or shorthand may be counted toward graduation.
- Credit for courses in religion, up to 10 hours, may be counted toward graduation.
- Not more than 10 hours of credit in special problems courses may be counted toward graduation in agriculture and human resources and family studies curricula.
- Not more than 4 hours of credit in music ensemble courses, including band, may be counted toward graduation.
- Not more than 15 credit hours in approved Institute of Aviation courses may be counted toward a degree in agriculture.
- Not more than 3 hours of basic activities courses in physical education may be counted (course numbers 100 through 110, including 199).
- The College of Agriculture does not recognize CLEP credit in the Biological or Physical Sciences. However, since many agriculture curricula require Botany 100 — General Botany, or Biology 104 — Animal Biology, or both, students who do well on the biology CLEP test may wish to take proficiency examinations in Botany 100 and Biology 104.

GENERAL EDUCATION REQUIREMENTS

All College of Agriculture students who entered the University after June 1, 1964, are required to satisfy certain minimum hours in the areas of the natural sciences, the humanities, and the social sciences. 199 courses may not ordinarily be used to fulfill the general education requirement. Individual courses may be accepted by petition.

NATURAL SCIENCES

Students in an agriculture curriculum satisfy the natural sciences requirement by completing a curriculum of the college. Students in the School of Human Resources and Family Studies (human resources and family studies, home economics education, interior design, restaurant management) should see requirements for these curricula on pages 185 through 199.

SOCIAL SCIENCES¹

A minimum of 9 hours of approved social sciences is required in all curricula of the college. Some curricula require more than the 9-hour minimum. Courses must be selected from at least two departments. Specific social science courses, prescribed

in certain curricula, may be counted toward the 9-hour requirement. The approved list of social science courses follows. (Completion of any course approved on an earlier social science listing will be counted toward the 9-hour requirement.)

Anth. — Any courses except 143, 200, 210, 300, 307, 315, 316, 317, 337, 343, 344, 345, 346, 347, 356, 372, 396

Econ. — Any courses except 171, 172, 173, 272, 367, 368

Fin. — 150

Geog. — Any courses except 102, 103, 185, 303, 312, 313, 348, 370, 371, 373, 378

Hist. — Any courses

Pol. S. — Any courses

Psych. — Any courses except 135, 143, 211, 217, 235, 306, 307, 311, 347, 390

Relst. — 229, 304, 328, 363

Soc. — Any courses except 185, 264, 385, 386, 387

HUMANITIES²

All students must complete a minimum of 6 hours from the approved courses listed below. Some curricula prescribe certain courses which, if on the list, may be used toward completion of this requirement. (Completion of any course approved on an earlier humanities listing will be counted toward the 6-hour requirement.)

Arch. — 210, 211, 212, 310, 311, 312, 313, 314, 315, 316, 317

Art — 101, 110,² 111,² 112,² 115,² 116,² 210, 211, 212, 213, 217, 218, 219, 220, 221, 222, 223, 224, 249, 250, 301, 303, 304, 305, 307, 308, 309, 310, 311, 312, 313, 314, 316, 317, 318, 321, 322, 323, 324, 325, 326, 327, 328, 330, 331, 332, 334, 335, 336, 340

As. St. — 150

Cl. Arc. and Cl. Civ. — All courses except Cl. Civ. 100, Grk. 101-112, 200, Lat. 101-114. (Also see foreign languages.)

C. Lit. — Any courses

Dance — 340, 341, 346

Engl. — Any courses except English 301, 302, 381; rhetoric; English as a second language; and business and technical writing

Foreign languages — Any language literature and/or culture courses, including language study courses beyond the second semester (intermediate) level. Not elementary or introductory skills courses.

Human. — Any courses with the title "Humanities" except 382

Music — 113, 115, 130, 131, 133, 134, 213, 214, 310, 311, 312, 313, 314, 315, 316, 327, 334, 335, 336

Phil. — Any courses except 353 and 354

Relst. — Any courses except 108, 109, 111, 112, 200, 232, 328, 363

Sp. Com. — 177,² 178,² 207, 210, 213, 243, 252, 254, 307, 308, 315, 317, 319, 322, 350, 352, 361, 362, 366, 387

Theat. — 101,² 102,² 103,² 104,² 105,² 263

¹ Courses which are open to freshmen include Anth. 102, 103; Econ. 101; Geog. 104, 105; Hist. 111, 112, 131, 132, 151, 152, 168, 169, 171, 172, 173, 174; Pol. S. 100, 150, 151; Psych. 101, 103, 105; Soc. 100, 131.

² Courses which are open to freshmen in addition to Art 101, 110, 111, 112, 115, 116; Cl. Civ. 110, 111, 112; Engl. 101, 102, 103, 115, 116; Human. 114; Phil. 101, 102, 103, 104, 105, 110; Relst. 100, 110, 120; Sp. Com. 177, 178; Theat. 101, 102, 103, 104, 105.

Curricula

CORE CURRICULUM IN AGRICULTURE

For the degree of Bachelor of Science in Agriculture

This is a core curriculum in that it provides for a common core program for the first two years. All students in agriculture, except those in agricultural communica-

tions, agricultural industries, agricultural occupations for secondary teachers, agricultural science, food industries, food science, forest science, home economics, home economics education, interior design, ornamental horticulture, restaurant management, and wood science, pursue the same general core program for the first two years. The student who starts in the core curriculum may select one of the approved majors for the junior and senior years, or he or she may continue with a broad general program by selecting the general major.

Freshmen may enter this curriculum without specifying a major but must make their choice of major not later than the beginning of the junior year. Transfer students entering this curriculum with 45 or more semester hours must indicate their proposed major on the application for admission.

The purposes, objectives, and requirements of the various majors and options are outlined on the following pages.

The core program for the first two years includes a foundation in basic sciences essential to a better understanding of agriculture. In addition the student has a choice of introductory courses in agriculture. By the proper choice of basic courses related to the student's ultimate objective and major, the student is ready to proceed with more advanced courses in his or her junior and senior years. Agr. 100, required of all freshmen in agriculture, is designed to assist the student in clarifying his or her objectives.

Upon completion of all requirements of this curriculum, with an approved major and a minimum of 126 hours of credit, the student is awarded the degree of Bachelor of Science in Agriculture.

Prescribed Courses

	HOURS
Rhet. 105 or 108 — Composition ¹.....	.4
Sp. Com. 101 — Principles of Effective Speaking ¹.....	.3
Agr. 100 — Agriculture in Modern Society ².....	.1
Agriculture core courses: Three as listed below and as required for student's major.....	9-10
Biological sciences: Two or more of the following areas as required by the student's major: ³ Bot. 100 — General Botany; or Mcbio. 100 — Introductory Microbiology, and Mcbio. 101 — Introductory Experimental Microbiology; or Biol. 104 — Animal Biology.....	8-9
Chem. 101 — General Chemistry ⁴.....	.4
Chem. 102 — General Chemistry (including organic), or Chem. 103 — General Chemistry: organic chemical studies ⁵.....	.4
Math. 111 — Algebra, or Math. 112 — College Algebra, or exemption by Mathematics Placement Test.....	5-3-0
Math. 114 — Plane Trigonometry, or Math. 124 — Introductory Analysis for Social Scientists; or one course from computer science or statistics; or exemption from Math. 114 by the Mathematics Placement Test ⁶	0-4
Econ. 101 — Introduction to Economics.....	.4
Social science courses (see page 152).....	.6
Humanities courses (see page 153).....	.6

¹ Sp. Com. 111 and 112 — Verbal Communication, 3 hours each, may be substituted for Rhet. 105 or 108, and Sp. Com. 101.

² Agr. 100 — Agriculture in Modern Society, 1 hour, is required for entering freshmen only. Transfer students are exempt.

³ Biological science requirements by major are:

Agricultural economics — two courses from Bot. 100; Mcbio. 100 and 101; Biol. 104; or one course from these three areas plus one of the following: Math. 124 or 120.

Agricultural mechanization — two courses from Bot. 100; Mcbio. 100 and 101; Biol. 104.

Agronomy — Bot. 100; and Mcbio. 100 and 101, or Biol. 104.

Animal science — Bot. 100, Mcbio. 100 and 101, and Biol. 104.

Dairy science — two courses from Bot. 100; Mcbio. 100 and 101; Biol. 104.

General agriculture — two courses from Bot. 100; Mcbio. 100 and 101; Biol. 104.

Horticulture — Bot. 100; and Mcbio. 100 and 101.

⁴To take Chem. 101, a student must have completed Math. 111 or 112 (or equivalent) or have gained exemption by the Mathematics Placement Test. He or she must also have a satisfactory score on the Chemistry Placement Test or take Chem. 100 (2 hours) before enrolling in Chem. 101.

⁵Chem. 102 or Chem. 103 is required except for (a) majors in agricultural economics, general option, marketing option, or rural sociology option, who may substitute Math. 134; or 130 or 131; or 135; and (b) majors in agricultural mechanization who may substitute Phys. 102 for Chem. 102 or 103.

⁶See requirements for the various majors. Some require additional mathematics, computer science, or statistics.

Agriculture Core Courses

In addition to Agr. 100, one course from three of the four areas listed below must be completed by each student in this curriculum.

	HOURS
Agricultural economics	
Ag. Ec. 100 — Introductory Agricultural Economics.....	3
Agricultural mechanization and food science	
Ag. M. 100 — Engineering Applications in Agriculture, or F.S. 101 — Food in Modern Society.....	3
Animal sciences	
An. S. 100 — Introduction to Animal Science, or D.S. 100 — Introduction to Dairy Production.....	4-3
Plant and soil sciences	
Agron. 101 — Introductory Soils, or Agron. 121 — Principles of Field Crop Science, or For. 101 — Introduction to Forestry, or Hort. 100 — Introductory Horticulture.....	3-4

First-Year Program

Courses must be chosen from those listed on page 154 and must include one agriculture core course each semester in addition to Agr. 100.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Agr. 100 — Agriculture in Modern Society.....		1	Agricultural core course.....	3-4
Agricultural core course.....		3-4	Biological science.....	4-5
Biological science.....		4	Chemistry.....	4
Mathematics or chemistry.....		2-5	Sp. Com. 101 — Principles of Effective Speaking, or Sp. Com. 112 — Verbal Communication.....	3
Rhet. 105 or 108 — Composition, or Sp. Com. 111 — Verbal Communication ¹		4-3	Social science.....	0-3
Total.....		14-17	Total.....	15-17

¹All students must take Sp. Com. 111 and 112 — Verbal Communication, or Rhet. 105 or 108 and Sp. Com. 101.

SECOND YEAR

The student will, in consultation with an adviser, select from those courses listed as prescribed and appropriate to his or her intended major in this curriculum.

THIRD AND FOURTH YEARS

For the third and fourth years, see the requirements of the approved major. In addition to the prescribed courses listed on page 154, the requirements include completion of: (1) All prescribed courses listed for the major. (2) Additional courses as required to give 40 hours in agriculture. One-half of the agriculture hours (20 hours) must be taken at the University of Illinois at Urbana-Champaign. (3) Sufficient open electives to bring the total hours to 126.

Major in Agricultural Economics (Including Rural Sociology)

The major and options in agricultural economics are to prepare students for employment in positions requiring economic decision making in agriculture and related occupations, for effective rural group leadership, and for graduate work. The options make it possible for students to specialize within the diverse subject matter, yet each is flexible enough to allow considerable freedom in choosing elective courses. In declaring a major in agricultural economics, each student is required to choose one of the following options: farm management, agricultural marketing, general agricultural economics, or rural sociology. For common core requirements, see Agriculture Core Courses above.

FARM MANAGEMENT OPTION

HOURS

Prescribed courses in agriculture¹

Ag. Ec. 100 — Introductory Agricultural Economics.....	3
Ag. Ec. 220 — Farm Management.....	3-4
Ag. Ec. 324 — Farm Operation.....	3
Ag. Ec. 325 — Advanced Farm Management.....	3
Agron. 101 — Introductory Soils.....	4
Additional agricultural economics courses.....	7-8
Elective courses in agriculture to bring total agriculture to a minimum of.....	40
Accy. 101 — Principles of Accounting, or Accy. 201 — Fundamentals of Accounting, or a course in statistics ²	3-4
Humanities (see page 153).....	6
Social sciences: 9 hours from two departments (see page 152). Must include Econ. 101 — Introduction to Economics, and Econ. 300 — Intermediate Microeconomic Theory.....	9
Open electives to bring total hours to.....	126

¹ Strongly recommended course is An. S. or D.S. 221 — Animal Nutrition.

² To be chosen from Econ. 171 or 172, or Agron. 340, or Ag. Ec. 341, or Math. 161.

AGRICULTURAL MARKETING OPTION

HOURS

Prescribed courses in agriculture

Ag. Ec. 100 — Introductory Agricultural Economics.....	3
Ag. Ec. 230 — Marketing of Agricultural Products.....	3
Six hours from the following:	
Ag. Ec. 331 — Grain Marketing.....	3
Ag. Ec. 332 — Livestock Marketing.....	3
Ag. Ec. 334 — Marketing of Dairy Products.....	3
Ag. Ec. 335 — Economics of Food Distribution.....	3
Ag. Ec. 338 — Agribusiness Management.....	3
Additional agricultural economics courses.....	8
Elective courses in agriculture to bring total agriculture to a minimum of.....	40
Humanities (see page 153).....	6
Social sciences: 9 hours from two departments (see page 152). Must include Econ. 101 — Introduction to Economics, and Econ. 300 — Intermediate Microeconomic Theory.....	9
Prescribed nonagriculture courses	
Accy. 101 — Principles of Accounting I, or Accy. 201 — Fundamentals of Accounting...3	
One course from speech communications, journalism, or business and technical writing.2-3	
A course in statistics to be chosen from Econ. 171 or 172, or Agron. 340, or Ag. Ec. 341, or Math. 161.....	3-4
Open electives to bring total hours to.....	126

GENERAL AGRICULTURAL ECONOMICS OPTION

HOURS

Prescribed courses in agriculture

Ag. Ec. 100 — Introductory Agricultural Economics.....	3
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Nine hours from the following:

Ag. Ec. 220 — Farm Management.....	3-4
Ag. Ec. 230 — Marketing of Agricultural Products.....	3
Ag. Ec. 302 — Financing Agriculture.....	3
Ag. Ec. 303 — Agricultural Law.....	3
Ag. Ec. 305 — Agricultural Policies and Programs.....	3
Ag. Ec. 318 — Land Economics.....	3
Ag. Ec. 341 — Agricultural Economic Statistics.....	3
Additional agricultural economics course.....	8
Elective courses in agriculture to bring total agriculture to a minimum of.....	40
Humanities (see page 153).....	6
Social sciences: 9 hours from two departments (see page 152). Must include Econ. 101 — Introduction to Economics, and Econ. 300 — Intermediate Microeconomic Theory.....	9
Accy. 101 — Principles of Accounting, or Accy. 201 — Fundamentals of Accounting, or a course in statistics ¹	3-4
Open electives to bring total hours to.....	126

¹ To be chosen from Econ. 171 or 172, or Agron. 340, or Ag. Ec. 341, or Math. 161.

RURAL SOCIOLOGY OPTION

HOURS

Prescribed courses in agriculture	
Ag. Ec. 100 — Introductory Agricultural Economics.....	3
R. Soc. 277 — Rural Social Change.....	3
Additional rural sociology or agricultural economics courses.....	14
Elective courses in agriculture to bring total agriculture to a minimum of.....	40
Humanities (see page 153).....	6
Social sciences: 9 hours from two departments (see page 152). Must include Econ. 101 — Introduction to Economics, and 2 approved 200- or 300-level sociology courses.....	9
Open electives to bring total hours to.....	126

Major in Agricultural Mechanization — Industrial Option

For students who are interested in emphasis in the areas of farm structures, conservation, farm power and farm machinery, in preparation for work with service organizations, retail dealers, power suppliers, contractors, or farm management companies.

For common core requirements see Agriculture Core Courses on page 155. Other courses required for this major are:

HOURS

Prescribed courses in agriculture	
Ag. Ec. 220 — Farm Management.....	3-4
Ag. M. 100 — Engineering Applications in Agriculture.....	3
Ag. M. 299 — Agricultural Mechanization Seminar.....	1
Agron. 101 — Introductory Soils.....	4
Agron. 121 — Principles of Field Crop Science.....	4
Fifteen hours from the following:	
Ag. M. 200 — Agricultural Mechanics Shop: Construction Technology.....	3
Ag. M. 201 — Agricultural Mechanics Shop: Electrical and Metal Work.....	3
Ag. M. 221 — Farm Power and Machinery Management.....	4
Ag. M. 241 — Farm Tractor Power.....	3
Ag. M. 252 — Mechanics of Soil and Water Conservation.....	3
Ag. M. 272 — Farm Buildings.....	3
Ag. M. 281 — Farmstead Mechanization.....	3
Ag. M. 300 — Special Problems.....	1-4
Ag. M. 321 — Advanced Farm Machinery Management.....	4
Ag. M. 331 — Farm Machinery Technology.....	4
Ag. M. 361 — Development and Function of Family Housing.....	3
Ag. M. 381 — Electro-Mechanical Agricultural Systems.....	3

Elective courses in agriculture to bring total agriculture to a minimum of.....	40
Humanities (see page 153).....	6
Social sciences: A minimum of 9 hours from two departments (see page 152) including	
Econ. 101 — Introduction to Economics.....	9
Other prescribed courses	
Accy. 101 — Principles of Accounting I.....	3
Math. 114 — Plane Trigonometry.....	2
Phys. 101 — General Physics (Mechanics, Heat, and Sound).....	5
Phys. 102 — General Physics (Light, Electricity, and Magnetism) if Chem. 102 and	
106 are not taken.....	5
Fifteen hours from the following:	
Ag. Ec. 338 — Agribusiness Management.....	3
B. Adm. 202 — Principles of Marketing.....	3
B. Adm. 210 — Management and Organizational Behavior.....	3
B. Adm. 212 — Retail Management.....	3
B. Adm. 247 — Introduction to Management, or Psych. 245 — Industrial Orga-	
nizational Psychology.....	3
B. Adm. 249 — Human Relations, or B. Adm. 321 — Industrial Social Systems.....	3
B. Adm. 261 — Summary of Business Law.....	3
B. Adm. 351 — Personnel Administration.....	3
B.&T.W. 251 — Business and Administrative Communication.....	3
B.&T.W. 271 — Sales Writing.....	3
B.&T.W. 272 — Report Writing.....	3
Sp. Com. 211 — Business and Professional Speaking.....	2
A course in statistics ¹	3
A course in digital computer methods ²	3
Open electives to bring total hours to.....	126

¹ See requirements for the various majors. Some require additional mathematics, computer science, or statistics.

² C.S. 105 is recommended.

Major in Agricultural Mechanization — Equipment Operations Option

This option is for students who desire to specialize in the problems of equipment and plant operations. Graduates would work as contractors, confinement livestock housing operators, processing plant operators, field foremen for corporation farms, or as farm operators.

For common core requirements of this major see page 155. Other courses required for this major are:

	HOURS
Prescribed courses in agriculture	
Ag. M. 100 — Engineering Applications in Agriculture.....	3
Ag. M. 221 — Farm Power and Machinery Management.....	4
Ag. M. 299 — Seminar.....	1
Ag. Ec. 220 — Farm Management.....	3-4
Agron. 101 — Introductory Soils.....	4
Agron. 121 — Principles of Field Crop Science.....	4
Twelve hours from the following agricultural mechanization courses:	
Ag. M. 200 — Agricultural Mechanization Shop: Construction Technology.....	3
Ag. M. 201 — Agricultural Mechanization Shop: Electrical and Metalwork.....	3
Ag. M. 241 — Farm Tractor Power.....	3
Ag. M. 252 — Mechanics of Soil and Water Conservation.....	3
Ag. M. 272 — Farm Buildings.....	3
Ag. M. 281 — Farmstead Mechanization.....	3
Ag. M. 300 — Special Problems.....	1-4
Ag. M. 321 — Advanced Farm Machinery Management.....	3
Ag. M. 331 — Farm Machinery Technology.....	4
Ag. M. 381 — Electro-Mechanical Agricultural Systems.....	3

Twelve hours from the following production and management courses:

Ag. Ec. 203 — Farm Taxation.....	2
Ag. Ec. 230 — Marketing of Agricultural Products.....	3
Ag. Ec. 302 — Financing Agriculture.....	3
Ag. Ec. 303 — Agricultural Law.....	3
Ag. Ec. 324 — Farm Operation.....	3
Ag. Ec. 325 — Advanced Farm Management.....	3
Agron. 303 — Soil Fertility and Fertilizers.....	3
Agron. 322 — Forage Crops and Pastures.....	3
An. S. 201 — Livestock Management.....	5
An. S. 307 — Environmental Aspects of Animal Management.....	3
Hort. 242 — Vegetable Crop Production.....	3
Agriculture hours must total a minimum of.....	40
Humanities: An approved 6 hours in the humanities.....	6
Social sciences: A minimum of 9 hours in the social sciences from two departments, including Econ. 101 (see page 152).....	9
Other prescribed courses:	
Accy. 101 — Principles of Accounting I.....	3
Math. 114 — Plane Trigonometry (unless exempt by Mathematics Placement Test).....	2
Phys. 101 — General Physics (Mechanics, Heat, and Sound).....	5
Phys. 102 — General Physics (Light, Electricity, and Magnetism) if Chem. 102 and 106 or 103 and 106 are not taken.....	5
Open electives to bring total hours to.....	126

For a trial period of four years, up to 8 hours of free elective credit will be allowed for vocational skills courses taken at junior colleges in the subject matter areas of surveying, carpentry, welding, engine analysis and overhaul, power trains, hydraulics, and electro-mechanical systems. Students who lack these skills are advised to complete such courses at another institution, or to gain such skills through practical experience. Concurrent enrollment may be arranged at the discretion of the dean of the college.

Major in Agronomy

This major is designed for students who wish to specialize in crops, soils, agronomy, or crop protection. For those who may later desire to pursue graduate work, adequate training may be obtained by suitable choices of electives within the framework of this major or in the agricultural science curriculum. Numerous employment opportunities exist in various agricultural industries for students who wish to major in the agricultural industries curriculum with emphasis in agronomy and with an adviser in agronomy.

For common core requirements see Agriculture Core Courses on page 155. Other courses required for this major are:

	HOURS
Prescribed courses in agriculture	
Agron. 101 — Introductory Soils.....	4
Agron. 121 — Principles of Field Crop Science.....	4
Agron. 290 — Undergraduate Agronomy Seminar.....	1
Elective courses in agronomy ¹	18
Crops	
Agron. 110 — Plant and Animal Genetics.....	3
Agron. 318 — Crop Growth and Production.....	3
Agron. 319 — Environment and Plant Ecosystems.....	3
Agron. 320 — Crop Physiology.....	3
Agron. 322 — Forage Crops and Pastures.....	3
Agron. 323 — Principles of Plant Breeding.....	4
Agron. 326 — Weeds and Their Control.....	3
Agron. 350 — Crops and Man.....	3

Soils	
Agron. 301 — Soil Survey, with Emphasis on Illinois Soils.....	3
Agron. 303 — Soil Fertility.....	3
Agron. 304 — Soil Management and Conservation.....	3
Agron. 305 — Biochemical Processes in Soil and Water Environment.....	3
Agron. 306 — Dynamics of Soil Development.....	3
Agron. 307 — Soil Chemistry.....	3
Agron. 308 — Physics of the Plant Environment.....	4
Crop protection	
Agron. 110 — Plant and Animal Genetics, or Agron. 320 — Crop Physiology.....	3
Agron. 301 — Soil Survey with Emphasis on Illinois Soils, or Agron. 303 — Soil Fertility and Fertilizers.....	3
Agron. 326 — Weeds and Their Control.....	3
Hort. 100 — Introductory Horticulture.....	3
Hort. 242 — Vegetable Crop Production, or Hort. 262 — Fruit Science II.....	3
Pl. Pa. 204 — Introductory Plant Pathology.....	3
Pl. Pa. 305 — Plant Disease Development and Control, or Pl. Pa. 377 — Diseases of Field Crops.....	3
Elective courses in agriculture to bring total agriculture to a minimum of.....	40
Humanities (see page 153).....	6
Social sciences: A minimum of 9 hours from two departments including Econ. 101 — Introduction to Economics.....	9
Other prescribed courses	
Geol. 101 — An Introduction to the Study of the Earth, or Geol. 107 — General Geology I (all options).....	4
Crop protection only	
Chem. 131 — Elementary Organic Chemistry and Chem. 134 — Elementary Organic Chemistry Laboratory.....	5
Entom. 101 — Agricultural Entomology.....	3
Entom. 319 — Fundamentals of Insect Control.....	4
Speech, journalism, or business and technical writing course.....	2-3
Open electives to bring total hours to.....	126

¹ Crops option requires 12 hours from agronomy-crops and 6 hours from agronomy-soils. Soils option requires 12 hours from agronomy-soils and 6 hours from agronomy-crops. Agronomy option requires 18 hours of agronomy, with a minimum of 6 hours each from crops and soils.

Major in Animal Science

The general animal science option is for students interested in preparing for work in the fields of animal feeding and nutrition, animal breeding and genetics, animal production, or related fields of the livestock and poultry industry. The industrial animal science option is designed to provide students with preparation in biological management, business management, environmental science, finance, and production economics for a career in large-scale, food-animal production. The companion animal biology option is for students who are primarily interested in activities associated with the companion animal industry or in gaining a basic knowledge of biological management and training of animals used in recreational activities. For common core requirements see Agriculture Core Courses on page 155.

GENERAL ANIMAL SCIENCE OPTION

HOURS

Prescribed courses in agriculture

An. S. 100 — Introduction to Animal Science.....	3
An. S. 110 — Plant and Animal Genetics.....	3
An. S. 202 — Domestic Animal Physiology ¹	4
An. S. 209 — Meat Animal and Carcass Evaluation, or An. S. 309 — Meat Science II....	3
An. S. 221 — Animal Nutrition.....	4

Two of the following:

An. S. 301 — Beef Production	3
An. S. 302 — Sheep Science	3-4
An. S. 303 — Pork Production	3
An. S. 304 — Poultry Management	3-4

Two of the following:

Agron. 101 — Introductory Soils	4
An. S. 230 — Comparative Physiology of Reproduction, Lactation, and Growth	3
An. S. 305 — Genetics and Animal Improvement	3
An. S. 307 — Environmental Aspects of Animal Management	3
An. S. 310 — Genetics of Domestic Animals	3
An. S. 320 — Nutrition and Digestive Physiology of Ruminants	3
An. S. 330 — Reproduction and Artificial Insemination of Farm Animals	3
An. S. 332 — Livestock Marketing	3

Elective courses in agriculture to bring total agriculture to a minimum of

Humanities (see page 153)

Social sciences: A minimum of 9 hours from two departments including Econ. 101 — Introduction to Economics (see page 152)

Mcbio. 100 — Introductory Microbiology and Mcbio. 101 — Introductory Experimental Microbiology, or Mcbio. 200 — Microbiology and Mcbio. 201 — Experimental Microbiology

Open electives to bring total hours to

INDUSTRIAL ANIMAL SCIENCE OPTION

HOURS

Prescribed courses in agriculture

An. S. 100 — Introduction to Animal Science	3
An. S. 110 — Plant and Animal Genetics	3
An. S. 202 — Domestic Animal Physiology ¹	4
An. S. 209 — Meat Animal and Carcass Evaluation	3
An. S. 221 — Animal Nutrition	4
An. S. 230 — Comparative Physiology of Reproduction, Lactation and Growth, or 330 — Reproduction and Artificial Insemination of Farm Animals	3
An. S. 301 — Beef Production or An. S. 302 — Sheep Science	3-4
An. S. 303 — Pork Production or An. S. 304 — Poultry Management	3-4
An. S. 307 — Environmental Aspects of Animal Management	3
Ag. M. 272 — Farm Buildings	3
Ag. M. 281 — Farmstead Mechanization	3
Ag. Ec. 220 — Farm Management	3-4
Ag. Ec. 302 — Financing Agriculture ²	3

Elective courses in agriculture to bring total agriculture to a minimum of

Humanities (see page 153)

Social sciences: A minimum of 9 hours from two departments including Econ. 101 — Introduction to Economics (see page 152)

Accy. 101 — Principles of Accounting I, or Accy. 201 — Fundamentals of Accounting

Mcbio. 100 — Introductory Microbiology and Mcbio. 101 — Introductory Experimental Microbiology, or Mcbio. 200 — Microbiology and Mcbio. 201 — Experimental Microbiology

C.S. 105 — Introduction to Computers and Their Application to Business and Commerce

B. Adm. 210 — Management and Organizational Behavior, or B. Adm. 247 — Introduction to Management

Open electives to bring total hours to

COMPANION ANIMAL BIOLOGY OPTION

HOURS

Prescribed courses in agriculture

An. S. 100 — Introduction to Animal Science	4
An. S. 110 — Plant and Animal Genetics	3
An. S. 202 — Domestic Animal Physiology ¹	4
An. S. 206 — Light Horse Management	3
An. S. 207 — Companion Animal Management	3
An. S. 221 — Animal Nutrition	4

An. S. 230 — Comparative Physiology of Reproduction, Lactation, and Growth.....	3
An. S. 299 — Seminar.....	1
An. S. 307 — Environmental Aspects of Animal Management.....	3
An. S. 346 — Animal Behavior, or An. S. 203 — Behavior of Domestic Animals ³	3
Elective courses in agriculture to bring total agriculture to a minimum of.....	40
Humanities: An approved 6 hours in the humanities (see page 153).....	6
Social sciences: A minimum of 9 hours from two departments in the social sciences, including Econ. 101 — Introduction to Economics (see page 152).....	9
Accy. 101 — Principles of Accounting I or Accy. 201 — Fundamentals of Accounting.....	3
Mcbio. 100 — Introductory Microbiology and Mcbio. 101 — Introductory Experimental Microbiology, or Mcbio. 200 — Microbiology and Mcbio. 201 — Experimental Microbiology.....	5-8
Chem. 131 — Elementary Organic Chemistry.....	3
Open electives to bring total hours to.....	126

¹ Students may choose An. S. 202 or Physl. 103. Only An. S. 202 may be counted toward the required 40 hours of agriculture course work.

² Fin. 257 — Corporation Finance, or Fin. 150 — Money, Credit and Banking may be substituted for Ag. Ec. 302 but cannot be counted toward the required 40 hours of agriculture course work.

³ Credit not given for both An. S. 346 and 203.

Major in Dairy Science

The purpose of the major in dairy science is to provide training for students planning careers as dairy farm operators and managers, as field representatives for milk plants, breed associations, feed companies, and governmental agencies, as control technicians or salespersons for feed manufacturers, as laboratory and field technicians in artificial insemination, and as breeding consultants.

In addition, this major provides a foundation for advanced study in preparation for careers as college teachers, research scientists in experiment stations and industry, and as extension specialists.

For common core requirements see Agriculture Core Courses on page 155. Other courses required for this major are:

Prescribed courses in agriculture	HOURS
Twenty hours from the following:	
Ag. Ec. 220 — Farm Management.....	3-4
D.S. 110 — Plant and Animal Genetics.....	3
D.S. 203 — Behavior of Domestic Animals.....	3
D.S. 204 — Dairy Cattle Evaluation.....	3
D.S. 221 — Animal Nutrition.....	4
D.S. 230 — Comparative Physiology of Reproduction, Lactation, and Growth.....	3
D.S. 301 — Dairy Herd Management.....	3
D.S. 305 — Genetics and Animal Improvement.....	3
D.S. 308 — Physiology of Lactation.....	4
D.S. 316 — Population Genetics.....	3-4
D.S. 320 — Nutrition and Digestive Physiology of Ruminants.....	3
D.S. 330 — Reproduction and Artificial Insemination of Farm Animals.....	3
D.S. 334 — Marketing Dairy Products.....	3
Elective courses in agriculture at the 200 and 300 level.....	10
Elective courses in agriculture to bring total agriculture to a minimum of.....	40
Humanities and social sciences: An approved 6 hours in the humanities and a minimum of 9 hours from two departments in the social sciences including Econ. 101 — Introduction to Economics (see pages 152 and 153).....	15
Speech communication, journalism, or business and technical writing elective.....	2-3
Minimum of 9 hours from at least two of the following areas:	
Accy. 101 or 201	
Biochemistry	
Biology ¹	

Botany ¹	
Chemistry	
Ecology, Ethology and Evolution	
Entomology	
Geology	
Mathematics ¹	
Microbiology ¹	
Physics	
Physl. 103 — Introduction to Human Physiology, or any 200- or 300-level physiology course	4
Open electives to bring total hours to	126

¹ Beyond minimum curriculum requirements.

Major in General Agriculture

This major is for students who are interested in a broad basic training in agriculture, rather than in specialization within a departmental field of work. Areas for which such training is suited include farming, agricultural extension, agricultural services, pretheological study, and others.

Students should refer to *A Handbook for Agriculture Students and Advisers* for suggested courses and programs of study for training in these areas within this major.

For common core requirements see Agriculture Core Courses on page 155. Other courses required for this major are:

	HOURS
Prescribed courses in agriculture	
Agron. 101 — Introductory Soils	4
In addition to core courses in agriculture, at least 3 hours of credit in each of the following departments: Agricultural Economics, Agricultural Engineering (Agricultural Mechanization), Agronomy (in addition to Agron. 101), Animal Science, Dairy Science, Horticulture	18
Elective courses in agriculture to bring total agriculture to a minimum of	50
Humanities (see page 153)	6
Social sciences: A minimum of 9 hours from two departments including Econ. 101 — Introduction to Economics (see page 152)	9
Open electives to bring total hours to	126

Major in Horticulture

This major is for students who desire a basic general knowledge of horticulture. Emphasis is placed on the basic plant sciences to give a general background for the specialized phases of horticulture, particularly those concerned with the production of food crops.

Students who are interested in the production and use of flowers and other ornamental crops (including nursery and turf crops) should enroll in the ornamental horticulture curriculum. Students expecting to do graduate study should enroll in the agricultural science curriculum with horticulture as the field of special interest.

For common core requirements, see page 155. Other courses required in this major are:

	HOURS
Prescribed courses in agriculture	
Ag. M. 100 — Engineering Applications in Agriculture	3
Agron. 101 — Introductory Soils	4
Entom. 101 — Agricultural Entomology	3
F.S. 101 — Food in Modern Society	3
Hort. 100 — Introductory Horticulture	3

Hort. 110 — Plant and Animal Genetics.....	3
Hort. 221 — Plant Propagation.....	3
Hort. 242 — Vegetable Crops Production.....	3
Hort. 262 — Fruit Science, I.....	3
Hort. 321 — Floricultural Physiology, or Hort. 345 — Growth and Development of Horticultural Crops, or Agron. 320 — Crop Physiology.....	3-4
Pl. Pa. 204 — Introductory Plant Pathology.....	3
Additional horticulture courses, except Hort. 190 — Organic and Traditional Vegetable Gardening; Hort. 225 — Ornamental Gardening; and Hort. 233 — Floriculture for the Home.....	6
Elective courses in agriculture to bring total agriculture courses to a minimum of.....	40
Humanities and social sciences: An approved 6 hours in the humanities. A minimum of 9 hours from two departments in the social sciences, including Econ. 101 — Introduction to Economics (See pages 152 and 153.).....	15
Other prescribed courses:	
Bot. 234 — Form and Function of Flowering Plants.....	3
Open electives to bring total hours to.....	126

CURRICULUM IN AGRICULTURAL COMMUNICATIONS

For the degree of Bachelor of Science in Agriculture

This curriculum is designed for students who wish to pursue careers in the combined fields of agriculture and communications. It seeks to prepare them for work in such careers as agricultural advertising, public relations, farm radio and television broadcasting, photography, and agricultural publications writing or editing. The College of Agriculture and the College of Communications offer this curriculum as a joint project. It allows the planning of study programs closely suited to the student's interests in one of three communications options: advertising, news-editorial, or radio-television.

Upon completion of the curriculum requirements and a minimum of 126 hours of credit the student is awarded the degree of Bachelor of Science in Agriculture.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Agr. 100 — Agriculture in Modern Society ¹		1	Agriculture core course.....	3-4
Agriculture core course.....		3	Chem. 100 — Introductory Chemistry ⁵	2
Biological science course ²		4-5	Sp. Com. 101 — Principles of Effective Speaking, or Sp. Com. 112 — Verbal Communication.....	3
Math. 111 — Algebra, or Math. 112 — College Algebra ³		3-5	Biological science course.....	4-5
Rhet. 105 or 108 — Composition, or Sp. Com. 111 — Verbal Communication ⁴		3-4	Elective.....	2-3
Total.....		15-17	Total.....	15-17
SECOND YEAR				
Agriculture core course.....		3-4	Agriculture elective.....	3
Agriculture elective ⁶ or Ag. Com. 114 — Agricultural Communications Media and Methods.....		3	Ag. Com. 114 — Agricultural Communications Media and Methods, or agriculture elective.....	3
Econ. 101 — Introduction to Economics.....		4	Humanities course ³	3
Physical science ⁷		3-4	Social science course.....	3
Social science ⁸		3	Open electives.....	4-6
Total.....		16-18	Total.....	16-18
THIRD YEAR				
Agriculture elective.....		3	Agriculture elective.....	3
Communications courses ¹⁰		6	Physical science course.....	3-4
Open elective.....		3	Communications courses.....	6
Humanities course.....		3	Social science course.....	3
Social science course.....		3	Open electives.....	3
Total.....		18	Total.....	18-19

FOURTH YEAR

Agriculture elective	3	Agriculture elective	3
Communications courses	6	Communication course	3
Physical science course	3-4	Open electives	6-8
Open electives	6	Social science course	3
Total	18-19	Total	15-17

- ¹ An orientation course required of all freshmen in agriculture.
- ² Two of the following are required in this curriculum: Bot. 100 — General Botany; or Biol. 104 — Animal Biology; or Mcbio. 100 and 101 — Introductory Microbiology and Introductory Experimental Microbiology.
- ³ A student in this curriculum is required to complete either Math. 111 — Algebra; or Math. 112 — College Algebra; or gain exemption by the Mathematics Placement Test.
- ⁴ Sp. Com. 111 and 112 — Verbal Communication, may be substituted for Rhet. 105 or 108, and Sp. Com. 101.
- ⁵ A student in this curriculum is required to complete Chem. 100 — Introductory Chemistry, or be exempt from Chem. 100 by the Chemistry Placement Test.
- ⁶ A minimum of 35 hours of agriculture courses is required, including at least 15 hours of the 200 and 300 level. At least 9 of the 15 hours must be from agriculture courses other than agricultural communications. The student may use no more than 15 hours of agricultural communications courses toward the 35 hour requirement.
- ⁷ A minimum of 16 hours required from chemistry, computer science, geology, mathematics, physics, or specified statistics courses. Must include Chem. 100 or exemption and Math. 111 or 112 or exemption.
- ⁸ A minimum of 15 hours required, including Econ. 101 — Introduction to Economics, and Psych. 100 — Introduction to Psychology.
- ⁹ A minimum of 6 hours required.
- ¹⁰ A minimum of 20 hours required.

Agriculture Core Courses

In addition to Agr. 100, students in this curriculum must take one prescribed course in each of three of four core areas: agricultural economics, agricultural mechanization and food sciences, animal sciences, and plant and soil sciences. (See page 155.)

Prescribed Courses in Communications

A student will complete one of the following options (minimum of 20 hours).

ADVERTISING OPTION

- Adv. 281 — Introduction to Advertising
- Adv. 381 — Advertising Research Methods
- Adv. 382 — Advertising Creative Strategy and Tactics
- Adv. 383 — Advertising Media Strategy and Tactics
- Adv. 391 — Advertising Management: Planning
- Adv. 392 — Advertising Management: Strategy and Tactics
- Electives in communications to complete the 20-hour requirement.

NEWS-EDITORIAL OPTION

- Journ. 204 — Typography
- Journ. 211 — Newswriting
- Journ. 370 — News Editing
- One course from the following:
 - Journ. 217 — History of Communications
 - Journ. 218 — Communications and Public Opinion
 - Journ. 220 — Processes and Systems of Communications
 - Journ. 231 — Mass Communication in a Democratic Society
 - Journ. 241 — Law and Communications
 - Journ. 251 — Social Aspects of Mass Communications

One course from the following:

Journ. 212 — Reporting

Journ. 326 — Magazine Article Writing

Journ. 330 — Magazine Editing

R. TV 355 — Television News

Electives in communications to complete the 20-hour requirement.

RADIO-TELEVISION OPTION

Journ. 211 — Newswriting

R. TV 252 — Television Laboratory

R. TV 261 — Principles of Radio and Television Broadcasting

Electives in communications to complete the 20-hour requirement, including at least 6 hours of radio-TV courses in addition to R. TV 252 and 261.

CURRICULUM IN AGRICULTURAL ENGINEERING

For the degree of Bachelor of Science in Agricultural Engineering

This curriculum, outlined on page 280, is administered in the College of Engineering. Requirements for the first year are the same as in other engineering curricula. Courses in agriculture and agricultural engineering begin in the second year. In the senior year the student chooses technical electives for specialization in one of the following: processing, structures and environment, power and machinery, or soil and water.

For the degrees of Bachelor of Science in Agricultural Engineering,
and of Bachelor of Science in Agriculture

Students may obtain bachelor's degrees in both agricultural engineering and agriculture in five years by choosing the curriculum in agricultural science, option 3, on page 174. Students following the five-year program should enroll in the College of Agriculture for their first three or four years of work and then transfer to the College of Engineering for the last one or two years.

CURRICULUM IN AGRICULTURAL INDUSTRIES

For the degree of Bachelor of Science in Agriculture

This curriculum provides a broad selection of courses in agricultural sciences, natural sciences, economics and other social sciences, business administration, finance, communications, and the humanities. It is designed to prepare students for careers in those industries and businesses which service or are related to agriculture. A minimum of 27 hours of commerce and business courses is required.

During the first two years, this curriculum closely parallels the requirements of the core curriculum in agriculture. Students desiring to transfer from one to the other during the first two years may do so with little difficulty. Examples of specific opportunities for employment are:

Farm Supplies. Marketing of feed, seed, fertilizer, machinery, equipment, and other supplies to farmers.

Agricultural Commodities. Marketing of agricultural commodities in local, intermediate, and central markets.

Food and Food Products. Distribution of food and food products in wholesale and retail markets, including institutional users.

Agricultural Real Estate and Finance. Services related to the appraisal, financing, ownership, and transfer of agricultural property.

An adviser assists each student in planning a specific program. Upon completion of the curriculum requirements and a minimum of 126 hours of credit, the student is awarded the degree of Bachelor of Science in Agriculture.

FIRST YEAR	FIRST SEMESTER	HOURS
Agr. 100 — Agriculture in Modern Society ¹	1	
Agriculture core course	3-4	
Math. 111 — Algebra, or Math. 112		
— College Algebra ²	5-3	
Natural science course	3-5	
Rhet. 105 or 108 — Composition ³	4	
Total	15-17	

SECOND SEMESTER	HOURS
Agriculture core course	3-4
Chem. 101 — General Chemistry ⁴	4
Math. 114 — Plane Trigonometry, or	
Math. 124 — Introductory Analysis for	
Social Scientists I ²	2-3
Natural science course	3-5
Sp. Com. 101 — Principles of Effective	
Speaking ³	3
Total	15-17

SECOND YEAR

Agriculture core course	3-4
Business course ⁵	3
Humanities course	3
Natural science course	3-5
Social science or humanities course ⁶	3
Total	15-17

Agriculture elective	3
Business courses	6
Journalism, business and technical	
writing, speech communication, or	
elective ⁷	2-3
Social science or humanities courses ⁶	3-6
Total	15-18

THIRD AND FOURTH YEARS

The general requirements, in addition to the courses listed for the first two years, include completion of: (1) A minimum of 27 hours of business courses from those listed. (2) Agriculture electives to bring total agriculture to 35 hours. (3) An approved 6 hours in the humanities. (See page 153.) (4) A minimum of 9 hours of approved social science courses, other than economics and Fin. 150. (See page 152.) (5) Sufficient open electives to bring the total hours to 126.

¹ An orientation course required of all freshmen in agriculture.

² Students without college credit in algebra are required to take the Mathematics Placement Test. Those who, on the basis of this test, qualify for exemption from algebra, need not take Math. 111 or 112. Those who qualify for exemption from trigonometry, or who wish to take Math. 124, need not take Math. 114. The recommended mathematics sequence beyond algebra is Math. 124 and 134. These two courses, or their equivalent, are pre-requisite courses for Econ. 171 and 172, and for B. Adm. 202. The alternate mathematics sequence is Math. 114, or exemption by the placement test, and Math. 120 — Calculus and Analytic Geometry, or a course in analytic geometry.

³ Sp. Com. 111 and 112 — Verbal Communication, 3 hours each, may be substituted for Rhet. 105 or 108, and Sp. Com. 101.

⁴ Students who have not had high school chemistry and those who do not earn a satisfactory score on the Chemistry Placement Test must take Chem. 100 and have Math. 111 or 112 or the equivalent before enrolling in Chem. 101.

⁵ Econ. 101 is recommended from this group for the sophomore year.

⁶ See approved humanities and social science courses on pages 152 and 153.

⁷ One course in business and technical writing, journalism, or speech communication is required in addition to Rhet. 105 or 108, and Sp. Com. 101; or Sp. Com. 111 and 112.

Agriculture Core Courses

In addition to Agr. 100, one course from three of the four areas listed on page 155 must be completed by each student in this curriculum.

Natural Science Courses Group

In addition to the chemistry and mathematics courses listed for the first two years, each student must complete *three courses* from the following:

	HOURS
Bot. 100 — General Botany, or Mcbio. 100 — Introductory Microbiology	4-3
Chem. 102 or Chem. 103 — General Chemistry	4

Geol. 101 — An Introduction to the Study of the Earth, or Geol. 107 — General Geology I.....	4
Math. 120 — Calculus and Analytic Geometry, or Math. 134 — Introductory Analysis for Social Scientists, or analytic geometry.....	4-5
Biol. 104 — Animal Biology, or Physl. 103 — Introduction to Human Physiology.....	4

Business Courses Group

Each student in this curriculum must take a minimum of 27 hours from the following:

	HOURS
Econ. 101 — Introduction to Economics.....	4
Econ. 300 — Intermediate Microeconomic Theory.....	3
One or more courses from each of the following:	
Fin. 150 — Money, Credit, and Banking, or Fin. 254 — An Introduction to Business Financial Management, or Fin. 257 — Corporation Finance, or Ag. Ec. 302 — Financing Agriculture.....	3
B. Adm. 247 — Introduction to Management, or B. Adm. 210 — Production Management and Organization.....	3
B. Adm. 202 — Principles of Marketing, or B. Adm. 272 — Industrial Selling, or Ag. Ec. 230 — Marketing of Agricultural Products, or Ag. Ec. 338 — Agribusiness Management.....	3
Two courses from:	
Accy. 101 — Principles of Accounting I, or Accy. 201 — Fundamentals of Accounting.....	3
Computer science.....	3
Statistics ¹	3-4
Two courses elected from: accountancy, advertising, business administration, economics, or finance.....	6

¹To be chosen from Econ. 171 or 172, or Agron. 340, or Ag. Ec. 341, or Math. 161. If either Agron. 340 or Ag. Ec. 341 is used to satisfy this requirement, credit may not also be counted toward agriculture hours.

Suggested Elective Courses in Agriculture

The following list of agriculture courses is intended as a guide from which electives in the various interest fields may be chosen. Other courses may be selected with approval of the adviser. A minimum of 26 hours is required.

	HOURS
AGRICULTURAL COMMODITIES	
Ag. Ec. 331 — Grain Marketing.....	3
Ag. Ec. 332 — Livestock Marketing.....	3
Ag. Ec. 334 — Marketing of Dairy Products.....	3
Ag. Ec. 335 — Economics of Food Distribution.....	3
Ag. Ec. 340 — Commodity Futures Markets and Trading.....	3
Ag. Ec. 342 — Agricultural Prices.....	3
Agron. 319 — Environment and Plant Ecosystems.....	3
An. S. 109 — Meat Purchasing and Preparation.....	2
An. S. 209 — Meat Animal and Carcass Evaluation.....	3
An. S. 221 — Animal Nutrition.....	4
An. S. 301 — Beef Production.....	3
An. S. 302 — Sheep Science.....	3-4
An. S. 303 — Pork Production.....	3
An. S. 304 — Poultry Management.....	3-4
AGRICULTURAL REAL ESTATE AND FINANCE	
Ag. Ec. 203 — Farm Taxation.....	2
Ag. Ec. 220 — Farm Management.....	3-4

Ag. Ec. 223 — Farm Business Accounting and Organization.....	2
Ag. Ec. 303 — Agricultural Law.....	3
Ag. Ec. 305 — Agricultural Policies and Programs.....	3
Ag. Ec. 312 — Rural Real Estate Appraisal.....	3
Ag. Ec. 324 — Farm Operation.....	3
Ag. Ec. 325 — Advanced Farm Management.....	3
Ag. Ec. 340 — Commodity Futures Markets and Trading.....	3
Ag. Ec. 342 — Agricultural Prices.....	3
Ag. M. 221 — Farm Power and Machinery Management.....	4
Ag. M. 252 — Mechanics of Soil and Water Conservation.....	3
Ag. M. 272 — Farm Buildings.....	3
Agron. 301 — Soil Survey, with Emphasis on Illinois Soils.....	3

FARM SUPPLIES

HOURS

Ag. Ec. 220 — Farm Management.....	3-4
Ag. Ec. 342 — Agricultural Prices.....	3
Ag. M. 221 — Farm Power and Machinery Management.....	4
Ag. M. 272 — Farm Buildings.....	3
Ag. M. 281 — Farmstead Mechanization.....	3
Agron. 301 — Soil Survey, with Emphasis on Illinois Soils.....	3
Agron. 303 — Soil Fertility and Fertilizers.....	3
Agron. 304 — Soil Management and Conservation.....	3
Agron. 319 — Environment and Plant Ecosystems.....	3
Agron. 322 — Forage Crops and Pastures.....	3
Agron. 323 — Principles of Plant Breeding.....	4
Agron. 326 — Weeds and Their Control.....	3
An. S. 221 — Animal Nutrition.....	4
An. S. 301 — Beef Production.....	3
An. S. 302 — Sheep Science.....	3-4
An. S. 303 — Pork Production.....	3
An. S. 304 — Poultry Management.....	3-4
D.S. 320 — Nutrition and Digestive Physiology of Ruminants.....	3
Entom. 101 — Agricultural Entomology.....	3
Entom. 103 — Life of Insects, or 118 — Insects, Man, and Environment.....	3
Entom. 319 — Fundamentals of Insect Control.....	4
Hort. 242 — Vegetable Crops Production.....	3
Hort. 262 — Fruit Science I.....	3
Pl. Po. 204 — Introductory Plant Pathology.....	3
Pl. Po. 377 — Diseases of Field Crops.....	3

FOOD AND FOOD PRODUCTS

HOURS

Ag. Ec. 335 — Economics of Food Distribution.....	3
Ag. Ec. 342 — Agricultural Prices.....	3
An. S. 109 — Meat Purchasing and Preparation.....	2
An. S. 209 — Meat Animal and Carcass Evaluation.....	3
An. S. 210 — Meat Selection and Classification.....	2
F.S. 202 — Sensory Evaluation of Foods.....	3
F.S. 260 — Raw Materials for Processing.....	4
F.S. 301 — Food Processing.....	5
F.S. 310 — Dairy Product Processing.....	5
F.S. 332 — Principles of Sanitation in the Processing and Handling of Foods.....	2
F.N. 120 — Contemporary Nutrition.....	3
Hort. 242 — Vegetable Crops Production.....	3
Hort. 262 — Fruit Science I.....	3
Hort. 307 — International Food Crops.....	3

CURRICULUM IN AGRICULTURAL OCCUPATIONS FOR SECONDARY TEACHERS

For the degree of Bachelor of Science in Agriculture

The purpose of this curriculum is to prepare students to teach agriculture in schools offering agricultural occupations courses. In addition to the training outlined in this curriculum, the Illinois State Plan calls for a minimum of one year or 2,000 hours of employment experience in agriculture. A minimum of 130 hours of credit is required for graduation. For teacher education requirements applicable to all curricula see section on teacher education beginning on page 135.

General Education Requirements

COMMUNICATIONS	HOURS
Sp. Com. 111 and 112, or Rhet. 105 or 108, and Sp. Com. 101.....	6-7
NATURAL SCIENCES	
Animal biology.....	4
College algebra, or exemption by placement test.....	3-5
General botany.....	4
General chemistry including organic.....	8
Total	23-25
HUMANITIES	
Approved courses.....	6
SOCIAL SCIENCES	
Econ. 101 — Introduction to Economics.....	4
General psychology.....	3
Electives	6-8
For students interested in secondary education certification, these electives must be selected to fulfill certification requirements in political science and U.S. history. The course in political science must include instruction on the constitutions of Illinois and the United States.	
Total	12-14
HEALTH AND/OR PHYSICAL EDUCATION.....	3

Professional Education Courses

	HOURS
Ed. Psy. 211 — Educational Psychology.....	3
Ed. Pr. 150 — School and Community Experiences.....	2
E.P.S. 201 — Foundations of American Education ¹	3
Vo. Tec. 101 — Nature of the Teaching Profession.....	2
Vo. Tec. 240 — Principles of Vocational and Technical Education.....	2
Vo. Tec. 275 — Summer Experience in Agricultural Education.....	2
Vo. Tec. 276 — Student Teaching in Vocational Agriculture.....	8
Vo. Tec. 277 — Programs and Procedures in Agricultural Education.....	5
Total	27

¹ E.P.S. 301, 302, or 303 may be substituted for E.P.S. 201.

Prescribed Courses in Agriculture

CORE COURSES	HOURS
Agr. 100 — Agriculture in Modern Society.....	1
Ag. Ec. 100 — Introductory Agricultural Economics.....	3

Ag. M. 100 — Engineering Applications in Agriculture, or	
Ag. M. 200 — Agricultural Mechanics Shop: Construction Technology.....	3
Agron. 101 — Introductory Soils.....	4
Total	11

OTHER COURSES IN AGRICULTURE

Each student must select one of the options. The prescribed agriculture courses and elective agriculture courses must total 40 hours, including the 11 hours listed above, and must include a minimum of 20 hours of 200- and 300-level courses.....29

Approved Options and Suggested Supporting Courses

The following list is intended as a guide for students and advisers as appropriate courses for the various options (areas of concentration).

AGRICULTURAL PRODUCTION OPTION

HOURS

Agriculture courses:	
Ag. Ec. 220 — Farm Management.....	3-4
Ag. Ec. 230 — Marketing of Agricultural Products, or Ag. Ec. elective 300-level courses.....	3
Ag. M. 201 — Agricultural Mechanics Shop: Electrical and Metalwork.....	3
Agricultural mechanization elective 200-level course.....	3-4
Agron. 121 — Principles of Field Crop Science.....	4
An. S. or D.S. 221 — Animal Nutrition.....	4
Animal science or dairy science elective.....	3
Hort. 100 — Introductory Horticulture.....	3

AGRICULTURAL SUPPLY AND PRODUCTS OPTION

HOURS

Agriculture courses:	
Ag. Ec. 220 — Farm Management.....	3-4
Ag. Ec. 230 — Marketing of Agricultural Products.....	3
Ag. Ec. 338 — Agribusiness Management.....	3
Ag. M. 201 — Agricultural Mechanics Shop: Electrical and Metalwork.....	3
Agron. 121 — Principles of Field Crop Science.....	4
Agron. 303 — Soil Fertility and Fertilizers, or Agron. 326 — Weeds and Their Control.....	3
An. S. or D.S. 221 — Animal Nutrition.....	4
Hort. 225 — Ornamental Gardening, or Hort. 233 — Floriculture for the Home.....	3
Nonagriculture courses:	
Accy. 101 — Principles of Accounting I, or Accy. 201 — Fundamentals of Accounting.....	3

AGRICULTURAL MECHANIZATION OPTION

HOURS

Agriculture courses:	
Ag. M. 200 — Agricultural Mechanics Shop: Construction Technology.....	3
Ag. M. 201 — Agricultural Mechanics Shop: Electrical and Metalwork.....	3
Agricultural mechanization electives — 200- and 300-level courses excluding Ag. M. 361.....	10
Hort. 100 — Introductory Horticulture.....	3
An. Sci. 100 — Introduction to Animal Science or An. Sci. 207 — Companion Animal Management.....	3-4

HORTICULTURE OPTION

HOURS

Agriculture courses:	
An. Sci. 100 — Introduction to Animal Science or An. Sci. 207 — Companion Animal Management	3-4
Entom. 101 — Agricultural Entomology.....	3
Hort. 100 — Introductory Horticulture, or Hort. 122 — Greenhouse Management.....	3
Pl. Pa. 204 — Introductory Plant Pathology.....	3
Nine hours from: Hort. 201, 202, 221, 225, 226, 233, 236, 242, 251, 262.....	9

AGRICULTURAL RESOURCES AND FORESTRY OPTION**HOURS**

Agriculture courses:

Agron. 304 — Soil Management and Conservation.....	3
An. Sci. 100 — Introduction to Animal Science or An. Sci. 207 — Companion Animal Management	3-4
Entom. 101 — Agricultural Entomology.....	3
For. 101 — General Forestry.....	3
For. 220 — Dendrology.....	4
For. 253 — Forest Economics or For. 260 — Forest Land Policy and Administration or For. 319 — Environment and Plant Ecosystems.....	3
Hort. 100 — Introductory Horticulture.....	3
R. Soc. 270 — Population and Human Ecology or R. Soc. 277 — Rural Social Change.....	3

CURRICULUM IN AGRICULTURAL SCIENCE

For the degree of Bachelor of Science in Agriculture

This curriculum is especially designed for students who plan to do graduate study in agricultural fields or for those who wish to engage in professional work requiring more science, mathematics, or engineering than is included in the core curriculum in agriculture. To be eligible for admission to the curriculum, students entering as freshmen must meet the minimum selection index as determined by high school rank and test scores. Students entering as transfers must have a scholastic grade-point average in their collegiate work of not less than 3.75 for options 1 and 2 and 3.5 for option 3 in terms of the grading system of the University of Illinois (A = 5.0). Once enrolled, all students in options 1 and 2 must maintain an average of at least 3.75, and those in option 3 must maintain at least 3.5, for both their University of Illinois and cumulative average to remain in and graduate from the curriculum.

Options 1 and 2 provide an opportunity for planning individual programs of study under the supervision of a faculty adviser qualified in the student's special field of interest. Option 3 includes many prescribed courses both in agriculture and in engineering. Careful scheduling of courses is necessary.

Option 1. For students desiring preparation for graduate study or professional work in animal, plant, or soil science.

Option 2. For students desiring preparation for graduate study or professional work in the fields included in agricultural economics, agricultural law, and rural sociology.

Option 3. For students enrolled in the five-year combined agricultural science and agricultural engineering program. All requirements of the combined curriculum as outlined on the following pages must be completed to satisfy requirements for a degree in agriculture.

Summary	OPTIONS	
	1 AND 3	OPTION 2
	MINIMUM HOURS	MINIMUM HOURS
General University requirements (rhetoric).....	4	4
Group I: College of Agriculture courses (15 of the 30 hours must be at the 200 and 300 level).....	30	30
In option 3, a maximum of 15 hours of agricultural engineering and agricultural mechanization courses may be credited toward the degree in agriculture.		
Group II: Humanities (for approved sequences, see page 153).....	6	6
Group III: Social sciences (for approved sequences and electives, see page 152).....	9	16
In option 2, at least 8 hours in economics must be included.		
In option 2, a minimum of 54 hours must be completed in groups III, IV, and V, combined, including the minimum hours indicated for each group.		

Group IV: Biological science (biology; botany; ecology, ethology, and evolution; entomology; microbiology; physiology; zoology).....	10	6
In options 1 and 3, a total of 45 hours in groups IV and V, with a minimum of 10 hours in each must be completed.		
In option 2, a minimum of 54 hours must be completed in groups III, IV, and V, combined, including the minimum hours indicated for each group.		
Group V: Physical science (biochemistry, chemistry, computer science, geology, mathematics, physics) and approved courses in statistics...	10	16
In options 1 and 3, a total of 45 hours in groups IV and V, with a minimum of 10 hours in each, must be completed.		
In option 3, T.A.M. 145 and 212 may be counted toward group V.		
In option 2, a minimum of 54 hours must be completed in groups III, IV, and V, combined, including the minimum hours indicated for each group.		
Electives (unrestricted).....	32	32
Total required for graduation.....	126	126

Option 1. Sample Program

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Agr. 100 — Agriculture in Modern Society		1	Agriculture elective	3-4
Agriculture elective		3	Bat. 100 — General Botany, or Biol. 104 — Animal Biology	4
Chem. 101 — General Chemistry ¹		4	Chem. 102 — General Chemistry	4
Math. 111 — Algebra, or Math. 112 — College Algebra ²		3-5	Sp. Com. 101 — Principles of Effective Speaking ³	3
Math. 114 — Plane Trigonometry ²		2	Elective	2-3
Rhet. 105 or 108 — Composition ³		4	Total	16-17
Total		15-17		

SECOND, THIRD, AND FOURTH YEARS

The programs for the second, third, and fourth years of option 1 must be planned in consultation with the student's faculty adviser. No student may enter the agricultural science curriculum for the first time after the beginning of his senior year in college except by petition approved by the associate dean of the college.

Total required for graduation.....	126
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¹ Chem. 101 has the prerequisite of a satisfactory score on the Chemistry Placement Test and Math. 111 or 112, or exemption therefrom. Students not exempt from Math. 111 or 112 should delay Chem. 101 until the second semester.

² Students who gain exemption from algebra and trigonometry may omit beginning courses in mathematics and enroll in more advanced courses.

³ Sp. Com. 111 and 112 may be substituted for Rhet. 105 or 108 and Sp. Com. 101.

Option 2. Sample Program

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Agr. 100 — Agriculture in Modern Society		1	Agriculture electives	3-6
Ag. Ec. 100 — Introductory Agricultural Economics		3	Bat. 100 — General Botany, or Biol. 104 — Animal Biology	4
Math. 111 — Algebra, or Math. 112 — College Algebra, or advanced mathematics ¹		5-3-2	Math. 114 — Plane Trigonometry, ¹ or Math. 124 — Introductory Analysis for Social Scientists, or Chem. 101 — General Chemistry	2-4
Rhet. 105 or 108 — Composition ²		4	Sp. Com. 101 — Principles of Effective Speaking ²	3
Electives		3-6	Total	16-17
Total		15-17		

SECOND, THIRD, AND FOURTH YEARS

The programs for the second, third, and fourth years of option 2 must be planned in consultation with the student's faculty adviser. No student may enter the agricultural science curriculum for the first time after the beginning of his or her senior year in college except by petition approved by the associate dean of the college.

¹ Students who gain exemption from algebra and trigonometry may omit beginning courses in mathematics and enroll in more advanced courses.

² Sp. Com. 111 and 112 may be substituted for Rhet. 105 or 108 and Sp. Com. 101.

Program in Agriculture and Law

The University of Illinois College of Law requires a bachelor's degree as a prerequisite for admission. The agriculture and law program, therefore, will normally require seven years—four years leading to the B.S. degree in agriculture plus three years in the College of Law leading to the J.D. degree.

The student who is interested in this program may complete the requirements for a degree in any of the approved curricula of the college, but it is advisable that the student follow option 2 of the agricultural science curriculum. Students interested in this program should ask to be assigned to an agriculture prelaw adviser.

Requirements for admission to the College of Law are as follows: (1) A degree from an accredited university or college, (2) A minimum 3.5 (A = 5.0) all-University grade-point average, (3) A satisfactory score on the Law School Admission Test, and (4) Other pertinent factors.

Option 3. Sample Program. Five-Year Combined Program in Agricultural Science and Agricultural Engineering for the Degrees of Bachelor of Science in Agriculture and Bachelor of Science in Engineering

Students enroll in the College of Agriculture for the first three years and may transfer to the College of Engineering in the fourth year but must be enrolled in the College of Engineering for the fifth year.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Agr. 100 — Agriculture in Modern Society, or Eng. 100 — Engineering Lecture		1-0	Bot. 100 — General Botany	4
Chem. 101 ¹ — General Chemistry		4	Chem. 102 — General Chemistry	4
Math. 111 — Algebra, or Math. 112 — College Algebra ²		5-3	Math. 120 — Calculus and Analytical Geometry, I	5
Math. 114 — Plane Trigonometry ²		2	G.E. 103 — Engineering Graphics, I	3
Rhet. 105 or 108 — Composition		4	Total	16
Elective ³		0-3		
Total		16-17		

SECOND YEAR

T.A.M. — Analytical Mechanics — Statics, or T.A.M. 152 — Engineering Mechanics I — Statics	2-3	Ag. E. 126 — Engineering in Agriculture	4
Math. 130 — Calculus and Analytic Geometry, II	5	Math. 240 — Calculus of Several Variables	3
Agron. 121 — Principles of Field Crop Science	4	C.S. 101 — Introduction to Automatic Digital Computing	3
Physcs. 106 — General Physics (Mechanics)	4	Physcs. 107 — General Physics (Heat, Electricity, and Magnetism)	4
Total	15-16	Elective ³	3
		Total	17

THIRD YEAR

Agron. 101 — Introductory Soils 4
 Math. 345 — Differential Equations
 and Orthogonal Functions 3
 Physcs. 108 — General Physics (Wave
 Motion, Sound, Light, and
 Modern Physics) 4
 T.A.M. 212 — Engineering Mechanics
 II (Dynamics) 3
 Geol. 101 — Introductory Geology,
 or Geol. 250 — Geology
 for Engineers 4-3
 Total 18-17

Ag. E. 127 — Agricultural Production
 Systems Engineering 3
 Econ. 101 — Introduction to Economics ... 4
 T.A.M. 221 — Elementary Mechanics
 of Deformable Bodies 3
 C.E. 261 — Structural Theory I, or
 M.E. 220 — Mechanics of Machinery .. 3-4
 Elective³ 3
 Total 16-17

FOURTH YEAR

Agricultural engineering technical
 elective from Group I 3
 T.A.M. 235 — Fluid Mechanics 4
 E.E. 220 — Basic Electric Engineering ... 3
 Technical elective 3
 Elective³ 3
 Total 16

Agricultural engineering technical
 elective from Group I 3
 Ag. E. 298 — Seminar 1
 Ag. Ec. 220 — Farm Management 3-4
 M.E. 209 — Thermodynamics 3
 Electives³ 6
 Total 16

FIFTH YEAR

Agricultural engineering technical
 elective from Group II 3
 Technical elective 6
 Electives³ 6
 Total 15

Agricultural engineering technical
 elective from Group II 3
 Ag. E. 299 — Undergraduate Thesis ... 2
 Technical elective 3
 Electives³ 6
 Total 14

¹ Chem. 101 has the prerequisite of a satisfactory score on the Chemistry Placement Test and Math. 111 or 112, or exemption therefrom. Students not exempt from Math. 111 or 112 should delay Chem. 101 until the second semester.

² Students with three to four years of high school mathematics, including trigonometry, and a satisfactory grade on the Mathematics Placement Test may take Math. 120 in the first semester and follow the common program for freshmen in the College of Engineering.

³ Electives must include the following:
 — Four hours of agriculture, other than agricultural engineering and agricultural mechanization, Agron. 101 and 121, and Ag. Ec. 220.
 — Six hours of biological science in addition to Bot. 100 (botany, entomology, microbiology, physiology, and zoology).
 — A 6-hour sequence in humanities courses. (See page 153.) Since the list of courses which the College of Engineering and College of Agriculture accept for humanities varies, students should be careful to select those which are acceptable to both colleges.
 — A minimum of 9 hours of approved social sciences, including Econ. 101, and an approved 6-hour sequence in social science. Since the list of courses which the College of Engineering and College of Agriculture accept for social science varies, students should be careful to select those which are acceptable to both colleges.
 — Sufficient approved electives (normally 3 hours) in the humanities in addition to the third item above to satisfy the College of Engineering requirements. (See page 275.)
 — Sufficient open electives to total the minimum curriculum requirements of 160 hours. All requirements of the combined curriculum as outlined must be completed to satisfy the requirements for a degree in agriculture.

Agricultural Engineering Technical Electives

Each student must have a minimum of 12 hours of agricultural engineering technical electives. These hours must include at least two courses from group I and two courses from group II listed below.

GROUP I	HOURS
Ag. E. 236 — Machine Characteristics and Mechanisms.....	3
Ag. E. 256 — Surveying Agricultural and Forest Lands.....	2
Ag. E. 287 — Environmental Control of Plants and Animals.....	3
Ag. E. 311 — Instrumentation and Measurements.....	3-4
Ag. E. 340 — Introduction to Applied Statistics.....	3

GROUP II	HOURS
Ag. E. 277 — Design of Concrete and Steel Structures for Agriculture.....	3
Ag. E. 336 — Design of Agricultural Machinery.....	3
Ag. E. 346 — Tractors and Prime Movers.....	3
Ag. E. 356 — Soil Conservation Structures.....	3
Ag. E. 357 — Land Drainage.....	3
Ag. E. 387 — Agricultural Process Engineering.....	3

Technical Electives

A minimum of 6 hours is required. All courses must satisfy the College of Engineering requirements as given on page 277 of this catalog. Students desiring to specialize in a specific area of agricultural engineering may use the following lists as guides in choosing their technical electives:

POWER AND MACHINERY	HOURS
Ag. E. 236 — Machine Characteristics and Mechanisms.....	3
Ag. E. 311 — Instrumentation and Measurements.....	3-4
Ag. E. 336 — Design of Agricultural Machinery.....	3
Ag. E. 340 — Introduction to Applied Statistics.....	4
Ag. E. 346 — Tractors and Prime Movers.....	3
M.E. 224 — Machine Analysis and Design.....	3
M.E. 234 — Heat Treatment of Metals.....	3

ELECTRIC POWER AND PROCESSING	HOURS
Ag. E. 236 — Machine Characteristics and Mechanisms.....	3
Ag. E. 287 — Environmental Control for Plants and Animals.....	3
Ag. E. 311 — Instrumentation and Measurements.....	3-4
Ag. E. 336 — Design of Agricultural Machinery.....	3
Ag. E. 340 — Introduction to Applied Statistics.....	4
Ag. E. 387 — Agricultural Process Engineering.....	3
Chem. 323 — Applied Electronics for Scientists.....	4

SOIL AND WATER	HOURS
Ag. E. 277 — Design of Concrete and Steel Structures for Agriculture.....	3
Ag. E. 287 — Environmental Control for Plants and Animals.....	3
Ag. E. 311 — Instrumentation and Measurements.....	3-4
Ag. E. 340 — Introduction to Applied Statistics.....	4
Ag. E. 356 — Soil Conservation Structures.....	3
Ag. E. 357 — Land Drainage.....	3

STRUCTURES AND ENVIRONMENT	HOURS
Ag. E. 277 — Design of Concrete and Steel Structures for Agriculture.....	3
Ag. E. 287 — Environmental Control for Plants and Animals.....	3
Ag. E. 311 — Instrumentation and Measurements.....	3-4
Ag. E. 340 — Introduction to Applied Statistics.....	4
C.E. 214 — Properties and Behavior of Concrete.....	2
C.E. 262 — Analysis of Framed Structures.....	3

CURRICULUM IN FOOD INDUSTRY

For the degree of Bachelor of Science in Food Industry

The food industry curriculum is designed to provide the student with training in preparation for a career in the food industry in such areas as business administration, food engineering, food production, food processing, quality control, and public health. A minimum of 130 hours of credit is required for graduation.

Students are urged to engage in at least one summer of employment in the food industry and are required to go on an inspection trip in the senior year. The trip will cost approximately \$35.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Agr. 100 — Agriculture in Modern Society.1			Biological science ²	4
F.S. 101 — Food in Modern Society		3	Chem. 101 — General Chemistry	4
Math. 111 — Algebra or Math. 112 —			Math. 114 or alternate course ²	2-3
College Algebra ² or exemption ¹		5-3	Sp. Com. 112 — Verbal Communication ..	3
Sp. Com. 111 — Verbal Communication ..		3	Elective ^{4,5,6}	3
Elective ^{4,5,6}		4-6	Total	16-17
Total		16		
SECOND YEAR				
Econ. 101 — Introduction to Economics ..		4	Chem. 131 — Elementary Organic	
Chem. 102 — General Chemistry		4	Chemistry	3
Mcbio. 100 — Introductory Microbiology ..		3	F.S. 202 — Sensory Evaluation of Food ..	3
Mcbio. 101 — Introductory Experimental			Accy. 201 — Fundamentals of Accounting ..	3
Microbiology		2	Social science elective ⁴	3
Phys. 101 — General Physics		5	Elective ^{4,5,6}	3-5
Total		18	Total	15-17
THIRD YEAR				
F.S. 213 — Food Analysis		4	F.S. 363 — Engineering for Food	
F.S. 260 — Raw Materials		4	Processing	3
Humanities elective ⁵		3	F.S. 214 — Food Chemistry ⁷	3
Social science elective ⁴		3	Mcbio. 311 — Food and Industrial	
Elective ^{4,5,6}		3	Microbiology	3
Total		17	Mcbio. 312 — Techniques of Applied	
			Microbiology	2
			Electives ^{4,5,6}	5-8
			Total	16
FOURTH YEAR				
F.S. 301 — Food Processing I		5	F.S. 302 — Food Processing II	5
Electives ^{4,5,6}		12	F.S. 206 — Inspection Trip	1
Total		17	F.S. 332 — Principles of Sanitation in	
			Processing and Handling of Food	2
			Electives ^{4,5,6}	5-8
			Total	16

¹ To take Chem. 101, a student must have completed Math. 111 or 112 (or equivalent) or have gained exemption by the Mathematics Placement Test. He or she must also have a satisfactory score on the Chemistry Placement Test or take Chem. 100 (2 hours) before enrolling in Chem. 101.

² In addition to Math. 111 or 112, the student must take one course from the following: Math. 114; Math. 124 or equivalent; computer science; statistics. If the student is exempt from trigonometry by placement examination, no additional course from the above group is required.

³ May be Biol. 104 or 110 or Bat. 100 or Physl. 103.

⁴ A minimum of 9 hours from two departments in social science, including Econ. 101.

⁵ An approved 6 hours in the humanities.

⁶ At least 15 hours, of which at least 6 hours are advanced undergraduate courses (200 and 300 level) from a bloc of courses approved by the adviser.

⁷ Offered in alternate years.

Examples of Options Available

BUSINESS OPTION

Elective courses to be taken from the following areas: accountancy, advertising, agricultural economics, agricultural journalism, business administration, business and technical writing, economics, finance, labor and industrial relations, and marketing.

ENGINEERING OPTION

Elective courses to be taken from the following engineering areas: agricultural, chemical, civil, electrical, mechanical, metallurgical, industrial, theoretical and applied mechanics.

PRODUCTION OPTION

Elective courses to be taken from the following production areas: agricultural engineering, animal science, agronomy, dairy science, horticulture, plant pathology, veterinary pathology, and hygiene.

Other options are available if approved by the department and the adviser.

CURRICULUM IN FOOD SCIENCE

For the degree of Bachelor of Science in Food Science

This program is designed for students who wish to be trained in the scientific aspects of food processing, quality control, research, product development, and technical sales functions for employment in the food industry, governmental agencies, and educational institutions. This curriculum also provides the scientific background for graduate study in the areas of food processing, food chemistry, food microbiology, and nutritional science. A minimum of 130 hours of credit is required for graduation.

Students are urged to engage in at least one summer of employment in the food processing industry and are aided in making contact with prospective employers. A senior inspection trip is required; the trip will cost about \$35.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Agr. 100 — Agriculture in Modern Society		1	Biological science ⁴	4
F.S. 101 — Food in Modern Society		3	Chem. 101 — General Chemistry ¹	4
Math. 114 — Plane Trigonometry ²		2	Math. 120 — Calculus and Analytic Geometry	5
Sp. Com. 111 — Verbal Communication		3	Sp. Com. 112 — Verbal Communication	3
Math. 111 or 112 ²		3-5	Total	16
Electives ³		4		
Total		16-18		
SECOND YEAR				
Chem. 102 — General Chemistry		4	Chem. 131 — Elementary Organic Chemistry	3
Math. 130 — Calculus and Analytic Geometry		5	Chem. 134 — Elementary Organic Chemistry Laboratory	2
Physcs. 101 — General Physics		5	F.S. 202 — Sensory Evaluation of Food ⁵	3
Electives ³		2-3	Mc bio. 100 — Introductory Microbiology	3
Total		16-17	Mc bio. 101 — Introductory Experimental Microbiology	2
			Physcs. 102 — General Physics	5
			Total	18

THIRD YEAR

F.S. 213 — Food Analysis I	4
F.S. 260 — Raw Materials for Processing ..	4
F.S. 314 — Food Chemistry and Nutrition I	4
Electives ³	4-5
Total	16-17

F.S. 315 — Food Chemistry and Nutrition II	4
Micbio. 311 — Food and Industrial Microbiology	3
Mcbio. 312 — Techniques of Applied Microbiology	2
Electives ³	7-8
Total	16-17

FOURTH YEAR

F.S. 301 — Food Processing I	5
Electives ³	11-13
Total	16-18

F.S. 206 — Inspection Trip	1
F.S. 302 — Food Processing II	5
F.S. 332 — Principles of Sanitation in Processing and Handling of Food	2
Social science elective ³	3
Electives ³	3-5
Total	14-16

¹ To take Chem. 101, a student must have completed Math. 111 or 112 (or equivalent) or have gained exemption by the Mathematics Placement Test. He or she must also have a satisfactory score on the Chemistry Placement Test or take Chem. 100 (2 hours) before enrolling in Chem. 101.

² Students exempt from both Math. 112 and 114 by the Mathematics Placement Test may begin with Math. 120. Those who are not exempt from Math. 112 and do not have credit for college algebra must take Math. 111 or 112. If Math. 114 cannot be taken in the first semester, adjustments in the suggested course sequence must be made.

³ A minimum of 9 hours of approved social sciences and a minimum of 6 hours of approved humanities are required. Courses must be selected from the approved list.

⁴ May be Biol. 104 or 110, or Bot. 100, or Physl. 103.

⁵ May be taken second semester of junior year.

CURRICULUM IN FOREST SCIENCE

For the degree of Bachelor of Science in Forestry

The curriculum in forest science prepares students for positions involving management of natural resources, particularly those associated with forests and forest land including environmental quality and ecology. Graduates may qualify for employment in a wide range of fields with public agencies or private industry. A minimum of 126 hours of credit, including 8 hours earned in summer field study, is required for graduation.

A summer field study of eight weeks is required for all students. This should come between the second and third year. The estimated cost of \$600 includes tuition, fees, transportation, meals, and lodging.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Agr. 100 — Agriculture in Modern Society		1	Biology ¹	4
Biology ¹		4	Chem. 101 — General Chemistry ⁵	4
Communications ²		3-4	Communications ²	3
Math. 120 — Calculus and Analytic Geometry ¹		5	Humanities, social sciences, or electives ⁶ ..	3
Humanities, social sciences, or electives ⁶ ..		3	For. 101 — Introduction to Forestry ³	3
Total		16-17	Total	17

SECOND YEAR

Chem. 102 — General Chemistry, or Chem. 103 — General Chemistry, Organic Chemical Studies	4	Agron. 101 — Introduction to Soils	4
For. 220 — Dendrology	4	Humanities, social sciences, or electives ⁶ ..	6
Geol. 107 — General Geology I	4	Phys. 102 — General Physics (Light, Electricity, and Magnetism)	5
Phys. 101 — General Physics (Mechanics, Heat, and Sound)	5	Econ. 101	4
Total	17	Total	18

SUMMER FIELD STUDIES (8 WEEKS)

For. 201 — Wildland Recreation	1
For. 211 — Forest Ecology	2
For. 221 — Forest Measurements	2
For. 231 — Wood Utilization I	1
For. 281 — Introduction to Forest Resource Management	2
Total	8

THIRD AND FOURTH YEARS⁷

The programs for the third and fourth years must be planned in consultation with the student's faculty adviser. The four-year course of study must include the following:

	HOURS
For. 101 — Introduction to Forestry ³	3
For. 201 — Wildland Recreation (Summer Field Studies)	1
For. 211 — Forest Ecology (Summer Field Studies)	2
For. 220 — Dendrology	4
For. 221 — Forest Measurements (Summer Field Studies)	2
For. 231 — Wood Utilization I (Summer Field Studies)	1
For. 253 — Forest Economics	3
For. 281 — Introduction to Forest Resources Management (Summer Field Studies)	2
Entom. 319 — Fundamentals of Insect Control, or Pl. Pa. 304 — Forest Tree Diseases and Wood Deterioration	4-3
Total	22-21

In addition, the student must complete at least one additional course from the following group of forestry and specialized area courses:

Ag. Ec. 341 — Agricultural Economic Statistics, or For. 340 — Introduction to Applied Statistics, or Math. 161 — Statistics	
For. 232 — Wood Utilization II	
For. 256 — Surveying Agricultural and Forest Lands	
For. 260 — Forest Land Policy and Administration	
For. 271 — Wood Anatomy and Identification	
For. 301 — Forest Recreation	
For. 321 — Forest Biometrics	
For. 342 — Forest Management	
For. 377 — Aerial Photograph Interpretation and Remote Sensing	
Entom. 319 — Fundamentals of Insect Control, or Pl. Pa. 304 — Forest Tree Diseases and Wood Deterioration (Depending upon which course the student selects from required list)	
Geog. 378 — Descriptive Interpretation of Remote Sensors	
Leist. 321 — Recreational Use of Public Land	
E.E.E. 342 — Fish and Wildlife Ecology	
Minimum hours of required forestry and specialized area courses	24
Humanities and social sciences: An approved 6 hours in the humanities and a minimum of 9 hours from two departments in the social sciences, including Econ. 101	15
Electives to bring total hours to	126

¹ The biology requirement may be fulfilled by either Bot. 100 and Biol. 104, or Biol. 110 and 111, or equivalent.

² The communication requirement may be fulfilled by either Rhet. 105 or 108 and Sp. Com. 101, or Sp. Com. 111 and 112.

³ Transfer students with sophomore standing (30 hours) may substitute For. 256, Geog. 378, Leist. 321, or Zool. 342 in place of For. 101.

⁴ Students who pass the algebra portion of the Mathematics Placement Test are exempt from the algebra requirement; those who pass the algebra and trigonometry portions of these tests begin their college mathematics with Math. 120 — Calculus and Analytic Geometry. Mathematics through Math. 120 is required of all students. Transfer students with 3 or more semester hours of analytic geometry may substitute Math. 135 — Calculus, for Math. 120.

⁵ To take Chem. 101 a student must have a satisfactory score on the Chemistry Placement Test and exemption from or credit in Math. 111 or 112; students who have not had high school chemistry or who do not score high enough on the Chemistry Placement Test must take Chem. 100 before taking Chem. 101.

⁶ Humanities and social sciences: An approved 6 hours in the humanities. A minimum of 9 hours from two departments in the social sciences, including Econ. 101.

⁷ One-half of the required forestry and specialized area hours must be completed in residence at the University of Illinois at Urbana-Champaign.

CURRICULUM IN ORNAMENTAL HORTICULTURE

For the degree of Bachelor of Science in Ornamental Horticulture

This curriculum prepares students for careers in the production, marketing, and use of ornamental crops; in teaching, research, or other related professional activities; or in business serving or related to ornamental horticulture. Opportunities open to graduates are: the production of flowers and ornamental plants in greenhouses and nurseries; plant breeding; flower shop management and floral designing; park and golf course management; sales representatives and technicians with seed and plant suppliers, chemical industries, and horticultural supply firms; employment with state or federal governmental agencies or institutions as teachers, researchers, horticultural advisers, crop inspectors, etc.; consultants; and writers.

Students are encouraged to acquire practical experience through employment in ornamental horticultural establishments. A minimum of 130 hours of credit is required for graduation.

Areas of specialization include production of floral crops; nursery management and production, use, and maintenance of woody ornamental crops; production and maintenance of turfgrass; and flower shop management and floral designing.

Questions concerning the curriculum and areas of specialization in ornamental horticulture should be directed to University of Illinois at Urbana-Champaign, 100 Ornamental Horticulture Building, Urbana, IL 61801.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Agr. 100 — Agriculture in Modern Society ¹		1	Chem. 101 — General Chemistry ⁴	4
Bot. 100 — General Botany		4	Course from group I	3
Course from group I		0-3	Entom. 101 — Agricultural Entomology	3
Hort. 122 — Greenhouse Management		3	Math. 114 — Plane Trigonometry ²	2
Math. 111 — Algebra, or Math. 112 —			Sp. Com. 112 — Verbal Communication ³	3
College Algebra ²		3-5	Total	15
Sp. Com. 111 — Verbal Communication ³		3		18
Total		15-18		

SECOND YEAR

Chem. 102 — General Chemistry, or			Agron. 101 — Introductory Soils	4
Chem. 103 — General Chemistry:			Courses from groups I and II	6
Organic Chemical Studies		4	Econ. 101 — Introduction to Economics	4
Courses from groups I and II		8-9	Elective	3
Elective		3-4	Total	17
Total		15-17		

THIRD AND FOURTH YEARS

The third and fourth years are to be devoted to the fulfillment of the group requirements listed below.

¹ An orientation course required of all freshmen in agriculture.

² Students in this curriculum are required to complete Math. 111 or 112 and 114 unless exempted by the Mathematics Placement Test.

³ Rhet. 105 or 108, and Sp. Com. 101 may be substituted for Sp. Com. 111 and 112.

⁴ To take Chem. 101, a student must have a satisfactory score on the Chemistry Placement Test, or take Chem. 100 (2 hours) and have Math. 111 or 112 or equivalent before enrolling in Chem. 101.

Group Requirements**GROUP I: HUMANITIES AND SOCIAL SCIENCES****HOURS**

An approved 6 hours in the humanities and a minimum of 9 hours from two departments in the social sciences (including Econ. 101).....15

GROUP II: PRESCRIBED HORTICULTURE AND SUPPORTING COURSES

Accy. 101 — Principles of Accounting I, or Accy. 201 — Fundamentals of Accounting.....	3
Bot. 260 — Introductory Plant Taxonomy, or Bot. 366 — Field Botany.....	3-5
Hort. 201 — Identification and Use of Woody Ornamental Plants I.....	3
Hort. 202 — Identification and Use of Woody Ornamental Plants II.....	3
Hort. 221 — Plant Propagation.....	3
Hort. 226 — Bedding and Foliage Plants.....	3
Pl. Pa. 204 — Introductory Plant Pathology.....	3
Total	21-23

GROUP III: HORTICULTURE ELECTIVE COURSES

Hort. 110 — Plant and Animal Genetics.....	3
Hort. 210 — Home Grounds Planning and Design ¹	4
Hort. 211 — Home Grounds Development and Construction.....	3
Hort. 212 — Landscape Contracting.....	3
Hort. 223 — Floricultural Crops Production I.....	3
Hort. 224 — Floricultural Crops Production II.....	3
Hort. 230 — Garden Flowers.....	3
Hort. 231 — Floral Decorations.....	3
Hort. 232 — Advanced Floral Decorations and Flower Shop Management.....	3
Hort. 234 — Nursery Management.....	3
Hort. 236 — Turfgrass Management.....	3
Hort. 242 — Vegetable Crops Production.....	3
Hort. 251 — Arboriculture.....	3
Hort. 262 — Fruit Science ²	3
Hort. 300 — Special Problems (maximum of 5 hours).....	3-5
Hort. 321 — Floricultural Physiology.....	4
Hort. 322 — Plant Nutrition.....	4
Hort. 323 — Principles of Plant Breeding.....	4
Hort. 345 — Growth and Development of Horticultural Crops ²	4
Minimum total, chosen with approval of faculty adviser.....	15

¹ Credit allowed toward fulfilling requirement in group III only if Hort. 211 is completed.

² Offered in alternate years.

GROUP IV: AREA OF SPECIALIZATION COURSES

Accy. 105 — Principles of Accounting ¹	3
Adv. 281 — Introduction to Advertising.....	3
Ag. Ec. 341 — Agricultural Economic Statistics, or Hort. 340 — Introduction to Applied Statistics, or Econ. 171 — Applied General Statistics, or Math. 161 — Statistics.....	3-4

Ag. M. 100 — Engineering Applications in Agriculture..... 3
 Ag. M. 201 — Agricultural Mechanics Shop: Electrical and Metalwork..... 3
 Ag. M. 252 — Mechanics of Soil and Water Conservation..... 3
 Agron. 303 — Soil Fertility and Fertilizers..... 3
 Agron. 304 — Soil Management and Conservation..... 3
 Agron. 326 — Weeds and Their Control..... 3
 Bot. 234 — Form and Function in Flowering Plants..... 3
 Bot. 330 — Plant Physiology..... 3
 Bot. 333 — Plant Physiology Laboratory (same as Hort. 333)..... 4
 Bot. 345 — Plant Anatomy..... 4
 Bot. 381 — Plant Ecology..... 5
 Business administration, business and technical writing, and/or finance²..... 0-9
 Chem. 131 — Elementary Organic Chemistry..... 3
 Chem. 134 — Elementary Organic Chemistry Laboratory..... 2
 Computer science³..... 3
 Entom. 319 — Fundamentals of Insect Control..... 4
 Geol. 101 — Physical Geology, or Geol. 107 — General Geology I..... 4
 Pl. Pa. 305 — Principles of Plant Disease Control¹..... 3
 Pl. Pa. 308 — Plant Disease Diagnosis⁴..... 2
 Pl. Pa. 310 — Diseases of Ornamental Plants..... 3
 Minimum total, chosen with approval of faculty adviser..... 15

¹ Students who plan to take Accy. 105 must take Accy. 101, not 201.

² Business administration, business and technical writing, and/or finance courses for which student qualifies and with consent of adviser; up to 9 hours credit.

³ Computer science course for which student qualifies and with consent of adviser.

⁴ Pl. Pa. 304 — Forest Pathology may be taken in place of either Pl. Pa. 305 or 308.

CURRICULUM IN PREVETERINARY MEDICINE

Students wishing to complete the preprofessional requirements for veterinary medicine in the College of Agriculture may do so within a variety of curricula. However, courses required are equivalent to those recommended for students majoring in animal science or dairy science. (See pages 160 and 162.)

Because of the competition for admission, students should plan to complete a bachelor's degree program. For fall 1978 there were approximately four qualified applicants for each space available in the entering class in veterinary medicine. The mean grade-point average of admitted students was 4.64.

Specific information about veterinary medicine, including admission requirements, can be found on page 453.

CURRICULUM IN WOOD SCIENCE

For the degree of Bachelor of Science in Forestry

The curriculum in wood science concerns wood as a raw material, including its origin, properties, and characteristics. The approach is interdisciplinary, requiring a knowledge of the chemical, physical, biological, and engineering properties of wood. The curriculum prepares students for positions concerned with using wood in new and better ways; and with seasoning, manufacturing, purchasing, marketing, preservative or fire-retardant treatments, gluing, or wood finishing. A minimum of 126 hours of credit, including 8 credit hours earned in summer field studies, is required for graduation. Estimated summer expense, \$600.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Agr. 100 — Agriculture in Modern Society		1	Chem. 101 — General Chemistry ⁴	4
Bot. 100 — General Botany		4	Econ. 101 — Introduction to Economics	4
Math. 111 — Algebra, or Math. 112 — College Algebra ²		5-3	For. 101 — General Forestry ¹	3
Sp. Com. 111 — Verbal Communication ³		3	Math. 114 — Plane Trigonometry ²	2
Humanities or social sciences ⁵		3	Sp. Com. 112 — Verbal Communication ³	3
Total		14-16	Total	16

SECOND YEAR

Chem. 102 and 106 — General Chemistry	4	Chem. 131 — Elementary Organic Chemistry	3
Math. 120 — Calculus and Analytic Geometry	5	Chem. 134 — Elementary Organic Chemistry Laboratory	2
Phys. 101 — General Physics (Mechan- ics, Heat, and Sound)	5	Phys. 102 — General Physics (Light, Electricity, and Magnetism)	5
Humanities or social sciences ⁵	3	Humanities or social sciences ⁵	6
Total	17	Total	16

SUMMER FIELD STUDIES (EIGHT WEEKS)

For. 201 — Wildland Recreation	1
For. 211 — Forest Ecology	2
For. 221 — Forest Measurements	2
For. 231 — Wood Utilization I	1
For. 281 — Introduction to Forest Resource Management	2
Total	8

THIRD AND FOURTH YEARS

The programs for the third and fourth years must be planned in consultation with the student's faculty adviser. In addition to the following required courses, the student must complete sufficient elective courses to bring the total hours for graduation to 126. At least 15 of the elective hours must be restricted electives.

¹ Transfer students with sophomore standing (30 hours) may substitute an elective course for For. 101.

² Students who pass the algebra portion of the Mathematics Placement Test are exempt from the algebra requirement; those who pass both the algebra and trigonometry portions of these tests may begin their college mathematics with Math. 120 — Calculus and Analytic Geometry. Math. 130 and 140 or 131 and 141 are also recommended.

³ Rhet. 105 or 108 and Sp. Com. 101 may be substituted for Sp. Com. 111 and 112.

⁴ To take Chem. 101, a student must have a satisfactory score on the Chemistry Placement Test, or take Chem. 100 (2 hours) and have Math. 111 or 112, or the equivalent, before enrolling in Chem. 101.

⁵ Humanities and social sciences: An approved 6 hours in the humanities and a minimum of 9 hours from two departments in the social sciences, including Econ. 101.

Required Specialized Courses

	HOURS
For. 220 — Dendrology	4
For. 232 — Wood Utilization II	3
For. 236 — Physical Properties of Wood and Wood-Base Materials	3
For. 253 — Forest Economics	3
For. 271 — Wood Anatomy and Identification	3
For. 273 — Adhesives and Laminates	3
For. 374 — Wood Deterioration and Its Prevention	3
For. 340 — Introduction to Applied Statistics, or Ag. Ec. 341 — Agricultural Economic Statistics, or Econ. 172-173 — Economic Statistics I and II	3-6
For. 372 — Mechanical Properties of Wood and Wood-Base Materials	3
Total	28-31

Restricted Electives (Minimum of 15 Hours)

HOURS

Accy. 201 — Fundamentals of Accounting.....	3
B. Adm. 200 ¹ — The Legal Environment of Business.....	3
B. Adm. 202 — Principles of Marketing.....	3
B. Adm. 210 — Management and Organizational Behavior.....	3
B. Adm. 261 — Summary of Business Law.....	3
B. Adm. 272 — Industrial Selling.....	3
B. Adm. 320 — Marketing Research.....	3
Chem. 122 — Elementary Quantitative Analysis.....	3
C.E. 369 — Behavior and Design of Wood Structures.....	3
C.S. 101 — Introduction to Automatic Digital Computing.....	3
Fin. 150 — Money, Credit, and Banking.....	3
Fin. 257 — Corporation Finance.....	3
Far. 222 — Advanced Forest Measurements.....	3
G.E. 282 — Introduction to Patent Law.....	1
G.E. 288 — Economic Analysis for Engineering Decision Making.....	3
G.E. 290 — Contracts and Specifications.....	3
G.E. 292 — Engineering Law.....	3
I.E. 230 — Labor Relations.....	3
I.E. 357 — Safety Engineering.....	3
I.I.R. 321 (Section B) — Industrial Social Systems.....	3
I.I.R. 347 — Labor Law I.....	3
Math. 130 or 131 — Calculus and Analytic Geometry.....	5-3
Math. 140 or 141 — Calculus and Analytic Geometry, or Math. 135 or 145 — Calculus.....	3-5
Math. 345 — Differential Equations and Orthogonal Functions.....	3
Minimum total.....	15

¹ Credit is not given for both B. Adm. 200 and 261.

CURRICULUM IN HUMAN RESOURCES AND FAMILY STUDIES¹

For the degree of Bachelor of Science in Human Resources and Family Studies

This four-year curriculum in the School of Human Resources and Family Studies, College of Agriculture, prepares students for careers in various home economics-oriented professions and also provides a liberal education. The 120 hours required for graduation include prescribed courses of which at least 28 hours must be in human resources and family studies selected according to the requirements for one of the ten options. At least 5 hours of advanced courses in one of the fields of concentration must be taken in residence at the University by any student transferring from another institution.

A student may also qualify for a baccalaureate degree in human resources and family studies in the College of Liberal Arts and Sciences. (See page 408.)

Students preparing to work professionally in the field of interior design should follow the interior design curriculum (page 194). Those preparing for managerial positions in restaurants and other commercial food service units should meet the requirements specified in the curriculum in restaurant management (page 195). Students preparing to teach home economics in secondary schools follow the curriculum in vocational home economics education (page 196).

The following number of hours in the designated areas of study and certain specific courses listed below are required in all options of the School of Human Resources and Family Studies curriculum.

HOURS

Basic disciplines — Design, humanities, natural sciences, and social sciences, to include a minimum of:.....	40-58
Art and design (studia course).....	2

¹ See also Curriculum in Vocational Home Economics Education on page 196.

Humanities	6
Natural sciences to include:	12
Principles of physical science (minimum 3 hours) and principles of biological science (minimum 3 hours); see option listings for specific science requirements for each option	
Social sciences to include at least one course in principles of economics and one in principles of psychology	9
Human resources and family studies (home economics)	28-44
Math. 111 or 112, or exemption by Mathematics Placement Test	0-5
Rhet. 105 or 108, or Sp. Com. 111 and 112	4-6
Other option requirements	0-24
Electives, to bring total to 120	11-52

The first two years of the curriculum, shown in detail below, provide a foundation for the various fields of concentration and allow some variation according to the purposes of individual students.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
H.R.F.S. course(s)		3-4	Art and design (studio course)	2
Math. 111 — Algebra, or Math. 112 — College Algebra ¹		3-5	H.R.F.S. course(s)	3-4
Physical or biological science		3-4	Physical or biological science	3-4
Rhet. 105 or 108 — Composition ²		4	Psych. 100 — Introduction to Psychology, or Psych. 103 — Introduction to Experimental Psychology	3-4
Total		14-16	Electives	2-4
			Total	15-16

SECOND YEAR

Econ. 101 — Introduction to Economics	4	H.R.F.S. course	2-3
H.R.F.S. course	3	Humanities	3
Humanities	3	Natural or social science course(s)	3-6
Natural or social science course	3	Electives	3-7
Electives	3	Total	15
Total	16		

THIRD AND FOURTH YEARS

The programs for the third and fourth years are largely determined by the option selected, and must be planned in consultation with the student's faculty adviser. The options are described below. Students should declare an option no later than the second semester of the sophomore year. Human resources and family studies courses as prescribed by the option, plus three home economics courses from outside the option area, must total a minimum of 28 hours. Areas are: child and family; foods and nutrition, hospital dietetics, and institution management; home management and family economics; housing, interior design, and equipment; textiles and clothing. Prescribed courses in the general option include at least one course from each of the five areas.

¹ Students who pass the algebra portion of the Mathematics Placement Test are exempt from the algebra requirement.

² Sp. Com. 111 and 112 may be substituted for Rhet. 105 or 108.

Option 1: Apparel Design

PRESCRIBED COURSES IN HUMAN RESOURCES AND FAMILY STUDIES	HOURS
T.C. 183 — Consumer Textiles	3
T.C. 184 — Apparel Design and Selection ¹	2
T.C. 186 — Clothing Laboratory: Tailoring ¹	2
T.C. 284 — Costume Design	2
T.C. 285 — History of Costume	2
T.C. 286 — Clothing Design: Flat Pattern	3

T.C. 287 — Dress and Human Behavior.....	3
T.C. 386 — Clothing Design: Draping.....	4
T.C. 395 — Fashion Analysis.....	3
Additional H.R.F.S. courses, including two courses chosen from areas other than textiles and clothing, to bring total to.....	28

BASIC DISCIPLINE COURSES ²	HOURS
Art 115 — Art Appreciation, or Art 116 — Masterpieces of Art.....	2-3
Art 117 — Drawing I ¹	3
Art 118 — Drawing II.....	3
Art 119 — Design I ¹	3
Art 120 — Design II.....	3
Art 125 — Life Drawing.....	2
Art 126 — Life Drawing.....	2
Additional humanities.....	3
Chem. 101 — General Chemistry.....	4
Chem. 102 — General Chemistry, or Chem. 103 — General Chemistry: Organic Chemical Studies.....	4
Econ. 101 — Introduction to Economics.....	4
Econ. 313 — Economics of Consumption, or F.A.C.E. 313.....	3
Mcbio. 100 — Introductory Microbiology and Mcbio. 101 — Introductory Experimental Microbiology, or Physl. 103 — Introduction to Human Physiology.....	4-5
Psych. 100 — Introduction to Psychology, or Psych. 103 — Introduction to Experimental Psychology.....	3-4
Soc. 100 — Introduction to Sociology.....	3

OTHER PRESCRIBED COURSES	HOURS
B.&T.W. 251 — Business and Administrative Communication.....	3
Sp. Com. 101 — Principles of Effective Speaking ³	3
A course in applied statistics ⁴	3
Open electives to bring total hours to.....	120

¹ Expertise in this course should be demonstrated before declaring the apparel design option.

² Basic disciplines are art (design), humanities, natural sciences, and social sciences.

³ Sp. Com. 111 and 112, 3 hours each, may be substituted for Rhet. 105 or 108, and Sp. Com. 101.

⁴ Select from Psych. 233, Soc. 185, Econ. 171, or Agron. 340.

Option 2: Child and Family

PRESCRIBED COURSES IN HUMAN RESOURCES AND FAMILY STUDIES	HOURS
H.D.F.E. 105 — Introduction to Human Development.....	3
H.D.F.E. 106 — Observation and Analysis of Behavior.....	3
H.D.F.E. 132 — Foods and Nutrition.....	3
H.D.F.E. 202 — Laboratory in Child Development.....	4
H.D.F.E. 203 — Child Development: Period of Infancy and Early Childhood ¹	4
H.D.F.E. 210 — Family Relationships.....	3
H.D.F.E. 301 — Advanced Problems in Home Guidance of Children.....	3
Additional H.R.F.S. courses, including two courses chosen from areas other than child development and family relationships, to bring total to.....	28

BASIC DISCIPLINE COURSES ²	HOURS
Anth. 101 — Concepts in General Anthropology, or Anth. 103 — Introduction to Cultural Anthropology.....	4
Art (design).....	2
Biological sciences electives ³	5-8
Econ. 101 — Introduction to Economics.....	4
Humanities electives.....	6

Physl. 103 — Introduction to Human Physiology.....	4
Physical sciences electives.....	3
Psych. 100 — Introduction to Psychology, or Psych. 103 — Introduction to Experimental Psychology.....	3-4
Social sciences electives.....	6
Soc., or R. Soc.....	3
Open electives to bring total to.....	120

¹ An H.D.F.E. course at another specified developmental level may be substituted.

² Basic disciplines are art (design), humanities, natural sciences, and social sciences.

³ One approved elective in biological science (see page 194); and one course in genetics from: Biol. 106, 107, 210, 315, 316; Psych. 247; An. S. 110, 341; E.E.E. 350; or a comparable course.

Option 3: Foods and Nutrition

PREScribed COURSES IN HUMAN RESOURCES AND FAMILY STUDIES	HOURS
F.N. 132 — Foods and Nutrition.....	3
F.N. 133 — Food Management.....	2
F.N. 220 — Principles of Nutrition.....	3
F.N. 231 — Foods.....	3
F.N. 324 — Biochemical Aspects of Human Nutrition.....	3
F.N. 330 — Experimental Foods.....	3
F.N. 240 — Quantity Food Production and Service, F.N. 320 — Diet in Disease, F.N. 321 — Experimental Nutrition, F.N. 322 — Physical Growth and Nutrition, or F.N. 331 — Problems in Foods.....	2-3
Additional H.R.F.S. courses, including three courses chosen from areas other than foods, nutrition, institution management, and dietetics, to bring total to.....	28

BASIC DISCIPLINE COURSES ¹	HOURS
Art (design).....	2
Chem. 101 — General Chemistry.....	4
Chem. 102 — General Chemistry.....	4
Chem. 122 — Elementary Quantitative Analysis.....	3
Chem. 131 — Elementary Organic Chemistry.....	3
Chem. 134 — Elementary Organic Chemistry Laboratory.....	2
Bioch. 350 — General Biochemistry, or Bioch. 352 — General Biochemistry I, and Bioch. 353 — General Biochemistry II.....	3-8
Bioch. 355 — Biochemistry Laboratory.....	4
Econ. 101 — Introduction to Economics.....	4
Humanities electives.....	6
Math. 114 — Plane Trigonometry.....	2
Mcbio. 100 — Introductory Microbiology, and Mcbio. 101 — Introductory Experimental Microbiology.....	5
Physl. 103 — Introduction to Human Physiology.....	4
Psych. 100 — Introduction to Psychology, or Psych. 103 — Introduction to Experimental Psychology.....	3-4
Social sciences electives.....	3
Open electives to bring total to.....	120

¹ Basic disciplines are art (design), humanities, natural sciences, and social sciences.

Option 4: Foods in Business

PREScribed COURSES IN HUMAN RESOURCES AND FAMILY STUDIES	HOURS
F.N. 132 — Foods and Nutrition.....	3
F.N. 133 — Food Management.....	2
F.N. 220 — Principles of Nutrition.....	3
F.N. 231 — Foods.....	3

F.N. 330 — Experimental Foods.....	3
F.N. 326 — Presentations: Principles and Techniques, F.N. 331 — Problems in Foods, or F.A.C.E. 375 — Home Equipment, for total of.....	6
Additional H.R.F.S. courses, including three courses chosen from areas other than foods, nutrition, institution management, and dietetics, to bring total to.....	28

BASIC DISCIPLINE COURSES ¹	HOURS
Art (design).....	2
Chem. 101 — General Chemistry.....	4
Chem. 102 — General Chemistry, or Chem. 103 — General Chemistry: Organic Chem- ical Studies.....	4
Econ. 101 — Introduction to Economics.....	4
Humanities electives.....	6
Mcbio. 100 — Introductory Microbiology, and Mcbio. 101 — Intraductory Experimen- tal Microbiology.....	5
Physl. 103 — Introduction to Human Physiology.....	4
Psych. 100 — Introduction to Psychology, or Psych. 103 — Introduction to Experimen- tal Psychology.....	3-4
Social sciences electives.....	3
Basic discipline electives to bring total to.....	40

OTHER PRESCRIBED COURSES	HOURS
B. Adm. 202 — Principles of Marketing.....	3
B.&T.W. 251 — Business and Administrative Communications.....	3
Journ. 211 — Newswriting.....	3
Sp. Com. 101 — Principles of Effective Speaking ²	3
Adv. 281 — Introduction to Advertising, Adv. 382 — Advertising Creative Strategy, Ag. Com. 214 — Agricultural Communications Strategy, Ag. Com. 300 — Special Problems in Agricultural Communications, B. Adm. 210 — Management and Organi- zational Behavior, B. Adm. 247 — Introduction to Management, F.N. 240 — Quantity Food Production and Service, F.A.C.E. 313 — Economics of Consumption, F.N. 322 — Physical Growth and Nutrition, F.A.C.E. 370 — Family Economics, Journ. 223 — Photojournalism, Journ. 326 — Magazine Article Writing, R. TV 261 — Prin- ciples of Radio and Television Broadcasting, Sp. Com. 211 — Business and Profes- sional Speaking, or applied statistics, ³ for a total of.....	12
Open electives to bring total to.....	120

¹ Basic disciplines are art (design), humanities, natural sciences, and social sciences.

² Sp. Cam. 111 and 112, 3 hours each, may be substituted for Rhet. 105 or 108, and Sp. Com. 101.

³ Select from Econ. 171, Psych. 233, Soc. 185, or Agron. 340.

Option 5: General Home Economics

PRESCRIBED COURSES IN HUMAN RESOURCES AND FAMILY STUDIES	HOURS
Minimum of 28 hours in H.R.F.S. to include at least one course from each of the five areas. ¹ Fifteen of the 28 hours must be at the 200 or 300 level with a minimum of two courses at the 300 level.....	28

BASIC DISCIPLINE COURSES ²	HOURS
Art 185 — Design.....	2
Chem. 101 — General Chemistry.....	4
Chem. 102 — General Chemistry, or Chem. 103 — General Chemistry: Organic Chem- ical Studies.....	4
Econ. 101 — Introduction to Economics.....	4
Humanities electives.....	6
Mcbio. 100 — Introductory Microbiology.....	3
Physl. 103 — Introduction to Human Physiology.....	4

Psych. 100 — Introduction to Psychology, or Psych. 103 — Introduction to Experimental Psychology.....	3-4
Soc. 100 — Introduction to Sociology.....	3
Basic discipline electives to bring total to.....	40
Open electives to bring total to.....	120

¹ Five areas are: child and family; foods and nutrition, institution management, and hospital dietetics; home management, housing, family economics, and equipment; interior design; textiles and clothing.

² Basic disciplines are art (design), humanities, natural sciences, and social sciences.

Option 6: Home Management

PREScribed COURSES IN HUMAN RESOURCES AND FAMILY STUDIES	HOURS
F.N. 132 — Foods and Nutrition.....	3
F.N. 133 — Food Management.....	2
F.A.C.E. 270 — Management of Family Resources.....	4
F.A.C.E. 273 — Home Management Seminar.....	4
F.A.C.E. 361 — Development and Function of Family Housing, or F.A.C.E. 375 — Home Equipment.....	3
Six additional hours selected from: H.D.F.E. 210 — Family Relationships, F.N. 220 — Principles of Nutrition, F.N. 231 — Foods, I.D. 260 — Interiors and Furniture I, I.D. 261 — Interiors and Furniture II, F.N. 330 — Experimental Foods, F.A.C.E. 361 — Development and Function of Family Housing, F.A.C.E. 371 — The Family as a Consuming Unit, F.A.C.E. 375 — Home Equipment, F.A.C.E. 378 — Problems in Home Management, Housing, I.D. 378 — Problems in Interior Design, F.A.C.E. 379 — Problems in Family and Consumption Economics, or T.C. 380 — Advanced Textiles.....	6
Additional H.R.F.S. courses, including two courses chosen from areas other than home management, housing, family economics, and equipment to bring total to.....	28

BASIC DISCIPLINE COURSES ¹	HOURS
Art 185 — Design.....	2
Chem. 101 — General Chemistry.....	4
Chem. 102 — General Chemistry, or Chem. 103 — General Chemistry: Organic Chem- ical Studies.....	4
Econ. 101 — Introduction to Economics.....	4
Humanities electives.....	6
Mcbio. 100 — Introductory Microbiology.....	3
Physl. 103 — Introduction to Human Physiology.....	4
Psych. 100 — Introduction to Psychology, or Psych. 103 — Introduction to Experimen- tal Psychology.....	3-4
Soc. 100 — Introduction to Sociology.....	3
Basic discipline electives to bring total to.....	40
Open electives to bring total to.....	120

¹ Basic disciplines are art (design), humanities, natural sciences, and social sciences.

Option 7: Hospital Dietetics

PREScribed COURSES IN HUMAN RESOURCES AND FAMILY STUDIES	HOURS
F.N. 132 — Foods and Nutrition.....	3
F.N. 133 — Food Management.....	2
F.N. 220 — Principles of Nutrition.....	3
F.N. 231 — Foods.....	3
F.N. 240 — Quantity Food Production and Service.....	3-5
F.N. 320 — Diet in Disease.....	3
F.N. 324 — Biochemical Aspects of Human Nutrition.....	3
F.N. 345 — Institutional and Restaurant Management: Food Purchasing and Equipment Selection.....	3

F.N. 350 — Institution and Restaurant Management: Organization and Administration . . . 4
 Three hours selected from: F.N. 330 — Experimental Foods, F.N. 355 — Specialized
 Quantity Food Production and Management, or Accy. 201 — Fundamentals of
 Accounting 3
 Three courses chosen from areas other than foods, nutrition, institution management,
 and dietetics 6-12

BASIC DISCIPLINE COURSES¹ **HOURS**

Art (design) 2
 Chem. 101 — General Chemistry 4
 Chem. 102 — General Chemistry 4
 Chem. 122 — Elementary Quantitative Analysis 3
 Chem. 131 — Elementary Organic Chemistry 3
 Chem. 134 — Elementary Organic Chemistry Laboratory 2
 Bioch. 350 — General Biochemistry, or Bioch. 352 — General Biochemistry I, and
 Bioch. 353 — General Biochemistry II 3-8
 Bioch. 355 — Biochemistry Laboratory 4
 Econ. 101 — Introduction to Economics 4
 Humanities electives 6
 Mcbio. 100 — Introductory Microbiology, and Mcbio. 101 — Introductory Experimen-
 tal Microbiology 5
 Physl. 103 — Introduction to Human Physiology 4
 Psych. 100 — Introduction to Psychology, or Psych. 103 — Introduction to Experimen-
 tal Psychology 3-4
 Social sciences electives 3

OTHER PRESCRIBED COURSES **HOURS**

B. Adm. 210 — Management and Organizational Behavior, or B. Adm. 247 — Intro-
 duction to Management 3
 B. Adm. 321 — Organizational Behavior, B. Adm. 351 — Personnel Administration, or
 Psych. 245 — Industrial Psychology 3
 Ed. Psy. 211 — Educational Psychology 3
 Open electives to bring total to 120

¹ Basic disciplines are art (design), humanities, natural sciences, and social sciences.

Option 8: Institution Management

PRESCRIBED COURSES IN HUMAN RESOURCES AND FAMILY STUDIES **HOURS**

F.N. 132 — Foods and Nutrition 3
 F.N. 133 — Food Management 2
 F.N. 220 — Principles of Nutrition 3
 F.N. 231 — Foods 3
 F.N. 240 — Quantity Food Production and Service 3-5
 F.N. 330 — Experimental Foods 3
 F.N. 345 — Institution and Restaurant Management: Food Purchasing and Equip-
 ment Selection 3
 F.N. 350 — Institution and Restaurant Management: Organization and Administration . . . 4
 F.N. 355 — Specialized Quantity Food Production and Management 3
 Three courses chosen from areas other than foods, nutrition, institution manage-
 ment, and dietetics 6-12

BASIC DISCIPLINE COURSES¹ **HOURS**

Art (design) 2
 Chem. 101 — General Chemistry 4
 Chem. 102 — General Chemistry, or Chem. 103 — General Chemistry: Organic Chem-
 ical Studies 4
 Econ. 101 — Introduction to Economics 4

Humanities electives	6
Mcbio. 100 — Introduction to Microbiology, and Mcbio. 101 — Introductory Experimental Microbiology.....	5
Physl. 103 — Introduction to Human Physiology.....	4
Psych. 100 — Introduction to Psychology, or Psych. 103 — Introduction to Experimental Psychology.....	3-4
Basic discipline electives to bring total to.....	40

OTHER PRESCRIBED COURSES**HOURS**

Accy. 101 — Principles of Accounting, I.....	3
Accy. 105 — Principles of Accounting, II.....	3
B. Adm. 210 — Management and Organizational Behavior, or B. Adm. 247 — Introduction to Management.....	3
B. Adm. 321 — Organizational Behavior, B. Adm. 351 — Personnel Administration, or Psych. 245 — Industrial Psychology.....	3
Sp. Com. 101 — Principles of Effective Speaking ²	3
Open electives to bring total to.....	120

¹ Basic disciplines are art (design), humanities, natural sciences, and social sciences.

² Sp. Com. 111 and 112, 3 hours each, may be substituted for Rhet. 105 or 108, and Sp. Com. 101.

Option 9: Retailing

PRESCRIBED COURSES IN HUMAN RESOURCES AND FAMILY STUDIES	HOURS
T.C. 184 — Apparel Design and Selection, or I.D. 160 — Residential Environments.....	2-3
T.C. 182 — Clothing Laboratory: Basic Construction, or T.C. 186 — Clothing Laboratory: Tailoring.....	2
T.C. 183 — Consumer Textiles.....	3
T.C. 280 — Household Textiles, or T.C. 380 — Advanced Textiles ¹	3-4
T.C. 395 — Fashion Analysis.....	3
Nine hours chosen from: I.D. 260 — Interiors and Furniture I, I.D. 261 — Interiors and Furniture II, I.D. 263 — Interior Design Studies: Materials and Processes, T.C. 280 — Household Textiles, T.C. 281 — Non-Textile Accessories, T.C. 284 — Costume Design, T.C. 285 — History of Costume, T.C. 286 — Clothing Design: Flat Pattern, T.C. 287 — Dress and Human Behavior, T.C. 360 — Interior Design Studio — Residential Environments, F.A.C.E. 361 — Development and Function of Family Housing, I.D. 378 — Problems in Interior Design, T.C. 380 — Advanced Textiles, T.C. 386 — Clothing Design: Draping, or T.C. 388 — Problems in Textiles and Clothing.....	9
Additional H.R.F.S. courses, including two courses in areas other than textiles, clothing, housing, and interior design, to bring total to.....	28

BASIC DISCIPLINE COURSES²**HOURS**

Art 115 — Art Appreciation, or Art 116 — Masterpieces of Art.....	3
Art 185 — Design.....	2
Art 186 — Design.....	2
Chem. 101 — General Chemistry.....	4
Chem. 102 — General Chemistry, or Chem. 103 — General Chemistry: Organic Chemical Studies	4
Econ. 101 — Introduction to Economics.....	4
Econ. 313 — Economics of Consumption, or F.A.C.E. 313.....	3
Humanities electives.....	3-4
Mcbio. 100 — Introductory Microbiology, and Mcbio. 101 — Introductory Experimental Microbiology, or Physl. 103 — Introduction to Human Physiology.....	4-5
Psych. 100 — Introduction to Psychology, or Psych. 103 — Introduction to Experimental Psychology.....	3-4
Psych. 201 — Introduction to Social Psychology.....	3
Soc. 100 — Introduction to Sociology.....	3
Basic discipline electives to bring total to.....	40

OTHER PRESCRIBED COURSES

HOURS

Adv. 281 — Introduction to Advertising.....	3
B. Adm. 202 — Principles of Marketing.....	3
B. Adm. 212 — Retail Management.....	3
B.&T.W. 251 — Business and Administrative Communication.....	3
Sp. Com. 101 — Principles of Effective Speaking ³	3
A course in applied statistics ⁴	3
Open electives to bring total to.....	120

¹ The course chosen to fulfill this requirement may not also be used to meet the requirement of 9 hours from the series of H.R.F.S. courses listed below.

² Basic disciplines are art (design), humanities, natural sciences, and social sciences.

³ Sp. Com. 111 and 112, 3 hours each, may be substituted for Rhet. 105 or 108, and Sp. Com. 101.

⁴ Select from Econ. 171, Psych. 233, Soc. 185, or Agron. 340.

Option 10: Textiles and Clothing

PRESCRIBED COURSES IN HUMAN RESOURCES AND FAMILY STUDIES

HOURS

T.C. 182 — Clothing Laboratory: Basic Construction, or T.C. 186 — Clothing Laboratory: Tailoring.....	2
T.C. 183 — Consumer Textiles.....	3
T.C. 184 — Apparel Design and Selection.....	3
T.C. 286 — Clothing Design: Flat Pattern.....	2
T.C. 380 — Advanced Textiles.....	4
Ten hours selected from: T.C. 280 — Household Textiles, T.C. 281 — Non-Textile Accessories, T.C. 284 — Costume Design, T.C. 285 — History of Costume, T.C. 287 — Dress and Human Behavior, T.C. 386 — Clothing Design: Draping, T.C. 388 — Problems in Textiles and Clothing, or T.C. 395 — Fashion Analysis.....	10
Additional H.R.F.S. courses, including three courses in areas other than textiles and clothing, to bring total to.....	28

BASIC DISCIPLINE COURSES¹

HOURS

Art 185 — Design.....	2
Art 186 — Design.....	2
Chem. 101 — General Chemistry.....	4
Chem. 102 — General Chemistry, or Chem. 103 — General Chemistry: Organic Chemical Studies.....	4
Econ. 101 — Introduction to Economics.....	4
Humanities electives.....	6
McBio. 100 — Introductory Microbiology and McBio. 101 — Introductory Experimental Microbiology, or Physl. 103 — Introduction to Human Physiology.....	4-5
Psych. 100 — Introduction to Psychology, or Psych. 103 — Introduction to Experimental Psychology.....	3-4
Soc. 100 — Introduction to Sociology.....	3
Basic discipline electives to bring total to.....	40
Open electives to bring total to.....	120

¹ Basic disciplines are art (design), humanities, natural sciences, and social sciences.

Journalism and Human Resources and Family Studies

For students interested in combining advertising, journalism, and radio-television with human resources and family studies, a program of 20 hours in courses offered by the College of Communications is recommended by that college and the School of Human Resources and Family Studies. This program may be combined with any of the ten options in human resources and family studies. It includes Adv. 281 — Introduction to Advertising, Journ. 211 — Newswriting, and R. TV 261 — Principles of Radio and Television Broadcasting, as required courses plus 12 additional

hours selected from Adv. 382 — Advertising Media Strategy and Tactics, Journ. 204 — Typography, Journ. 212 — Reporting, Journ. 223 — Photo-journalism, Journ. 321 — Editing, Journ. 326 — Magazine Article Writing, Journ. 330 — Magazine Editing, B. Adm. 202 — Principles of Marketing, R. TV 355 — Television News.

Courses Approved for General Education

The following courses are in addition to those listed on pages 152 and 153.

ART AND DESIGN

All studio art courses *except* Art 121, 122, 123; Arch. 171, 172.

BIOLOGICAL SCIENCES

All courses in biology, botany, entomology, microbiology, physiology, zoology; *and* Anth. 240, 247, 337, 340, 341, 344, 345, 356, 396; Psych. 211, 217, 311, 347.

PHYSICAL SCIENCES

All courses in astronomy, biochemistry, chemistry, geology, and physics; Geog. 102, 103, 303, 312, 313; L.A.S. 140, 141, 142, 143, 197, 198; all courses in mathematics *except* Math. 101, 104, 111, 112, 118, 119, 161, 202, 203, 305, 306, 307.

CURRICULUM IN INTERIOR DESIGN

For the degree of Bachelor of Science in Interior Design

The interior design curriculum is for those students wishing to work professionally in the field of interior design. Emphasis is on interior space planning and related phases of environmental design in reference to the human. Graduates are employed by interior design and space planning studios, department and retail furniture stores, and county cooperative extension and urban renewal resource offices.

The 120 credit hours required for graduation include 18 credit hours in professional interior design courses, 12 to 14 credit hours in other human resources and family studies courses, 28 credit hours in art, 40 to 42 credit hours in general liberal arts, and 18 to 22 credit hours in electives.

Prescribed Courses

HOURS

I.D. 160, 161, 260, 261, 262, 263; T.C. 183, and 6 hours from F.A.C.E. 361, 375; I.D. 366 or I.D. 378; and three courses from H.R.F.S. areas other than interior design, and equipment	30-32
Art 111, 112, 117, 118, 119, 120, 121, 122, 133, 134	28
Anthropology (cultural); Econ. 101; Math. 111 or 112; Psych. 100; Rhet. 105 or 108; Soc. 100; and Sp. Com. 101	27-29
Approved natural sciences ¹	8
Electives	23-27
Total required for graduation	120

¹ Students in this curriculum must complete a minimum of 8 hours natural sciences from the following: Biological sciences — Anth. 240, 247, 337, 340, 341, 344, 356, 396; any courses in biology, botany, entomology, microbiology, physiology; Psych. 211, 217, 311, 347; any courses from physiology and zoology. Physical sciences — all courses in astronomy, biochemistry, chemistry, geology, and physics; Geog. 102, 103, 303, 312, and 313; L.A.S. 140, 141, 142, 143, 197, and 198; all courses in mathematics except Math. 101, 104, 111, 112, 118, 119, 161, 202, 203, 305, 306, and 307.

Suggested Sequence of Prescribed Courses

Field trips are required. Estimated cost: \$30 each trip.

Two summers' experience, of a minimum of eight weeks each, or equivalent, in the interior design field is recommended and should be completed before registering in I.D. 378. This experience normally should come at the end of the second and third years.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
I.D. 160 — Residential Environments		3	T.C. 183 — Consumer Textiles	3
I.D. 161 — Introduction to Interior Design		2	Art 117 — Drawing I	3
Math, 111 — Algebra or Math. 112 —			Art 119 — Design I	3
College Algebra		3-5	Art 121 — Drawing Theory	2
Rhet. 105 or 108 — Composition		4	Sp. Com. 101 — Principles of Effective	
Psych. 100 — Introduction to Psychology		3	Speaking	3
Total		15-17	Restricted elective ¹	2-3
			Total	16-17
SECOND YEAR				
I.D. 260 — Interiors and Furniture, I		3	I.D. 261 — Interior Design, II	3
Art 118 — Drawing, II		3	I.D. 262 — Interior Design	3
Art 120 — Design, II		3	Art 133 — Design Workshop	2
Art 122 — Drawing Theory		2	Natural science	4
Natural science		4	Restricted elective ¹	2-3
Total		15	Total	14-15
THIRD YEAR				
I.D. 263 — Interior Design Studio:			Art 112 — Art History	4
Materials and Processes		3	Anth. (cultural)	4
Art 111 — Art History		4	Restricted I.D. elective ²	3
Art 134 — Design Workshop		2	Electives	4-5
Econ. 101 — Principles of Economics		4	Total	15-16
Elective		3		
Total		16		
FOURTH YEAR				
Soc. 100 — Introduction to Sociology		3	Restricted I.D. elective ²	3
Restricted elective ¹		2-3	Electives	12
Electives		9	Total	15
Total		14-15		

¹Minimum of three (100, 200, 300-level) courses in textiles and clothing, family and consumer economics, foods and nutrition, or human development and family ecology.

²To be chosen from I.D. 360, 361, 378, or F.A.C.E. 375.

CURRICULUM IN RESTAURANT MANAGEMENT

For the degree of Bachelor of Science in Restaurant Management

The curriculum in restaurant management prepares students (both men and women) for managerial positions in restaurants and other commercial food service units. It also gives them basic training for work as purchasing agents, kitchen equipment and layout specialists, food inspectors, and other allied occupations. A total of 126 hours of credit is required for graduation.

Two summers (a minimum of eight weeks each), or equivalent, of practical restaurant experience are required and must be completed before registering in F.N. 355. This experience normally should come at the end of the second and third years.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Humanities ²		3	Chem. 101 — General Chemistry ⁴	4
Math. 111 — Algebra, or Math. 112 —			Humanities ²	3
College Algebra ¹		3-5	Soc. 100 — Introduction to Sociology	3
Psych. 100 — Introduction to Psychology,			Sp. Com. 112 — Verbal Communication ³	3
or Psych. 103 — Introduction to			Elective	3
Experimental Psychology		3-4	Total	16
Sp. Com. 111 — Verbal Communication ³		3		
Elective		0-3		
Total		14-15		

SECOND YEAR

Accy. 101 — Principles of Accounting I	3	Accy. 105 — Principles of Accounting II	3
Chem. 102 — General Chemistry or		Physl. 103 — Introduction to	
Chem. 103 — General Chemistry:		Human Physiology	4
Organic Chemical Studies	4	Electives	9
Econ. 101 — Introduction to Economics	4	Total	16
F.N. 132 — Foods and Nutrition	3		
Elective	3		
Total	17		

THIRD YEAR

An. S. 109 — Meat Purchasing		B. Adm. 202 — Principles of Marketing	3
and Preparation ⁷	2	B. Adm. 210 — Management and	
Econ. 240 — Labor Problems	3	Organizational Behavior, or B. Adm.	
I.D. 160 — Residential Environments,		247 — Introduction to Management	3
or elective	3	F.N. 240 — Quantity Food Production	
F.N. 220 — Principles of Nutrition	3	and Service	5
F.N. 231 — Foods	3	Mcbio. 100 — Introductory Microbiology	3
Total	14-16	Mcbio. 101 — Introductory Experimental	
		Microbiology	2
		Total	16

FOURTH YEAR

An. S. 109 — Meat Purchasing		B. Adm. 261 — Summary of Business Law	3
and Preparation ⁵	2	B.&T.W. 251 — Business and	
B. Adm. 249 — Human Relations	3	Administrative Communication	3
I.D. 160 — Residential Environments,		F.N. 350 — Institution and Restaurant	
or elective	3	Management: Organization and	
F.N. 345 — Institution and Restaurant		Administration	4
Management: Food Purchasing and		F.N. 355 — Specialized Quantity Food	
Equipment Selection	3	Production and Management	3
Electives	4	Elective	3
Total	15	Total	16

¹ Students who make a satisfactory score on the Mathematics Placement Test are exempt from Math. 111 and 112.

² A minimum of 6 hours of approved humanities courses is required.

³ Rhet. 105 or 108, and Sp. Com. 101 may be taken instead of Sp. Com. 111 and 112.

⁴ Students who do not make a satisfactory score on the Chemistry Placement Test must take Chem. 100 and have Math. 111 or 112 or equivalent before Chem. 101.

⁵ An. S. 109, offered first semester in alternate years.

CURRICULUM IN VOCATIONAL HOME ECONOMICS EDUCATION

For the degree of Bachelor of Science in Home Economics Education

The purpose of this curriculum is to prepare students to teach home economics in secondary schools. A minimum of 126 semester hours is required for graduation. Work experience is strongly recommended. (For teacher education requirements applicable to all curricula, see pages 135 to 140.)

General Education

	HOURS
American government.....	3
Art 185 or an acceptable alternative.....	2
Art 186 ¹	2-0
Chem. 101.....	4
Chem. 102, or Chem. 103.....	4
Econ. 101.....	4
Humanities (6 hours from approved College of Agriculture list on page 153).....	6
Math, 111 or 112 (or exemption).....	5-3 or 0
Mcbio. 100, 101.....	5
Physical education and/or health education.....	3
Psych. 100 or 103.....	3
Rhet. 105 or 108 and Sp. Com. 101, 121, or 141 (or Sp. Com. 111 and 112).....	7-6
U.S. history.....	3-4
Total	43-52

¹ Required in human resources and family studies education areas I, IV, V only.

Professional Education

	HOURS
Ed. Pr. 242.....	8
Ed. Psy. 211.....	3
E.P.S. 201, 301, 302, 304, or 305.....	2-3
Vo. Tec. 101 and 240 for 2 hours each (or Vo. Tec. 240 for 4 hours).....	4
Se. Ed. 241.....	3
At least 3 hours from the following:.....	3
Ed. Pr. 150	
Vo. Tec. 278	
Vo. Tec. 249 or 349 ¹	
Vo. Tec. 199 or 399 ¹	
Minimum total	20-24

¹ Require advance approval by adviser.

Human Resources and Family Studies Courses

The student may choose one of the following six areas. For Area I (General) requirements include 44 or 45 hours of specific home economics courses. Areas II through VI are specialized programs which require at least 36, and not more than 45, hours¹ in home economics with at least 6 hours at the 300 level.

AREA I: GENERAL HOME ECONOMICS EDUCATION ²	HOURS
H.D.F.E. 105 — Introduction to Human Development.....	3
H.D.F.E. 106 — Observation and Analysis of Behavior, or H.D.F.E. 202 — Child Development Laboratory, or acceptable alternative.....	3
F.N. 132 — Foods and Nutrition.....	3
F.N. 133 — Food Management.....	2
I.D. 160 — Residential Environments.....	3
T.C. 183 — Consumer Textiles.....	3
T.C. 184 — Apparel Design and Selection.....	2
T.C. 186 — Clothing Laboratory — Tailoring.....	2
H.D.F.E. 210 — Family Relationships.....	3
F.N. 220 — Principles of Nutrition.....	3
F.N. 231 — Foods.....	3
F.A.C.E. 273 — Home Management Seminar.....	3
T.C. 286 — Clothing Design: Flat Pattern, and two additional courses from the following, at least one of which must be 300 level:.....	6-7
I.D. 260 — Interiors and Furniture I	

F.A.C.E. 270 — Management of Family Resources	
H.D.F.E. 301 — Advanced Problems in Home Guidance of Children	
F.N. 322 — Physical Growth and Nutrition	
F.N. 330 — Experimental Foods	
F.A.C.E. 361 — Development and Function of Family Housing	
F.A.C.E. 371 — The Family as a Consuming Unit	
F.A.C.E. 375 — Home Equipment	
T.C. 380 — Advanced Textiles	
T.C. 386 — Clothing Design: Draping	
Minimum total	44-45

¹ Unless hours applied for graduation exceed 126.

² At least 8 semester hours are required for authorization to teach specialized semester courses in any home economics area, e.g., to teach a semester course in child development for high school students would require 8 hours of preparation in child or human development.

AREA II: HUMAN DEVELOPMENT AND CHILD CARE OCCUPATIONS¹

Minimum of 12 hours in child and family, including basic courses in human development (e.g., H.D.F.E. 105 and 106) and in the family (e.g., H.D.F.E. 210)

Minimum of 6 hours in foods and nutrition (excluding courses designated for nonmajors)

Minimum of 6 hours in one of the following specializations:

Interior design

Home management, housing, family economics, and equipment

Textiles and clothing

H.R.F.S. electives, 12 to 21 hours (for minimum of 36 hours)

AREA III: FOODS AND NUTRITION AND FOOD SERVICE OCCUPATIONS¹

Foods and nutrition courses:

F.N. 132 — Foods and Nutrition

F.N. 133 — Food Management

F.N. 220 — Principles of Nutrition

F.N. 231 — Foods

F.N. 240 — Quantity Food Production and Service

At least one of the following:

F.N. 320 — Diet in Disease

F.N. 330 — Experimental Foods

F.N. 345 — Institution and Restaurant Management: Food Purchasing and Equipment Selection

F.N. 350 — Institution and Restaurant Management: Organization and Administration

A minimum of 6 hours each in two of the following specializations:

Child and family

Interior design

Home management, housing, family economics, and equipment

Textiles and clothing

H.R.F.S. electives, 7 to 15 hours (for minimum of 36 hours)

AREA IV: TEXTILES AND CLOTHING AND RELATED OCCUPATIONS¹

Minimum of 12 hours in textiles and clothing courses excluding T.C. 182

Minimum of 6 hours each in two of the following specializations:

Child and family

Interior design

Home management, housing, family economics, and equipment

Foods and nutrition

H.R.F.S. electives, 12 to 21 hours (for minimum of 36 hours)

AREA V: INTERIOR DESIGN, AND EQUIPMENT AND RELATED OCCUPATIONS¹

A minimum of 14 hours from the following:

I.D. 160 — Residential Environments

- T.C. 183 — Consumer Textiles
- I.D. 260 — Interiors and Furniture I
- I.D. 261 — Interiors and Furniture II
- I.D. 262 — Interior Design
- T.C. 280 — Household Textiles
- F.A.C.E. 361 — Development and Function of Family Housing
- F.A.C.E. 375 — Home Equipment
- I.D. 378 — Problems in Interior Design

A minimum of 6 hours each in two of the following specializations:

- Child and family
- Home management, housing, family economics, and equipment
- Foods and nutrition
- Textiles and clothing

H.R.F.S. electives, 10 to 19 hours (for minimum of 36 hours)

AREA VI: CONSUMER EDUCATION AND HOME MANAGEMENT¹

A minimum of 12 hours from the following:

- F.A.C.E. 270 — Management of Family Resources
- F.A.C.E. 273 — Home Management Seminar
- F.A.C.E. 313 — Economics of Consumption
- F.A.C.E. 370 — Family Economics
- F.A.C.E. 371 — The Family as a Consuming Unit
- F.A.C.E. 379 — Problems in Family and Consumption Economics

A minimum of 6 hours each in two of the following specializations:

- Child and family
- Interior design
- Foods and nutrition
- Textiles and clothing

Human Resources and Family Studies electives, 12 to 21 hours (for minimum total of 36 hours)

¹ At least 8 semester hours are required for authorization to teach specialized semester courses in any home economics area; e.g., to teach a semester course in child development for high school students would require 8 hours of preparation in child or human development.

College of Applied Life Studies

*University of Illinois at Urbana-Champaign
107 Huff Gymnasium
Champaign, IL 61820*

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The College of Applied Life Studies, first established as the School of Physical Education in 1932, became the College of Physical Education in 1957, and in 1974 became the College of Applied Life Studies which currently has three academic departments and two divisions: the Departments of Health and Safety Education, Leisure Studies, and Physical Education; and the Divisions of Campus Recreation and Rehabilitation-Education Services.

All departments offer the Bachelor of Science, Master of Science, and Doctor of Philosophy degrees. The Departments of Health and Safety Education and Physical Education offer opportunities for specialization in teaching. All departments provide opportunity for specialization in leadership, administration, research, and scholarship.

Any student may enroll in physical education activities courses. Credit earned may be counted toward graduation and included in the student's grade-point average at the discretion of his or her college. Students enrolled in teacher education programs are required to obtain a minimum of 3 semester hours credit in basic health and/or physical education activity courses. Students in the College of Applied Life Studies are required to obtain a minimum of 4 semester hours of credit in activity courses.

This college, in cooperation with the College of Agriculture, provides a statewide consultant service through the Office of Recreation and Park Resources to assist municipalities, agencies, and rural and urban groups in initiating new programs and developing existing recreation and park programs, facilities, and resources, including farm recreation enterprises.

DEPARTMENTS AND DIVISIONS

The Department of Health and Safety Education operates the Health and Safety Curriculum, Teaching, Research, and Resources Laboratory; and the Safety and Driver Education Laboratory.

The Department of Leisure Studies operates the Leisure Behavior Research Laboratory.

The Department of Physical Education operates the Biomechanics Laboratory, the Exercise Therapy Clinic, the Motor Behavior Laboratory, the Motor Learning and Development Laboratory, the Physical Fitness Research Laboratory, and the experimental Summer Sports Fitness Day-School for children.

The Division of Campus Recreation provides a wide and varied program of competitive and free-time recreational sports for students, faculty, and staff.

The Division of Rehabilitation-Education Services specializes in the needs of permanently, severely physically handicapped students including visually and hearing impaired. It offers medical services, physical therapy and functional training, prosthetics, counseling, services for the visually and hearing impaired, occupational therapy, recreation and athletics, and transportation services. It also coordinates all facilities on campus including housing for those with disabilities.

SPECIAL PROGRAMS

Leisure Studies in the British Isles

A semester abroad in the British Isles for approximately 16 semester hours of credit may be offered to students pursuing a major course of study in leisure studies. Students normally go abroad during the spring of their third year of course work.

Additional information about the program may be obtained from the Department of Leisure Studies, University of Illinois at Urbana-Champaign, 104 Huff Gymnasium, Champaign, IL 61820.

International Exchange Program in Germany

The College of Applied Life Studies offers juniors a two-semester program in physical education, health education, and recreation at the Deutsche Sporthochschule in Germany. Full credit is received for participation in the program and overall costs are slightly less than a year at a comparable U.S. institution. Interested students should contact the Department of Physical Education, University of Illinois at Urbana-Champaign, 155 Freer Gymnasium, Urbana, IL 61801.

HONORS PROGRAMS

Honors at Graduation

To graduate from the College of Applied Life Studies with highest honors a student must have attained a University of Illinois at Urbana-Champaign cumulative grade-point average no lower than 4.75 calculated on the basis of a minimum of 55 semester hours and must have satisfied the College of Applied Life Studies requirements for graduation as a James Scholar.

To graduate from the College of Applied Life Studies with high honors a student must have attained a University of Illinois at Urbana-Champaign cumulative grade-point average no lower than 4.5 calculated on the basis of a minimum of 55 semester hours.

To graduate from the College of Applied Life Studies with honors a student must have attained a University of Illinois at Urbana-Champaign cumulative grade-point average no lower than 4.25 and no greater than 4.499 calculated on the basis of a minimum of 55 semester hours.

James Scholar Program

Three criteria must be met for entrance into the James Scholar Program of the College of Applied Life Studies:

1. A minimum of a 4.25 cumulative grade-point average (GPA),
2. Positive recommendations by the student's adviser and one other faculty member concerning the ability of the student to enter into and maintain the scholarly productivity required of a James Scholar, and
3. Completion of a written statement by the applicant stating his or her desire to enter the program, interest in scholarly endeavors, and intention of involvement. The one-and-a-half to two-page typewritten statement may reflect previous experiences as well as future plans.

To graduate as a James Scholar a student must have:

1. Accrued a minimum of 24 semester hours of honors credit, at least 12 of which must be within the College of Applied Life Studies, and

2. Earned at least a 4.25 cumulative grade-point average on all work attempted at the University of Illinois at Urbana-Champaign.

Application forms and more information about this challenging course of study may be obtained from the Office of the Dean, 107 Huff Gymnasium, 333-2131.

Awards

Alpha Sigma Nu. Each year, Alpha Sigma Nu, physical education honorary, selects junior and senior men and women with a University of Illinois grade-point average of 4.0 or higher who are active participants in and have given outstanding service and leadership in physical education activities and organizations. Their names are inscribed on a plaque in Freer Gymnasium.

Charles K. Brightbill Memorial Award. An original-design engraved paperweight is presented annually to a senior in the curriculum in leisure studies. The recipient is selected by a faculty and student committee on the basis of scholarship, personality, leadership, and character.

John Bruce Capel Memorial Scholarship. A cash award is presented annually to a sophomore or junior student in the curriculum in leisure studies. The recipient is selected by a faculty and student committee on the basis of leadership, scholarship, personality, and character.

Eta Sigma Gamma. Tau Chapter of Eta Sigma Gamma, national health science honorary, annually presents a Gamman of the Year Award to the student member who has exemplified outstanding leadership and service in the organization and in health and safety activities.

Senior Award in Physical Education. The Physical Education Senior Honorary Award has been designed to honor those senior men and women who have exemplified outstanding contributions to the profession of physical education and who have evidenced personal and professional growth and commitment to scholarship during their tenure as undergraduate students.

GENERAL EDUCATION REQUIREMENTS

To graduate from the College of Applied Life Studies, a student must earn a minimum of 6 semester hours credit in each of the humanities, natural sciences, and social sciences, and a minimum of 4 semester hours credit in activity courses. Courses used to meet the first three requirements must be taken outside of the College of Applied Life Studies.

Humanities

The humanities are concerned with the appreciation of the life of humans: their ideas and values expressed in literature and language, art forms (music and painting), a past record of those ideas reflected by experiences and events (history), and an organization and ordering of thought and knowledge (philosophy). Six semester hours are required.

Natural Sciences

The natural sciences are concerned with the observation, identification, description, experimental investigation, and theoretical explanation of natural phenomena that deal with matter, energy, and their interrelations. Disciplines include, but are not limited to, biology, chemistry, physics, and zoology. Six semester hours are required.

Social Sciences

The social sciences are concerned with the orderly investigation of individual and group behavior. Disciplines include, but are not limited to, anthropology, political science, psychology, and sociology. Six semester hours are required.

Activity Courses

Activity courses are those 100-level laboratory courses whose primary focus is the practical, rather than the theoretical, aspects of the subject matter. Laboratory courses in the natural sciences are excluded. Four semester hours are required.

SUPERVISED FIELD EXPERIENCES

Effective professional practice is influenced not only by academic proficiency but also by the personal characteristics and health of the prospective practitioner. Recognizing the importance of these personal factors, counseling and medical services are available for all students in the College of Applied Life Studies. Since it is essential that counseling and medical services be offered as soon as the need becomes apparent, College of Applied Life Studies advisers and faculty are asked to participate in this effort. Staff members are invited to recommend for assistance or examination any student about whom concern is felt. Students who are recommended for assistance or examination will receive a written request to make an appointment to discuss matters in which a counselor or physician may be of assistance. Students who receive a letter of this nature must respond to the request as a requirement of the supervised field experience. Failure to respond will jeopardize the continuation of students in the supervised field experience. During the appointment students will be informed of the services available on this campus. The use of these services will usually be optional. In exceptional cases, however, students may be required to satisfactorily complete a mental health or physical examination with one of the campus services. Such referrals are mandatory for students who wish to continue in the supervised field experience.

Curricula

CURRICULUM IN HEALTH AND SAFETY EDUCATION

For the degree of Bachelor of Science in Health and Safety Education

The Department of Health and Safety Education offers a bachelor's degree in three options: community health education, public safety education, and school health and safety education. While all options require 128 hours for graduation, each is individualized to its own specialty.

Students selecting the community health education or public safety education option are required to take a fieldwork course during their junior or senior year. The college statement on supervised field experience applies to all students participating in the fieldwork courses. Students selecting the school health and safety education option must meet teacher education requirements including extensive practicum in teacher observation and student teaching.

For teacher education requirements applicable to all curricula see pages 135 to 140.

New emphasis in public health care on the part of governments at all levels has made a community health education background highly desirable. Federal legislation has increased the demand for students qualified in public safety education.

New laws in Illinois have opened the employment horizons in school health and safety areas. For further information on some of the fastest growing fields in the nation, contact the Department of Health and Safety Education, University of Illinois at Urbana-Champaign, 121 Huff Gymnasium, Champaign, IL 61820.

General Education Requirements

Humanities ¹	HOURS
Electives	6

Communication Arts

Rhet. 105 or 108 (4) and Sp. Com. 101 (3) or 113 (3).....	7
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Mathematics²

College algebra — Math. 111 (5) or 112 (3).....	3-5
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¹ See college definitions on page 205.

² May be satisfied by appropriate score on Mathematics Placement Test.

Natural Sciences

Chemistry	4
Human Anatomy.....	5
Human Genetics.....	3
Microbiology	3
Introduction to Human Physiology.....	4
Total	19

Social Sciences

Introductory Sociology.....	3
Introductory Psychology.....	3
Cultural Anthropology.....	4
Statistics or Measurement.....	3
Total	13

PHYSICAL EDUCATION ACTIVITY COURSES.....	4
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Total	52-54
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Professional Core Requirements

H. Ed. 110 — Public Health.....	3
H. Ed. 150 — Health and Modern Life.....	3
H. Ed. 200 — Mental Health.....	2
H. Ed. 281 — First Aid.....	2
H. Ed. 282 — Organization of School Health Programs.....	3
H. Ed. 288 — Curriculum Development and Evaluation in Health Education.....	3
H. Ed. 283 — Man and His Diseases or H. Ed. 374 — General Epidemiology.....	2-4
H. Ed. 390 — Public Health Education.....	3
S. Ed. 280 — General Safety Education.....	3
Total	24-26

Areas of Concentration

Each student will declare an area of concentration within health and safety education no later than the first semester of the junior year. The areas of concentration are: community health education, public safety education, and school health and safety education. See specifics below:

COMMUNITY HEALTH EDUCATION**HOURS**

H. Ed. 206 — Sex Education.....	2
H. Ed. 289 — Community Health Education Internship.....	8
H. Ed. 391 — Health Data Analysis.....	2
H. Ed. 393 — Drug Abuse Education.....	2
F.N. 120 — Contemporary Nutrition.....	3
Total	17

PUBLIC SAFETY EDUCATION

S. Ed. 289 — Safety Education Internship.....	4
Sp. Com. 211 — Business and Professional Speaking.....	2
B.&T.W. 251 — Business and Technical Writing or B.&T.W. 272 — Report Writing.....	3
B. Adm. 247 — Introduction to Management.....	3
C.S. 106 — Introduction to Computers.....	3
I.E. 305 — Principles of Ergonomics.....	4
Total	19

SCHOOL HEALTH AND SAFETY EDUCATION

H. Ed. 285 — Sex Education for Teachers.....	4
H. Ed. 393 — Drug Abuse Education.....	3
F.N. 120 — Contemporary Nutrition.....	3
Total	10

Correlate Areas

Each student will select a correlate area which is a planned program of courses taken outside the department designed to be supportive of the area of concentration. The correlate area may serve as a minor field of study, may satisfy teacher education requirements, or may prepare the student for advanced study. See specifics below:

CORRELATE AREA #1 (Community Health Education)**HOURS**

Select a minimum of 6 hours from the departmentally approved list of courses related to communication.....	6
Select a minimum of 3 hours from the departmentally approved list of courses related to health care delivery.....	3
Select a minimum of 3 hours from the departmentally approved list of courses related to organization and leadership.....	3
Select a minimum of 3 hours from the departmentally approved list of courses related to community problems.....	3-4
Total	15-16

CORRELATE AREA #2 (Industrial Safety)

Psych. 245 — Industrial Organizational Psychology.....	3
Psych. 258 — Human Factors in Man-Machine Systems.....	3
I.E. 357 — Safety Engineering.....	3
G.E. 105 — Elements of Drawing.....	3
Avi. 355 — Aviation Safety Augmentation.....	3
Total	15

CORRELATE AREA #3 (Teacher Certification 6-12)

E.P.S. 201, 300, 301, 302, or 304 — Educational Policy Studies.....	2-3
Ed. Psy. 211 — Educational Psychology.....	3
Ed. Psy. 240 — Principles of Secondary Education.....	2
Se. Ed./H. Ed. 241 — Techniques of Teaching in the Secondary School.....	3
H. Ed. 233 — Observation and Participation in Health Education.....	3

Ed. Pr. 242 — Educational Practice in the Secondary Schools.....	8
Pol. S. 150 — American Government.....	3
Total	24-25

CORRELATE AREA #4 (Traffic Safety)

S. Ed. 284 — Driver Education.....	3
S. Ed. 294 — Advanced Traffic Safety.....	3
S. Ed. 384 — Simulated Teaching Systems for Traffic Safety.....	3
S. Ed. 385 — Psychology of Traffic Safety.....	4
C.E. 325 — Highway Traffic Characteristics.....	3
Total	16

TEACHER EDUCATION MINOR IN HEALTH EDUCATION

This program is designed for students enrolled in a teacher education curriculum other than in the Department of Health and Safety Education.

HOURS

H. Ed. 110 — Public Health.....	2
H. Ed. 150 — Health and Modern Life.....	3
H. Ed. 281 — First Aid.....	2
H. Ed. 282 — Organization of School Health Programs.....	3
H. Ed. 285 — Sex Education for Teachers.....	4
H. Ed. 288 — Curriculum Development and Evaluation in Health Education.....	3
H. Ed. 393 — Drug Abuse Education.....	2
Electives in health and/or safety education.....	2-3
Total	21-22

TEACHER EDUCATION MINOR IN DRIVER EDUCATION

This program is designed for students enrolled in a teacher education curriculum other than in the Department of Health and Safety Education.

HOURS

S. Ed. 280 — Safety Education.....	3
S. Ed. 284 — Driver Education.....	3
S. Ed. 294 — Instructional Methods in Driver Education.....	4
S. Ed. 385 — Psychology of Traffic Safety: Study of the Accident Process and Driver Controls	4
H. Ed. 281 — First Aid.....	2
Electives in health education or safety education.....	2
Total	18

CURRICULUM IN LEISURE STUDIES

For the degree of Bachelor of Science in Leisure Studies

The curriculum in leisure studies prepares students to design, manage, and deliver leisure services to a variety of populations through diverse agency settings. A broad general education is emphasized and complemented with a core of professional courses. Students may select from one of three options:

1. Outdoor recreation planning and management for students desiring to work in national and state park departments,
2. Program management, which prepares students to manage leisure programs in public or private agencies, and
3. Therapeutic recreation for students desiring to design and deliver leisure programs to disabled populations.

All options require 126 credit hours for graduation and the completion of the Professional Laboratory Experience Program.

Professional Laboratory Experience Program

All students in the Department of Leisure Studies must satisfactorily complete the Professional Laboratory Experience Program prior to graduation. The program is designed to augment formal classroom instruction with active experiential learning under the guidance of an agency-based supervisor. The program consists of two classes: Leist. 280 — Orientation to Practicum, and Leist. 284 — Leisure Studies Practicum.

Students must have achieved junior standing to enroll in the Professional Laboratory Experience Program, have a minimum cumulative grade-point average of 3.00, and be in good standing with the University. Depending on the option selected by the student, other specific course prerequisites may need to be fulfilled prior to being accepted into the Professional Laboratory Experience Program. The college statement on supervised field experience applies to all students participating in the Professional Laboratory Experience Program.

COURSES

Students should register for Leist. 280 — Orientation to Practicum after achieving junior standing. As a part of this course, students must document that they have completed a minimum of 320 hours of actual fieldwork experience in a leisure service agency in a face-to-face service delivery capacity. During this course, students will make final arrangements for completing Leist. 284 — Leisure Studies Practicum.

The practicum may be taken only after the student has achieved senior standing (90 completed semester hours), satisfactorily completed Leist. 280, and fulfilled other option prerequisites. The professional field practicum is designed to give the student guided professional experience prior to graduation. Leist. 284 can only be taken in agencies which have been approved and contracted for this program. The practicum includes a minimum of 640 clock hours of experience in a nonpaid, internship type of position. No more than 40 hours per week may be applied to this total.

The last day for a student to apply for placement into a practicum for an academic semester is Friday of the third week of the preceding academic semester. Students will be cleared for placement by their academic adviser and must then make application to the coordinator of the Professional Laboratory Experience Program for a practicum assignment.

Students who are on academic or disciplinary probation or who are on dropped status are not eligible for completing a practicum during the semester in which the probationary or dropped status is in effect and are not permitted to engage in practicum activities.

Students should anticipate and plan for off-campus assignments during the semester in which they will be taking their practicum. Only a limited number of assignments for practicums are available in the vicinity of campus. It is not currently possible to arrange local assignments for all whose need would justify such an assignment. For most students, an additional expense will be incurred during the semester in which the practicum is taken.

General Education Requirements

VERBAL COMMUNICATION

HOURS

Sp. Com. 101 — Principles of Effective Speaking, or Sp. Com. 113 — Group Discussion and Conference Leadership.....	3
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WRITTEN COMMUNICATION

Rhet. 105 — Principles of Composition, or Rhet. 108 — Forms of Composition.....	4
Rhet. 133 — Principles of Composition, or Rhet. 143 — Intermediate Expository Writing.....	3

ACCOUNTING OR ECONOMICS OR MATHEMATICS OR STATISTICS.....	3
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ACTIVITY COURSES¹.....	4
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NATURAL SCIENCE¹

Students in the Therapeutic Recreation Option must select Physl. 103 and Physl. 234....	8-9
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SOCIAL SCIENCE¹

Students in the Therapeutic Recreation Option and Program Management Option must select Psych. 100, 103, or 105 and additional social science electives.....	15
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HUMANITIES¹

F.A.A. 250 — Arts and Leisure.....	3
Humanities electives.....	8
Total	51-52

¹ See college definitions on page 205.

Professional Core Requirements**HOURS**

Leist. 100 — Introduction to Leisure Studies.....	3
Leist. 110 — Foundations for Delivery of Leisure Services.....	2
Leist. 130 — Introduction to Therapeutic Recreation.....	2
Leist. 210 — Theories and Methods of Supervision.....	3
Leist. 280 — Orientation to Practicum.....	0
Leist. 284 — Leisure Studies Practicum.....	12
Leist. 290 — Research in Leisure Studies.....	3
Leist. 310 — Introduction to Administration.....	3
Total	28

Areas of Concentration**OUTDOOR RECREATION PLANNING AND MANAGEMENT OPTION****HOURS**

General Education Requirements.....	51-52
Professional Core Requirements.....	28
Area of Concentration	
Leist. 140 — Principles of Camping.....	3
Leist. 141 — Introduction to Outdoor Education and Recreation.....	2
Leist. 320 — Park Management.....	3
Leist. 321 — Recreational Use of Public Lands.....	3
Electives	3
Total	14
Correlate Area #1.....	12
Electives	20-21
Total required hours.....	126

PROGRAM MANAGEMENT OPTION**HOURS**

General Education Requirements.....	51-52
Professional Core Requirements.....	28
Area of Concentration	
Leist. 200 — Leadership in Leisure Delivery Systems.....	3

Leist. 215 — Recreation Program Development.....	3
Leist. 274 — Urban Leisure Systems.....	3
Leist. 315 — Play Theories and Their Implications (2-4).....	3
Leist. 332 — Program Design and Evaluation in Therapeutic Recreation.....	3
Total	15
Correlate Area #2.....	12
Electives	19-20
Total required hours.....	126

THERAPEUTIC RECREATION OPTION**HOURS**

General Education Requirements.....	51-52
Professional Core Requirements.....	28
Area of Concentration	
Leist. 230 — Clinical Aspects of Therapeutic Recreation.....	2
Leist. 232 — Principles of Therapeutic Recreation.....	3
Leist. 331 — Leisure Counseling.....	3
Leist. 332 — Program Design and Evaluation in Therapeutic Recreation.....	3
Select ONE of the following courses:.....	3
Leist. 231 — Leisure and the Aging	
Leist. 233 — Recreation for the Physically Disabled	
Leist. 234 — Recreation for the Mentally Ill and Emotionally Disturbed	
Leist. 235 — Recreation for the Developmentally Disabled	
Total	14
Correlate Area #3.....	14
Electives	18-19
Total required hours.....	126

Correlate Areas

Correlate areas are planned programs of courses taken outside of the department which are designed to support the student's area of concentration.

CORRELATE AREA #1 (Outdoor Recreation Planning and Management Option)		HOURS
L.A. 226 — Principles of Park Design.....		2
For. 301 — Forest Recreation.....		2
Geog. 214 — Conservation of Natural Resources.....		3
To be selected with adviser.....		5
Total		12

CORRELATE AREA #2 (Program Management Option)

H. Ed. 281 — First Aid.....		2
L.A. 226 — Principles of Park Design.....		2
For. 301 — Forest Recreation.....		2
To be selected with adviser from a list of courses approved by the department.....		6
Total		12

CORRELATE AREA #3 (Therapeutic Recreation Option)

H. Ed. 281 — First Aid.....		2
Sp. Ed. 117 — Exceptional Children.....		3
P.E. 355 — Kinesiology.....		3
Psych. 216 — Child Psychology.....		3
Psych. 238 — Abnormal Psychology.....		3
Total		14

Minor in Leisure Studies for Non-Leisure Studies Majors**HOURS**

Leist. 100 — Introduction to Leisure Studies.....	3
Leist. 110 — Foundations for Delivery of Leisure Services.....	2

Leist. 200 — Leadership in Leisure Delivery Systems.....	3
Leist. 215 — Recreation Program Development.....	3
Leist. 210 — Theories and Methods of Supervision.....	3
Any two of the following:	
Leist. 140 — Principles of Camping.....	3
Leist. 130 — Introduction to Therapeutic Recreation.....	2
L.A. 226 — Principles of Park Design.....	2
Leist. 141 — Introduction to Outdoor Education and Recreation.....	2
Total	18-19

CURRICULUM IN PHYSICAL EDUCATION

For the degree of Bachelor of Science in Physical Education

This curriculum is designed to allow students to develop a course of studies, in consultation with an adviser, that would prepare them for professional work in either public or nonpublic agencies. In addition, this major provides a foundation for graduate study in physical education. The 128 hours required for graduation include prescribed courses for all students as well as requirements determined by the various areas of concentration and electives selected by the student. The first two years of this curriculum provide a foundation for the various areas of concentration as well as allowing for some variation according to the interests of individual students. The courses for the third and fourth year are largely determined by the area of concentration selected. Students who desire teacher certification can satisfy the necessary requirements by appropriate selection of courses within the major and correlate areas. For teacher education requirements applicable to all curricula see pages 135 to 140.

General Education Requirements for all Students

COMMUNICATION ARTS	HOURS
Sp. Com. 111 and 112, or Rhet. 105 or 108 and a speech performance elective.....	6-7
Communication arts elective.....	2-3
Total	8-10
HUMANITIES¹	
History of the United States.....	4
Electives	2
Total	6
MATHEMATICS²	
College algebra — Math. 111 or 112.....	3-5
NATURAL SCIENCES¹	
Introduction to Human Physiology.....	4
Human Anatomy.....	5
Total	9
SOCIAL SCIENCES¹	
General Psychology.....	3
American Government (state and federal constitutions).....	3
Electives	3
Total	9

ELECTIVES

Must be selected from the five areas listed above or foreign languages.....	18-22
Total	57

¹ See college definitions on page 205.

² May be satisfied by appropriate score on Mathematics Placement Test.

Professional Core Requirements for All Students**HOURS**

P.E. 239 — Performance and Analysis of Physical Activities.....	3
P.E. 240 — Social Scientific Bases of Sport.....	3
P.E. 250 — Bioscientific Foundations of Human Movement.....	3
P.E. 260 — Physical Education as a Profession.....	2
P.E. 270 — Principles of Evaluation and Assessment.....	3
Select one course from the supervised experiences sequence (P.E. 285, 286, 287).....	3
Select two courses from the physical education activities sequence (P.E. 100-110).....	2
Total	19

Areas of Concentration

Each student will declare an area of concentration within physical education no later than the first semester of the junior year. The areas of concentration are as follows: bioscience, motor development, motor performance and sport, and social science of sport. See specifics below.

BIOSCIENCE¹

Select 9 to 10 hours from the following.....	9-10
P.E. 352 — Physiology of Physical Activity (3)	
P.E. 354 — Growth and Physical Development of Children (3)	
P.E. 355 — Kinesiology (3)	
P.E. 357 — Motor Learning (4)	
Select 7 to 9 hours from bioscience courses (see department list) numbered 239 and above (including P.E. 352, 354, 355, 357 if not already selected).....	7-9
Select 2 to 4 hours of activities appropriate to bioscience from the physical education activities sequence.....	2-4
Total	20

MOTOR DEVELOPMENT

P.E. 262 — Motor Development in Childhood.....	3
Select 9 hours from the following.....	9
P.E. 282 — Psychology of Learning and Teaching P.E. (3)	
P.E. 349 — Analysis of Small Groups in Play and Sport (3)	
P.E. 354 — Growth and Physical Development of Children (3)	
P.E. 355 — Kinesiology (3)	
Select 4 hours of activities appropriate to motor development from the physical education activities sequence.....	4
Select 4 hours from courses numbered P.E. 239 and above.....	4
It is strongly recommended that the following courses be selected:	
P.E. 263 (2)	
P.E. 273 (1)	
Total	20

MOTOR PERFORMANCE AND SPORT

Select 3 hours from the instructional strategies sequence.....	3
Select 9 hours from the following.....	9
P.E. 249 — Sport in Modern Society (3)	
P.E. 282 — Psychology of Learning and Teaching Physical Education (3)	

P.E. 352 — Physiology of Physical Activity (3)	
P.E. 355 — Kinesiology (3)	
Select 4 hours of activities at intermediate level or above appropriate to motor performance and sport ²	4
Select 4 hours from courses numbered P.E. 239 and above.....	4
Total	20

SOCIAL SCIENCE OF SPORT

P.E. 352 — Physiology of Physical Activity (3) or P.E. 355 — Kinesiology (3).....	3
P.E. 282 — Psychology of Learning and Teaching Physical Education (3) or P.E. 296 — Theory of Coaching (2).....	2-3
Select 11 hours from the following.....	11
P.E. 241 — History of Sport (3)	
P.E. 249 — Sport in Modern Society (3)	
P.E. 341 — International Physical Education and Sport (2)	
P.E. 348 — Social Problems Related to Physical Activity and Sport (2)	
P.E. 349 — Analysis of Small Groups in Play and Sport (2 or 4)	
P.E. 357 — Motor Learning (4)	
Select 3 or 4 hours of activity courses at the intermediate level or above ²	3-4
Total	20

¹ Students electing the bioscience area of concentration must elect correlate area #4 or #5.

² Students must demonstrate proficiency at the intermediate level in two of the following activity areas: aquatics, dance, gymnastics, individual and dual sports, team sports.

Correlate Areas

Each student will select a correlate area which is a planned program of courses taken outside the department designed to be supportive of the area of concentration. The correlate area may serve as a minor field of study, may satisfy teacher education requirements, or may prepare the student for advanced study. See specifics below.

CORRELATE AREA #1 (TEACHER CERTIFICATION K-12) ³	HOURS
E.P.S. 201 — Foundations of American Education.....	3
Ed. Psy. 236 — Child Development for Elementary Teachers or Ed. Psy. 211 ⁴ Educational Psychology.....	3
El. Ed. 233 — Classroom Programs in Childhood Education or Se. Ed. 240 ⁴ Principles of Secondary School.....	2
Se. Ed. 241 — Technic of Teaching in the Secondary School.....	3
Ed. Pr. 238 — Educational Practice for Special Fields in Elementary Schools.....	5
Ed. Pr. 242 — Educational Practice in Secondary Education.....	5
Total	21

CORRELATE AREA #2 (TEACHER CERTIFICATION 6-12) ³	HOURS
E.P.S. 201 — Foundations of American Education.....	3
Ed. Psy. 211 — Educational Psychology.....	3
Se. Ed. 240 — Principles of Secondary Education.....	2
Se. Ed. 241 — Technic of Teaching in the Secondary School.....	3
Ed. Pr. 242 — Educational Practice in the Secondary School.....	8
Total	19

CORRELATE AREA #3	HOURS
Select one course from growth and development.....	3-4
(Psych. 216, Psych. 217, Human Econ. 203)	
Select one course from biological bases.....	3
(Anth. 143, Psych. 230, Psych. 248)	

Select one course from research bases.....	3-4
(Econ. 171, Math. 161, Psych. 235, C.S. 101, C.S. 201)	
Remaining hours to be selected according to individual student needs and interests.....	7-9
Total	18

CORRELATE AREA #4

Any minor field of study appropriate to area of concentration.....	18
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CORRELATE AREA #5

Select one area from the physical bases in science (students should take placement tests in chemistry, mathematics, and physics).....	5-11
Chemistry (inorganic and organic)	
Mathematics (college algebra and trigonometry)	
Physics (mechanics and electricity)	
Select one course from history-philosophy of science.....	3-4
[Examples: Hist. 247 (3), 248 (3);	
L.A.S. 140 (4), 197 (4), 198 (4);	
Phil. 270 (3), 330 (3), 332 (3).]	
Select one course from statistics.....	3-4
[Examples: Ed. Psy. 390 (3);	
Math. 161 (3); Psych. 235 (4), 306 (4).]	
Remaining hours selected from suggested courses outside the Department of Physical Education	0-7
Total	18

³ Any student desiring to be certified to teach in the public schools must select either the motor development or the motor performance and sport area of concentration.

⁴ Any student desiring to teach at the secondary level with the K-12 certification may elect Ed. Psy. 211 in place of Ed. Psy. 236, and Se. Ed. 240 in place of El. Ed. 233.

TEACHER EDUCATION MINOR IN PHYSICAL EDUCATION

This program is designed for students enrolled in a teacher education curriculum other than in the Department of Physical Education.

REQUIRED COURSES**HOURS**

P.E. 250 — Bioscientific Foundations of Human Movement.....	3
P.E. 265 — Analysis of Physical Fitness Programs.....	2
P.E. 267 — Adapted Physical Education.....	3
P.E. 269 — Physical Education for Children.....	3
P.E. 273 — Instructional Strategies in Physical Education.....	1
P.E. 277 — Instructional Strategies in Small Group Activities.....	2
P.E. 278 — Instructional Strategies in Large Group Activities.....	2
P.E. 282 — Psychology of Learning and Teaching Physical Education.....	3
P.E. 100 — P.E. 110 Physical Education Activity Courses	
Select at least one course from each of the three areas below:	
Dance and/or Rhythmic Activities	
Individual-Dual Activities	
Team Sports	
Total	5
Total	24

Institute of Aviation

*University of Illinois at Urbana-Champaign
Willard Airport
Savoy, IL 61874*

ADMISSION REQUIREMENTS	220
CURRICULA	220

The Institute of Aviation is responsible for promotion and correlation of education and research activities related to aviation in the University. Its director has the advice and assistance of an executive committee. The institute holds Federal Aviation Administration (FAA) Airman Examining (Pilot) Agency Certificate Number 1, which permits it to issue pilot certificates and ratings to its graduates on behalf of the FAA. Pilot training includes training from the private pilot level to the airline transport pilot.

A two-year aircraft maintenance curriculum prepares students for the FAA mechanic certificate with airframe and powerplant ratings. An avionics curriculum, with the first year at Parkland College and the second at the Institute of Aviation, is also available.

The student who wishes to become a professional pilot may elect the combined maintenance-flight program which permits substitution of flight courses for specified maintenance courses in each semester of the aircraft maintenance curriculum, permitting the student to work toward the commercial certificate.

Normally new freshmen are accepted for admission only in August. However, an aspiring professional pilot may begin in the spring semester. Intra-University transfer to the Institute of Aviation may be accomplished as space permits.

Graduating institute students may transfer to any degree-granting division of the University to complete requirements for a degree in that division, usually requiring a minimum of two and one-half additional years. A non-Institute of Aviation student may elect flight courses with the permission of his or her department, to the extent that space in institute courses is available.

Special fees ranging from \$300 to \$1,200 are charged for a course involving flight training in addition to the estimated costs listed in table 2 on page 73.

The institute's Aviation Research Laboratory conducts interdisciplinary research in many areas related to flight problems. The laboratory head for research holds joint professorship in the Department of Aeronautical and Astronautical Engineering, permitting graduate students in various departments to perform research activities as graduate research assistants.

The institute manages Willard Airport, located six miles southwest of the Urbana-Champaign campus. The airport provides the University and the community with excellent air transportation facilities.

ADMISSION REQUIREMENTS

Applicants must meet general University requirements as well as those specified by the Institute of Aviation listed in the Admissions Chart on page 37. Additional units in physics, mathematics, and social sciences are recommended.

Anyone who does not have the subjects required for admission to the institute may request special review of his application by the Office of Admissions and Records, University of Illinois at Urbana-Champaign, 177 Administration Building, Urbana, IL 61801.

Courses offered by the Institute of Aviation are open to students, faculty, and staff in all departments of the University, subject to limitations imposed by the availability of space and equipment.

Curricula

AIRCRAFT MAINTENANCE CURRICULUM

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Avi. 142 — Powerplant Theory		4	Avi. 147 — Introduction to Federal Aviation Regulations	3
Avi. 143 — Aircraft Materials and Processes I		2	Avi. 152 — Aircraft Powerplant Electrical Systems	4
Avi. 144 — Powerplant Theory Laboratory		2	Avi. 153 — Aircraft Materials and Processes II	2
Avi. 145 — Aircraft Physics		3	Avi. 155 — Aircraft Mathematics	3
Avi. 154 — Powerplant Systems II		3	Avi. 156 — Powerplant Systems III	3
Rhet. 105 — Principles of Composition or Rhet. 108 — Forms of Composition		4	G.E. 105 — Elements of Drawing	3
Total		18	Total	18
SECOND YEAR				
Avi. 163 — Aircraft Materials and Processes III		3	Avi. 157 — Powerplant Conditioning and Testing	7
Avi. 165 — Aircraft Fabricating Processes I		4	Avi. 159 — Powerplant Inspection and Regulations	3
Avi. 167 — Aircraft Fabricating Processes II		2	Avi. 172 — Aircraft Systems III	3
Avi. 169 — Aircraft Systems I		4	Avi. 174 — Aircraft Assembly and Inspection	5
Avi. 170 — Aircraft Systems II		5	Total	18
Total		18		

COMBINED FLIGHT-MAINTENANCE CURRICULUM¹

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Avi. 101 — Private Pilot I		3	Avi. 120 — Private Pilot II	3
Avi. 142 — Powerplant Theory		4	Avi. 147 — Introduction to Federal Aviation Regulations	3
Avi. 143 — Aircraft Materials and Processes I		2	Avi. 152 — Aircraft Powerplant Electrical Systems	4
Avi. 144 — Powerplant Theory Laboratory		2	Avi. 153 — Aircraft Materials and Processes II	2
Avi. 145 — Aircraft Physics		3	Avi. 155 — Aircraft Mathematics	3
Rhet. 105 — Principles of Composition or Rhet. 108 — Forms of Composition		4	Avi. 156 — Powerplant Systems III	3
Total		18	Total	18

FIRST SUMMER¹

Avi. 157 — Powerplant Conditioning and Testing	7
Avi. 159 — Powerplant Inspection and Regulation	3
Total	10

SECOND YEAR

Avi. 130 — Commercial-Instrument I	3
Avi. 154 — Powerplant Systems II	3
Avi. 163 — Aircraft Materials and Processes III	3
Avi. 165 — Aircraft Fabricating Processes I	4
Avi. 167 — Aircraft Fabricating Processes II	2
Total	15

Avi. 140 — Commercial-Instrument II	3
Avi. 169 — Aircraft Systems I	4
Avi. 170 — Aircraft Systems II	5
G.E. 105 — Elements of Drawing	3
Total	15

SECOND SUMMER²

Avi. 172 — Aircraft Systems III	3
Avi. 174 — Aircraft Assembly and Inspection	5
Total	8

¹ Students register in aircraft maintenance curriculum.

² Students who prefer not to attend summer sessions may extend their maintenance and flight training into the third year, electing other subjects as they desire to complete a normal class-hour load.

PROFESSIONAL PILOT CURRICULUM

FIRST YEAR	FIRST SEMESTER	HOURS
Avi. 101 — Private Pilot I		3
Biol. 100 — Biological Science ¹		4
Hist. 111 — History of Western Civilization to 1815, or Hist. 151 — History of the United States to 1877 ²		4
Sp. Com. 111 — Verbal Communication ..		3
Free elective		3
Total		17

SECOND SEMESTER	HOURS
Avi. 120 — Private Pilot II	3
Biol. 103 — Biological Science ¹	4
Hist. 112 — History of Western Civilization, 1815 to the Present, or Hist. 152 — History of the United States, 1877 to the Present ²	4
Sp. Com. 112 — Verbal Communication ..	3
Free elective	3
Total	17

SECOND YEAR

Avi. 130 — Commercial-Instrument I	3
L.A.S. 140 — Thought and Structure in Physical Science ¹	4
Humanities elective ³	3
Free electives	6
Total	16

Avi. 140 — Commercial-Instrument II	3
L.A.S. 141 — The Physical Universe ¹	4
Humanities elective ³	3
Free electives	6
Total	16

¹ L.A.S. 140 and 141 may precede Biol. 100 and 101 at the student's discretion.

² Hist. 111 and 112, or Hist. 151 and 152 should be chosen.

³ Humanities electives should be chosen to comply with University general education requirements.

AVIONICS**FIRST YEAR (PARKLAND)****SUMMER HOURS**

Elt. 150 — Introduction2

Elt. 171 — Basic Electronics Circuits3

Total5

FIRST SEMESTER HOURS

Elt. 151 — Network Analysis I3

Elt. 291 — Electronic Amplifiers

and Devices5

Mat. 135 — Technical Mathematics II3

Eng. 100 — Composition Workshop or

Eng. 101 — Composition I3

Total14

SECOND SEMESTER HOURS

Elt. 173 — Digital Electronics3

Elt. 175 — Systems Maintenance4

Elt. 178 — Radio Transmitting Systems ...4

Avi. 100 — Introduction to Aviation3

Eng. 102 — Composition II or

Spe. 101 — Introductory Speech

Communication3

Total17

SECOND YEAR (INSTITUTE OF AVIATION)**FIRST SEMESTER HOURS**

Avi. 165 — Aircraft Fabricating Processes ..4

Avi. 181 — Aircraft Communication

Systems5

Avi. 182 — Aircraft Navigation Systems ..5

Avi. 183 — Aircraft Pulse Systems5

Total19

SECOND SEMESTER HOURS

Avi. 170 — Aircraft Systems II5

Avi. 185 — Aircraft Flight Control

Systems5

Avi. 290 — Advanced Topics in Avionics ..4

Total14

College of Commerce and Business Administration

*University of Illinois at Urbana-Champaign
214 David Kinley Hall
Urbana, IL 61801*

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The purpose of the College of Commerce and Business Administration is to provide educational experience that will help students develop their potentialities for leadership and service in business, in government, and in teaching and research. The undergraduate curricula provide a study of the basic aspects of business and preparation for careers in fields such as accounting, business management, banking, insurance, and marketing. Students should, however, expect to serve an apprenticeship in the fields they enter if they aspire to higher positions.

The curricula, leading to the Bachelor of Science degree in one of the various degree programs in business and economics, are based on four years of college work. Students are required to elect courses in other colleges of the University including mathematics, rhetoric, literature, speech, and social sciences and to secure as liberal an education as possible to avoid the narrowing effects of overspecialization. Through a cooperative arrangement with the College of Liberal Arts and Sciences students in that college may major in economics or finance.

The college offers graduate and professional programs to students with a bachelor's degree in one of the areas of business and economics, or in a nonbusiness area such as liberal arts, science, or engineering. Detailed information on graduate programs may be obtained from the Graduate College.

DEPARTMENTS AND CURRICULA

Undergraduate instruction in the College of Commerce and Business Administration is organized under the Departments of Accountancy, Business Administration, Economics, and Finance. Each of these departments offers courses that provide a field of concentration a student may elect. These curricula lead to Bachelor of Science degrees in one of the various fields of study in the college and are designed to encourage each student to fully develop his or her intellectual capacity. Each curriculum introduces the students to each major subject area in the college and provides them with the opportunity to major in the area of their choice.

ADMISSION REQUIREMENTS

Applicants must meet general University requirements as well as those specified by the College of Commerce and Business Administration listed in the Admissions Chart on page 37.

Students transferring from other colleges will not be excused from the entrance requirements unless they have demonstrated proficiency in the areas in which they are deficient.

Mathematics Placement Test

Students without college credit in algebra are required to take the Mathematics Placement Test before registering in the college. The results of the test are used to

place students in Math. 111 or 112 or to exempt them from college algebra and allow them to enroll in Math. 125 or equivalent which is required for graduation.

The student who enters with college credit in algebra may proceed directly to courses beyond college algebra required by the college for graduation.

HONORS PROGRAMS

Honors at Graduation

Honors awarded to superior students at graduation are designated on the diploma as follows: for graduation with Honors, a minimum 4.25 grade-point average in all courses accepted toward the student's degree; for graduation with High Honors, a minimum 4.5 grade-point average in all courses accepted toward the degree; and for graduation with Highest Honors, a minimum 4.75 (A = 5.0) grade-point average in all courses accepted toward the degree.

Edmund J. James Scholars

For information regarding the James Scholar Program see page 54.

Dean's List

At the end of each semester the Dean's List is announced.

Superior academic achievement is recognized in other ways by the University through the Bronze Tablet.

Further information concerning honors programs may be obtained from the *College of Commerce and Business Administration Undergraduate Programs* catalog or by writing to the Undergraduate Office, College of Commerce and Business Administration, University of Illinois at Urbana-Champaign, 214 David Kinley Hall, Urbana, IL 61801. See also pages 114 and 115.

Awards

Alpha Kappa Psi Scholarship Medallion. Epsilon chapter of Alpha Kappa Psi, a professional fraternity in commerce, annually awards a scholarship medallion and \$25 to a male student pursuing a curriculum in the College of Commerce and Business Administration. The recipient must be a student in the senior class who has completed three full years of academic work in the college; his scholastic grade-point average for the first six semesters in the college must be at least 4.5 (A = 5.0); he must be active in various campus organizations as evidenced by recommendations from the faculty advisers of the respective activities; he must possess qualities of leadership as demonstrated by offices held in the various organizations and by successful completion of beneficial projects under his responsibility; he must have commendable personality as judged by a commerce faculty board appointed by the local chapter of Alpha Kappa Psi to administer the award. The name of the winner is engraved on a scholarship tablet on display in David Kinley Hall.

Delta Sigma Pi Key. The Illinois chapter of Delta Sigma Pi, professional fraternity, annually awards a key to the male student graduating from the College of Commerce and Business Administration with the highest four-year scholastic average.

Haskins and Sells Foundation Award. The Haskins and Sells Foundation has established an annual award of \$500 for a junior student majoring in accounting who is selected by a committee of the faculty on the basis of demonstrated excellence in accounting.

GRADUATION REQUIREMENTS

Students in the College of Commerce and Business Administration who meet the University's requirements with reference to registration, residence, and fees, and who maintain satisfactory scholastic records in the college, are awarded degrees appropriate to their curricula.

Each candidate for a degree must have a 3.0 (A = 5.0) grade-point average or above for all courses counted toward graduation, a 3.0 grade-point average or above for all courses taken at this University, and a 3.0 grade-point average or above for all courses taken in the field of concentration.

Each student may select only one major field of concentration.

Continuing students advance enroll for the following semester in November and April of each academic year. New students may advance enroll during the summer for each fall semester. Information may be obtained from the Office of Admissions and Records, University of Illinois at Urbana-Champaign, 177 Administration Building, Urbana, IL 61801.

Faculty advisers are available during the registration period each semester to help students plan their academic programs.

Students are responsible for meeting the requirements for graduation. Therefore, students should familiarize themselves with the requirements listed in this catalog and should refer to them each time they plan their program.

GENERAL EDUCATION SEQUENCE REQUIREMENTS

Students must complete at least one sequence from each of the following lists. The following regulations apply:

- The behavioral science sequence (list 2) should be started not later than the sophomore year. Business administration majors must select the sequence of Psych. 100 and 201.
- Two or more courses in the general education sequences (lists 1 through 4) must be selected from 200- and 300-level courses.
- Substitution of other courses in the listed sequences must be approved by one of the deans in the Undergraduate Office, College of Commerce and Business Administration, University of Illinois at Urbana-Champaign, 214 David Kinley Hall, Urbana, IL 61801.
- General education sequence courses and the advanced rhetoric course may be taken under the pass-fail option.

LIST 1: FOREIGN LANGUAGE, HUMANITIES, NATURAL SCIENCE

Art 116, Music 130, 131	Geol. 101, 102
Art 111, 112, and Music 113 or 115	Human. 151, 152
Astr. 101, 102	Human. 211, 212
Biol. 100, 101	Human. 215, 216
Bot. 100, Zool. 104	L.A.S. 140, 141
Chem. 107, 108	Math. 140, 141, 145, or 244, and any 300-
Chem. 101, 102	level course (excluding 305, 306, and 307)
Entom. 103, Physl. 103	Phil.: at least 8 hours
Entom. 103, Zool. 104	Phycs. 101, 102
Foreign language: 8-hour sequence in any	Phycs. 106, 107
language (intermediate or above)	
Geog. 102, 103	

LIST 2: BEHAVIORAL SCIENCE

Anth. 103, 260	Soc. 100 and any two 200- or 300-level
Psych. 100 and a 200- or 300-level course in	courses in sociology
psychology (Psych. 201 recommended)	(Students majoring in business administration
	must select Psych. 100 and 201.)

LIST 3: HISTORY OR POLITICAL SCIENCE

Political science: any two courses of 3 or more hours each History: any two courses of 3 or more hours each

LIST 4: LITERATURE

Six hours of literature.

MATHEMATICS REQUIREMENT

Any of the following sequences meet the College of Commerce and Business Administration requirement: Math. 135 (5 semester hours); Math. 120, 130 (10 semester hours); Math. 120, 131 (8 semester hours); Math. 125, 134 (7 semester hours).

New students at this time need only select which mathematics sequence to enter. Decisions on how far to go in a sequence can be made later as the student gains experience and firms up career objectives.

The most appropriate mathematics sequence for a student depends on his or her background, interest, motivation, and objectives. Background can be evaluated in terms of mathematics courses already completed and the student's score on the Mathematics Placement Test. Interest, motivation, and objectives must be determined by the student. Three basic sequences are open to the student. They are:

- Math. 135. A demanding course requiring a previous analytical geometry course. Should be chosen by students whose interests and objectives require strong mathematics.
- Math. 120, 130, or Math. 120, 131. These sequences are appropriate for students whose background is good but who have not had analytical geometry or who feel a somewhat less demanding sequence is preferable.
- Math. 125, 134. This sequence provides the student with a good background but since the pace is slower it may not sufficiently challenge the very good or previously well-prepared student.

Curricula

Normally students must register for not less than 12 hours nor more than 18 hours in each semester. Students should take mathematics, economics, and accountancy courses in the semesters indicated in the sample schedule of courses. The computer science course must be taken during the first year. A required course that is failed must be repeated the following semester.

A student with less than 30 hours of credit is required to have his program for the semester approved by a faculty adviser.

Up to 4 hours of credit in basic physical education may be counted in the 124 hours necessary for graduation. Physical education grades are counted in the graduation grade-point average.

UNIVERSITY REQUIREMENTS**HOURS**

Rhet. 105 or 108 — Composition¹.....4

GENERAL EDUCATION REQUIREMENTS

Business and technical writing or advanced rhetoric.....3
Sp. Com. 101 — Principles of Effective Speaking.....3

General education sequences:

List 1 — Foreign language, humanities, mathematics, natural science. 8
 List 2 — Behavioral science. 6
 List 3 — History or political science. 6
 List 4 — Literature. 6

BUSINESS CORE REQUIREMENTS

Accy. 101, 105 — Principles of Accounting. 6
 B. Adm. 200 — Legal Environment of Business. 3
 B. Adm. 210 — Management and Organizational Behavior. 3
 B. Adm. 202 — Principles of Marketing. 3
 B. Adm. 389 — Business Policy. 3
 C.S. 105 — Introduction to Computers. 3
 Econ. 101 — Introduction to Economics. 4
 Econ. 172, 173 — Quantitative Methods. 6
 Fin. 254 — Business Financial Management. 3
 Math. 125, 134 — Introductory Analysis for Social Scientists². 7

MAJOR

Courses to yield a total of. 18-24

ELECTIVES³

To yield a total of. 124

¹ Sp. Com. 111 and 112 may be substituted for Rhet. 105 or 108 and Sp. Com. 101.

² Math. 135, or Math. 120 and 130, or Math. 120 and 131 may be substituted for Math. 125 and 134. (See college mathematics requirement on page 228.)

³ All general education requirements (except Sp. Com. 101) and all electives may be taken under the pass-fail option.

SAMPLE SCHEDULE OF COURSES

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Econ. 101		4	Math. 134	4
Math. 125		3	Sp. Com. 101	3
C.S. 105		3	General education sequence	9
Rhet. 105 or 108		4	Total	16
Total		14		

SECOND YEAR

Accy. 101	3	Accy. 105	3
Econ. 172	3	Econ. 173	3
Adv. Rhet.	3	General education sequence	6
General education sequence list 1, 3, 4	7	Major or elective	3
Total	16	Total	15

THIRD YEAR

Fin. 254	3	B. Adm. 200	3
B. Adm. 210	3	Major and electives	9
B. Adm. 202	3	General education sequence	4
Major or elective	3	Total	16
General education sequence	4		
Total	16		

FOURTH YEAR

Major and electives	13	Major and electives	13
General education sequence	3	B. Adm. 389	3
Total	16	Total	16

CURRICULUM IN ACCOUNTANCY

For the degree of Bachelor of Science in Accountancy

Accountancy is usually selected as a major by the student who is preparing for private, governmental, or public accounting, or who wishes to use accountancy as general training for a career in business.

In private accounting, the accountant's employment is limited to a single organization. The size and nature of the organization determines the scope of the accounting activities but, broadly defined, the following duties are illustrative: design and installation of accounting systems, preparation of financial statements and reports, cost accounting, internal auditing, interpretation and analysis of budgets, and preparation of tax returns.

Governmental accounting deals with accounting principles, standards, and procedures applicable to state and local governments and to institutions such as universities and hospitals.

Public accounting is concerned primarily with the audit of the financial statements of business enterprises and institutions for the purpose of expressing an opinion as to the fairness of the information presented. The public accountant may be called upon to render services to clients which transcend the expression of an opinion on financial statements. These services include the areas of management consulting and tax service.

Requirements for the degree are: Accy. 208, Accy. 266, Econ. 300, and five additional accountancy courses. Accy. 199, up to 4 hours, may count as one course. Additional credit in Accy. 199 will be allowed only with the permission of the department head.

Econ. 300 and accountancy courses may not be taken on a pass-fail basis. A limit of 33 hours of accountancy courses may be counted toward the Bachelor of Science in Accountancy.

CURRICULUM IN BUSINESS ADMINISTRATION

For the degree of Bachelor of Science in Business Administration

The Department of Business Administration offers three separate undergraduate programs: marketing, organizational administration, and production. Marketing encompasses those business activities directly related to the process of placing meaningful assortments of goods and services in the hands of the consumer. The marketing student is concerned with the efficient performance of marketing activities and with their effective coordination with the other operations of the firm. Organizational administration is concerned primarily with the effective utilization of human resources within the business organization. Attention is focused on the organization as a social system and the forces that affect this system such as the behavior of individuals and groups, economic conditions, and technology. The study of production is concerned primarily with the efficient utilization of the organization's material resources. Attention is focused on the design and improvement of productive capacity and the coordination of the production process with other system activities.

Requirements for the degree are: B. Adm. 321 — Industrial Social Systems I, B. Adm. 374 — Operations Research, B. Adm. 389 — Business Policy, any 200- or 300-level economics course, and one of the following concentrations.

MARKETING

A student must take B. Adm. 320 — Marketing Research, and B. Adm. 344 — Consumer Behavior, plus one of the following courses:

B. Adm. 212 — Retail Management

- Adv. 383 — Advertising Media Strategy and Tactics
- Adv. 392 — Advertising Management
- B. Adm. 337 — Promotion Management
- B. Adm. 352 — Pricing Policies
- B. Adm. 370 — International Marketing
- B. Adm. 360 — Business Logistics
- B. Adm. 380 — Management Science in Marketing

ORGANIZATIONAL ADMINISTRATION

A student must take three courses from the following list, one of which must be B. Adm. 323 or 351:

- B. Adm. 323 — Industrial Social Systems II
- B. Adm. 351 — Personnel Administration
- L.I.R. 345 — Economics of Manpower
- Pol. S. 361 — Introduction to Public Administration
- Pol. S. 362 — Administrative Organization and Policy Development
- Psych. 355 — Industrial Social Psychology
- Psych. 357 — Psychology of Industrial Conflict
- Soc. 318 — Industry and Society
- Soc. 359 — The Social Psychology of Organization

PRODUCTION

A student must take B. Adm. 314 — Production, and B. Adm. 315 — Management in Manufacturing, plus one of the following courses:

- Accy. 336 — Managerial Accounting and Quantitative Techniques
- B. Adm. 323 — Industrial Social Systems II
- B. Adm. 351 — Personnel Administration
- I.E. 286 — Operations Analysis
- Psych. 258 — Human Performance in Man-Machine Systems
- Psych. 356 — Human Factors in Equipment Design

MANAGEMENT SCIENCE

A student may satisfy this option by taking any three courses approved in advance by the department head. Recommended sequences among the mathematics courses are 315, 357; 315, 383; 361 or 363, 366. Selected courses include:

- B. Adm. 373 — Electronic Data Processing for Business
- B. Adm. 380 — Management Science in Marketing
- Accy. 366 — Managerial Accounting and Quantitative Techniques
- Math. 315 — Linear Transformations and Matrices
- Math. 357 — Mathematical Models in the Social Sciences
- Math. 361 — Theory of Probability I
- Math. 363 — Advanced Statistics I
- Math. 364 — Advanced Statistics II
- Math. 366 — Theory of Probability
- Math. 383 — Linear Programming

Students wishing to concentrate in production or management science are advised (not required) to fulfill the college mathematics requirement with either Math. 120, 130; Math. 135, 145; or Math. 125, 134, 141 (special section).

Students must select Psych. 100 and 201 from list 2.

B. Adm. 389 should, if possible, be taken after all requirements in the concentration have been satisfied.

Courses used to fulfill major requirements may not be taken on a pass-fail basis.

Beyond the required courses for the business core and major, no more than 12 of the 28 elective hours can be selected from business administration, accountancy, or finance.

CURRICULUM IN ECONOMICS

For the degree of Bachelor of Science in Economics

Economics has been described as the study of how people use limited resources to produce various commodities and to distribute them to members of society for their consumption. Accordingly, the economist is concerned with what is produced, how goods and services are distributed, the organization of industries, the labor supply and its use, international trade, the production and distribution of national income and wealth, government finance, and the use and conservation of land and natural resources.

Related options for specialization by the student within this major are economic development, economic history, economic theory, economics of transportation, government and economic activity, international economics, labor economics, and quantitative economics.

Career opportunities available to students who major in economics include management positions in business, industry, and government; research; technical writing; and teaching.

Requirements for the degree are: Econ. 300 and 301, and 12 additional hours of economics. (See General Education Sequence Requirements on page 227.)

Students are advised but not required to take one of the following mathematics sequences: Math. 120, 130, 140; Math. 120, 131, 141; or Math. 135, 145. In addition, students considering graduate work should take Math. 315.

No course used to fulfill major requirements can be taken on a pass-fail basis.

CURRICULUM IN FINANCE

For the degree of Bachelor of Science in Finance

The field of finance is primarily concerned with the acquisition of capital funds for business, public, or personal use. A new business, for example, must secure sufficient funds to initiate and maintain operations until the cash flow from sales is great enough to maintain capital requirements. Established businesses seek financial advice when considering the purchase of new equipment, the selection of a new plant location, or the expansion of present facilities. Business policy decisions which result in changes in the capital structure of the business are of special importance to finance.

A student who majors in finance may specialize in finance, investment, and banking; insurance and risk management; or real estate and urban land economics.

As the study of finance is designed to provide the student with both the theoretical background and the analytical tools required to make effective judgments in finance, many students select careers in business financial management, commercial or investment banking, government finance, insurance, or real estate.

Requirements for the degree are: Fin. 150, and one of the following concentrations.

FINANCE, INVESTMENT, AND BANKING

Econ. 301

Three of Fin. 230, 235, 252, 253, 255, 258, 280, 340, 357

One of Accy. 274, 362, 376, B. Adm. 374, Econ. 312, 328

INSURANCE AND RISK MANAGEMENT

Fin. 260

Three of Fin. 262, 360, 363, 370, 371

One of Accy. 274, Econ. 301, 315, Fin. 294, 295, Math. 371, 372

REAL ESTATE AND URBAN ECONOMICS

- Fin. 364
- Fin. 365
- Fin. 366
- Two of Accy. 274, Arch. 379, C.E. 216, 231, 318, Econ. 301, 360, Fin. 367, 371,¹ Geog. 366, 383, U.P. 338²

¹ Fin. 367 and 371 should be taken as the elective courses if the student is planning to use the real estate major as a basis for taking the real estate brokerage examinations for a state license. Fin. 364 will satisfy the requirements for the salesman's license examination.

² Other courses in urban planning are available with the consent of the student's adviser and the Department of Urban and Regional Planning.

TEACHER EDUCATION MINOR IN ACCOUNTANCY FOR NONCOMMERCE MAJORS

REQUIRED COURSES	HOURS
Accy. 101 — Principles of Accounting I.....	3
Accy. 105 — Principles of Accounting II.....	3
Accy. 208 — Intermediate Accounting.....	4
Electives	11-12
Total	21-22

ELECTIVES

Accy. 266 — Cost Accounting.....	3
Accy. 274 — Basic Federal Income Tax Accounting.....	3
Accy. 376 — Advanced Accounting.....	2
Accy. 366 — Managerial Accounting and Quantitative Techniques.....	3
Econ. 108 — Elements of Economics.....	3-4
B. Adm. 200 — Legal Environment of Business.....	3
One of the following:	
B. Adm. 202 — Principles of Marketing.....	3
B. Adm. 302 — Wills, Estates, and Trusts.....	3

TEACHER EDUCATION MINOR IN ECONOMICS EDUCATION FOR NONCOMMERCE MAJORS

Business education majors may also elect this minor. The same courses may not count as fulfilling both major and minor requirements.

REQUIRED COURSES	HOURS
Econ. 102 and 103 — Principles of Economics, or Econ. 108 — Elements of Economics and Econ. 103 (special section).....	6
Econ. 313 — Economics of Consumption, or H. Ec. 271 — Home Management.....	2-3
Fin. 150 — Money, Credit, and Banking, or Fin. 257 — Corporation Finance, or Fin. 260 — Economics of Insurance.....	3
Electives	9
Total	20-21

ELECTIVES

Econ. 214 — Government Finance and Taxation.....	3
Econ. 240 — Labor Problems.....	3
Econ. 255 — Comparative Economic Systems.....	3
Fin. 150 — Money, Credit, and Banking.....	3
Fin. 257 — Corporation Finance.....	3
Fin. 230 — Investment Principles.....	3
Fin. 260 — Economics of Insurance.....	3
F.A.C.E. 271 — Home Management.....	2

College of Communications

*University of Illinois at Urbana-Champaign
119 Gregory Hall
Urbana, IL 61801*

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For students with two years of college and a commitment to a career in communications, the College of Communications offers an additional two years of education leading to the degrees of Bachelor of Science in Advertising and in Journalism. Although it does not offer a curriculum in radio and television, the college does offer a limited number of broadcasting courses.

Through its educational programs, the college aims at giving students professional competence in their chosen fields of communications. At the same time, it seeks to help them acquire a solid background in the social sciences and humanities. Its premise is that students need an understanding of people and the world they live in if they are to communicate effectively through print and broadcast media.

Although its curricula are somewhat specialized, the college seeks to equip its students with a general professional education that will give them flexibility when they enter the field.

The college has modern equipment and facilities for teaching future communications workers — newsrooms, a photographic darkroom, a typography laboratory, an advertising layout laboratory, an audio laboratory, a radio newsroom, and broadcasting studios. Students use the facilities of WILL-TV (Channel 12) for laboratory instruction. The Communications Library is generally recognized as one of the best in the nation. The college maintains a job placement service for its graduates.

The college is also the supervising administrative unit for the University Broadcasting Division and the Institute of Communications Research.

Instruction in journalism at the University was begun in 1902 as part of the courses in rhetoric and was organized as a division of the Department of English in 1916. The School of Journalism was established in 1927 as a separate unit. In 1950 it became the School of Journalism and Communications with divisions of journalism, advertising, and radio, the last of which later added instruction in television. In 1957, the school was elevated to college status. Two years later the college's three divisions were redesignated departments. The present name — College of Communications — was adopted in 1968.

DEPARTMENTS AND CURRICULA

Through its two academic departments the college offers professional education in two sequences which have been accredited by the American Council on Education for Journalism — advertising and news-editorial.

The Department of Advertising supervises work in the advertising curriculum for students expecting to enter advertising agencies or the advertising departments of communications media, industrial organizations, or retail stores. The department aims to educate analytical, flexible, and creative professionals who are able to deal with current and future advertising problems.

Through its news-editorial curriculum the Department of Journalism tries to prepare students for varied and long-term careers in journalism. The primary professional aim of the program is to train public affairs reporters by providing them with the skills, knowledge, and understanding required of successful journalists.

Each of the departments offers graduate programs leading to the degrees of Master of Science in Advertising and Journalism. The college offers an interdisciplinary program leading to the Doctor of Philosophy in Communications under the direction of the Institute of Communications Research.

ADMISSION REQUIREMENTS

For admission to the College of Communications a student must complete 60 semester hours of undergraduate college work and present a grade-point average of at least 4.0 (A = 5.0) and evidence of interest in a professional career in communications. Applicants with less than a 4.0 will be considered if they demonstrate strong career motivation and aptitude.

Since they must have junior standing to be eligible to enter the College of Communications, students at the University of Illinois at Urbana-Champaign are advised to register as freshmen and sophomores in the general curriculum of the College of Liberal Arts and Sciences and follow a broad general education program. Students at other institutions should follow similar programs.

There is no formal precommunications program. While in another college, a student is expected to follow the requirements of that college. However, students should attempt to satisfy the University general education sequence requirements. If possible they should include in their programs basic courses in such fields as economics, English, history, philosophy, political science, psychology, sociology, and anthropology. Students who do not have a reasonable degree of typing ability must acquire such skill before entering the college as it is required in all curricula.

Students at the University of Illinois at Urbana-Champaign should make arrangements to apply for transfer into the college during the advance enrollment period in the semester in which they will earn junior standing. Junior standing is necessary for students to take courses offered by the College of Communications.

Students completing their freshman and sophomore studies at institutions other than the University of Illinois are strongly advised to defer courses in advertising, communications, journalism, and radio and television until enrolled in the College of Communications. Transfer students must take all of their required professional courses in the College of Communications. They may be permitted to transfer up to 9 hours of elective professional courses taken elsewhere, provided they take an equivalent number of additional hours in advanced social studies, arts, and sciences beyond the 20 semester hours required for graduation from the college.

The college does not recommend that students with more than 90 hours enter any of its undergraduate programs. The programs are set up on a four-semester basis. In certain cases it is possible to complete the requirements of its curricula in three semesters. The college does not accept students who have already received a bachelor's degree as candidates for a second bachelor's degree. Instead, it recommends that such students enter one of its graduate programs.

HONORS PROGRAMS

Edmund J. James Scholars

The College of Communications does not have an honors program. However, students who transfer into the College of Communications from another college on the Urbana-Champaign campus and are James Scholars in their previous colleges

at the time of transfer will continue to be listed as James Scholars in the College of Communications through the end of their first spring semester in the college. If they have a cumulative average of 4.5 (A = 5.0) at that time they will be certified as James Scholars for the academic year and continued as James Scholars through the next academic year when their records will be reviewed for certification. Any student whose cumulative average falls below 4.5 will not be certified and will be removed from the James Scholars listing. Designation as James Scholars is available only to those students who were previously so designated.

Dean's List

To be eligible for Dean's List recognition students must rank in the top 20 percent of their respective classes and must successfully complete 14 academic hours of which at least 12 hours must be traditionally graded hours (excluding course work graded pass-fail, credit-no credit, satisfactory/unsatisfactory, excused, or deferred) and excluding grades and hours in basic physical education courses and religious foundation courses.

Honors at Graduation

For graduation with Honors, a student must have been named to the Dean's List of the College of Communications for at least three semesters while enrolled in the College of Communications, must rank in the upper 20 percent of the student's graduation class, and must have earned a minimum grade-point average of 4.50 in all courses taken after admission to the College of Communications; for graduation with High Honors, a student must have been named to the Dean's List of the College of Communications for at least three semesters, must rank in the upper 10 percent of the student's graduation class, and must have earned a minimum grade-point average of 4.70 in all courses taken after admission to the College of Communications; for graduation with Highest Honors, a student must have been named to the Dean's List of the College of Communications for at least three semesters, must rank in the upper 5 percent of the student's graduation class, and must have earned a minimum grade-point average of 4.80 in all courses taken after admission to the College of Communications.

Kappa Tau Alpha

Each year scholastically high-ranking undergraduate and graduate students in the College of Communications are considered for membership in Kappa Tau Alpha, national honorary society in journalism. The society was founded to recognize and promote scholarship in advertising, journalism, and broadcasting.

Awards

Donald E. Brown Award. An award sponsored by the Illinois News Broadcasters Association is given every third year to an outstanding student in radio-television news reporting.

Communications Alumni Memorial Award. An award of \$200 to an outstanding student in the College of Communications for scholarship, character, and professional achievement as demonstrated during the junior year.

Dudley McAllister Memorial Award. An award of \$100 is made annually to the student in the College of Communications giving evidence of the most promise in the reporting of public affairs.

Harold Gustave Roettger Memorial Award. An award is made annually to an out-

standing graduating senior in communications who is a member of the journalism honorary fraternity, Kappa Tau Alpha. The award is based on academic record.

St. Louis Advertising Club Award. Each year two outstanding students in the advertising program, one man and one woman, are selected for an award by the St. Louis Advertising Club. The students so honored are chosen on the basis of scholarship, advertising aptitude, and citizenship.

Raymond O. Torr Memorial Award. An award of \$100 is given to a student in journalism.

GRADUATION REQUIREMENTS

The college offers programs of study leading to the degree of Bachelor of Science in Advertising or Journalism. To meet the degree requirements all students must satisfy general University requirements as to registration, residence, scholarship, and fees. They must complete the rhetoric requirement and approved sequences in the humanities, social sciences, and natural sciences as listed under General Education Sequence Requirements on page 217. All students must also fulfill the following general requirements of the College of Communications:

- Complete a total of 124 semester hours of course credit. Basic physical education activity courses and basic courses in military, naval, or air force science may not be counted toward this total although such credits may be counted toward meeting the admission requirement of 60 semester hours. No more than a total of 12 hours earned in undergraduate open seminars (199 courses) and in independent study courses outside the college will be counted toward the degrees offered by the college. Students in the college may enroll in one such course for a maximum of 4 hours credit in any semester.
- Complete not less than 30 hours but not more than 36 hours in courses offered by the college in advertising, journalism, and radio and television. Undergraduate courses cross-listed with advertising, journalism, or radio and television courses are considered college course offerings. Undergraduate communications courses cross-listed only with departments outside the college are not counted as college offerings.
- Complete not less than 20 hours in advanced (200- and 300-level) courses at the University of Illinois at Urbana-Champaign in the social studies, arts, and sciences approved by the faculty. The human resources and family studies minor may be substituted for the requirement of 20 hours in advanced social studies, arts, and sciences.
- Complete the specific requirements of one of the curricula offered by the college as listed starting below.
- Earn a grade-point average of 3.0 (A = 5.0) in all courses presented for the degree. In addition students must earn a 3.0 cumulative grade-point average for all courses taken while registered in the college.

GENERAL EDUCATION SEQUENCE REQUIREMENTS

To be graduated from the College of Communications a student must have completed a minimum of 6 hours each in the humanities, the social sciences, and the natural sciences. The following sequences and courses have been approved. A student may not use sequences from any one department to satisfy the requirement in more than one of these fields. Any substitutions of sequences must be approved by the dean of the college.

The college will waive the requirements in any of these three areas if the student's performance in the College Level Examination Program earned such a

waiver in the college from which the student transferred into the College of Communications. However, only credit hours earned in the social sciences and humanities, up to a maximum of 12, will be allowed toward the graduation requirement of 124 hours. Credit hours in natural science (including mathematics) earned through CLEP will not be allowed.

However, any sequence or combination of courses in these areas approved by another college at the Urbana campus will be accepted by the College of Communications if the student completed or started the courses while enrolled in that college. For example, precommunications students enrolled in the College of Liberal Arts and Sciences may follow the requirements as listed in the current *LAS Student Handbook*. Students at other institutions should select courses comparable to those on the college list.

HUMANITIES

Any of the following sequences: Engl. 101, 102, 103, 104, or 106 (any two); Engl. 115, 116, 118, 120, or 180 (any two); Human. 141, 142; Phil. 101, 102; Hist. 131, 132; an 8-hour sequence in one foreign language (intermediate level or above); or any sequence or course work approved by another college at the Urbana campus, if the student completed or started the courses while enrolled in that college.

SOCIAL SCIENCES

Any of the following sequences: Anth. 102, 103; Econ. 101, 236, 240, 245, or 255 (any two); Hist. 111, 112; 151, 152; 168, 169; Phil. 103, 104; Pol. S. 100, 150; Psych. 100, 201, 216, 238, 245, or 250 (any two); Soc. 100, 131; or any sequence or course work approved by another college at the Urbana campus, if the student completed or started the courses while enrolled in that college.

NATURAL SCIENCES

Any one of the following sequences: Biol. 100, 101; E.E.E. 105, Bot. 100; E.E.E. 105, Physl. 103; E.E.E. 105, Entom. 103; Bot. 100, Entom. 103; Astr. 101, 102; L.A.S. 140, 141; 142, 143; any 6 hours of chemistry except Chem. 100; or any 6 hours of physics; or any 6 hours of mathematics, exclusive of Math. 101, 104, 111, and 112; or any sequence or course work approved by another college at the Urbana campus, if the student completed or started the courses while enrolled in that college. Courses must be selected from either the life sciences, the physical sciences, or mathematics. Combinations of life sciences courses with physical science or mathematics courses will not satisfy the natural sciences requirement.

Curricula

CURRICULUM IN ADVERTISING

For the degree of Bachelor of Science in Advertising

To be graduated from the advertisting curriculum, a student must meet the general requirements for a degree listed under Graduation Requirements on page 240 and must complete the following courses:

	HOURS
Adv. 281 — Introduction to Advertising.....	3
Adv. 381 — Advertising Research Methods.....	3
Adv. 382 — Advertising Creative Strategy and Tactics.....	3
Adv. 383 — Advertising Media Strategy and Tactics.....	3

Adv. 391 — Advertising Management: Planning.....	3
Adv. 392 — Advertising Management: Strategy and Tactics.....	3
Adv. 393 — Advertising in Contemporary Society.....	3
Advertising, journalism, or radio-TV electives.....	9
Total	30
A specified course in statistical methods ¹	3-4
Econ. 101 — Introduction to Economics.....	4
B. Adm. 202 — Principles of Marketing ²	3
Psych. 100 — Introduction to Psychology, Soc. 100 — Introduction to Sociology, or Anth. 103 — Introduction to Cultural Anthropology (any two of these three courses).....	6-7

¹ Students should check with the Department of Advertising for currently acceptable courses.

² This course may be credited toward the 20 hours of advanced social studies required of all students.

CURRICULUM IN NEWS-EDITORIAL

For the degree of Bachelor of Science in Journalism

To be graduated from the news-editorial curriculum of the Department of Journalism a student must meet the general University and college requirements for a degree listed on page 240 and must complete the following courses:

	HOURS
Journ. 350 — Journalism I.....	4
Journ. 360 — Journalism II.....	4
Journ. 370 — Journalism III.....	4
Journ. 380 — Journalism IV.....	4
Journ. 390 — Journalism V.....	2
Journ. 217 — History of Communications; Journ. 218 — Communications and Public Opinion; Journ. 220 — Processes and Systems of Communications; Journ. 231 — Mass Communications in a Democratic Society; Journ. 241 — Law and Communica- tions; or Journ. 251 — Social Aspects of Mass Communications (a minimum of two courses from this list).....	6
Advertising, journalism, or radio-TV electives.....	6
Total	30

At least 6 hours of credit in each of the following areas: economics, English or American literature, history, philosophy, political science, and sociology or anthropology¹

36

¹ Courses taken in these fields to fulfill the college requirement of 20 hours of advanced social studies, arts, and sciences may be used toward fulfilling these departmental requirements as may lower division courses or sequences in these fields taken anytime during the student's four years. Undergraduate seminar (199) courses and hours earned through CLEP may not be used to fulfill these departmental requirements.

PROGRAM IN RADIO AND TELEVISION

The College of Communications no longer offers a curriculum leading to a degree in radio and television. An interim program for students interested in broadcast aspects of journalism is currently available.

An important element of the program is the opportunity it affords students aiming at a career in broadcast journalism. By planning their schedules at the start of their junior year, journalism majors can take a concentration of elective courses in broadcast journalism within the maximum number of allowable college hours. Other students in the college can learn fundamentals of the broadcast media by electing courses from this program.

MINORS

Students in the College of Communications are not required to complete a minor. Students with special interests in home economics may elect to follow a special minor as listed below. The home economics minor may be substituted for the college requirement of 20 hours of advanced social studies, arts, and sciences.

For students not enrolled in the College of Communications, the college offers only one approved special minor, a minor in the teaching of journalism for students in teacher education. Other students are cautioned against attempting to follow a minor in advertising, journalism, or radio and television even if approved by their major departments. Enrollment in many courses offered by the college is restricted to majors in one of the college's curricula. In all college courses enrollment priority is given to majors.

Minor in Human Resources and Family Studies for Majors in College

For a minor in human resources and family studies (home economics), the student must complete a minimum of 20 hours in courses offered by the School of Human Resources and Family Studies. The 20 hours completed in this area may be substituted for the 20 hours of advanced social studies, arts, and science required by the college for graduation. However, all students in the news-editorial curriculum must satisfy the departmental requirements of at least 6 hours each in history, political science, philosophy, economics, sociology or anthropology, and English or American literature. These courses may be taken at the lower- or upper-division level.

Students may elect any of the following courses in H.R.F.S. to total 20 hours for the minor. It is recommended that students select a concentration in one of the areas and choose electives in the other areas.

FAMILY AND CONSUMER ECONOMICS	HOURS
F.A.C.E. 170 — Consumer Economics.....	3
F.A.C.E. 270 — Management of Family Resources, or F.A.C.E. 271 — Home Management..	2-4
F.A.C.E. 313 — Economics of Consumption.....	3
F.A.C.E. 371 — The Family as a Consuming Unit.....	3
F.A.C.E. 375 — Home Equipment.....	3
FOODS AND NUTRITION	
F.N. 120 — Contemporary Nutrition.....	3
F.N. 125 — Food Selection and Preparation.....	3
F.N. 132 — Foods and Nutrition.....	3
F.N. 133 — Food Management (credit is not given in F.N. 132 and F.N. 133 in addition to F.N. 120 and F.N. 125).....	2
F.N. 220 — Principles of Nutrition.....	3
F.N. 231 — Foods.....	3
HUMAN DEVELOPMENT AND FAMILY ECOLOGY	
H.D.F.E. 105 — Introduction to Human Development.....	3
H.D.F.E. 106 — Observation and Analysis of Behavior.....	3
H.D.F.E. 202 — Laboratory in Child Development.....	3-4
H.D.F.E. 210 — Family Relationships.....	3
INTERIOR DESIGN	
I.D. 160 — Residential Environments.....	3
I.D. 260 — Interiors and Furniture I.....	3
I.D. 261 — Interiors and Furniture II.....	3

TEXTILES AND CLOTHING

T.C. 183 — Consumer Textiles.....	3
T.C. 184 — Apparel Design and Selection.....	2
T.C. 280 — Household Textiles.....	3
T.C. 281 — Non-Textile Accessories.....	3
T.C. 285 — History of Costume.....	2
T.C. 287 — Dress and Human Behavior.....	3
T.C. 395 — Fashion Analysis.....	3

TEACHER EDUCATION MINOR IN JOURNALISM

This minor is specifically for students in teacher education programs. It requires a minimum of 18 hours in communications courses. In addition to three required courses with a total of 9 hours of credit, a minimum of 9 additional hours must be chosen from a selected group of electives. Students are also required to take at least 7 hours of rhetoric, for a total of 25 hours.

REQUIRED COURSES**HOURS**

Typography	3
News writing	3
News editing.....	3
Electives in advertising, journalism, and communications.....	9
Rhet. 105 or 108.....	4
One of the following: Engl. 381, Rhet. 133, or Rhet. 144.....	3
Total	25

ELECTIVES

Introduction to advertising.....	3
Public affairs reporting.....	3
Contemporary affairs.....	2
Photojournalism	3
Magazine article writing.....	3
Principles of radio and television broadcasting.....	2
Others may be chosen in consultation with the adviser.	

College of Education

*University of Illinois at Urbana-Champaign
140A Education Building
Urbana, IL 61801*

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The College of Education of the University of Illinois at Urbana-Champaign offers undergraduate degree programs in four of the seven departments within the college. The departments which offer undergraduate degree programs, and the programs offered by each, are given below.

The Department of Vocational and Technical Education offers degree programs in industrial education, health occupations, and business education. Although freshmen may be admitted to these curricula, students interested in industrial education and health occupations are typically encouraged to obtain academic and technical preparation in their areas of specialization prior to admission.

The Department of Secondary Education offers degree programs in the following teaching specialties: English, mathematics, social studies, general science, physical sciences, and life sciences. Only students who have earned at least 60 semester hours are considered for admission to secondary education curricula in the College of Education.

The Department of Special Education offers an undergraduate degree program preparatory to the teaching of moderately and severely handicapped persons. This program is able to accommodate only a small number of juniors and seniors.

The Department of Elementary and Early Childhood Education offers degree programs in elementary education and early childhood education.

In addition to these degree programs, Education General is a two-year curriculum in the College of Education available to students who have completed fewer than 60 semester hours. It is designed to accommodate students who are uncertain of the specific degree program which they wish to pursue in the College of Education and students who have not completed the 60 hours required to qualify for admission to curricula in the college for which junior standing is an admission requirement.

In addition to offering undergraduate degree programs in education, the College of Education, under the auspices of the Council on Teacher Education, cooperates with four other colleges on the Urbana-Champaign campus to provide courses in professional education to undergraduate students who are preparing for careers in teaching and special educational services.

The College of Education also offers graduate degree programs. Detailed information concerning graduate programs in education may be obtained in 120 Education Building.

ADMISSION REQUIREMENTS

The curricula in business education, technical education specialties, early childhood education, and elementary education admit beginning freshmen. (Admission re-

quirements for these programs are given on the Admissions Chart on page 38.) Junior standing, at least 60 semester hours of baccalaureate-oriented course work attained at an accredited institution of higher learning, is required for admission to all other undergraduate curricula.

A minimum cumulative grade-point average of 3.5 ($A = 5.0$) is required to be considered for admission to the College of Education in good standing. A student whose cumulative average is below 3.5 may be considered individually, on a petition basis, if enrollment vacancies exist in the curriculum to which admission is being sought. If admitted, such students may be placed on provisional status by the Council on Teacher Education and the College of Education.

SPECIAL PROGRAMS

Elementary Education Semester in England

The Department of Elementary and Early Childhood Education provides an opportunity for undergraduate students at the junior level to study at the University of Bristol and associated teachers colleges, and to work in the infant and junior schools of England.

Students carry several courses and have opportunities to assist regular teachers in classrooms. The one semester of work and study enables students preparing for teaching to receive first-hand experience working with children and to work with teaching methods and curricula used in England.

Costs for the semester of study and transportation expenses are borne by the students involved, and normally somewhat exceed the average costs of attending the University of Illinois at Urbana-Champaign.

Inquiries regarding the program should be directed to the Department of Elementary and Early Childhood Education, 314 Education Building.

HONORS PROGRAMS

Honors at Graduation

Eligibility for graduation with honors is established on the fulfillment of residence and scholastic requirements. Residence requirements for graduation with honors are fulfilled under any of the following conditions:

- Meeting University residence requirements for graduation. Furthermore, at least 54 of the final 60 semester hours of credit must have been earned in residence at Urbana-Champaign. Credit for courses which is not included in the grade-point average does not count toward residency.
- Obtaining waiver of University residence requirements by petition to the undergraduate office, 140A Education Building, and earning at least 54 of the last 60 semester hours of credit, excluding credit for courses which are not included in computation of the grade-point average, through resident study at Urbana-Champaign.
- Meeting University residence requirements and having completed all but 15 hours in resident study at Urbana-Champaign.
- Having completed the first 90 semester hours in residence and all or part of the senior year in an approved program at another institution for the University of Illinois degree.

A student who achieves the required scholastic average in all education courses and in all work presented for graduation (excluding credit for courses not included in the computation of the grade-point average), with education and graduation averages computed separately, may be recommended for honors as follows: Honors,

minimum education and graduation scholastic grade-point averages of 4.25 (A = 5.0); High Honors, minimum education and graduation scholastic grade-point averages of 4.50; Highest Honors, minimum education and graduation scholastic grade-point averages of 4.75. These requirements are subject to change.

Edmund J. James Scholars

For information concerning the James Scholar Program see page 54.

GRADUATION REQUIREMENTS

Each undergraduate student in the College of Education must meet the University requirements (pages 107 to 114) and the requirements of the Council on Teacher Education (pages 135 to 140) for graduation. Students in all curricula must meet the course and academic credit requirements of their curricula with satisfactory scholastic averages. Educational practice (student teaching), which is required of all undergraduates in teacher education, must be completed at the University of Illinois at Urbana-Champaign.

Students in need of additional information concerning regulations and requirements of the College of Education should consult their academic advisers or the office of the Coordinator of Undergraduate Programs, University of Illinois at Urbana-Champaign, 140A Education Building, Urbana, IL 61801.

GENERAL EDUCATION REQUIREMENTS

Each candidate for a degree in the College of Education must complete at least 6 semester hours of credit in each of three areas — humanities, natural sciences, and social sciences. In certain curricula additional credit in these areas may be required. Courses in these areas taken as part of the major or minor field in secondary curricula are acceptable. Departments which offer appropriate courses are listed below.

HUMANITIES

Art (not studio courses)
Classics (not 100, 150, 315, 382)
English (literature)
French (literature)
German (literature)
History (not U.S. history)

Humanities
Music (not performance courses)
Philosophy (not 102, 202)
Russian (literature)
Spanish (literature)
Speech communication (not performance courses)

NATURAL SCIENCES

Astronomy
Biology
Botany
Chemistry
Entomology
Geography (physical)
Geology

Mathematics — any 6 hours at or above the level of calculus. (Mathematics is not acceptable as a physical science in elementary and early childhood education.)
Microbiology
Physics
Physiology
Zoology

SOCIAL SCIENCES

The college requirement in the social sciences must be fulfilled through the completion of Hist. 151 or 152 (or equivalent) and Pol. S. 150.

Curricula

EDUCATION GENERAL

Education General is a two-year curriculum available to students in the College of Education who have completed fewer than 60 semester hours. It has been designed to accommodate students who are uncertain of the specific degree program which they wish to enter in the College of Education and students who have not completed the 60 hours required to qualify for admission to curricula in the college for which junior standing is an admission requirement, e.g., secondary education, special education. Students in Education General are required to pursue a program of study which includes the course requirements common to all undergraduate programs in the College of Education and the requirements for continuation established by the University and the College of Education. Students must transfer out of Education General following the term in which they complete their sixtieth semester hour in order to obtain a bachelor's degree.

Recommended Program

FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Rhet. 105 or 108 or Sp. Com. 111	4	Speech performance elective	
Psych. 100	3	or Sp. Com. 112	3-4
Basic physical education activity ¹	1	Ed. Pr. 150	1
Science elective	3	Basic physical education activity ¹	1
Hist. 151 or 152	4	Science elective	3
Total	15	Pol. S. 150	3
		Electives	4
		Total	15-16
THIRD SEMESTER	HOURS	FOURTH SEMESTER	HOURS
Humanities elective	3	Humanities elective	3
E.P.S. 201	3	Ed. Psy. 236 or 211	3
Basic physical education activity ¹	1	Ed. Pr. 150	1
Ed. Pr. 150	2	Electives	8
Electives	6	Total	15
Total	15		

¹ Students may substitute a health course for all or part of the 3-hour requirement in basic physical education activities.

CURRICULUM PREPARATORY TO HIGH SCHOOL TEACHING

For the degree of Bachelor of Science in Secondary Education

The following requirements in general education and professional education are common to all secondary education specialties. For requirements in addition to those below, refer to pages 135 to 140 for teacher education requirements applicable to all curricula.

It is essential that students consult appropriate teacher education advisers in the selection of specific courses and in the overall planning of degree programs.

A minimum of 120 hours of credit, excluding basic military, is required for graduation.

GENERAL EDUCATION REQUIREMENTS	HOURS
Sp. Com. 111 and 112, or Rhet. 105 and a speech performance elective, or Rhet. 108 and a speech performance elective	6-7

Humanities ¹	6
Natural sciences ¹	6
History of the United States (Hist. 151, 152, 260, 261, 262)	3
American government (Pol. S. 150)	3
General psychology	3
Health and/or basic physical education activities	3
Total	30-31

PROFESSIONAL EDUCATION REQUIREMENTS²

Orientation to professional education (Se. Ed. 101)	2
Principles of education (Se. Ed. 240)	2
Psychology of teaching and learning (Ed. Psy. 211)	3
Foundations of American education (E.P.S. 201)	3
Techniques of teaching (Se. Ed. 241)	4-5
Educational practice (student teaching) (Ed. Pr. 242)	5-8
Total	19-23

¹ Courses in humanities and natural sciences must be selected from those listed on page 249. If the teaching major or minor area of specialization includes courses in these subjects, they also may be applied toward general education requirements. The social science requirement is fulfilled by the courses in U.S. history and American government.

² All secondary curricula are being revised to require at least 100 clock hours of early field experiences prior to student teaching. Students should consult their advisers for specific requirements.

Specialty in English

REQUIREMENTS FOR BOTH OPTIONS

HOURS

Literature for the high school or audiovisual communication (Engl. 385, Lib. S. 304, Se. Ed. 354)	3
Fundamentals of reading techniques (Se. Ed. 336)	3
Oral interpretation (Sp. Com. 141)	3

OPTION A: TEACHER EDUCATION MAJOR IN ENGLISH

Introduction to Shakespeare (Engl. 205, 318, 319)	3
Survey of American literature, or equivalent (Engl. 255, 256)	6
Survey of English literature, or equivalent	6
Descriptive English grammar (Engl. 302)	3
Principles of composition, or intermediate expository writing (Rhet. 133, 143)	3
English electives	11

Six of these hours must be in courses restricted to advanced undergraduates. It is recommended that electives be chosen from English offerings in literary genres, world and/or classical literature, literary criticism, contemporary literature, backgrounds to literature, rhetoric, and linguistics.

Total	32
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TEACHER EDUCATION MINOR OR SUPPORTING AREAS OF CONCENTRATION

Students selecting the teacher education major in English (Option A) must (1) complete one of the teacher education minors listed on page 139, or (2) complete at least three courses in each of two areas of concentration, or, (3) complete at least two courses in each of three areas of concentration. The areas of concentration are language and communications; language performance, oral and written; humanities and philosophy; methods and theories of critical processes; world and classical literatures; and the teaching of components of English. Courses for the areas of concentration must be elected in consultation with the adviser. Students selecting the teacher education minor in literature (Option B) must complete the approved teacher education minor in rhetoric or the approved teacher education minor in teaching English as a second language.

TOTAL

Including general education and professional education credit, at least.....120

OPTION B: TEACHER EDUCATION MAJOR IN LITERATURE

Poetry, drama, fiction, or honors seminar (Engl. 101, 102, 103).....	6
Introduction to Shakespeare (Engl. 205, 318, 319).....	3-6
Practical criticism (Engl. 277).....	3
Survey of American literature (Engl. 255, 256).....	6
Survey of English literature.....	6
Advanced English electives.....	5-8
Total	29-35

TEACHER EDUCATION MINOR IN RHETORIC

See page 417.

TEACHER EDUCATION MINOR IN ENGLISH AS A SECOND LANGUAGE

See page 418.

TOTAL

Including general education and professional education credit, at least.....120

Specialty in General Science**REQUIRED CORE COURSES****HOURS**

General physics (Phycs. 101, 102 or 106, 107, 108).....	10-12
General chemistry.....	8-10
General biology (Biol. 110, 111).....	10
Descriptive statistics or educational measurement.....	3-4
Two of the following:	
General astronomy or descriptive astronomy (Astr. 101 and 102, or 210).....	3-8
Physical geography.....	4
Physical geology.....	4

ELECTIVES

Additional electives in science and courses related to science teaching must be chosen in consultation with an adviser and must be taken to bring the total of such work to approximately 70 semester hours, including 15 semester hours of 200- and/or 300-level courses in sciences, exclusive of those listed immediately above. The completion of a teacher education minor in either biology or mathematics is recommended.¹

TOTAL

Including general education and professional education credits, at least.....120

¹ Courses related to science teaching may include mathematics, computer science, history of science, philosophy of science, anthropology, experimental psychology, physical geography, and science education exclusive of education courses specifically required.

Specialty in Life Science**REQUIRED CORE COURSES****HOURS**

General physics.....	10-12
General chemistry.....	8-10
General biology.....	10
Descriptive statistics or educational measurement.....	3-4
Organic chemistry.....	5

Physiology (experimental, including laboratory).....	5
Microbiology (including laboratory) ²	6
Genetics	4
Vertebrate or invertebrate zoology.....	3-5
Ecology	3-5
Botany (advanced level).....	3-5

ELECTIVES

Additional electives in science and courses related to science teaching must be taken to bring the total of such work to approximately 70 semester hours, and must be selected in consultation with an adviser. The completion of a teacher education minor in mathematics or one of the physical sciences is recommended.¹

TOTAL

Including general education and professional education credit, at least.....120

¹ Courses related to science teaching may include mathematics, history of science, philosophy of science, anthropology, experimental psychology, physical geography, and science education exclusive of the education courses.

² Microbiology laboratory may be taken for 3 to 5 hours credit. The minimum required for teacher education is 3 hours. Students with particular interest in microbiology may take additional hours.

Specialty in Mathematics¹

REQUIRED COURSES	HOURS
Calculus and analytic geometry.....	13
Geometry (Math. 302).....	3
Analysis (Math. 344 or 347).....	3
Algebra (Math. 317).....	3
Probability-statistics (Math. 263 or 361 or 363).....	3
Computer science (C.S. 101 or 105 or 121).....	3
Each student must also select at least four additional courses (12 hours) from the field lists below. This selection must include courses from at least two different field lists....	
Geometry-topology: 303, 323, 332	
Analysis: 306, 341 or 345, 346 or 348, 384	
Algebra: 305, 315 or 318, 319, 353, 383	
Probability-statistics: 362, 364, 368, 369	
With the approval of the adviser, topics courses such as Math. 307 or 351 may be used in the field list most appropriate to the content of a particular offering of that course.	
Total hours in mathematics and computer science.....	34-38

TOTAL

Including general education and professional education credits, at least.....120

¹ In order to remain in good academic standing in the program, a student must satisfy the following requirements (in addition to those requirements applicable to all teacher education curricula): (1) a student may not receive more than 5 hours with grades of C or below in the calculus sequence, and (2) a student must maintain an average of 3.5 or higher in mathematics courses beyond calculus.

Specialty in Physical Science

REQUIRED CORE COURSES	HOURS
General physics.....	10-12
General chemistry.....	8-10
Life science (Biol. 110, 111).....	10

Descriptive statistics or educational measurement.....3-4
 One of the following options must be completed:

OPTION A. CHEMISTRY

Twenty-two to 24 hours in chemistry beyond the core courses. For more detailed information refer to the Curriculum Preparatory to the Teaching of Chemistry on page 413. Additional electives in science and courses related to science teaching must be chosen in consultation with an adviser and must be taken to bring the total of such work to approximately 70 semester hours. The completion of a teacher education minor in either mathematics, physics, or biology is recommended.¹

OPTION B: PHYSICS

Nineteen hours in physics beyond the core courses. For more detailed information refer to the Curriculum Preparatory to the Teaching of Physics on page 429. Additional electives in science and courses related to science teaching must be taken to bring the total of such work to approximately 70 semester hours. The completion of a teacher education minor in either mathematics or chemistry is recommended.¹

OPTION C. EARTH SCIENCE

Thirty-two hours in earth science beyond the core courses. For more detailed information refer to the Curriculum Preparatory to the Teaching of Earth Science on page 415. Additional electives in science and courses related to science teaching must be taken to bring the total of such work to approximately 70 semester hours. The completion of a teacher education minor in biology, mathematics, or one of the physical sciences is recommended.¹

TOTAL

Including general education and professional education credits, at least.....120

¹ Courses related to science teaching may include mathematics, history of science, computer science, philosophy of science, anthropology, experimental psychology, physical geography, and science education exclusive of education courses.

Specialty in Social Studies

This specialty offers preparation for teachers of courses in history, sociology, economics, political science, geography, psychology, and general social studies.

Two arrangements are provided for completing the major and minor requirements:

Option A requires a social studies major of 41 hours and a minor of 20 to 24 hours in an approved teaching field outside the social studies (English, a foreign language, mathematics, etc.). The major under option A consists of two parts: (1) 20 hours in history, and (2) 21 hours in anthropology, economics, geography, psychology, political science, and sociology chosen in consultation with an adviser and distributed to provide one course in each of four fields and some concentration in two of the fields.

Option B requires a social studies major of 36 hours and a minor of 20 hours which is also within the social studies field. The major under option B consists of two parts: (1) 16 to 21 hours in history and (2) 15 to 20 hours in anthropology, psychology, economics, geography, political science, and sociology distributed to provide courses in three of the six fields. The 20-hour minor is taken entirely in one of the areas of anthropology, economics, geography, psychology, political science, or sociology which has not been included in the major.

The choice of options will be selected in consultation with an adviser. Under each option at least one survey course in American history and one course in American government is required.

TEACHER EDUCATION MINOR IN ADULT AND CONTINUING EDUCATION

It is the purpose of this minor to offer students a course of study to increase their competence as teachers of adults and to open avenues for expanded career options for those planning to be teachers. This is not a field in which one can be certified for elementary or secondary teaching in Illinois.

	HOURS
Adult learning and development (A.H.C.E. 362).....	4
Continuing education general seminar (A.H.C.E. 380).....	4
Instructional design (A.H.C.E. 363).....	4
Electives (for the selection of electives, students must have prior approval of the adult and continuing education adviser, 276 Education Building).....	6
Total	18

APPROVED NONTEACHING MINOR¹

INSTRUCTIONAL APPLICATIONS OF COMPUTERS

A minimum of 20 hours, including the following, is required.

COMPUTER SCIENCE	HOURS
Introduction to computer programming (C.S. 121).....	3
Program and data structures (C.S. 221).....	3
Advanced computer science elective, ² or introductory programming (C.S. 101, 102, 103, 105, 107).....	3
Advanced computer programming (C.S. 300, or C.S. 121 and 221).....	3
Advanced computer science elective ²	3
Total	9

INSTRUCTIONAL APPLICATIONS OF COMPUTERS

Introduction to instructional applications of computers (Se. Ed. 317).....	4
Instructional applications in subject fields.....	4
Practicum in instructional applications.....	3

ELECTIVE

A thesis project (Se. Ed. 249).....	3
Total	20-23

Students enrolled in this minor may do practice teaching in schools having computer resources for instructional applications.

¹ This is not a subject field to be taught but is an additional resource to assist the teacher in the instruction of a teacher education major. Please consult an adviser concerning this.

² A computer science elective chosen from among the general areas of programming, numerical analyses, structure and logic, theory of computation, hardware, or applications of computing.

CURRICULUM IN BUSINESS EDUCATION

For the degree of Bachelor of Science in Business Education

All students complete requirements as outlined in prescribed courses in business education, general education, professional education, one or more areas of specialization, and general electives. Students must complete the requirements of one area of specialization. Students may also complete a second area of specialization or one of the approved teacher education minors listed on page 139. A minimum of 126 hours of credit, excluding basic military, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 135 to 140.

GENERAL EDUCATION COURSES	HOURS
Sp. Com. 111 and 112, or Rhet. 105 and a speech communication performance elective, or Rhet. 108 and a speech communication performance elective.....	6-7
Humanities (two approved courses) ¹	6-8
Introduction to psychology.....	3
Natural science (approved courses including a laboratory course) ¹	6-8
Health and/or physical education activities.....	3
United States history (Hist. 151, 152).....	3-4
United States government (Pol. S. 150).....	3
Total	30-37

PRESCRIBED COURSES IN BUSINESS EDUCATION

Principles of accounting I and II (Accy. 101, 105).....	6
Introduction to economics (Econ. 101).....	4
Introductory economic statistics (Econ. 171 or 172).....	3
Introductory analysis for social scientists (Math. 124 and 134).....	7
Business and administrative communication (B.&T.W. 251).....	3
Total	23

PROFESSIONAL EDUCATION REQUIREMENTS

Orientation to professional education (Vo. Tec. 101).....	2
Principles of vocational education (Vo. Tec. 240).....	2
Psychology of teaching and learning (Ed. Psy. 211).....	3
Foundations of American education (E.P.S. 201).....	3
Techniques of teaching (Se. Ed. 241).....	4-5
Educational practice (student teaching) (Ed. Pr. 242).....	5-8
Total	19-23

GENERAL ELECTIVES

General electives (up to 24 hours) will be selected as needed to meet the minimum requirement of 126 hours for graduation. These may include courses to develop depth to respond to the diverse interests of the student.

¹ Courses in natural science and humanities must be selected from the approved General Education Requirements list on page 249.

Areas of Specialization

The area of specialization must be declared no later than the first semester of the junior year. The following lists of specific courses are provided as a guide for students and advisers. Substitution may be made with the approval of the adviser. Students are expected to complete the minimum program in the area of specialization which is declared.

ACCOUNTING-BOOKKEEPING	HOURS
Intermediate accounting (Accy. 208).....	3
Cost accounting (Accy. 266).....	3
Basic federal income tax accounting (Accy. 274).....	3
Introduction to computers and their application to business and commerce (C.S. 105).....	3
Electives in accounting.....	6-8
Management and organizational behavior (B. Adm. 210 or 247).....	3
Technic and curriculum development for teaching secretarial and office practice subjects ¹ (Vo. Tec. 270).....	3
Technic and curriculum development for teaching data processing and office machines ¹ (Vo. Tec. 271).....	3
Total	27-29

DATA PROCESSING

Accounting (Accy. 208).....	3
Accounting system design (Accy. 325).....	3
Introduction to computers and their application to business and commerce (C.S. 105).....	3
Economic statistics II (Econ. 173).....	3
Electives in computer science.....	7-9
The legal environment of business (B. Adm. 200).....	3
Technic and curriculum development for teaching data processing and office machines ¹ (Vo. Tec. 271).....	3
Introduction to management (B. Adm. 210 or 247).....	3
Total	28-30

ECONOMICS

Economic statistics II (Econ. 173).....	3
Intermediate microeconomic theory (Econ. 300).....	3
Intermediate macroeconomic theory (Econ. 301).....	3
Electives in economics.....	7-9
Introduction to management (B. Adm. 210 or 247).....	3
Select three of the five courses listed:.....	9
Government finance and taxation (Econ. 214)	
Labor problems (Econ. 240)	
Comparative economic systems (Econ. 255)	
Economics of consumption (Econ. 313)	
Introduction to business financial management (Fin. 254)	
Total	28-30

MARKETING AND DISTRIBUTIVE EDUCATION

Elective in marketing or advertising.....	3-4
The legal environment of business (B. Adm. 200).....	3
Principles of marketing (B. Adm. 202).....	3
Retail management (B. Adm. 212).....	3
Promotion management (B. Adm. 337).....	3
Technic and curriculum development for teaching secretarial and office practice subjects ¹ (Vo. Tec. 270).....	3
Technic and curriculum development for teaching data processing and office machines ¹ (Vo. Tec. 271).....	3
Cooperative vocational and technical education programs (Vo. Tec. 382).....	4
Problems in concurrent work-education (Vo. Tec. 385).....	4
Total	29-30

SECRETARIAL-OFFICE PRACTICE

Elective in industrial administration or finance.....	3-4
Introduction to business financial management (Fin. 254).....	3
The legal environment of business (B. Adm. 200).....	3
Introduction to management (B. Adm. 247).....	3
Personnel management.....	3
Technic and curriculum development for teaching secretarial and office practice subjects ¹ (Vo. Tec. 270).....	3
Technic and curriculum development for teaching data processing and office machines ¹ (Vo. Tec. 271).....	3
Cooperative vocational and technical education programs (Vo. Tec. 382).....	4
Problems in concurrent work-education (Vo. Tec. 385) ²	4
Total	29-30

¹ Students who wish to teach in special fields requiring essential competencies in an applied area such as typing, shorthand, and office machines must obtain an acceptable level of proficiency prior to enrollment in the program, or outline a plan whereby these skills may be obtained prior to enrollment in Vo. Tec. 270 and 271 and student teaching. Proficiency levels are validated by the business education faculty through examination.

² May be waived on the basis of 2,000 hours of work experience.

CURRICULUM IN EARLY CHILDHOOD EDUCATION

For the degree of Bachelor of Science in Early Childhood Education

This four-year curriculum focuses on teaching in the nursery school and kindergarten-primary grades. A minimum of 124 semester hours of credit, excluding basic military, is necessary for graduation under this curriculum.

For teacher education requirements applicable to all curricula, see pages 135 to 140.

LANGUAGE ARTS

HOURS

Rhet. 105 and a performance-based speech communication course, or Rhet. 108 and a performance-based speech communication course, or Sp. Com. 111 and 112.....	6-7
Literature	6
Children's literature (El. Ed. 304).....	3
Total	15-16

SOCIAL SCIENCE

Social science courses approved by adviser ¹	6-8
History of the United States (Hist. 151, 152, 260, 261, 262).....	3-4
American government (Pol. S. 150).....	3
Total	12-15

NATURAL SCIENCE

Biological science ¹	6-8
Physical science ¹ (mathematics not acceptable).....	6-8
Total	12-16

FINE ARTS

Music for early childhood education (Music 240, 249).....	6
Art for the elementary school (Art 203, 205).....	6
Total	12

HUMANITIES

May be fulfilled with literature courses above.....	6
---	---

MATHEMATICS

Including content and methods (Math. 202).....	5
--	---

PSYCHOLOGY

Psych. 100	3
------------------	---

HEALTH AND/OR PHYSICAL EDUCATION

Health or physical education for the elementary school (P.E. 269 or H. Ed. 285 or 392)....	3
Basic physical education activities.....	2
Total	5

AREA OF CONCENTRATION

At least 12 hours of credit in one of the areas (including the above areas) approved by the Department of Elementary and Early Childhood Education. Generally, 6 hours must be at the 200 or 300 level. All 12 hours must be in addition to the basic requirement in the area.

PROFESSIONAL EDUCATION

Foundations of American education (E.P.S. 201).....	3
Child growth and development (Ed. Psy. 236, H.D.F.E. 105, or Psych. 216).....	3

Theory and process of early childhood education (El. Ed. 234).....	5
Principles, problems, and issues in elementary education (El. Ed. 230).....	3
Educational practice in elementary education (Ed. Pr. 232).....	8
Educational practice for special fields in elementary schools (Ed. Pr. 238).....	3
Teaching of language arts in the elementary school (El. Ed. 333).....	3
Principles and practices in early childhood education (El. Ed. 334).....	3
Methods in the elementary school (El. Ed. 335, 332, or 331).....	3
Fundamentals of reading techniques (El. Ed. 336).....	3
Parent involvement techniques for teachers (El. Ed. 344, H.D.F.E. 210, or Anth. 210).....	3
Elementary nutrition (El. Ed. 399 or F.N. 120).....	2 or 3
Total	42-43

ELECTIVES

To yield a total (with above requirements) of.....	124
--	-----

¹ To be selected from appropriate General Education Requirements list on page 249.

CURRICULUM PREPARATORY TO ELEMENTARY SCHOOL TEACHING

For the degree of Bachelor of Science in Elementary Education

A minimum of 124 semester hours, excluding basic military, is necessary for graduation under this curriculum.

For teacher education requirements applicable to all curricula, see pages 135 to 140.

LANGUAGE ARTS

HOURS

Rhet. 105 and a performance-based speech communication course, or Rhet. 108 and a performance-based speech communication course, or Sp. Com. 111 and 112.....	6-7
Literature	6
Children's literature (El. Ed. 304).....	3
Total	15-16

SOCIAL SCIENCE

Social science courses approved by adviser ¹	6-8
History of the United States (Hist. 151, 152, 260, 261, 262).....	3-4
American government (Pol. S. 150).....	3
Cultural geography.....	3-4
Total	15-19

NATURAL SCIENCE

Biological science ¹	6-8
Physical science ¹ (mathematics not acceptable).....	6-8
Total	12-16

FINE ARTS

Music for the elementary school (Music 240, 241).....	6
Art for the elementary school (Art 203, 205).....	6
Total	12

HUMANITIES

May be fulfilled with literature courses above.....	6
---	---

MATHEMATICS

Including content and methods (Math. 202, 203).....	8
---	---

PSYCHOLOGY 3**HEALTH AND/OR PHYSICAL EDUCATION**

Health or physical education for the elementary school.....	2
Health and/or basic physical education activities.....	3
Total	5

AREA OF CONCENTRATION

At least 12 hours of credit in one of the areas (including the above areas) approved by the Department of Elementary and Early Childhood Education. Generally, 6 hours must be at the 200 or 300 level. All 12 hours must be in addition to the basic requirement in the area.

PROFESSIONAL EDUCATION

Foundations of American education (E.P.S. 201).....	3
Child growth and development (Ed. Psy. 236).....	3
Pre-student teaching practicum (El. Ed. 237).....	5
Primary reading and language arts (El. Ed. 336, 333).....	6
Student teaching with seminar (Ed. Pr. 232).....	8
Principles, problems, and issues in elementary and early childhood education (El. Ed. 230).....	3
Total	28

ELECTIVES

To yield a total (with above requirements) of.....	124
--	-----

¹ To be selected from appropriate General Education Requirements list on page 249.

CURRICULUM IN TECHNICAL EDUCATION SPECIALTIES

For the degree of Bachelor of Science in Occupational and Practical Arts Education

The curriculum outlined below requires a minimum of 128 hours for graduation (excluding basic military science). A student who completes this curriculum may seek to teach his or her specialty at one or more of the following types of institutions: secondary school, technical institute, junior college, business, or industry. Examples of technical education specialties include: preparation for the teaching of environmental maintenance, food service occupations, health occupations, accounting, ornamental horticulture, industrial arts, dental assisting, and manufacturing.

For teacher education requirements applicable to all curricula, see pages 135 to 140.

GENERAL EDUCATION REQUIREMENTS**HOURS**

Sp. Com. 111 and 112, or Rhet. 105 and a speech communication performance elective, or Rhet. 108 and a speech communication performance elective.....	6-7
General psychology.....	3
Natural sciences (approved courses).....	6-8
Humanities (approved courses).....	6-8
History of the United States (Hist. 151, 152, 260, 261, 262).....	3
American government (Pol. S. 150).....	3
Health and/or basic physical education activities.....	3
Total	30-35

PROFESSIONAL EDUCATION REQUIREMENTS COMMON TO ALL TECHNICAL EDUCATION SPECIALTIES

Foundations of American education (E.P.S. 201).....	3
---	---

Principles of occupational and practical arts education (Vo. Tec. 240).....	2
Psychology of teaching and learning (Ed. Psy. 211).....	3
Methods of teaching.....	3
Educational practice (Ed. Pr. 242).....	5-8
Planning and organizing content for career, occupational, and practical arts education (Vo. Tec. 383).....	3
Total	19-22

TECHNICAL EDUCATION SPECIALTY REQUIREMENTS

The technical education specialties provide opportunities for planning individual programs of study under the supervision of a faculty adviser in the student's special field of interest. Examples of specific programs are on file with the Department of Vocational and Technical Education to aid in program planning.

Supervised Occupational Experience

Cooperative arrangements have been made by the University for supervised occupational experience of technical education specialty students while employed in selected employment locations. This program is designed for students preparing to become certified vocational or technical specialty instructors, for students preparing for employment in training departments maintained by business or industrial organizations, or for students preparing to be teachers of selected occupations. Students may accumulate up to 17 semester hours of credit through registration in Vo. Tec. 189 — Supervised Occupational Experience.

Cooperative arrangements have been established with some community colleges whereby registration in this program may be accomplished after completion of the freshman year.

Summary of Requirements

MINIMUM HOURS

General requirements.....	30-35
Professional education requirements.....	19-22
Technical education specialty requirements.....	48
General electives.....	26-31
Total	128

CURRICULUM PREPARATORY TO TEACHING MODERATELY AND SEVERELY HANDICAPPED PERSONS

For the degree of Bachelor of Science in Special Education

This two-year curriculum is designed to prepare students for the instruction of moderately and severely handicapped persons. To be considered for admission, prospective students must have a cumulative grade-point average of at least 3.5 (A = 5.0), have prior experience with moderately and severely handicapped persons, and have attained junior standing (at least 60 semester hours of baccalaureate credit) upon enrollment in the program. A minimum of 124 hours of credit, excluding basic military, is required for graduation.

To allow completion of degree requirements within two years, applicants must have earned 60 hours and must have fulfilled all or most of the following requirements prior to enrollment.

HOURS

Composition and speech performance (e.g., Sp. Com. 111 and 112, or Rhet. 105 and a speech communication performance elective, or Rhet. 108 and a speech communication performance elective).....	6-7
Humanities ¹	6
Natural sciences ¹	6

Social sciences.....	6
History of the United States (Hist. 151, 152, 260, 261, 262).....	3
United States government (Pol. S. 150).....	3
Basic physical education activities and/or health education.....	3
Introduction to exceptional children (Sp. Ed. 117).....	3
Child development (Ed. Psy. 236 or Psych. 216).....	3
Introduction to psychology (Psych. 100 or 103).....	3-4
Abnormal psychology or psychology of personality (Psych. 238 or 250).....	3
Electives	13-15
Total	60

¹ List of approved General Education Requirements is on page 249.

The following requirements are to be completed after enrollment in the program for the preparation of teachers of moderately and severely handicapped persons.

Basic Curriculum Requirements

HOURS

Characteristics and Problems of Mental Retardation (Sp. Ed. 322).....	3
Applied Behavior Analysis and Behavior Management (Sp. Ed. 318, section X1).....	4
Mental and Educational Measurement of the Mentally Handicapped (Sp. Ed. 324).....	3
Curriculum Programming for the Severely Handicapped, I (Sp. Ed. 318, section S).....	4
Curriculum Programming for the Severely Handicapped, II (Sp. Ed. 318, section T).....	4
Early Field Experiences (Ed. Pr. 150, section SB).....	4
Educational Practice with the Emotionally Disturbed (Ed. Pr. 220, section E).....	6
Educational Practice with the Mentally Retarded (Ed. Pr. 220, section C).....	8
Secondary/Vocational Parent Concerns (Sp. Ed. 318, section V).....	4
Total	40

Supporting Area Requirements

HOURS

Language Intervention with the Moderately and Severely Handicapped (Sp. Ed. 318, section O).....	4
Arts and crafts in the elementary grades (Art 123, 190, 203, 205, or Vo. Tec. 188).....	3
Music Education for Exceptional Children (Music 346, section B).....	2
History and/or philosophy of education (E.P.S. 201, 300, 301, 302, 304, 305, 308).....	3
Total	12
Electives	12

College of Engineering

*University of Illinois at Urbana-Champaign
207 Engineering Hall
Urbana, IL 61801*

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The College of Engineering prepares men and women for professional careers in engineering and for responsible positions of a technical and semitechnical character in industry, commerce, education, and government. The college provides training in the mathematical and physical sciences and their application to a broad spectrum of technological and social requirements of society. The engineering curricula, though widely varied and specialized, are built on a general foundation of scientific theory applicable to many different fields. Work in the classroom and laboratory is brought into sharper focus by practical problems which the student solves by methods similar to those of practicing engineers.

While each student pursues a curriculum chosen to meet his or her own career goals, all students take certain common courses. Basic courses in mathematics, chemistry, physics, rhetoric, and computer science are required in the first two years. Although the curricula are progressively specialized in the third and fourth years, each student is required to take some courses outside his or her chosen field.

Nontechnical courses are included in each curriculum; they may be required or elective. Many nontechnical courses satisfy the broad objectives of the humanities and social sciences requirements of the engineering curricula — making the student keenly aware of the urgent problems of society and developing a deeper appreciation of man's cultural achievements. The humanities and social sciences courses are usually drawn from the liberal arts and sciences, economics, and approved courses in fine and applied arts. Students who wish a broader cultural background should consider a combined engineering-liberal arts and sciences program as described on page 268.

The Engineering Library, on the first three floors of Engineering Hall, is a major resource center for students of all curricula. It contains the reference books, periodicals, catalogs, and technical publications which students need constantly, and also provides for general reading and private research.

DEPARTMENTS AND CURRICULA

The College of Engineering includes the Departments of Aeronautical and Astronautical Engineering, Ceramic Engineering, Civil Engineering, Computer Science, Electrical Engineering, General Engineering, Mechanical and Industrial Engineering, Metallurgy and Mining Engineering, Physics, Theoretical and Applied Mechanics, and the Nuclear Engineering Program. The undergraduate curricula described later in this section are administered by these departments. The work in chemical engineering is administered by the College of Liberal Arts and Sciences. The curriculum in agricultural engineering is administered jointly by the Colleges of Agriculture and Engineering. Architecture and the engineering option in archi-

lecture are administered by the College of Fine and Applied Arts. (See page 312.)

Each student entering the College of Engineering declares his or her choice of a curriculum. All first-year students follow the common program for freshmen shown below.

ADMISSION REQUIREMENTS

Entering Freshmen

Students seeking admission to the College of Engineering who are recent high school graduates or who have earned less than 12 semester hours of credit at other collegiate institutions are classified as new freshmen and must meet the entrance requirements to the College of Engineering that are specified for new freshmen. (See the Admissions Chart on page 39.) Also a student should have an ACT score of 25 (SAT score of 1015) or better and be in the upper 25 percent of his or her high school class.

Although new freshmen take a common, or similar, program (shown below) they are asked to choose a curriculum in which they wish to study. Freshmen may change their curriculum of study at their own request any time during, or at the conclusion of, their freshman year of study. Since the program of study is essentially the same for all freshman students, such changes can be made without loss of credit toward graduation.

The Mathematics Placement Test is required of all freshman students entering the College of Engineering, and they are urged to take the examination during the spring testing period prior to enrollment.

The Chemistry Placement Test is required of all entering freshmen who will take freshman chemistry during their first year. This examination will be used to place a student in a remedial course for engineers, Chem. 100, or in the normal beginning course for engineers, Chem. 101. Students with a superior background in chemistry may take the Chemistry Proficiency Test which, if passed, would place them in Chem. 102 and grant them 4 hours proficiency credit for Chem. 101. Students having CEEB advanced placement credit in mathematics, chemistry, or physics (see page 49) will receive credit toward graduation and will be placed in advanced course work consistent with their academic preparation.

All entering freshmen take a common first-year program as described below. Any freshman completing the first two semesters in any engineering curriculum in the college will be able to use every course taken toward any other curriculum in the college into which he or she wishes to transfer.

COMMON FIRST-YEAR PROGRAM

	HOURS
Engineering lectures.....	0
Chemistry ¹	4-8
Mathematics ²	8-10
Physics.....	4
Rhetoric.....	4
Engineering electives.....	0-6
Electives.....	3-6
Total.....	31-36

¹ The normal freshman chemistry sequence is Chem. 101 and 102.

² Entering freshmen who do not pass the Mathematics Placement Test will take Math. 111 or 112, and 114. Students who have had analytic geometry in high school and pass the Mathematics Placement Test will replace the normal mathematics sequence (Math. 120, 131, and 241) with Math. 135, 245, and 3 semester hours of free electives.

Transfer Students

The College of Engineering welcomes transfer students from both junior and senior colleges and has worked closely with these schools in Illinois to implement pre-engineering programs.

Students may complete the first two years of study in other accredited institutions and transfer to the University of Illinois at Urbana-Champaign with little or no loss of credit provided they follow a program similar to the one in the College of Engineering. Following is a suggested list of courses which should be completed in the first two years prior to transfer. A range of hours is given in each of these course work areas, as the major concern is that students have an adequate coverage of basic subject matter rather than specific numbers of hours in given areas. The range is given for students who may be attending schools on either the quarter-hour or semester-hour system.

SUGGESTED PREENGINEERING COURSES	RANGE OF HOURS	
	Quarter Hours	Semester Hours
Freshman chemistry.....	10-15	6-10
General physics.....	12-18	8-12
English (rhetoric and composition).....	6-9	3-6
Mathematics (total mathematics credits).....	20-24	15-17
Calculus or calculus and analytic geometry.....	16-20	12-14
Differential equations.....	3-4	3
Engineering graphics (mechanical drawing and/or descriptive geometry).....	4-6	3-4
Applied mechanics — statics.....	3-4	2-3
Applied mechanics — dynamics.....	3-6	2-3
Computer science (FORTRAN programming).....	3-4	3
	RANGE OF HOURS	
	Quarter Hours	Semester Hours
OTHER COURSES		
Social sciences and humanities.....	Varies	Varies
Statistics.....	4	3

Students should complete as many of the suggested courses as possible and select additional course work from those listed as Other Courses above to complete full-time study programs. Normally, a student will complete all of the suggested courses and 8 to 10 additional semester hours of course work. This additional course work may include social sciences and humanities electives but could include work in computer science or advanced mathematics.

Before selecting social sciences and humanities electives, students should familiarize themselves with the elective requirements of the college listed on pages 275 through 277. Students seeking transfer to the college must have a cumulative grade-point average of at least 3.50 (A = 5.0).

Students may transfer to the college for the fall, spring, or summer session provided the students have completed 60 or more semester hours of work. Transfer students are normally expected to have also completed the basic mathematics (through calculus), physics, and chemistry sequences in the 60 or more semester hours required for transfer. Transfer students starting their studies in the fall semester are also allowed to advance enroll during the preceding summer. Students are informed of this opportunity after they are admitted. Questions are invited concerning this procedure.

A few sophomore-level technical courses such as E.E. 260, M.E. 185, and C.E. 195 are not offered by most community colleges. However, junior-level transfer students can usually arrange their programs here so that all technical requirements can be completed in a four-semester period on this campus if they wish to do so. If the number of hours remaining to complete a degree requires more than four semesters, the student may enroll for an additional summer session or semester.

Students transferring to the College of Engineering are encouraged to write to the Office of the Associate Dean, University of Illinois at Urbana-Champaign, 207

Engineering Hall, Urbana, IL 61801, or to the head of the department to which they wish to transfer, at any time they desire guidance in the selection of courses. Transfer students who are deficient in areas such as mathematics, physics, or mechanics may find it difficult to obtain a full program here in their first semester. It is recommended that a student complete all sequences in mathematics, physics, and chemistry at one institution in order to maintain proper continuity. In cases where this is not possible, a student may enroll in a summer session to make up deficiencies.

Transfer students are not required to take freshman guidance examinations, or any other examinations, to qualify for admission to the College of Engineering, but all other admission regulations apply to them. Transfer students should consult Admission of Transfer Students on page 23 for general information concerning transfer to the University of Illinois at Urbana-Champaign, and students from community colleges should note especially the rules regarding community colleges on pages 24 and 25.

SPECIAL PROGRAMS

Combined Engineering—Liberal Arts and Sciences Program

A five-year program of study permits a student to earn a Bachelor of Science degree in a field of engineering from the College of Engineering and a Bachelor of Arts or a Bachelor of Science degree from the College of Liberal Arts and Sciences at the Urbana-Champaign campus.

This program affords students the opportunity to prepare for careers of an interdisciplinary nature. By selecting an appropriate liberal arts and sciences major in combination with the desired engineering curriculum, it is possible for students to qualify for new and unique careers in industry, business, or government. Students who desire a broader background than it is possible to provide in the four-year engineering curricula can develop a program that includes a well-rounded cultural education in addition to an engineering specialty.

Each student in this program has advisers in both colleges who assist in planning a program of study to meet the needs and requirements for both degrees. Most combinations of engineering and liberal arts curricula may be completed in ten semesters, provided the student does not have deficiencies in the entrance requirements of either college.

Most engineering curricula can be combined with one of a variety of liberal arts and sciences majors including languages, social sciences, humanities, speech communication, and philosophy. This combined program operates under the following conditions:

- Students entering the program must meet admission requirements for both colleges. (See the Admissions Chart on pages 39 and 41.)
- A student who starts in the program and decides to transfer from it is subject to the existing graduation requirements of the college of his or her choice.
- The degrees of Bachelor of Science in Engineering and Bachelor of Arts or Bachelor of Science in Liberal Arts and Sciences are awarded simultaneously. No student in the combined program is permitted to receive a degree from either college before the completion of the entire program.
- Any student entering this program with his or her liberal arts and sciences foreign language requirement partially or completely fulfilled is required to substitute for these hours an equivalent number of hours in the humanities or social sciences.
- Students electing advanced ROTC or NROTC are required to meet these commitments in addition to the combined program as outlined.
- Students having 75 or more hours of transfer credit are not advised to enter this program since they cannot ordinarily complete it in five years.

- Students transferring from other colleges and universities must plan to complete at least one year in the College of Liberal Arts and Sciences at Urbana-Champaign and one year in the College of Engineering at Urbana-Champaign in order to satisfy residence requirements if both degrees are to be granted here. Other students should plan to spend a minimum of two years in each college.
- Students are expected to maintain at least a 3.5 (A = 5.0) grade-point average to be accepted or continued in the program.

During the first year students are enrolled in the common freshman program for engineers which is taken in the College of Engineering. (See page 240.) Students are enrolled in the College of Liberal Arts and Sciences for the second and third years and in the College of Engineering for the fourth and fifth years. A typical combined program follows.

SECOND YEAR			FIRST SEMESTER		HOURS		SECOND SEMESTER		HOURS		
Biological science	4	Biological science	.....	4	Calculus and analytic geometry	.....	5	Language	.....	4
Humanities or social sciences	4	Liberal arts and sciences major	.....	3	Language	.....	4	Physics (heat, electricity, and magnetism)	.....	4
Total	.....	17	Total	.....	15	THIRD YEAR					
THIRD YEAR			Humanities or social sciences	.....	4	Engineering subjects	.....	6-8	Humanities or social sciences	.....	4
Language	4	Liberal arts and sciences major	.....	6	Language	.....	4	Liberal arts and sciences major	.....	3
Physics (wave motion, sound, light, and modern physics)	4	Total	.....	18	Total	.....	17-19	FOURTH YEAR		
Total	18	FOURTH YEAR			Engineering subjects	.....	15	Engineering subjects	.....	18
FOURTH YEAR			Humanities or social sciences	.....	4	Total	.....	19	FIFTH YEAR		
FIFTH YEAR			FIFTH YEAR			Engineering subjects	.....	15-17	Engineering subjects	.....	18

It may be necessary to adjust the above program to allow the student to take more hours in the L.A.S. program.

For further information about this program, students should write to the Office of the Associate Dean in either the College of Engineering or the College of Liberal Arts and Sciences at the Urbana-Champaign campus.

Affiliations with Other Liberal Arts Colleges

Through a program of affiliation between the College of Engineering and a number of liberal arts colleges, students may enroll in a five-year program and earn a bachelor's degree from one of these colleges and at the same time earn a bachelor's degree in engineering from the University of Illinois at Urbana-Champaign. In general, students spend the first three years at the liberal arts college and the final two years at the University of Illinois at Urbana-Champaign.

Increasing numbers of engineering graduates enter leadership roles in industry and government and require a greater understanding of the impact of technology on society. The five-year program encourages a student to develop a broad understanding of the social sciences and humanities while he or she strives for excellence in technical studies. These affiliations have the added benefit of allowing the student to take his or her preengineering studies at a liberal arts school chosen on the basis of geographical location, prestige, religious principles, family circumstances, or other personal reasons.

Colleges which are affiliated with the College of Engineering are:

Adrian College Adrian, Michigan	Illinois Benedictine College Lisle, Illinois (formerly St. Procopius College)	Monmouth College Monmouth, Illinois
Anderson College Anderson, Indiana	Illinois College Jacksonville, Illinois	Northern Illinois University DeKalb, Illinois
Augustana College Rock Island, Illinois	Illinois State University Normal, Illinois	Olivet Nazarene College Kankakee, Illinois
Beloit College Beloit, Wisconsin	Illinois Wesleyan University Bloomington, Illinois	Rockford College Rockford, Illinois
Butler University Indianapolis, Indiana	Lewis University Lockport, Illinois	Saint Ambrose College Davenport, Iowa
Carthage College Kenosha, Wisconsin	Loras College Dubuque, Iowa	Saint Joseph's College Rensselaer, Indiana
DePaul University Chicago, Illinois	Loyola University of Chicago Chicago, Illinois	Shimer College Mt. Carroll, Illinois
Eastern Illinois University Charleston, Illinois	MacMurray College Jacksonville, Illinois	Wartburg College Waverly, Iowa
Elmhurst College Elmhurst, Illinois	McKendree College Lebanon, Illinois	Western Illinois University Macomb, Illinois
Greenville College Greenville, Illinois	Millikin University Decatur, Illinois	Wheaton College Wheaton, Illinois
		Yankton College Yankton, South Dakota

Cooperative Engineering Education Program

A five-year program in cooperative engineering education is available to students in all curricula in the college. Students in the program alternate periods of attendance at the University with periods of employment in industry or government. The employment, which is an essential element in the educational process, is with the same company each work period and is related to the student's field of study. The diversified work assignments provide the student with a variety of experiences related to his or her studies. These assignments increase in difficulty and responsibility with each succeeding period off campus. A list of participating employers may be obtained by writing to the Cooperative Engineering Coordinator, University of Illinois at Urbana-Champaign, 109 Engineering Hall, Urbana, IL 61801.

Students wishing to join the program must first enroll in the College of Engineering at the University of Illinois at Urbana-Champaign. Freshmen are encouraged to explore the benefits of the co-op program during their first semester and should apply during their second semester for an off-campus educational assignment. If accepted by a participating employer freshmen will have their first off-campus educational assignment scheduled during the summer following their freshman year or they will attend the summer session and have their first off-campus assignment during the fall semester following their freshman year. Typical schedules are illustrated in a co-op brochure available from the cooperative engineering coordinator.

Sophomores and advanced undergraduates are eligible for the program, which will still require five years to complete, but they will have fewer off-campus assignments.

Junior college transfer students and other transfer students are eligible to participate in the program and should contact the cooperative engineering coordinator as soon as they decide to participate in the program. Application for the co-op pro-

gram will, in some cases, precede a formal application for admission to the University of Illinois, and acceptance into the co-op program does not imply later admission to the University should the transfer student fail to meet normal competitive admission requirements.

The cooperative engineering coordinator, after receiving information from the junior college preengineering student, will help the student plan a five-year educational program which will include periods of study at the junior college, periods of study at the University, and four or five off-campus educational assignments. However, the college does not assist the prospective transfer student in finding a co-op employer, and application to the employer is made directly by the transfer student. The first one or two off-campus assignments scheduled will probably be completed prior to transfer to the University.

Students enrolled in the cooperative education program are registered in the University and are considered full-time students for the entire five years required by the program. Appropriate entries indicating participation in the co-op program are entered on the student's official transcript each semester and summer that he or she is enrolled. Upon successful completion of the program, the student is awarded a certificate signed by the dean of the college and the off-campus co-op coordinator, in addition to receiving the regular diploma awarded for completing the degree requirements.

College Option in Bioengineering

Bioengineering is a broad, interdisciplinary field that brings together engineering, biology, and medicine to create new techniques, new devices, and new understanding of living systems to improve the quality of human life. Its practice ranges from the fundamental study of the behavior of biological materials to the design and development of medical instruments.

Any of the existing engineering curricula can provide a good foundation for work in bioengineering. However, the engineering undergraduate needs additional education in the biologically oriented sciences to obtain a strong background for bioengineering. With such a background the student should be able to progress rapidly on the graduate level in any branch of bioengineering. In industry the graduate will be competent to handle engineering tasks which are related to biology.

The courses shown below have been selected specifically for the undergraduate engineering student. There are three possible alternatives which can be selected to meet the individual student's plans, designated A, B, and C. The listing of bioengineering courses is not complete, but represents examples of courses which are currently available. An additional course in organic chemistry would be required for entrance to most medical schools. A minimum of 16 hours is required for the option. To obtain recognition for the bioengineering option, students must register in the Office of the Associate Dean, 207 Engineering Hall.

BIOLOGY CORE	ALTERNATIVES		
	A	B	C
Chem. 131 — Elementary Organic Chemistry.....	3	3	3
Physl. 103 — Introduction to Human Physiology.....		4	
Physl. 301 ¹ — General Physiology.....	3	3	3
Physl. 303 — General Physiology Laboratory.....	2	2	2
Physl. 302 ¹ — Experimental Animal Physiology.....			3
Physl. 304 — Experimental Physiology Laboratory.....		2	2
V.M.S. 315 — Veterinary Physiology.....	5		
Total hours for the biology core.....	13	14	13
BIOENGINEERING AND RELATED COURSES (one or more)	HOURS		
Bioen. 120 — Introduction to Bioengineering.....	1		
Bioen. 199 — Undergraduate Open Seminar.....	0-4		

Bioen. 270 — Individual Study.....	0-4
Eng. H. 297 — Honors Projects in Bioengineering.....	1-4
Bioen. 308 — Implant Materials for Medical Application.....	3
Bioen. 314 — Biomedical Instrumentation (same as E.E. 314).....	3
Bioen. 315 — Biomedical Instrumentation (lab) (same as E.E. 315).....	2
Bioen. 370 — Biofluid Mechanics (same as T.A.M. 393).....	3-4
Bioen. 370Z — Special Topics in Bioengineering.....	0-4
Bioen. 370CC — Bioengineering Heat and Mass Transfer (same as M.E. 393).....	3-4
Bioen. 375 — Modeling of Biological Systems (same as E.E. 375).....	3
Chem. 323 — Applied Electronics for Scientists.....	4
E.E. 374 — Ultrasonic Techniques.....	3
I.E. 305 — Principles of Ergonomics (same as Physl. 305).....	4
I.E. 306 — Quantitative Methods of Ergonomics (same as Physl. 306).....	4
Nuc. E. 241 — Introduction to Radiation Protection.....	3
Nuc. E. 341 — Principles of Radiation Protection.....	4
Other departmental specialties related to bioengineering (taken as electives).....	3-4

¹ Biology prerequisites can be waived by the instructor for advanced engineering students. Engineering students must obtain permission from the associate dean, 207 Engineering Hall, before registration.

Thesis

A senior of high standing in any curriculum, with the approval of the department concerned, may substitute for one or more technical courses an investigation of a special subject and write a thesis.

Curriculum Modification

Students interested in modifying their curriculum may do so by checking with their department and advisers to determine the petition procedures for making curriculum modifications.

Special Curricula

Students of high scholastic achievement, with exceptional aptitudes and interests in special fields of engineering and their application, may be permitted to vary the course content of the standard curriculum in order to emphasize some phases not included or not encompassed by the usual course substitution and selection of electives. These unwritten curricula, however, include all the fundamental courses of the standard curricula, the variations being made mainly in the so-called applicatory portions of the standard curricula of the college. The program of study of each student permitted to take such a special curriculum must be approved by a committee of the college, in consultation with the head of the department in which the student is registered, and with a faculty member of the college. This faculty member automatically becomes the student's adviser in charge of registration and other matters pertaining to the approved program.

Advanced ROTC Training Combined with Engineering

Students in the College of Engineering may elect to participate in the Reserve Officers' Training Program and earn a commission in the United States Army Reserve, United States Air Force Reserve, or the United States Naval Reserve. A commission is awarded simultaneously with the awarding of the Bachelor of Science degree in an engineering field. Participation in these programs is limited to students who

apply and are selected by the Army, Air Force, or Navy units at the University. A monthly stipend is paid to those selected for advanced military training.

These programs require from one to three summer camps or cruises as well as the earning of a specified number of credits in advanced military courses. Credits earned appear in all academic averages computed by the College of Engineering. Certain curricula may use only a limited amount of these credits in fulfillment of graduation requirements. Students should plan on taking nine semesters to obtain both a bachelor's degree in engineering and a commission in the ROTC program. For further information on these programs, write directly to the Professor of Military Science, the Professor of Aerospace Studies, or the Professor of Naval Science. (See pages 123 through 134.)

Exchange Scholarship at Munich, Germany

The College of Engineering has an exchange scholarship with the Technical University in Munich, Germany. Under the terms of the scholarship, a University of Illinois student is given a tuition scholarship at the Technical University and a stipend to cover living expenses for the year. A student selected by the Technical University will receive a tuition scholarship at the University of Illinois at Urbana-Champaign and an equivalent cash stipend. Students are responsible for their own transportation expenses.

Students eligible for study in Germany must be enrolled in one of the following curricula: civil engineering, electrical engineering, industrial engineering, mechanical engineering, metallurgical engineering, nuclear engineering, or engineering physics. It is expected that the full year's study abroad will be used toward graduation in the student's curriculum at Urbana-Champaign.

To participate in the program, a student must have completed Ger. 104 or the equivalent and have finished his or her sophomore studies in engineering at the Urbana-Champaign campus. In addition, the student must be an outstanding scholar who will be an excellent representative of the University of Illinois and must be a U.S. citizen.

The program is under the general administration of the Engineering College Honors Council, although the recipient need not be an honors student if he or she has an outstanding undergraduate record.

On-the-Job Training in Foreign Countries

IAESTE (International Association for the Exchange of Students for Technical Experience) is a private, nonprofit organization which enables students of engineering, architecture, and the sciences to obtain on-the-job training in foreign countries. Any student, undergraduate or graduate, who is enrolled in good standing at the University and who has completed at least the sophomore year of study may apply. Generally, the maintenance allowance is adequate to cover living expenses while in training. Further information about these opportunities may be obtained from the College of Engineering.

HONORS PROGRAMS

Honors at Graduation

Honors awarded at graduation to superior students are designated on the diploma as Honors, High Honors, or Highest Honors. Students receive the designation Honors if they have a cumulative University of Illinois grade-point average of at least 4.5, and High Honors if they have at least a 4.8 grade-point average at graduation ($A = 5.0$). Highest Honors may be awarded to any student eligible for High

Honors upon recommendation of his or her department. The criteria used by departments in selecting individuals for Highest Honors recognition include outstanding performance in course work and in supplementary activities of an academic and/or professional nature. Ordinarily, the basis for such a citation requires completion of an undergraduate thesis or a special project of superior quality.

Edmund J. James Scholars

The honors program in engineering is a part of the University James Scholar Program established to recognize and develop the talents of academically outstanding students. Engineering students in this program are known as James Scholars in Engineering. Each is assigned to an honors adviser, and receives special consideration in the selection of a course program to meet specific needs.

New freshmen are eligible to enter the program if they meet two of the following three requirements: (1) rank in the top 10 percent of their high school graduating class; (2) have an ACT Subscore in Mathematics of 34 or better; (3) have an ACT Composite Score of 31 or better. To be eligible for admission and continuation in the Engineering James Scholar Program, all other students' cumulative grade-point averages shall be 4.5 or better for juniors and seniors and 4.3 or better for sophomores. Transfer students, with a superior transfer record, may be accepted into the program upon request and the completion of one normal semester in engineering with a grade-point average commensurate with the requirement for their class.

Good standing in the James Scholar Program requires participation in special honors work for a majority of the semesters in which a student is in residence.

Dean's List

See reference to the Dean's List on page 115.

Awards

Competitive prizes, scholarships, fellowships, and miscellaneous awards which are offered to students in the College of Engineering are listed below. The college publishes an annual brochure describing each award in detail and listing the most recent winners. Copies of this brochure may be obtained from the Office of the Associate Dean, College of Engineering, University of Illinois at Urbana-Champaign, 207 Engineering Hall, Urbana, IL 61801.

Air Conditioning, Refrigeration, and Heating Award

Elliott Ritchie Alexander Award

Alpha Chi Sigma Plaque

Alpha Epsilon Award

American Institute of Aeronautics and Astronautics Awards

American Institute of Chemical Engineers Scholarship Award

American Institute of Chemists Award

American Institute of Industrial Engineers Award

American Institute of Mining and Metallurgical Engineers' Student Technical Paper Writing Contest

American Society for Metals Outstanding Senior Awards

American Society of Agricultural Engineers Honor Awards

American Society of Agricultural Engineers (Chicago Chapter) Honored Member Scholarship Award

American Society of Agricultural Engineers (Central Illinois Section) Outstanding Sophomore Award

American Society of Civil Engineers Awards

American Society of Mechanical Engineers Prizes

Ira O. Baker Prizes
Bateman Congeniality Award
James W. Bayne Award
Caterpillar Award
M. T. Dural Undergraduate Research Prize
Donald E. Eisele Memorial Award
Elmendorf World Citizenship Awards
Eta Kappa Nu Award
Edward S. Fraser Award
Reynold Clayton Fuson Award
Algeron Dewaters Gorman Prize
Walter E. Hanson Graduate Study Award
Randolph P. Hoelscher Award
Honeywell Award
Ingersoll-Rand Award
Institute of Electrical and Electronics Engineers Award
Harvey H. Jordan Award
Kendall Award
Bernt O. Larson Project Design Award
E. W. Lehmann Award
O. A. Leutwiler Award
E. M. Lyman Prize
Machinery Award
H. L. Marcus-L. B. Phillips Award
Merck Award
Morrow Award
Mueller Company Award
Harold L. Olesen Award
W. E. O'Neil Civil Engineering Fellowship Award
Thomas A. Peebles Award
Marcia H. Peterman Paper Award
Phi Lambda Upsilon Cup
Stanley H. Pierce Award
Pi Tau Sigma Award
W. H. Rayner Surveying Award
Ernest A. Reid Open House Award
Worth Huff Rodebush Award
Lisle Abbott Rose Memorial Award
Fred B. Seely Award
J. O. Smith Award
Tau Beta Pi Outstanding Freshman Award
A. L. Thomas Award
Union Carbide-ASME Award
J. A. Weber Award
C. C. Wiley Traveling Award
Richard D. Williamson Memorial Award
Grace Wilson Award

ELECTIVES

Humanities and Social Sciences Electives

Eighteen hours of humanities and social sciences are required (in addition to rhetoric), including one sequence in humanities and one sequence in social sci-

ences. The two sequences cannot be in the same department. A sequence is defined as any combination of at least 6 hours of approved courses (see list below) taught by a single, nonengineering department, or any of the interdisciplinary sequences listed below. Additional courses to complete the 18 hours must also be drawn from the lists of approved courses. All seminars (including 199), honors courses, thesis courses, and individual study are excluded except as specifically approved.

APPROVED COURSES IN THE HUMANITIES

African Studies — all courses

Arch. — 210, 310-317

Art — 101, 110-116, 140, 209-214, 217-224, 301-340

As. St. — all courses

Cl. Arch. — all courses

Cl. Civ. — all courses except 100 and 382

C. Lit. — all courses

Engl. — all courses except Engl. 302, 381, 385, all business and technical writing courses, and rhetoric and composition courses

Foreign languages — all courses except the following: (1) introductory foreign language courses, e.g., 101, 102; (2) teachers' courses, e.g., 270, 280-282, 382; and (3) courses which duplicate previous studies.

Foreign literature in translation — all courses (check listings under appropriate language)

Hist. — all courses except 294, 298

Human. — all courses except 382

Music — 100, 101-104, 113, 115, 130, 131, 133, 134, 202, 203, 213, 214, 310-317, 327, 334-337

Phil. — all courses except 102, 202, 333, 334, 339, 353, 355

Relst. — all courses

Sp. Com. — 177, 178, 210, 213, 254, 307, 308, 315, 317, 319, 322, 332, 335, 350, 387

Theat. — 101-105, 263

INTERDISCIPLINARY SEQUENCES IN THE HUMANITIES

Cl. Civ. 201 and Art 301 or 304

Cl. Civ. 202 and Art 305

Cl. Civ. 201 and Phil. 303

Cl. Civ. 201 and Pol. S. 393

Music 113 and 115, Art 115

Art 111 and any of Arch. 310-312

Art 112 and any of Arch. 313-316

APPROVED COURSES IN THE SOCIAL SCIENCES

Ag. Ec. — 301, 318, 337, 352-354

Anth. — all courses except 143, 240, 246, 247, 307, 318, 337, 342-347, 351-356, 365, 393, 394

Comm. — all courses

Econ. — all courses except 171-173, 272, 307, 374, 375

E.P.S. — 300-305, 315, 385-386

G.E. — 220

Geog. — all courses except 102, 185, 271-278, 313, 315, 318, 330, 348, 370-378

Journ. — 215-220, 231, 241, 251

L.I.R. — all courses except 347, 360

L.A. — 213, 214

L.A. St. — 295

Ling. — all courses except 200, 201, 202, 301, 305-307, 375, 376, 386, 388, 389

Min. E. — 302

Pol. S. — all courses except 270, 357, 359, 366, 385, 386, 390

Psych. — 100, 101, 105, 201, 211, 216, 245, 248, 250, 326, 338, 339, 348, 352-355, 357-373

R. Soc. — all courses

Soc. — all courses except 184-185, 246, 332, 383-388

U.P. — 171, 351, 352, 360

INTERDISCIPLINARY SEQUENCES IN THE SOCIAL SCIENCES

Econ. 101 and Min. E. 302
 Sac. 100 and L.A. St. 295
 Pal. S. 100 and L.A. St. 295
 Econ. 101 and Env. St. 236

TECHNICAL ELECTIVES

Each engineering curriculum offers some elective opportunities which may be specified as technical or nontechnical. All technical elective courses must be chosen from departmentally approved lists.

Although some restrictions are imposed by departments, the following courses are generally accepted as technical electives.

Astr. 301, 306, 307, 314, 321, and 357

Chemical engineering, chemistry, computer science, and mathematics: all 200- and 300-series courses except Math. 202 and 203

Engineering: all 200- and 300-series courses not required in the student's curriculum except C.E. 290, G.E. 220, 281, 282, 288, 290, 292, and 304; I.E. 230 and 239; and Min. E. 302

F.S. 363

Geology: all courses except Geol. 102

Free Electives

These electives are selected at the prerogative of the student except as noted below.

Credit will not be allowed for courses of a remedial nature such as mathematics below analytic geometry, or basic military training. No more than 3 semester hours of physical education course work (basic level, i.e., activity courses) may be used as free electives nor may they be applied toward degree requirements.

Total transfer credit in required basic courses in mathematics (through integral calculus), physics, rhetoric, freshman chemistry, and engineering graphics may be used for free electives only if the credit covers topics beyond those in equivalent courses at the University of Illinois. Further restrictions on the acceptance of transfer credit for free electives may be imposed by the departments with the approval of the associate dean.

Credit—No Credit Option

The credit-no credit option is designed to encourage student exploration into areas of academic interest which they might otherwise avoid for fear of poor grades. All students considering this option are cautioned that many graduate and professional schools consider applicants whose transcripts bear a significant number of nongrade symbols less favorably than those whose transcripts contain none or very few.

A. All students

1. Credit-no credit courses are not counted toward the grade-point average but are included as part of the total credit hours. (Grades of S, U, CR, NC, and Pass are reported on the University official transcript.)
2. Instructors are not informed of those students in their classes who are taking work under the credit-no credit option, and they report the usual letter grades at the end of the course. These grades are automatically converted to CR or NC (for credit or no credit).
3. Grades of C or better are required in order to earn credit.
4. Final grades of CR or NC are recorded on the student's permanent academic record and subsequently will not be changed to letter grades.
5. A correspondence course student may elect the credit-no credit option prior to completion of one-eighth of the lessons contained in the course; however,

should he or she desire to return to a letter grade, an amended credit-no credit form must be filed prior to completion of one-half of the lessons.

6. Courses taken under the credit-no credit option, either in residence or in correspondence, may be dropped only in accordance with the normal procedures for dropping courses.

B. Undergraduate students

1. Any undergraduate student in good academic standing (not on probation) may elect the credit-no credit system. Students not in residence, but enrolling in correspondence courses, may elect the credit-no credit option provided they are in good academic standing.
2. To elect the credit-no credit option, students must obtain the approval of their adviser or, in the case of a correspondence course, their adviser or college office.
3. A student who goes on probation after enrolling must change his or her program to eliminate the credit-no credit option.
4. A maximum of 18 semester hours earned under the credit-no credit option may be applied toward a degree at the Urbana-Champaign campus of the University. A correspondence course taken on a credit-no credit basis will be included in the 18 semester hour maximum limit allowed. A full-time student may take a maximum of two courses each semester under the credit-no credit option. Part-time students may take one course each semester under this option. Summer session students may take one course under the credit-no credit option.
5. Any lower or upper division course may be chosen under the credit-no credit option except courses used to satisfy the University's general education requirements, or in courses designated by name or area by the major department for satisfying the major or field of concentration, or those specifically required by name by the college for graduation.
6. In cases of subsequent change of major or field of concentration, courses previously taken under the credit-no credit option in the new field may qualify for meeting major requirements.
7. An undergraduate student must exercise the credit-no credit option for a course taken in residence only during registration or within the first two weeks of instruction in the semester (only during registration or within the first week of instruction during the summer session); however, he or she may elect to return to the regular grade option by filing an amended request within the first eight weeks of the semester (first four weeks of instruction during the summer session). The credit-no credit option form must be properly approved and deposited in the college office. (See paragraph A (5) above for correspondence courses.)

C. Engineering students

In addition to the preceding guidelines, the following four items are provided to clarify situations that are of specific interest to engineering undergraduate students.

1. Six hours of social sciences and 6 hours of humanities, completed to meet University general education requirements, must be taken for a grade. The remaining 6 hours of social sciences and/or humanities may be taken for credit-no credit regardless of whether they are used to meet sequence requirements.
2. Students must have at least 14 hours of course work completed in a given semester to be considered for the Dean's List and other honors. Twelve semester hours of credit must be completed for letter grade.
3. Technical electives and secondary field electives will not be eligible for the credit-no credit option unless specifically approved by the major department.
4. Free electives will be eligible for credit-no credit option.

Curricula

CURRICULUM IN AERONAUTICAL AND ASTRONAUTICAL ENGINEERING

For the degree of Bachelor of Science in Aeronautical and Astronautical Engineering

This curriculum provides a strong fundamental background in engineering and applied science with emphasis on aircraft and space flight engineering. The program is designed to give the student a basic engineering education applicable to related engineering disciplines including graduate study. The curriculum offers courses in related areas such as air pollution and energy sources. Up to 16 hours of free and technical electives can be used to provide a diversified program of study.

The curriculum requires 134 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry		4	Chem. 102 — General Chemistry	4
Eng. 100 — Engineering Lecture		0	G.E. 103 — Engineering Graphics I	3
Math. 120 — Calculus and Analytic Geometry		5	Math. 131 — Calculus and Analytic Geometry	3
Rhet. 105 — Principles of Composition		4	Phycs. 106 — General Physics (Mechanics)	4
Humanities or social sciences elective ¹		3	Humanities or social sciences elective ¹	3
Total		16	Total	17
SECOND YEAR				
Math. 241 — Calculus of Several Variables		5	C.S. 101 — Introduction to Automatic Digital Computing	3
Phycs. 107 — General Physics (Heat, Electricity, and Magnetism)		4	Math. 345 — Differential Equations and Orthogonal Functions	3
M.A.M. 156 — Analytical Mechanics		5	M.E. 207 — Thermodynamics	3
Humanities or social sciences elective ¹		3	Phycs. 108 — General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Total		17	Humanities or social sciences elective ¹	3
			Total	16
THIRD YEAR				
A.A.E. 212 — Aerodynamics I		4	A.A.E. 213 — Aerodynamics II	4
A.A.E. 224 — Flight Structures I		4	A.A.E. 225 — Flight Structures II	4
A.A.E. 254 — Aerospace Systems I		3	A.A.E. 233 — Aircraft Propulsion	3
Math. 343 — Advanced Calculus		3	A.A.E. 255 — Aerospace Systems II	4
Elective ²		3	Humanities or social sciences elective ¹	3
Total		17	Total	18
FOURTH YEAR				
A.A.E. 260 — Aerospace Laboratory I		2	A.A.E. 241 — Aerospace Design	3
A.A.E. 292 — Seminar		1	A.A.E. 263 — Aerospace Laboratory II	2
Humanities or social sciences elective ¹		3	Electives ²	11
Electives ²		11	Total	16
Total		17		

¹ Of the 134 hours required for graduation, 18 must be in social sciences and humanities. These requirements are discussed on page 275.

² Twenty-five hours of elective credits are required for graduation. These electives must contain at least 6 hours from list A below and 3 hours from list B. In addition, credit is required in at least one 300-level aeronautical and astronautical engineering course. Six hours of electives are free electives. The remaining shall be technical electives.

A: E.E. 220, 229, 244, 260, 340; Phycs. 341, 342.

B: Met. E. 334; Phycs. 383.

CURRICULUM IN AGRICULTURAL ENGINEERING

For the degree of Bachelor of Science in Agricultural Engineering

Agricultural engineering is the application of engineering principles to solutions of problems in agriculture. Efficient agricultural production depends on sophisticated systems of men, equipment, processes, and natural resources. Agricultural engineers are involved in the design of systems which include mechanization of animal and crop production, soil moisture control, crop processing, materials handling, and structures for storage and shelter. Important design constraints are economics, conservation of materials and energy, safety, and environmental quality. Graduates are employed by industry and government in research, education, manufacturing, and applications. A five-year, dual degree in both engineering and agriculture is available. (See page 166.)

The curriculum requires 128 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry		4	Chem. 102 — General Chemistry	4
Eng. 100 — Engineering Lecture		0	Math. 130 — Calculus and Analytic Geometry	5
G.E. 103 — Engineering Graphics		3	PhyCs. 106 — General Physics (Mechanics)	4
Math. 120 — Calculus and Analytic Geometry		5	Ag. E. 126 — Engineering in Agriculture	4
Rhet. 105 — Principles of Composition		4	Total	17
Total		16		
SECOND YEAR				
Biological and agricultural sciences elective ¹		3-4	Ag. E. 127 — Agricultural Production Systems Engineering	3
Math. 240 — Calculus of Several Variables		3	Math. 345 — Differential Equations and Orthogonal Functions	3
PhyCs. 107 — General Physics (Heat, Electricity, and Magnetism)		4	Econ. 101 — Elements of Economics ²	4
C.S. 101 — Introduction to Automatic Digital Computing		3	PhyCs. 108 — General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
T.A.M. 150 — Statics or T.A.M. 152 — Statics		2 or 3	T.A.M. 212 — Engineering Mechanics II (Dynamics)	3
Total		15-17	Total	17
THIRD YEAR				
Agricultural engineering technical elective, group I ³		3	Agricultural engineering technical elective, group I ³	3-4
E.E. 220 — Basic Electrical Engineering		3	Ag. E. 298 — Undergraduate Seminar	1
T.A.M. 221 — Elementary Mechanics of Deformable Bodies		3	C.E. 261 — Structural Theory I, or M.E. 220 — Mechanics of Machinery	3-4
Humanities or social sciences elective ²		4	M.E. 209 — Thermodynamics and Heat Transfer	3
Biological and agricultural sciences elective ¹		4-3	T.A.M. 235 — Fluid Mechanics	4
Total		17-16	Total	14-16
FOURTH YEAR				
Agricultural engineering technical elective, group II ³		3	Agricultural engineering technical elective, group II ³	3
Humanities or social sciences electives ²		6	Ag. E. 299 — Undergraduate Theses	2
Technical elective ³		4-3	Biological and agricultural sciences elective ¹	3
Free elective		3	Humanities or social sciences electives ²	4
Total		16-15	Free elective	3
			Total	15

¹ Students must complete 10 to 12 hours from biological and agricultural sciences electives.

² Students must complete Econ. 101 and 14 additional hours of humanities and social sciences from approved college list.

³ Each student must have 18 to 20 hours of technical electives. The student selects from the following: (1) C.E. 261, or M.E. 220; (2) two courses from agricultural engineering technical electives, group I, and two courses from group II; and (3) additional courses from other technical electives. Minimum total for biological and agricultural sciences and technical electives is 30 hours.

Biological and Agricultural Sciences Electives

The 10 to 12 hours of biological and agricultural sciences are to be chosen from the following:

Ag. Ec. 220, 324, 325
Ag. M. 200, 201
Agron. 101, 121, 308, 322, 326
An. S. 307
Biol. 100, 101, 104
Bot. 100
Entom. 101
Geol. 101, 250
Mcbio. 100

Agricultural Engineering Technical Electives

GROUP I	HOURS
Ag. E. 236 — Machine Characteristics and Mechanisms.....	3
Ag. E. 256 — Surveying Agricultural and Forest Lands.....	2
Ag. E. 287 — Environmental Control for Plants and Animals.....	3
Ag. E. 311 — Instrumentation and Measurements.....	3-4
Ag. E. 340 — Introduction to Applied Statistics.....	4
GROUP II	
Ag. E. 277 — Design of Concrete and Steel Structures for Agriculture.....	3
Ag. E. 336 — Design of Agricultural Machinery.....	3
Ag. E. 346 — Tractors and Prime Movers.....	3
Ag. E. 356 — Soil Conservation Structures.....	3
Ag. E. 357 — Land Drainage.....	3
Ag. E. 387 — Agricultural Process Engineering.....	3

Other Technical Electives

A student may choose any course which satisfies the college requirements for technical electives.

Students desiring to specialize in a specific area of agricultural engineering may use the following lists as a guide in choosing their technical electives.

POWER AND MACHINERY	HOURS
Ag. E. 236 — Machine Characteristics and Mechanisms.....	3
Ag. E. 311 — Instrumentation and Measurements.....	3-4
Ag. E. 336 — Design of Agricultural Machinery.....	3
Ag. E. 340 — Introduction to Applied Statistics.....	4
Ag. E. 346 — Tractors and Prime Movers.....	3
M.E. 224 — Design of Machine Elements.....	3
M.E. 234 — Heat Treatment of Metals.....	3

PROCESSING

Ag. E. 236 — Machine Characteristics and Mechanisms.....	3
Ag. E. 287 — Environmental Control for Plants and Animals.....	3
Ag. E. 311 — Instrumentation and Measurements.....	3-4

Ag. E. 336 — Design of Agricultural Machinery.....	3
Ag. E. 340 — Introduction to Applied Statistics.....	4
Ag. E. 387 — Agricultural Process Engineering.....	3
Chem. 323 — Applied Electronics for Scientists.....	4

SOIL AND WATER

Ag. E. 277 — Design of Concrete and Steel Structures for Agriculture.....	3
Ag. E. 287 — Environmental Control for Plants and Animals.....	3
Ag. E. 311 — Instrumentation and Measurements.....	3-4
Ag. E. 340 — Introduction to Applied Statistics.....	4
Ag. E. 356 — Soil Conservation Structures.....	3
Ag. E. 357 — Land Drainage.....	3

STRUCTURES AND ENVIRONMENT

Ag. E. 277 — Design of Concrete and Steel Structures for Agriculture.....	3
Ag. E. 287 — Environmental Control for Plants and Animals.....	3
Ag. E. 311 — Instrumentation and Measurements.....	3-4
Ag. E. 340 — Introduction to Applied Statistics.....	4
C.E. 214 — Properties and Behavior of Concrete.....	2
C.E. 262 — Structural Theory II.....	3

CURRICULUM IN CERAMIC ENGINEERING

For the degree of Bachelor of Science in Ceramic Engineering

Ceramic engineering deals with the processing of naturally occurring minerals or synthetic inorganic materials that lead to products whose characteristic usefulness is ordinarily realized by high-temperature treatments or service. The ceramic engineer serves as a high-temperature materials specialist in a modern engineering team devoted to research, development, operation, or sales. He or she must not be solely preoccupied by analysis, but must also be able to synthesize new ceramic materials and join the engineering search for improved processing, properties, and products.

The curriculum requires 132 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry		4	Chem. 102 — General Chemistry.....	4
Eng. 100 — Engineering Lecture		0	Math. 130 — Calculus and Analytic Geometry	5
G.E. 103 — Engineering Graphics I		3	Phys. 106 — General Physics (Mechanics).4	
Math. 120 — Calculus and Analytic Geometry		5	Humanities or social sciences elective ¹ ...	3
Rhet. 105 — Principles of Composition ...		4	Total	16
Total		16		

SECOND YEAR

Cer. E. 201 — Ceramic Crystal Chemistry ..	3	Cer. E. 202 — Ceramic Materials and Processes	3
Math. 240 — Calculus of Several Variables.3		Math. 345 — Differential Equations and Orthogonal Functions	3
Phys. 107 — General Physics (Heat, Electricity, and Magnetism)	4	Phys. 108 — General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Humanities or social sciences elective ¹ ...	3	T.A.M. 154 — Analytical Mechanics (Statics and Dynamics)	4
C.S. 101 — Introduction to Automatic Digital Computing	3	Humanities or social sciences elective ¹ ...	3
Total	16	Total	17

THIRD YEAR

Cer. E. 205 — Phase Equilibria in Ceramic Systems	3	Cer. E. 208 — Thermal Processing	3
Cer. E. 314 — Chemistry and Technology of Glass	3	Cer. E. 216 — Rate Processes in Ceramic Engineering	3
Cer. E. 221 — Pyrometry	2	Ceramic engineering elective ²	3
Cer. E. 245 — Physical Chemistry for Engineers or equivalent ²	3	Technical elective	3
T.A.M. 221 — Elementary Mechanics of Deformable Bodies	3	Chemistry or physics elective ²	3
Humanities or social sciences elective ¹ ..	3	Humanities or social sciences elective ¹ ..	3
Total	17	Total	18

FOURTH YEAR

E.E. 220 — Basic Electrical Engineering ..	3	Electrical applications elective ²	3
Humanities or social sciences elective ¹ ..	3	Free electives	6
Technical elective	2	Ceramic engineering elective ²	3
Ceramic engineering electives ²	9	Technical elective	3
Total	17	Total	15

¹ Consult the college list of approved courses on page 276.

² Consult departmental adviser for list of approved courses.

CURRICULUM IN CHEMICAL ENGINEERING

For the degree of Bachelor of Science in Chemical Engineering

This curriculum is administered by the College of Liberal Arts and Sciences. (See page 406.)

CURRICULUM IN CIVIL ENGINEERING

For the degree of Bachelor of Science in Civil Engineering

The civil engineering curriculum provides a systematic, integrated foundation in the physical and engineering sciences and mathematics, thereby permitting the rational development of engineering methods as applied to the design of bridges, buildings, dams and hydraulic structures, nuclear installations, transportation facilities, sanitary and environmental engineering systems and facilities, surveying and mapping systems, and other engineering projects. It includes a strong sequence in the humanities and social sciences for a better understanding of the society of which the civil engineer is a part. The flexibility of the curriculum permits a student, during the last two years, to pursue either a broad program representing most of the principal areas of civil engineering endeavor or, depending upon the student's aptitude and interests, a more specialized program in one or more specific technical areas.

Students interested in environmental engineering in civil engineering follow the curriculum in civil engineering, selecting suitable technical electives in the third and fourth years. This program leads also to the degree of Bachelor of Science in Civil Engineering. Degrees in environmental engineering, in civil engineering, and in environmental science are offered only at the graduate level.

The curriculum permits substantial flexibility in course selection during the last two years so that the student, in consultation with his or her adviser, may plan a viable program directed toward his or her particular educational objectives in civil engineering. Shown below is the format for each year of study.

The curriculum requires 129 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry		4	Chem. 102 — General Chemistry	4
G.E. 103 — Engineering Graphics		3	Math. 131 — Calculus and Analytic Geometry	5
Math. 120 — Calculus and Analytic Geometry		5	Rhet. 105 — Principles of Composition	4
Econ. 101 — Elements of Economics		4	Phys. 106 — General Physics (Mechanics)	4
Eng. 100 — Engineering Lecture		0	Total	15
Total		16		
SECOND YEAR				
C.E. 195 — Introduction to Civil Engineering		1	C.E. 292 — Design and Planning of Civil Engineering Systems	3
C.S. 101 — Introduction to Automatic Digital Computing		3	C.E. 293 — Stochastic Concepts in Civil Engineering	3
Math. 241 — Calculus of Several Variables		5	Phys. 108 — General Physics (Wave Mo- tion, Sound, Light, and Modern Physics)	4
Phys. 107 — General Physics (Heat, Electricity, and Magnetism)		4	T.A.M. 212 — Analytical Mechanics (Dynamics)	3
T.A.M. 152 — Analytical Mechanics (Statics)		3	T.A.M. 221 — Elementary Mechanics of Deformable Bodies	3
Total		16	Total	16
THIRD YEAR				
T.A.M. 235 — Fluid Mechanics		4	Introductory technical courses ¹	9
Introductory technical courses ¹		6	Technical elective ⁴	3
Humanities or social sciences elective ²		3	Humanities or social sciences electives ²	5
Advanced mathematics ³		3	Total	17
Total		16		
FOURTH YEAR				
Introductory technical courses ¹		3	Technical electives ⁴	9
Technical electives ⁴		9	Humanities and social sciences elective ²	3
Humanities or social sciences elective ²		3	Free elective ⁵	3
Free elective ⁵		3	C.E. 295 — Professional Practice	0
Total		18	Total	15

¹ Each student must take at least six of the nine introductory courses in the several technical specialty areas in civil engineering as shown in Introductory Technical Courses, below.

² Each student is required to select 18 hours from the college-approved list of humanities and social sciences, including Econ. 101. (See page 276.)

³ Each student must select at least one course (3 hours) of advanced mathematics, at the 300 level. This may be Math. 315, 343, 345, 361, 362, 363, 383, or an appropriate course approved by the program review committee.

⁴ Twenty-one hours (20 hours if C.E. 201 is selected as an introductory technical course) of technical courses must be selected by the student, in consultation with his or her adviser and with the approval of the department, to define a coherent program for which the Bachelor of Science degree in civil engineering may be appropriately awarded.

⁵ Six semester hours of free electives must be selected in accordance with the regulations of the college and the department.

Introductory Technical Courses

	HOURS
C.E. 201 — Engineering Surveying	4
C.E. 216 — Construction Engineering	3
C.E. 220 — Materials for Transportation Facilities, or	3
C.E. 230 — Introduction to Transportation Engineering	3
C.E. 241 — Water Quality and Water Pollution	3
C.E. 255 — Introduction to Hydrosystems Engineering	3
C.E. 261 — Fundamentals of Structural Engineering	3
C.E. 280 — Foundation Engineering	3
Geol. 250 — Geology for Engineers	3
T.A.M. 224 — Behavior of Materials	3

CURRICULUM IN COMPUTER ENGINEERING¹

For the degree of Bachelor of Science in Computer Engineering

The program in computer engineering is administered by and is part of the offerings of the Department of Electrical Engineering. Computer engineering is concerned with the organization, design, and efficient utilization of digital and analog information processing systems.

Although much of the program is elective, specific courses are indicated for most of the work in the first five semesters. This provides the student with the background in mathematics and science needed for the study of computer engineering and allows the student time to consult with his or her adviser, select the areas of interest, and choose courses to give emphasis to those areas.

To qualify for registration in the electrical engineering courses specified in the first semester of the junior year of the curriculum in computer engineering, a student must have a combined grade-point average of 3.25 (A = 5.0) in the mathematics, physics, computer science, and electrical engineering courses which are required in the freshman and sophomore years of the curriculum.

The following suggested curriculum indicates one way in which the student may satisfy in eight semesters the requirements for the degree of Bachelor of Science in Computer Engineering.

The curriculum requires 128 hours for graduation.

¹ Curriculum pending final approval.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS	
Chem. 101 — General Chemistry	4	Chem. 102 — General Chemistry	.....	4
Eng. 100 — Engineering Lecture	0	Math. 130 — Calculus and Analytic Geometry	.....	5
Math. 120 — Calculus and Analytic Geometry	5	Phys. 106 — General Physics (Mechanics)	.....	4
Rhet. 105 — Principles of Composition	4	Humanities or social sciences elective ¹	.....	3
Humanities or social sciences elective ¹	3	Total	.....	16
Total	16			
SECOND YEAR					
C.S. 121 — Introduction to Automatic Digital Computing ²	4	E.E. 244 — Electrical Engineering Laboratory I	.....	2
Math. 240 — Calculus of Several Variables	3	E.E. 260 — Networks I	.....	3
Phys. 107 — General Physics (Heat, Electricity, and Magnetism)	4	Math. 345 — Differential Equations and Orthogonal Functions	.....	3
Electives ¹	5	Phys. 108 — General Physics (Wave Motion, Sound, Light, and Modern Physics)	.....	4
Total	16	Electives ¹	.....	4
			Total	.....	16
THIRD YEAR					
E.E. 229 — Introduction to Electro- magnetic Fields	3	E.E. 249 — Digital Systems Laboratory	.....	2
E.E. 340 — Electronics	3	Math. 361 — Theory of Probability or E.E. 313 — Probabilistic Methods in Electrical Engineering	.....	3
E.E. 290 — Introduction to Information Processing	3	E.E. 391 — Boolean Algebra and Switch- ing Theory	.....	3
E.E. 319 — Applied Modern Algebra	3	C.S. 221 — Program and Data Structures	.....	3
E.E. 309 — Circuit, Signal, and System Analysis	4	E.E. 380 — Pulse and Digital Circuits or E.E. 342 — Advanced Electronics	3
Total	16	Elective ¹	2
			Total	16

FOURTH YEAR

Electives ¹	16	Electives ¹	16
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¹ Forty-nine hours of electives to be selected by the student in consultation with his or her adviser, apportioned as follows:

— Twenty-five hours of technical electives as follows:

Seventeen hours (not including other requirements) must be chosen from a departmentally approved list of technical courses for the computer engineering program.

Eight hours may be chosen from other technical areas.

— Eighteen hours of humanities and social sciences from the college-approved list. (See page 276.)

— Six hours of free electives, to be selected in accordance with the regulations of the college.

² The alternate for C.S. 121 is C.S. 101 and 9, instead of 8, hours of electives from other technical areas.

CURRICULUM IN COMPUTER SCIENCE

For the degree of Bachelor of Science in Computer Science

This curriculum is offered by the Department of Computer Science for students seeking a broad and deep knowledge of the theory, design, and application of digital computers and information processing techniques. The first two years are spent on basic work in mathematics, physics, and an introduction to the fundamental areas of computer science — computing, programming, the organization of digital machines, hardware, numerical analysis, and theory of computation. The third year completes the work in basic computer science, and requires electives to broaden the background of the student. During the fourth year the student is encouraged to deepen his or her understanding of topics in which he or she has particular interest and ability.

To qualify for registration in the computer science courses specified in the first semester of the junior year, a student must have a combined grade-point average of 3.25 (A = 5.0) in the mathematics, physics, and computer science courses which are required in the freshman and sophomore years.

The curriculum requires 122 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry		4	Chem. 102 — General Chemistry	4
Eng. 100 — Engineering Lecture		0	Math. 131 — Calculus and Analytic Geometry	3
Math. 120 — Calculus and Analytic Geometry		5	Phy. 106 — General Physics (Mechanics) ..	4
Electives		6	Rhet. 105 — Principles of Composition ..	4
Total		15	Total	15

SECOND YEAR

C.S. 121 — Introduction to Computer Programming		4	Phy. 108 — General Physics (Wave Motion, Sound, Light, and Modern Physics) ..	4
Math. 241 — Calculus of Several Variables		5	C.S. 264 — Introduction to the Structure and Logic of Digital Computers ¹	3
Phy. 107 — General Physics (Heat, Electricity, and Magnetism)		4	C.S. 221 — Program and Data Structures ..	3
Elective		3	Electives	5
Total		16	Total	15

THIRD YEAR

C.S. 273 — Introduction to Theory of Computation	3	C.S. 257 — Introduction to Numerical Analysis	3
C.S. 281 — Introduction to Computer Circuitry	3	C.S. 321 — Advanced Program and Data Structures	3
Math. 315 — Linear Transformations and Matrices	3	Math. 361 — Theory of Probability I	3
Electives	7	Electives	6
Total	16	Total	15

FOURTH YEAR

Electives	15	Electives	15
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¹ It is strongly recommended that C.S. 265 — Logic Design Laboratory with Integrated Circuits, 2 hours, be taken concurrently with (or following) C.S. 264.

Note: C.S. 257, 273, and 281 can be interchanged within the suggested curriculum in accordance with student interest. The student should take the courses of particular interest early so as to maximize the time for subsequent sequences in the area.

Electives

The computer science curriculum contains 57 semester hours of electives. These electives are chosen by the student according to the following requirements:

- Eighteen hours must be selected in the humanities and social sciences areas as specified by the college requirements on pages 275 through 277.
- Twelve hours must be selected from computer science courses numbered 300 or higher.
- At least one course must be selected from each of the following four groups:

GROUP I	GROUP II	GROUP III	GROUP IV
Math. 341	C.S. 311	C.S. 331	E.E. 379 and 380
Math. 345	C.S. 318	C.S. 333	C.S. 381
C.S. 313	C.S. 323	C.S. 337	C.S. 384
C.S. 358	C.S. 325	C.S. 338	C.S. 385
C.S. 359	C.S. 375	C.S. 364	C.S. 389
C.S. 373		C.S. 391	
C.S. 383			

Computer science courses selected from these four groups may be used to satisfy the requirement for 12 semester hours of computer science courses numbered 300 or higher.

- Twelve semester hours must consist of a goal-directed sequence of courses directed toward a study of a specific problem area related to computer use. This sequence must be approved by the student's adviser.
- A total of no more than 15 semester hours is designated as free electives.

CURRICULUM IN ELECTRICAL ENGINEERING¹

For the degree of Bachelor of Science in Electrical Engineering

The electrical engineering curriculum prepares students for responsible engineering positions in research, development, design, operation, sales, and administration in many fields including communications, computers, electronics, electromagnetics, and electrical power.

Although more than half of the program is elective, specific courses are indicated for most of the work in the first five semesters. This provides the student with the

¹ Curriculum pending final approval.

background in mathematics and science needed for the study of electrical engineering and allows the student time to consult with his or her adviser, select the areas of interest, and choose courses to give emphasis to these areas.

To qualify for registration in the electrical engineering courses specified in the first semester of the junior year of the curriculum in electrical engineering, a student must have a combined grade-point average of 3.25 ($A = 5.0$) in the mathematics, physics, computer science, and electrical engineering courses which are required in the freshman and sophomore years of the curriculum.

The following suggested curriculum indicates one way in which the student may satisfy in eight semesters the requirements for the degree of Bachelor of Science in Electrical Engineering.

The curriculum requires 128 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry	.....4		Chem. 102 — General Chemistry	.....4
Eng. 100 — Engineering Lecture	.....0		Math. 130 — Calculus and Analytic Geometry	.....5
Math. 120 — Calculus and Analytic Geometry	.....5		Phycs. 106 — General Physics (Mechanics)	.....4
Rhet. 105 — Principles of Composition	.....4		Humanities or social sciences elective ¹	.....3
Humanities or social sciences elective ¹	.....3		Total	.....16
Total	.....16			
SECOND YEAR				
C.S. 101 — Introduction to Automatic Digital Computing	.....3		E.E. 260 — Networks I	.....3
Math. 240 — Calculus of Several Variables	.....3		E.E. 244 — Electrical Engineering Laboratory I	.....2
Phycs. 107 — General Physics (Heat, Electricity, and Magnetism)	.....4		Math. 345 — Differential Equations and Orthogonal Functions	.....3
Electives ¹	.....6		Phycs. 108 — General Physics (Wave Motion, Sound, Light, and Modern Physics)	.....4
Total	.....16		Electives ¹	.....4
			Total	.....16
THIRD YEAR				
E.E. 229 — Introduction to Electromag- netic Fields	.....3		E.E. 245 — Electrical Engineering Laboratory II	.....2
E.E. 290 — Introduction to Information Processing	.....3		E.E. 342 — Advanced Electronics or E.E. 340 — Electronics I	.....3
E.E. 340 — Electronics I or E.E. 342 — Advanced Electronics	.....3		E.E. 350 — Lines, Fields, and Waves	.....3
E.E. 309 — Circuit, Signal, and System Analysis	.....4		Electives ¹	.....8
Electives ¹	.....3		Total	.....16
Total	.....16			
FOURTH YEAR				
Electives ¹	.....16		Electives ¹	.....16

¹ Fifty-nine hours of electives are to be selected by the student, in consultation with his or her adviser, apportioned as follows:

— Thirty-five hours of technical electives as follows:

Sixteen semester hours of electrical engineering courses to be selected from a departmentally approved list.

The courses selected to meet the preceding requirement must include at least two of the following fourteen laboratory courses: E.E. 246, 249, 311, 315, 335, 344, 346, 351, 353, 369, 377, 379, 386, 397, and at least one of the following three courses: E.E. 313, 330, or 344.

Nineteen semester hours of technical electives to be selected from a departmentally approved list, at least 12 of which must be in areas outside electrical engineering and at least one course must be selected from a list of department-approved non-electrical engineering science electives, and at least 10 hours must be 300-level courses.

- Eighteen hours of humanities and social sciences from the college-approved list. (See page 276.)
- Six semester hours of free electives, to be selected in accordance with the regulations of the college.

CURRICULUM IN ENGINEERING MECHANICS

For the degree of Bachelor of Science in Engineering Mechanics

This curriculum, offered by the Department of Theoretical and Applied Mechanics, is intended primarily for students interested in research and development in modern engineering. It links the sciences and engineering with an emphasis on the principles of mechanics which are basic to all branches of engineering. Electives give the student freedom to prepare for a variety of career opportunities in industry and in government. A firm foundation is provided for continuing self-education, which is necessary for participation in the advances of an ever-progressing technological society. The curriculum also provides sound preparation for graduate study in many disciplines.

The curriculum requires 128 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry		4	Chem. 102 — General Chemistry	4
Eng. 100 — Engineering Lecture		0	Math. 130 — Calculus and Analytic Geometry	5
G.E. 103 — Engineering Graphics I		3	Phy. 106 — General Physics (Mechanics)	4
Math. 120 — Calculus and Analytic Geometry		5	Humanities or social sciences elective ¹	3
Rhet. 105 — Principles of Composition		4	Total	16
Total		16		
SECOND YEAR				
Math. 240 — Calculus of Several Variables		3	C.S. 101 — Introduction to Automatic Digital Computing	3
Phy. 107 — General Physics (Heat, Electricity, and Magnetism)		4	Math. 343 — Advanced Calculus	3
T.A.M. 152 — Engineering Mechanics (Statics)		3	Phy. 108 — General Physics (Wave Mo- tion, Sound, Light, and Modern Physics)	4
Humanities or social sciences electives ¹		6	T.A.M. 212 — Engineering Mechanics II (Dynamics)	3
Total		16	Humanities or social sciences elective ¹	3
			Total	16
THIRD YEAR				
E.E. 260 — Networks I		3	E.E. (any 300-level) or Chem. 323	3-4
Math. 345 or 341 — Differential Equations		3	M.E. 205 — Thermodynamics	3
T.A.M. 221 — Elementary Mechanics of Deformable Bodies		3	T.A.M. 224 — Behavior of Materials	3
T.A.M. 235 — Fluid Mechanics		4	Advanced dynamics elective ²	3
Humanities or social sciences elective ¹		3	Technical elective	3
Total		16	Total	15
FOURTH YEAR				
T.A.M. 293 — Senior Research Project		2	Advanced fluid mechanics elective ⁴	3
T.A.M. 351 — Fundamental Concepts of Deformable Body Mechanics		3	T.A.M. 294 — Senior Research Project	4
T.A.M. 392 — Analysis and Synthesis of Problems		3	Advanced mechanics elective ³	3
Advanced mechanics elective ³		3	Technical elective	3
Humanities or social sciences elective ¹		3	Free elective	3
Free elective		3	Total	16
Total		17		

¹ The list of courses approved by the College of Engineering should be consulted.

² The student may elect T.A.M. 311, or T.A.M. 314, or Physcs. 322, or a course approved by the department.

³ The student must take at least 3 hours of course work in each of two of the following three areas: Modern Physics (Physcs. 383, or Physcs. 386, or a course approved by the department); Continuum Mechanics (T.A.M. 360, or a course approved by the department); and Advanced Materials (T.A.M. 381, or Met. E. 387, or Cer. E. 307, or a course approved by the department).

⁴ The student may elect T.A.M. 334, or T.A.M. 335, or C.E. 351, or a course approved by the department.

CURRICULUM IN ENGINEERING PHYSICS

For the degree of Bachelor of Science in Engineering Physics

This curriculum provides broad, thorough training in fundamental physics and mathematics to prepare students for graduate study in physics or related fields and for research and development positions in industrial or government laboratories. For the first two years, the curriculum follows essentially the common engineering program. In the last two years, emphasis is on advanced courses in physics and mathematics, but there is a liberal allowance of electives enabling a student to study a particular field of engineering, of liberal arts and sciences, or of other areas interesting to him or her. Physics honors students have an opportunity to join a graduate student-faculty research project.

When registering for advanced undergraduate courses in physics, students continuing in or transferring to this curriculum must have a grade-point average of at least 3.5 (A = 5.0) in all University subjects exclusive of the basic courses in military training, and a combined grade-point average of 3.5 in all courses in mathematics and physics taken prior to such registration. Transfer students must have a corresponding record in the institution from which they have transferred and must maintain such status at the University.

The illustrative program that follows shows the requirements to be completed in four years. However, many students take these courses in a different order. The program includes 35 hours of electives.

The curriculum requires 128 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS	
Chem. 101 — General Chemistry ¹	4	Chem. 102 — General Chemistry ¹	.....	4
Eng. 100 — Engineering Lecture	0	Humanities or social sciences electives	...	4
G.E. 103 — Engineering Graphics I	3	Math. 130 — Calculus and Analytic Geometry	.....	5
Math. 120 — Calculus and Analytic Geometry	5	Physcs. 106 — General Physics (Mechanics)	.....	4
Rhet. 105 — Principles of Composition ²	...	4	Total	.....	17
Total	16			
SECOND YEAR					
Math. 240 — Calculus of Several Variables	3	Math. 345 — Differential Equations and Orthogonal Functions ⁵	.....	3
Physcs. 107 — General Physics (Heat, Electricity, and Magnetism)	4	Physcs. 108 — General Physics (Wave Mo- tion, Sound, Light, and Modern Physics)	.....	4
Language ³ or humanities or social sciences electives ⁴	4	Physcs. 341 — Electricity and Magnetism	..	5
Humanities or social sciences elective ⁴	...	3	Language ³ or humanities or social sciences electives ⁴	.....	4
C.S. 101 — Introduction to Automatic Digital Computing	3	Total	.....	16
Total	17			

THIRD YEAR

Math. 343 — Advanced Calculus	3	Phycs. 322 — Theoretical Mechanics ⁷	4
Phycs. 321 — Theoretical Mechanics	4	Phycs. 343 — Electronic Circuits ⁵	5
Phycs. 342 — Electricity and Magnetism	5	Phycs. 371 — Light	4
Nontechnical electives ⁶	4	Humanities or social sciences elective ⁴	3
Total	16	Total	16

FOURTH YEAR

Phycs. 303 — Modern Experimental Physics, ¹ or Phycs. 344 — Electronic Circuits	5	Phycs. 361 — Thermodynamics and Statistical Mechanics	4
Phycs. 386 — Atomic Physics and Quantum Mechanics I	4	Phycs. 387 — Atomic Physics and Quantum Mechanics II	4
Technical or nontechnical elective ⁶	3	Technical or nontechnical electives ⁶	4
Free elective	3	Free elective	3
Total	15	Total	15

¹ Chem. 107, 109, and 108, 110 may be substituted for Chem. 101 by students who desire a more rigorous chemistry sequence.

² Sp. Com. 111 and 112 fulfill the graduation requirement in rhetoric. The extra 2 hours may be applied to nontechnical electives or to free electives.

³ German, Russian, or French is recommended. If one of these was begun in high school, it should be continued through the equivalent of the fourth semester of the University course.

⁴ Consult the college list of approved courses in humanities and social sciences on page 276.

⁵ Math. 341 and 342 may replace Math. 345. Extra hours count as technical electives.

⁶ Advanced military courses may be substituted for 6 hours of nontechnical electives.

⁷ Students wishing to take the College Option in Bioengineering should plan for it by the end of their sophomore year. These students may substitute courses from the bioengineering option list (see pages 271 and 272) for Phycs. 322, Phycs. 303, and any 9 hours from free, technical, and nontechnical electives. The college requirements of 18 hours of humanities and social sciences electives are not waived for students electing the bioengineering option.

⁸ Students wishing to emphasize electrical engineering may take E.E. 342 or other suitable electrical engineering sequence.

Elective Courses

Of the 35 hours of elective courses, 18 hours must be chosen from the college-approved list of the humanities and social sciences. (See page 276.) At least 6 additional hours must be nontechnical electives, which may include up to 6 hours of advanced military science, or any first-year foreign language, or 100-level courses in the biological sciences.

The remaining 11 hours include 6 hours of free electives and 5 hours of technical or nontechnical courses. Students electing one of the applied physics options are therefore free to take three or four courses under that option.

Of the 35 elective hours, at least 12 must be chosen either from technical courses numbered 300 or above or from nontechnical courses numbered 200 or above.

Applied Physics Options

Many physicists are employed in private industry, by the federal government, or in national laboratories. Most of their activities are of an interdisciplinary nature. A student planning to enter graduate school in physics or an engineering discipline, as well as a student intending to look for immediate employment may, in consultation with his adviser and the instructors in other departments involved, elect an interdisciplinary applied physics sequence. Such a program may open opportunities for immediate employment and for advanced work, not only in the physical sciences but also in biology or medical school.

The applied physics options include:

Applied Nuclear Physics
 Bioengineering
 Fluids and Plasmas
 Optical Physics and Lasers
 Physical Electronics
 Systems Analysis and Control Theory

For each of these options a list of recommended courses from which to choose is available in the Department of Physics undergraduate records office or from the advisers.

CURRICULUM IN GENERAL ENGINEERING

For the degree of Bachelor of Science in General Engineering

The general engineering curriculum provides a comprehensive program in the basic sciences, engineering sciences, and in project design, together with specialized training in an approved secondary field. The secondary field may be selected from the areas shown below or from any other cohesive field of study approved by the department. Other fields selected in the past include law, mathematics, bioengineering, oceanography, meteorology, technical writing, engineering design, etc. The program is centered around a strong core in mathematics, theoretical and applied mechanics, basic electronics, thermodynamics, and project design. Emphasis is placed upon the practice of professional engineering.

The curriculum requires 127 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry		4	G.E. 104 — Engineering Project Design	
Eng. 100 — Engineering Lecture		0	Methodology	3
G.E. 103 — Engineering Graphics I		3	Math. 130 — Calculus and Analytic	
Math. 120 — Calculus and Analytic			Geometry	5
Geometry ¹		5	Physcs. 106 — General Physics (Mechanics)	4
Humanities or social sciences elective ²		3	Rhet. 105 — Principles of Composition	4
Total		15	Total	16
SECOND YEAR				
C.S. 101 — Introduction to Computers			Math. 345 — Differential Equations and	
for Application to Engineering and			Orthogonal Functions	3
Physical Science		3	Physcs. 108 — General Physics (Wave Mo-	
Econ. 101 — Introduction to Economics		4	tion, Sound, Light, and Modern Physics)	4
Math. 240 — Calculus of Several			T.A.M. 212 — Engineering Mechanics	
Variables		3	II (Dynamics)	3
Physcs. 107 — General Physics (Heat,			T.A.M. 221 — Elementary Mechanics of	
Electricity, and Magnetism)		4	Deformable Bodies	3
T.A.M. 150 — Analytical Mechanics			Humanities or social sciences elective ²	3
(Statics)		2	Total	16
Total		16		
THIRD YEAR				
G.E. 221 — Introduction to General			E.E. 244 — Electrical Engineering	
Engineering Design		3	Laboratory I	2
G.E. 222 — Analysis of Dynamic Systems		3	E.E. 260 — Networks I	4
G.E. 288 — Economic Analysis for			G.E. 232 — Engineering Analysis	4
Engineering Decision Making		3	Secondary field elective	3
M.E. 209 — Thermodynamics and			Humanities or social sciences elective ²	2
Heat Transfer		3	Free elective	3
Secondary field elective		3	Total	17
Total		15		

FOURTH YEAR

G.E. 241 — Component Design	4	G.E. 242 — Project Design	3
G.E. 292 — Engineering Law	3	G.E. 291 — General Engineering Seminar	0
T.A.M. 235 — Fluid Mechanics	4	Technical elective	3
Secondary field elective	3	Secondary field elective	3
Humanities or social sciences elective ²	3	Humanities or social sciences elective ²	3
Total	17	Free elective	3
		Total	15

¹ Math. 111 or 112, and 114 for those entering freshmen who do not pass the Mathematics Placement Test. Students who have had analytic geometry in high school and pass the Mathematics Placement Test will replace the mathematics sequence 120, 130, 240 with Math. 135, 245, and 3 hours of free electives.

² Students must complete at least one elective sequence of at least 6 hours in both the social sciences and the humanities. (See page 275.)

Suggested Fields of Concentration**ENGINEERING ADMINISTRATION****HOURS**

Accy. 201 — Fundamentals of Accounting, or Accy. 206 — Cost Accounting for Engineers	3
B. Adm. 210 — Management and Organizational Behavior, or B. Adm. 247 — Introduction to Management	3
B. Adm. 314 — Production	3
B. Adm. 315 — Management in Manufacturing	3
B. Adm. 321 — Individual Behavior in Organizations	3
B. Adm. 323 — Organizational Design and Environment	3
B. Adm. 351 — Personnel Administration	3
Fin. 254 — An Introduction to Business Financial Management, or Fin. 257 — Corporation Finance	3
G.E. 330 — Industrial Standardization	2
G.E. 392 — Legal Problems in Engineering Design	3
I.E. 238 — Analysis of Data	3
I.E. 335 — Industrial Quality Control	3
I.E. 357 — Safety Engineering	3
I.E. 385 — Operations Research I	3-4
I.E. 388 — Applications of Operations Research to Industrial Systems	3
B.&T.W. 251 — Business and Administrative Communication	3

ENGINEERING MARKETING

Accy. 201 — Fundamentals of Accounting	3
B. Adm. 202 — Principles of Marketing, or B. Adm. 272 — Industrial Selling	3
B. Adm. 320 — Marketing Research	3
B. Adm. 337 — Promotion Management	3
B. Adm. 344 — Consumer Behavior	3
B. Adm. 360 — Marketing Logistics	3
G.E. 330 — Industrial Standardization	2
G.E. 392 — Legal Problems in Engineering Design	3
I.E. 238 — Analysis of Data	3
Psych. 245 — Industrial Organizational Psychology	3
B.&T.W. 251 — Business and Administrative Communication	3

ENVIRONMENTAL QUALITY

C.E. 240 — Control of the Urban Environment	3
C.E. 241 — Air and Water Quality	3
C.E. 340 — Physical Principles of Environmental Engineering Processes	3
C.E. 341 — Air Resources Management	2
C.E. 342 — Water Quality Control Processes	3
C.E. 343 — Chemical Principles of Environmental Engineering Processes	3-4
C.E. 344 — Solid Wastes Management	4
C.E. 346 — Biological Principles of Environmental Engineering Processes	3

G.E. 348 — The Air Pollution System	1-2
C.E. 349 — Air Resources Engineering	3
M.E. 303 — Dynamics of Aerosols and Hydrosols	3
M.E. 333 — Air Pollution and Combustion	3
E.E.E. 359 — Aquatic Ecology	3

COMPUTER SCIENCE

Any computer science course beyond C.S. 101.

G.E. 293 — Section C, Computer Graphics in Engineering	3
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MINING AND GEOLOGICAL ENGINEERING

C.E. 201 — Engineering Surveying ¹	4
C.E. 280 — Introduction to Soil Mechanics and Foundation Engineering	3
C.E. 383 — Soil Mechanics and Soil Properties	4
C.E. 384 — Applied Soil Mechanics	4
Geol. 107 — General Geology I ¹	4
Geol. 108 — General Geology II ¹	4
Geol. 233 — Minerals and Rocks	4
Geol. 250 — Geology for Engineers	3
Geol. 311 — Structural Geology	4
Geol. 332 — Mineralogy-Petrology	4
I.E. 238 — Analysis of Data	3
I.E. 357 — Safety Engineering	3
Math. 343 — Advanced Calculus	3
Met. E. 207 — Extractive Metallurgy ¹	3
Min. E. 356 — Rock Mechanics ¹	3
Any mining engineering course	1-4

¹ These courses are required in the mining engineering option. Twelve of these hours will count as the secondary field, and the remainder will be substituted for other courses with the approval of the adviser.

CURRICULUM IN INDUSTRIAL ENGINEERING

For the degree of Bachelor of Science in Industrial Engineering

Industrial engineering is concerned with the design, improvement, and installation of integrated systems of men, materials, and equipment, drawing upon specialized knowledge and skill in the mathematical, physical, and social sciences together with the principles and methods of engineering analysis and design, to specify, predict, and evaluate the results to be obtained from such systems. Industrial engineers are in demand by a wide variety of industries ranging from metalworking through electrical, chemical, pharmaceutical, and food processing.

The curriculum requires 130 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry		4	Chem. 102 — General Chemistry	4
Eng. 100 — Engineering Lecture		0	Humanities or social sciences elective ¹	3
G.E. 103 — Engineering Graphics I		3	Math. 131 — Calculus and Analytic	
Math. 120 — Calculus and Analytic			Geometry	3
Geometry		5	Physcs. 106 — General Physics (Mechanics)	4
Rhet. 105 — Principles of Composition		4	Total	14
Total		16		

SECOND YEAR

Math. 240 — Calculus of Several Variables	5
M.E. 185 — Materials Processing and Production Technology	4
Physcs. 107 — General Physics (Heat, Electricity, and Magnetism)	4
T.A.M. 154 — Analytical Mechanics (Statics and Dynamics)	4
Total	17

C.S. 101 — Introduction to Automatic Digital Computing	3
Advanced mathematics ²	2
Physcs. 108 — General Physics (Wave Motion, Sound, Light, and Modern Physics) ..	4
T.A.M. 221 — Elementary Mechanics of Deformable Bodies	3
Humanities or social sciences elective ¹ ..	3
Total	16

THIRD YEAR

I.E. 232 — Methods-Time Analysis	3
I.E. 238 — Analysis of Data	3
M.E. 209 — Thermodynamics and Heat Transfer	3
M.E. 220 — Mechanics of Machinery	4
Humanities or social sciences elective ¹ ..	3
Total	16

Accy. 201 — Fundamentals of Accounting ..	3
I.E. 385 — Operations Analysis	3
I.E. 291 — Seminar	0
E.E. 220 — Basic Electrical Engineering ..	3
M.E. 224 — Machine Analysis and Design ..	3
M.E. 234 — Heat Treatment of Metals	3
Humanities or social sciences elective ¹ ..	3
Total	18

FOURTH YEAR

I.E. 282 — Process Planning and Economy in Manufacturing	3
I.E. 388 — Industrial Systems Analysis and Design	3
I.E. 357 — Safety Engineering	3
I.E. 386 — Industrial Engineering Analysis ..	3
Technical elective ³	3
Humanities or social sciences elective ¹ ..	3
Total	18

Technical elective	6
Humanities or social sciences elective ¹ ..	3
Free electives	6
Total	15

¹ A total of 18 hours of humanities and social sciences electives is required, one course of which must be economics. The remaining hours are to be selected from the college-approved lists on page 276.

² Choice of Math. 315 — Linear Transformations and Matrices, Math. 343 — Advanced Calculus, or Math. 345 — Differential Equations and Orthogonal Functions.

³ Nine hours of technical electives from a departmentally approved list are required. A limit of 6 hours of these is set for undergraduate individual instruction courses.

CURRICULUM IN MECHANICAL ENGINEERING

For the degree of Bachelor of Science in Mechanical Engineering

Mechanical engineering is concerned with the theory of conversion and transmission of energy and the practical use of power processes; the kinematic, dynamic, and strength and wear considerations as well as the technological and economic aspects in the development, design, and use of machines and processes; the analysis, synthesis, and control of entire engineering systems; and the organizational and management problems confronting the mechanical engineer.

The curriculum requires 130 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry		4	Chem. 102 — General Chemistry	4
Eng. 100 — Engineering Lecture		0	Humanities or social sciences elective ¹ ..	3
G.E. 103 — Engineering Graphics I		3	Math. 131 — Calculus and Analytic Geometry	3
Math. 120 — Calculus and Analytic Geometry		5	Physcs. 106 — General Physics (Mechanics) ..	4
Rhet. 105 — Principles of Composition ..		4	Total	14
Total		16		

SECOND YEAR

Math. 240 — Calculus of Several Variables	5
M.E. 185 — Materials Processing and Production Technology	4
Phys. 107 — General Physics (Heat, Electricity, and Magnetism)	4
T.A.M. 154 — Analytical Mechanics	4
Total	17

C.S. 101 — Introduction to Automatic Digital Computing	3
Math. 345 — Differential Equations and Orthogonal Functions	3
M.E. 220 — Mechanics of Machinery	4
Phys. 108 — General Physics (Wave Motion, Sound, Light, and Modern Physics) ..	4
Humanities or social sciences elective ¹ ..	3
Total	17

THIRD YEAR

E.E. 220 — Basic Electrical Engineering ..	3
M.E. 205 — Thermodynamics	3
M.E. 210 — Introduction to Engineering Experimentation	3
M.E. 211 — Introductory Gas Dynamics ..	3
T.A.M. 221 — Elementary Mechanics of Deformable Bodies	3
Humanities or social sciences elective ¹ ..	3
Total	18

M.E. 206 — Thermodynamics	3
M.E. 213 — Heat Transfer	3
M.E. 224 — Machine Analysis and Design ..	3
M.E. 234 — Heat Treatment of Metals ..	3
M.E. 291 — Seminar	0
Technical elective ² or humanities or social sciences elective ¹	3
Total	15

FOURTH YEAR

Mechanical engineering systems ³	3
M.E. 250 — Thermoscience Laboratory ..	3
M.E. 265 — Instrumentation and Controls ..	3
M.E. 271 — Machine Analysis and System Design	3
Technical elective ²	3
Humanities or social sciences elective ¹ ..	3
Total	18

Free electives	6
Humanities or social sciences electives ¹ ..	3-6
Technical electives ²	3-6
Total	15

¹ A total of 18 hours of humanities and social sciences electives is required, one course of which must be economics. (See page 275.)

² Nine hours of technical electives are required and must be chosen from a departmentally approved list.

³ Mechanical engineering systems to be chosen from M.E. 323, 335, 341; I.E. 282; and other courses approved by the department.

CURRICULUM IN METALLURGICAL ENGINEERING

For the degree of Bachelor of Science in Metallurgical Engineering

The program in metallurgical engineering emphasizes physical metallurgy and permits the student, by appropriate selection of elective courses, to emphasize engineering metallurgy, metal physics, or some other well-defined career objective. The basic core of physical metallurgy principles is treated in the sequence Met. E. 370-373, and this may be taken by students from other curricula who wish to obtain a strong foundation in the basic principles of physical metallurgy.

The curriculum requires 128 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry		4	Chem. 102 — General Chemistry	4
Eng. 100 — Engineering Lecture		0	Math. 131 — Calculus and Analytic Geometry	3
G.E. 103 — Engineering Graphics I		3	Phys. 106 — General Physics (Mechanics) ..	4
Math. 120 — Calculus and Analytic Geometry		5	Humanities or social sciences electives ¹ ..	4
Rhet. 105 — Principles of Composition ..		4	Total	15
Total		16		

SECOND YEAR

Math. 240 — Calculus of Several Variables	5
Phycs. 107 — General Physics (Heat, Electricity, and Magnetism)	4
T.A.M. 154 — Analytical Mechanics (Statics and Dynamics)	4
Elective ¹	1
Total	16

Math. 345 — Differential Equations and Orthogonal Functions	3
Phycs. 108 — General Physics (Wave Motion, Sound, Light, and Modern Physics).4	
T.A.M. 221 — Elementary Mechanics of Deformable Bodies	3
C.S. 101 — Introduction to Automatic Digital Computing	3
Elective ¹	3
Total	16

THIRD YEAR

Met. E. 370 — Physical Metallurgy I	3
Met. E. 371 — Physical Metallurgy Laboratory I	3
Met. E. 310 — Crystallography and Diffraction	4
Met. E. 314 — Metallurgical Thermodynamics	3
Elective ¹	3
Total	16

Met. E. 372 — Physical Metallurgy II	3
Met. E. 373 — Physical Metallurgy Laboratory II	3
Met. E. 316 — Mechanical Metallurgy	3
Electives ¹	7
Total	16

FOURTH YEAR

E.E. 220 — Basic Electrical Engineering	3
Met. E. 296 — Metallurgical Seminar	2
Electives ¹	12
Total	17

Met. E. 318 — Physics of Metals	3
Electives ¹	13
Total	16

¹ All students are required to satisfy the college requirement of 18 hours in the social sciences and humanities. (See page 275.) Six hours of electives are free to be selected by the student. A minimum of 9 hours is to be selected from among these departmental electives: Met. E. 207, 299, 301, 306, 307, 312, 315, 317, 386, 389. A minimum of 6 hours of technical electives are to be taken outside the department. A liberal interpretation of technical elective will be taken, and may include such courses that satisfy a carefully thought out career plan presented by the student to his or her adviser.

CURRICULUM IN MINING ENGINEERING

See General Engineering, on page 292, for undergraduate curriculum.

CURRICULUM IN NUCLEAR ENGINEERING

For the Degree of Bachelor of Science in Nuclear Engineering

The curriculum in nuclear engineering provides students comprehensive study in basic sciences, basic engineering, social sciences and humanities, and technical areas specific to nuclear engineering. It also provides a large, flexible selection of both technical and free electives which enable the student to emphasize breadth and/or depth of study. Thus, the curriculum not only enables the B.S. graduate to enter directly into a wide variety of careers in nuclear engineering, but also to continue formal education at the graduate level.

Nuclear engineering is a branch of engineering primarily related to the development and utilization of nuclear energy sources. These energy sources include: (1) the rapidly developing engineering application of fission reactors as central electric power plant thermal sources; (2) the longer term development of fusion reactors for electric power generation; and (3) the use of radiation sources in such areas as materials, biological systems, medical treatment, and industrial instrumentation.

The curriculum during the first two years provides a strong foundation in basic sciences (physics, mathematics, and chemistry) and an introduction to basic electric circuits and to digital computer utilization. Taking these courses at this time in the program provides the student added flexibility in choosing technical elective courses.

The curriculum requires 127 hours for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Chem. 101 — General Chemistry		4	Chem. 102 — General Chemistry	4
Math. 120 — Calculus and Analytic Geometry		5	Math. 130 — Calculus and Analytic Geometry	5
Eng. 100 — Engineering Lecture		0	Physcs. 106 — General Physics (Mechanics)	4
G.E. 103 — Engineering Graphics I		3	Nuc. E. 197 — Nuclear Energy and Its Uses ¹	1
Rhet. 105 — Principles of Composition		4	Humanities or social sciences elective ²	3
Total		16	Total	17
SECOND YEAR				
Physcs. 107 — General Physics (Heat, Electricity, and Magnetism)		4	Physcs. 108 — General Physics (Wave Mo- tion, Sound, Light, and Modern Physics)	4
Math. 240 — Calculus of Several Variables		3	Math. 345 — Differential Equations and Orthogonal Functions	3
C.S. 101 — Introduction to Automatic Digital Computing		3	T.A.M. 154 — Analytical Mechanics (Statics and Dynamics)	4
Humanities or social sciences elective ²		2	E.E. 260 — Networks I	3
Econ. 101 — Introduction to Economics ²		4	Free elective ³	3
Total		16	Total	17
THIRD YEAR				
Nuc. E. 346 — Modern Physics for Nuclear Engineers		3	Nuc. E. 347 — Introduction to Nuclear Engineering	3
M.E. 205 — Thermodynamics		3	Nuc. E. 351 — Nuclear Engineering Laboratory	3
Advanced mathematics ⁴		3	Technical elective	3
Humanities or social sciences elective ²		3	Humanities or social sciences elective ²	3
T.A.M. 221 — Elementary Mechanics of Deformable Bodies		3	M.E. 211 — Introductory Gas Dynamics	3
Total		15	Total	15
FOURTH YEAR				
Nuc. E. elective ⁶		3	Nuc. E. electives ⁶	6
Technical electives ⁵		6-7	Technical electives ⁵	6-7
Nuc. E. 358 — Design in Nuclear Engineering		3	Free elective ³	3
Humanities or social sciences elective ²		3	Total	15-16
Total		15-16		

¹ This is not a required course, but it is recommended that Nuc. E. 197 be taken at least once in the freshman and/or sophomore years; it may be taken for credit no more than twice.

² All students are required to satisfy the college requirement of 18 hours in social science and humanities. Included in this group should be Econ. 101.

³ Six hours of electives are free to be selected by the student.

⁴ Students are required to take a minimum of one 3-hour advanced math course in the 300 series in addition to Math. 345.

⁵ A student is required to select 16 hours of technical electives, as specified in the college-approved list on page 277.

⁶ A student is required to take a minimum of 10 hours selected from the following courses: Nuc. E. 197 — Nuclear Energy and Its Uses (1 or 2); Nuc. E. 295 — Special Problems (1 to 4); Nuc. E. 312 — Nuclear Power Economics and Fuel Management (3); Nuc. E. 321 — Introduction to Controlled Thermonuclear Fusion (4); Nuc. E. 341 — Nuclear Radiation Protection (4); Nuc. E. 355 — Reactor Statics and Dynamics (3); Nuc. E. 357 — Nuclear Reactor Safeguards (3); Nuc. E. 388 — Nuclear Ceramics (3); Nuc. E. 397 — Radiochemistry (3); Nuc. E. 398 — Radiochemistry Laboratory (2); and Met. E. 334 — Physical Metallurgy for Engineers (3).

Note: Students will be required to have a specific area of specialization. This is accomplished by careful selection of technical electives and nuclear engineering electives to provide a minimum of three courses in the specialized area of study. Examples of such areas are power, materials, radiation protection and application, engineering science, and direct energy conversion. A student who has selected an area of specialization may elect to substitute a more appropriate course for those specified as required in the above listing in order to begin a sequence. Substitution must be at least of as high a caliber and content as that being replaced.

College of Fine and Applied Arts

*University of Illinois at Urbana-Champaign
114 Architecture Building
Urbana, IL 61801*

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The College of Fine and Applied Arts prepares men and women for professional work by offering programs in architecture, art and design, dance, landscape architecture, music, theatre, and urban and regional planning. Both freshmen and transfer students are admitted to these curricula. In each curriculum certain basic courses, professional courses, and general education requirements including a minimum approved sequence of 6 semester hours each in the humanities, social sciences, and natural sciences, must be completed in order to qualify for the specific baccalaureate degree offered.

For development beyond the undergraduate programs in these areas of study the departments of the college offer graduate curricula leading to advanced professional degrees through the Graduate College.

For students enrolled in other colleges and schools of the University of Illinois at Urbana-Champaign, the College of Fine and Applied Arts offers introductory courses designed to increase aesthetic appreciation and development and to portray the role of the arts in civilization. Participation in University Bands is available, and applied music courses are also available.

To serve the total academic community and all citizens in the state of Illinois, the college features the arts by exhibitions, concerts, lectures, performances, demonstrations, and conferences within the areas of architecture, art, dance, landscape architecture, music, theatre, and urban and regional planning. Many outstanding professionals and works in these fields are brought to the University campus.

In addition to the teaching divisions, the College of Fine and Applied Arts includes the Krannert Center for the Performing Arts, the Krannert Art Museum, the University Bands, the Bureau of Urban and Regional Planning Research, and the Small Homes Council-Building Research Council.

KRANNERT ART MUSEUM

The museum exhibits art objects from its extensive collections, which date from ancient Egypt to our own times. In addition, it schedules a full program of changing exhibitions. These bring to the campus a wide variety of historic and contemporary works of art.

KRANNERT CENTER FOR THE PERFORMING ARTS

The center, completed in 1969, provides remarkable facilities for orchestra, opera, choral organization, theatre, and dance. The Great Hall, seating 2,200, is designed for large-scale musical events. The Festival Theatre, with 1,000 seats, is for opera and other musical stage productions. The Playhouse seats 700 and is the home of the University Theatre. The Studio Theatre, seating 150, is for experimental pro-

ductions. An outdoor amphitheatre, rehearsal rooms, offices, dressing rooms, technical rooms, and underground parking on two levels for 650 cars complete this monumental facility. The major donors of the center were Mr. and Mrs. Herman C. Krannert of Indianapolis.

UNIVERSITY OF ILLINOIS BANDS

The University Bands are organized into the Symphonic Band, the Symphonic Band II, the First Concert Band, the Second Concert Bands, the Marching Bands, and the Basketball Band. Membership in these organizations is determined by audition, and assignments are made according to proficiency and instrumentation needs.

The bands play numerous concerts on the campus, and the Symphonic Band also appears in many Illinois and other midwestern cities. In addition, the bands furnish music for commencement, convocations, athletic events, military ceremonies, and other occasions.

The University owns a large library of band music and was bequeathed the John Philip Sousa Memorial Library. These collections comprise one of the largest and finest libraries of band music in the world.

The Symphonic Bands maintain complete symphonic instrumentations for the study and performance of all types of band literature and are open to those who have attained a high level of musical and technical proficiency on their instruments. The First Concert Band maintains the instrumentation of the standard band and serves as a training organization for the symphonic bands. The Second Concert Bands also maintain standard band instrumentations. Promotions to the Symphonic Bands may be made directly from any of the three Concert Bands.

One hour of credit per semester is offered in bands. This credit may be used as partial fulfillment of the School of Music ensemble requirement and is available to other colleges as elective credit.

The following individuals are involved in the teaching of band students: Harry Begian, professor; Gary E. Smith, assistant professor; Thomas Harris, assistant professor; and Eldon Oyen, conductor.

LIBRARIES

Students in the college have at their disposal outstanding library resources. In addition to the general Library, one of this country's great university collections, there are specialized libraries serving the needs of specific fields. The Ricker Library of Architecture and Art contains more than 35,000 books (with almost two times as many more in the same fields in the University Library), 32,000 photographs, and 9,400 clippings.

The City Planning and Landscape Architecture Library contains approximately 18,000 books, with approximately 50,000 in the general Library.

The School of Music Library, located in the Music Building, contains over 750,000 items. These include introductory, instructive, research, and reference materials including books, editions of music, recordings, manuscripts, microfilm, and other nonbook materials.

DEPARTMENTS AND CURRICULA

The College of Fine and Applied Arts consists of the Departments of Architecture, Art and Design, Dance, Landscape Architecture, Theatre, and Urban and Regional Planning with the Bureau of Urban and Regional Planning Research; the School of Music; the University Bands; the Small Homes Council-Building Research

Council; the Krannert Art Museum; and the Krannert Center for the Performing Arts. The specific functions of each department or school and the undergraduate curricula are described on the following pages.

All departments in the College of Fine and Applied Arts reserve the right to retain, exhibit, and reproduce the works submitted by students for credit in any course.

SPECIAL PROGRAMS

Individual Study Program

All curricula offered by the College of Fine and Applied Arts are designed to develop professional competence in the specific area of studies noted on the degree. Therefore, an individual study program must insure this professional development.

A qualified student who has specific professional goals which are not met by the curricular offerings of the college may request an individual program of studies selected from courses offered by the University. Such a program must include the basic courses prerequisite for advanced study, requirements of the University for graduation, general education sequences and requirements of the college, and professional course work which will insure the competence expected for the particular degree.

To obtain approval for an individual study program, the student must submit his or her proposal in writing during the sophomore or junior year. The proposal should contain an outline of the complete program of course work as well as an explanation of the professional goal desired. It should be discussed with and submitted to an approved representative of the appropriate department or school concerned with the degree who will then forward the proposal through the executive officer of the department or school for recommendation to the college office. Final consideration and notification of the action taken on the proposal will be made by the college office.

Study Abroad

The college provides the opportunity for students to obtain campus credit for foreign study and/or travel for a period of from one semester to one calendar year. Students must submit a detailed proposal of plans for such study and/or travel for approval by their appropriate departmental committee and by the associate dean of the college prior to such study abroad. If approved, students register and retain their status as University students and may continue their student health insurance as if they continued to study at the Urbana-Champaign campus.

HONORS PROGRAMS

Honors at Graduation

At graduation, the College of Fine and Applied Arts grants honors to superior students. To be eligible, students must have completed a minimum of four semesters of work or 65 hours of credit in residence at the Urbana-Champaign campus.

For the degree with Honors, the student must have a grade-point average of 4.25 (A = 5.0) or better in all courses used for graduation and be in the upper 25 percent of those receiving that particular degree; for the degree with High Honors, a grade-point average of 4.5 or better and be in the upper 15 percent; and for the degree with Highest Honors, a grade-point average of 4.75 or better and be in the upper 6 percent. Credit earned at other institutions and transferred to the

University of Illinois is used in computing the student's average. Credit earned at the University of Illinois at Urbana-Champaign must be of at least the level required for the degree with Honors.

Awards

AIA-AIAF Scholarships. The American Institute of Architects and the American Institute of Architects Foundation sponsor annually a national competition for these scholarships. Eligibility is limited to those students enrolled in either of the last two years of a five-year or four plus two-year program who are working toward the first professional degree in schools accredited by the National Architectural Accrediting Board.

Allerton American Traveling Fellowship. Income from an endowment by the late Robert Allerton provides funds for the Department of Architecture to award one scholarship of \$1,200 to be used for summer travel and study on the Atlantic seaboard by a student who will do graduate study in the history of architecture at the Urbana-Champaign campus. The awards are made to those whose accomplishments indicate superior ability in this area.

Alpha Rho Chi Medal. Alpha Rho Chi, national architectural fraternity, provides a bronze medal each year to the Department of Architecture to be awarded to a senior who has shown ability for leadership, has demonstrated an exemplary attitude, and has given promise of professional merit.

Alschuler Award. This award of \$100 is presented annually to the student in the Department of Architecture who is judged to have contributed the best article to the department of publication, *Objective* or *Ricker Reader*, during the year.

American Institute of Architects Medal. The American Institute of Architects awards annually a medal and a certificate to the student graduating with a Master of Architecture degree, who is adjudged outstanding in scholastic achievement, character, and promise of professional ability, and a certificate to the student who is ranked second in these categories.

APA Award. Presented annually to a graduating senior in urban and regional planning in recognition of outstanding academic performance. The award is sponsored by the American Planning Association, which provides a certificate for the recipient.

American Society of Landscape Architects Certificates. Certificates of honor are awarded each year to one or two seniors in landscape architecture. Awards are based on academic scholarship and professional skills.

Fred E. and Thomas Berger Fellowship. This scholarship was established through a joint endowment by the late Fred E. Berger and Mrs. Thomas E. Berger in memory of Mr. Fred E. Berger (1913), founder of Berger-Kelly & Associates, Champaign, Illinois, and his son, Mr. Thomas E. Berger (1940). It is awarded to a graduate student entering the final year of the M. Arch. program for excellence and promise in studies relating to the professional practice of architecture.

Bradley and Bradley Award. Two \$200 awards offered annually by the architectural firm of Bradley and Bradley, Rockford, Illinois are made to students who have demonstrated exceptional ability in a stated course in design and architectural administration and building technology.

Construction Specifications Institute Awards. Awarded annually for excellence in architectural construction and professional practice and are offered by: (1) The Chicago Chapter, C.S.I., \$50, and (2) The Illowa Chapter, C.S.I., three awards at \$200 each.

Edward C. Earl Awards. Income from an endowment bequeathed by Edward C. Earl is used for undergraduate prizes totaling \$3,200 in various levels of architectural design, structural theory and design, history of architecture, and the individual study option.

Fields, Goldman, and Magee Scholarship. An annual award of \$300 is presented to an undergraduate student in architecture who has excelled in design, has attained general academic excellence, has completed the senior year, and is returning for the first year of graduate study in architecture.

Gargoyle Awards. The Gargoyle Society annually recognizes the freshman in architecture who ranks highest scholastically.

Robert F. Hastings Memorial Fellowship. A stipend of \$4,000, plus tuition and fee waiver is available annually to a student who is a candidate in the Master of Architecture/Master of Business Administration double master's program. The fellowship has been established by principals of Smith, Hinchman & Grylls Associates, Inc., in memory of Robert F. Hastings, alumnus and former national president of the A.I.A.

Illinois Power Company Award. A stipend in the amount of \$500 is annually awarded for the best energy conscious design project submitted by an architecture student.

Illumination Engineering Society Prize. A stipend of \$50 is annually awarded for the best lighting design project submitted by an architecture student.

Kate Neal Kinley Memorial Fellowship. This fellowship was established in memory of the wife of a former president of the University and was designed to promote advanced study in the fine arts in recognition of her influence in promoting these and similar interests. It is awarded annually to enable a graduate of the University, or some similar institution of equal educational standing, to pursue advanced study for one year at home or abroad. This fellowship is open to students whose principal or major studies have been in architecture (design or history only), art (all branches), or music (all branches).

Karl Baptiste Lohmann Award. Presented annually to a graduating senior in urban and regional planning in recognition of performance as a student and of professional promise. The award is named for Karl B. Lohmann, professor of city and regional planning, emeritus, who provided the leadership in professional education in city planning at the University of Illinois for more than thirty years. A certificate is given to the recipient.

Charles F. and Helen Loeb Scholarship Fund. Scholarships for students in vocal music.

Frank S. and Jennie M. Long Traveling Fellowship. This fellowship provides a stipend of \$2,500 from the Long bequest to enable a graduate student to undertake studies that require at least six weeks of travel. The winner is selected on the basis of a written proposal and is expected to return to the department for no less than one semester before graduation.

Mary C. McLellan Scholarship. Established by request of Mary C. McLellan of the class of 1888, this scholarship is awarded every second year under the direction of the Department of Art and Design. It is open to graduates of the University of Illinois who have demonstrated unusual excellence in one of the areas of study offered by the Department of Art and Design and who have shown promise of professional success. The stipend is to be used for professional development through travel in America or abroad, or for study at a recognized institution or with a qualified private master.

Mu Phi Epsilon Alumnae Award (Edith Rose Memorial Scholarship). An annual award of \$125 is given to the senior member of Epsilon Xi chapter who has made the greatest contribution in service and scholarship in music. If there is no qualified senior, a junior may be chosen.

Ralph E. Myers Award. A stipend of \$250 is offered annually by Ralph E. Myers of the architectural firm of Kivett and Myers, Kansas City, Missouri to enable an undergraduate student to participate in the overseas study program of the Department of Architecture.

Rexford Newcomb Award. Rexford Newcomb Award was established in memory of Dean Newcomb, eminent architectural historian and author, and first dean of the College of Fine and Applied Arts (1931-54). The award of \$400 is annual and is made to that graduate student whose work in the history and preservation of architecture shows highest promise of continuing the scholarly ideals and objectives of Dean Newcomb.

Pi Kappa Lambda Award. The initiation fees of Pi Kappa Lambda, national honorary music fraternity, are awarded annually by Zeta chapter to the senior student in music who has the highest scholastic average.

Francis J. Plym Fellowships and Awards. Francis J. Plym Fellowships and Awards are provided through endowments bequeathed by the late Francis J. Plym for excellence in professional development since graduation, for academic excellence in the first year of the two-year graduate curriculum, and for excellence in undergraduate sketching and architectural graphics.

Francis J. Plym Traveling Fellowship. An annual fellowship in the amount of \$6,000 is awarded to a graduate of the Department of Architecture of the University of Illinois, Urbana-Champaign campus. The recipient must be less than thirty-five years of age on the first day of June of the year of the award and must demonstrate a record of professional excellence since graduation. The fellowship must be used to defray expenses of a minimum of six months' study in Europe.

Francis J. Plym Graduate Fellowships. Two fellowships are awarded annually in the amount of \$3,000 each and are open to first-year graduate students continuing into the second year of graduate study.

Francis J. Plym Awards. \$175 is awarded annually for excellence in courses in art for architects and in design graphics.

Theodore Presser Foundation Scholarship. One award each year to a School of Music senior music major as a reward for excellence. The award is for \$500 with a matching sum from the School of Music.

Ricker Awards. Two awards each of \$25 and a book are awarded annually for the two best essays on some phase of the history of architecture by students registered in advanced courses in the history of architecture. The awards are given through donations in recognition of the distinguished contributions made by Dr. Nathan Clifford Ricker, who for fifty years taught the history of architecture at the University.

Charles G. Rummel Fellowship in Architecture. A stipend of \$10,000, plus tuition and fee waivers, spread over two and a half years is available to a student who is a candidate in the Master of Architecture/Master of Business Administration double master's program. The fellowship is funded by Lester B. Knight Endowment to honor Charles G. Rummel, alumnus and Plym Fellow.

Edward L. Ryerson Traveling Fellowship. Two fellowships, one in architecture awarded to the student who has completed architectural design through Architecture 471 or 481 and one in landscape architecture, open to senior and graduate students, are offered each year. Each fellowship grants a stipend of \$4,500 to be used for a period of approved study abroad of not less than four months' duration.

Sigma Alpha Iota Award. The Urbana-Champaign alumni chapter of Sigma Alpha Iota, national honorary music sorority, provides an annual award of \$100 given on the basis of musicianship, scholarship, and financial need. All undergraduate students in the School of Music who have completed at least two semesters of work are eligible to apply. The final selection is based upon auditions held once each year.

Edgard Varese Percussion Award. Scholarship aid to a deserving music student whose instrumental emphasis is in the field of percussion.

Undergraduate Viola and String Bass Undergraduate Awards. Four awards each year up to the amount of in-state tuition and fees.

C. Edward Ware Fellowship. This \$1,000 fellowship is awarded to a graduate student for research and study in professional architectural practice to encourage the study of and leadership in professional practice concerns. C. Edward Ware, AIA, B.S. (Arch.) 1943, of E. Ware & Associates, Rockford, is the donor.

James M. White Memorial Prizes. These prizes, totaling \$1,200, were made possible by the students, friends, and associates of Professor James M. White, for many years supervising architect of the University. Income from the endowment is used for prizes in the undergraduate courses in materials and methods of construction, structural elements and theory, and for excellence in graduate studies.

Chicago Chapter of the Women's Architecture League Foundation Scholarship. Two \$750 scholarships are awarded on the basis of both scholastic achievement and financial need to U.S. citizens and residents of the state of Illinois who are entering the final year of the M. Arch. program.

GRADUATION REQUIREMENTS

Students who meet the general University requirements with reference to registration, residence, scholarship, fees, rhetoric, and general education requirements, and who maintain a satisfactory record, receive degrees appropriate to the curriculum completed. Refer to the specific departmental and curricular requirements listed on the following pages. In addition, students must complete the required senior courses in their major field of study in residence at the Urbana-Champaign campus.

ELECTIVES AND GENERAL EDUCATION SEQUENCE REQUIREMENTS

Electives specified in any curriculum in the College of Fine and Applied Arts must be chosen from the lists which follow. Single courses specified in the sequence lists or more advanced courses for which they are prerequisite may also be used as electives.

General Education Sequence Requirements

To comply with the general education sequence requirements, each student in the College of Fine and Applied Arts must have a minimum of 6 semester hours in one department or in an approved sequence from different departments in each of the following three areas: humanities, social sciences, and natural sciences (biological or physical sciences). They should be taken to fulfill *electives* if they are not listed as a specific curricular requirement.

1. A student may not use courses in his or her major area to satisfy a sequence requirement, and a student may not ordinarily use courses from one department to satisfy the distributional sequence requirement in more than one area.
2. Basic foreign language courses, rhetoric, and speech requirements, L.A.S. 110 and 210, or courses numbered 199 may not be used to fulfill the sequence requirements.
3. Foreign language which is used in lieu of or duplicates high school entrance requirements will not be accepted as *elective* credit, nor will the first semester of any other foreign language be accepted without completion of the second semester.
4. Credit in Rhet. 103, 104 may not be applied toward the degree.
5. Approval to use any course or sequence not contained in the listings must be requested by written petition to the Office of the Associate Dean of the college prior to registration in the substitute course or courses. Approval of an adviser or instructor is not acceptable.

HUMANITIES SEQUENCES (6 semester hours)

Afr. St. 210 plus either Hist. 215 or Anth. 315

Anth. 168, 169, 300, 315, 316, 329

Arch. 210, and all advanced architecture history courses (not for architecture, art, landscape architecture, or urban and regional planning majors)

Art 111, 112, 115, 116, 210-213, 217, 218, and all advanced art history courses (not for architecture, art, landscape architecture, or urban and regional planning majors)

Asian studies — all courses, except introductory and intermediate language courses

Classics — all courses, excluding Cl. Civ. 100; Grk. 101-112, 200-202; Lat. 101-114; Hebr. 110, 111

Comparative literature — all courses

Dance 340, 341 (not for dance majors)

English — all courses, excluding rhetoric, business and technical writing, and E.S.L. courses

French — all courses, excluding 100-174, 211-215, 217, 218, 270, 311, 313, 314

German — all courses, excluding 101-124, 153, 211, 212, 382

Hist. 111, 112, 131, 132, 151, 152, 181, 182, 247, 248, 307, 308, 323, 324, 381-384

Humanities — all courses

Italian — all courses, except 101-104, 209, 211, 212

L.A. 213, 214 (not for architecture and landscape architecture majors)

Ling. 198, 220, 300-305, 320, 330, 338, 340, 360, 387

Arab. 305-308

Hindi 308-310

Hebr. 307, 308

Music 113, 130, 131, 133, 134, 213, 214, 310-315, 317 (not for music majors)

Philosophy — all courses, except those listed in physical and social science areas

Portuguese — all courses, except 101-104, 111, 209, 211, 212

Religious studies — all courses, except 108, 109, 111, 112, 200, and those listed in social science area

Russian — all courses, except 101-112, 121-124, 211, 212, 213, 214, 280, 303, 304, 307, 308, 313, 314

Scandinavian — all courses, except 101-104, 216

Slav. 319, 380, 382

Spanish — all courses, except 101-104, 107, 114, 122-124, 209, 211, 215, 217, 225, 280, 351, 352, 371

Sp. Com. 141, 142, 177, 178, 207, 213, 243, 307, 308, 320, 322, 342, 344, 345

Theat. 102-105, 263 (not for theatre majors)

SOCIAL SCIENCE SEQUENCES (6 semester hours)

Afr. St. 222, with a social science course on Africa totaling 6 hours

Anthropology — all courses, except those listed in life science and humanities areas

Economics — all courses

Fin. 150, with Econ. 101

Geography — all courses except those listed in life and physical science areas

Hist. 111, 112, 131, 132, 151, 152, 171, 172, 211, 212, 215, 216, 253, 254, 260-262, 307, 308, 353, 379-384, 386

Ling. 200, 201, 225, 307, 325, 350, 370

Phil. 103, 104

Political science — all courses

Pol. S. 150, plus Hist. 151 or 152 or 260, 261 or 262

Psychology — all courses, except those listed in life science areas

Relst. 229, 304, 328, 363

Sociology — all courses, except that listed in life science area

Sp. Com. 113, 221, 230, 313, 321, 325, 335

NATURAL SCIENCE SEQUENCES (6 semester hours)

Anth. 143, 240, 246, 247, 337, 340-347, 356, 393

Psych. 103, 143, 211, 217, 230, 246, 247, 342, 347, 393

Soc. 246, with a course in the life sciences totaling 6 hours or more

Physical sciences

Astronomy — all courses

Biochemistry — all courses

Chemical engineering — all courses

Chemistry — all courses

Geog. 102, 103, 214, 303, 312, 313, 348; or 305 with a course in the life sciences totaling 6 hours

Geology — all courses

L.A.S. 140-143, 197, 198

Mathematics — all courses excluding 101, 104, 111, 112, 202, 203, 305-307 (cannot duplicate high school entrance regardless of course placement by exam or curriculum requirements or prerequisites)

Phil. 333, 334, 353-355

Physics — all courses

Life sciences (any 6 hours, may be from more than one department)

Biology — all courses; 100, 101 recommended

Botany — all courses; 100, 204, 234, 260 recommended

Entomology — all courses; 103, 118 recommended

Microbiology — all courses; 113 recommended

Physiology — all courses; 103 recommended

Ecology, ethology, and evolution — all courses; 105, 143 recommended

Elective Areas

Electives specified in any curriculum in the College of Fine and Applied Arts must be chosen from the list which follows. Single courses specified in the general education sequence lists or more advanced courses for which they are prerequisite may also be used as electives. Always check prerequisite requirements when registering for these courses.

Air Force Aerospace Studies, Military Science, and Naval Science, advanced courses only (maximum of 6 hours)

Anthropology

Arch. 210, 310-317 (no courses usable for architecture and art majors as electives)

Art, especially 105-112, 115, 116, 180, 185, 186, 209-216, 301-328, 388 (none usable for art majors as electives; only 180 or 209 and up on this list are for architecture majors)

Asian studies

Astronomy

Bands, up to 3 hours (not for music majors)

Chemistry

Classics

Comparative literature

Computer science

Dance, especially 101, 102, 150, 166, 340, 341, 3 hours maximum studio courses to apply as elective credit (none for dance majors)

Economics

English, including advanced rhetoric, and business and technical writing

French¹

Geography

Geology

Germanic languages and literatures¹

History

Humanities

Labor and industrial relations

L.A. 213, 214 (not for landscape architecture majors)

Latin American studies

L.A.S. 110 and 210 by petition only (maximum of 6 hours)

Life sciences

Linguistics

Mathematics¹

Music, especially 100-104, 113, 130, 131 (instrumental courses: 2 maximum; ensembles, including Bands: 3 maximum) (not for music majors)

Philosophy

Physics

Political science

Physical education activity courses (100-239, except 199) (maximum of 3 hours)
 Psychology
 Religious studies
 Slavic languages and literature
 Social sciences
 Sociology
 Spanish, Italian, and Portuguese¹
 Speech communication
 Theatre, especially 102-105, 110, 281 (not for theatre majors)
 Urban planning, especially 171 (not for urban planning or architecture majors)

¹ Cannot duplicate high school entrance or curricular requirements or prerequisites regardless of course placement by exam.

SPECIFIC ELECTIVE COURSES

The following list of courses available as electives offers specialized areas of knowledge not found in previous lists. These courses have obvious professional values to many in fine and applied arts; other courses may simply be personally informative or significant. No more than 9 hours of courses in any one of these areas should be taken.

Accy. 101, 105, 201, 203
 Agr. Ec. 100
 Agron. 101, 121, 350
 B. Adm. 202, 210, 247, 249, 261, 272, 323, 337, 344
 C.E. 216, 230, 231
 Comm. 220, 251
 E.E. 271, 272, 288
 G.E. 200 and 300-level
 Fin. 150
 H. Ed. 150, 200, 206
 E.P.S. 300, 305
 B. Adm. 261
 Jour. 215, 220, 251
 Mechanical and industrial engineering, all courses
 R. TV 356

PROFESSIONAL ELECTIVES

Professional electives, as specified in any curriculum, are:

1. Courses offered by the student's department and
2. Technical or related courses which will aid in the development of a student's professional goal and which are approved by the student's department.

Department of Architecture

Architecture is concerned with the shaping of man's habitat — that environment in which he normally lives.

In accomplishing this an architect has the responsibility to direct his or her professional effort in such a way as to contribute to the optimal physical, psychological, and social well-being of man. The education of an architect must stimulate sensitivity and understanding of human needs and must develop the ability to satisfy those needs through appropriate architecture. It must provide training in the process of information gathering and analysis, and in the appropriate utilization of this information in problem solving. Additionally, the education of an architect must provide the realization of the significance of the historical development of archi-

ture and a thorough understanding of architectural design, structural design, environmental technology, building construction techniques, and architectural administration.

DEGREE PROGRAMS IN ARCHITECTURE

The Department of Architecture offers a four-year undergraduate preprofessional curriculum leading to the Bachelor of Science in Architectural Studies degree and a two-year graduate professional curriculum leading to the Master of Architecture degree.

The undergraduate curriculum provides the fundamentals of a professional education, the base upon which advanced professional education can build, and, further, an acquisition of knowledge appropriate to many roles in architecture, planning, and the construction industry.

Students who have received the Bachelor of Science in Architectural Studies degree or an equivalent degree from another university, and who meet all requirements for admission to the graduate curriculum, may apply for admission to the Graduate College in that curriculum. Students with a five-year Bachelor of Architecture degree may make similar application for admission at the second-year level in the graduate curriculum. The graduate curriculum provides advanced professional education, and, in addition, the opportunity for specialization. The University recommends attainment of the Master of Architecture degree to students whose goals include establishment of professional standing. The Master of Architecture degree program is fully accredited by the National Architectural Accrediting Board. For details of the graduate curriculum, please refer to the *Graduate Programs* catalog, University of Illinois at Urbana-Champaign.

Departmental facilities are limited, and preference will be given to the best-qualified applicants until quotas are filled.

Since 1967, the Department of Architecture has operated an Overseas Study Abroad Program in France. The program is open to qualified students during their fourth year of study. Course offerings taught by department faculty parallel those available to students at the Urbana-Champaign campus but stress the European experience.

The Department of Architecture occupies drafting rooms, lecture rooms, and offices in the Architecture Building, Flag Hall, and Noble Hall. The Ricker Library of Architecture and Art is located in the Architecture Building.

UNDERGRADUATE CURRICULUM IN ARCHITECTURE

For the degree of Bachelor of Science in Architectural Studies

In this curriculum, normal course progress is imperative. A student failing to complete any required course more than one semester later than the time designated in the curriculum is prohibited from progressive registration in architectural courses until the deficiency is corrected. For the Bachelor of Science in Architectural Studies degree, 124 semester hours are required.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS	
Hist. 111 — History of Western Civilization to 1815	4	Arch. 101 or elective	.....	4
Social science sequence	3	Hist. 112 — History of Western Civilization, 1815 to the Present	.....	4
Rhet. 105 or 108 — Composition	4	Social science sequence	.....	3
Math. 120 — Calculus and Analytic Geometry	5	Math. 131 — Calculus and Analytic Geometry (3), plus elective (2), or Math. 130 — Calculus and Analytic Geometry	.....	5
Total	16	Total	.....	16

SECOND YEAR

Arch. 171 — Basic Design Studio I	3	Arch. 172 — Basic Design Studio II	3
U.P. 171 — Planning of Cities and Regions	3	Arch. 210 — Introduction to History of Architecture	3
Approved general education sequence	4	C.S. 102 — Introduction to Automatic Digital Computing	3
Natural science elective	4	Continuation of approved general education sequence	4
Total	14	Natural science elective	4
		Total	17

THIRD YEAR

Arch. 231 — Architectural Construction I	4	Arch. 232 — Architectural Construction II	3
Arch. 251 — Statics and Dynamics	4	Arch. 252 — Strength of Materials and Design Applications	4
Arch. 271 — Basic Design Studio III	3	Arch. 272 — Basic Design Studio IV	3
Elective or professional elective	3	Architecture history (Arch. 310-317)	3
Total	14	Elective or professional elective	3
		Total	16

FOURTH YEAR

Architecture history (Arch. 310-317)	3	Architecture history (Arch. 310-317)	3
Arch. 241 — Environmental Technology I	4	Arch. 242 — Environmental Technology II	4
Arch. 351 — Theory and Design of Metal Structures	4	Arch. 352 — Theory of Reinforced Concrete	3
Arcs. 371 — Architectural Design Studio I	5	Arch. 372 — Architectural Design Studio II	5
Total	16	Total	15

Department of Art and Design

The Department of Art and Design is a professional school within a university. Students attain proficiency in art and design and secure a liberal education. The first year of each curriculum is basic and cultural. Specialization begins in the second year.

All first-year students in art and design will be admitted to the general curriculum in art and design. After completing one year in the general curriculum students must select one of the more specialized art and design curricula. Students should be aware that admission into a specific degree curriculum from the general curriculum of the first year is limited by the number of students each curriculum is able to accommodate. When necessary, selection of students will be determined by grade-point averages.

Courses in the history and appreciation of art and certain courses in studio work are open to students from other colleges of the University.

A field of concentration in the art history is also offered in the College of Liberal Arts and Sciences. (See page 358.)

Under the regulations of the Graduate College two master's degrees in art and design are offered. The degree of Master of Arts is offered with a major in either art history or art education and the degree of Master of Fine Arts in Art and Design in the studio areas.

The degree of Doctor of Philosophy in the History of Art is offered jointly by the Department of Art and Design and the Department of Architecture under the regulations of the Graduate College. The degree of Doctor of Education in Art Education is offered jointly by the Department of Art and Design and the College of Education under the regulations of the Graduate College.

The Department of Art and Design occupies studios, drafting rooms, and offices in fourteen different University buildings. The departmental faculty offices are in the Art and Design Building, and the greater portion of the work is carried on there.

FRESHMAN PROGRAM FOR ALL ART AND DESIGN CURRICULA

This first-year requirement is included in all art and design curricula which follow.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Art 111 — Ancient and Medieval Art		4	Art 112 — Renaissance and Modern Art	4
Art 113 — Orientation to Art		0	Art 118 — Drawing	3
Art 117 — Drawing		3	Art 120 — Design	3
Art 119 — Design		3	Foreign language or elective	6
Foreign language or elective		2	Total	16
Rhet. 105 or 108 — Composition		4		
Total		16		

Students in any art and design curriculum to proceed in junior-level art and design courses must have earned a cumulative grade-point average of at least 3.25 ($A = 5.0$). The cumulative average is to be computed as follows: (1) all University of Illinois courses; (2) the combination of University of Illinois and transfer courses, the lowest of the two to govern.

CURRICULUM IN ART EDUCATION

For the degree of Bachelor of Fine Arts in Art Education

A minimum of 130 hours of credit is required for graduation. This curriculum prepares its graduates for teaching art in grades K through 12.

In addition to specified courses in art, a minimum of 8 semester hours must be acquired in one of the following areas of specialization: sculpture, painting, crafts, printmaking, photography.

The curriculum in art education prepares students for positions as teachers and supervisors of art in the public schools. The program places emphasis on methods, materials, processes, and practice teaching in Illinois schools. Upon completion, graduates are eligible for the State Special Certificate as defined by the Illinois State Teacher Certification Board.

For teacher education requirements applicable to all curricula, see pages 135 to 140.

GENERAL REQUIREMENTS	HOURS
Sp. Com. 111 and 112, or Rhet. 105 or 108 and a speech communication performance elective	6-7
General psychology	3
One approved sequence of 6 hours in one of the natural sciences	6
One approved sequence of 6 hours in one of the humanities	6
American government (state and federal constitutions)	3
History of the United States	3
Physical and/or health education	3
Total	30-31

ART HISTORY

Introduction to ancient and medieval art	4
Introduction to Renaissance and modern art	4
Advanced art history (200- or 300-level)	3
Total	11

GENERAL ART AND DESIGN

Orientation to art	0
Drawing I, II	6
Design I, II	6
Life drawing I, II	4

Design III, IV.....	4
Total	20

ART EDUCATION

Art education laboratory.....	4
Creative art for children.....	3
Art curriculum and practicum in the elementary grades.....	3
Organization of public school art programs.....	3
Total	13

PROFESSIONAL EDUCATION¹

Foundations of American education (educational policy studies).....	2
Psychology of teaching and learning.....	3
Principles of education.....	2
Techniques of teaching.....	3
Educational practice (student teaching).....	9
Total	19

ELECTIVES

Art electives.....	21
General electives.....	6
General or professional electives.....	9-10
Total	36-37

¹ Art education courses are applicable to professional education requirements for teacher certification.

TEACHER EDUCATION MINOR IN ART EDUCATION

REQUIRED COURSES	HOURS
Introduction to watercolor painting.....	2
Introduction to ancient and medieval art.....	3
Introduction to Renaissance and modern art.....	3
Drawing	2
Design	2
Crafts	4
Art education laboratory.....	4
Total	20

CURRICULUM IN CRAFTS

For the degree of Bachelor of Fine Arts in Crafts

The curriculum in crafts emphasizes professional training for the development of the self-sustaining craftsman, the teacher of crafts, and the designer-craftsman in industry. The present curriculum provides a choice of three areas of concentration: ceramics, glass working, and metal working. The emphasis within these areas of concentration is on the development of individual design capabilities and perceptions and upon the mastery of comprehensive technical skills. In conjunction with these individual areas of emphasis, each student is given experience in other craft media.

A total of 122 semester hours is required for the degree.

GENERAL REQUIREMENTS	HOURS
Rhet. 105 or 108.....	4
One approved sequence of 6 hours in each of the following areas: humanities, natural sciences, and social sciences.....	18

ELECTIVES 14-18**ART HISTORY**

Art 111 and 112 plus 6 hours advanced art history..... 14

GENERAL ART AND DESIGN

Art 113 — Orientation to Art and Design..... 0

Art 117, 118, 125, and 126 — Drawing..... 10

Art 119, 120, 131-132 or 133-134 — Design..... 10

ART ELECTIVES..... 12-14**PROFESSIONAL ELECTIVES**..... 12-14**CRAFTS**Art 192 and 194 plus major sequence in ceramics or metal and 3 or 4 hours in allied
crafts courses..... 25-26**CURRICULUM IN GRAPHIC DESIGN**

For the degree of Bachelor of Fine Arts in Graphic Design

The curriculum in graphic design prepares the student for entrance into the field of visual communications. Projects explore professional practices, design in two and three dimensions, the proper use of resources and media, and the interrelationships of pertinent disciplines such as journalism, advertising, and marketing. Emphasis is placed on a balance of technical and conceptual skills.

A total of 122 semester hours is required for the degree.

GENERAL REQUIREMENTS	HOURS
Rhet. 105 or 108.....	4
One approved sequence of 6 hours in each of the following areas: humanities, natural sciences, and social sciences.....	18
Total	22

ART HISTORY

Art 111 and Art 112 — Introduction to the History of Art..... 8

Advanced art history..... 6

Total

GENERAL ART AND DESIGN

Art 113 — Orientation to Art..... 0

Art 117 and 118 — Drawing I and II..... 6

Art 119 and 120 — Design I and II..... 6

Art 131 and 132 — Elementary Composition or Art 133 and 134 — Design Workshop..... 4

Total

GRAPHIC DESIGN

A minimum of 29 hours, terminating in a thesis project in the senior year. Graphic design courses presently include:

Art 159 — Graphic Design Basic Skills..... 3

Art 160 — Graphic Design Production..... 3

Art 161 and 162 — Graphic Design I and II..... 6

Art 264 — Photo/Graphics..... 3

Art 265, 266, 267, and 268 — Graphic Design III, IV, V, VI.....	12
Art 269 — Graphic Design Senior Project.....	2

ELECTIVES

General electives (see college list of approved electives).....	25-29
Professional electives.....	12-16
Total	41

CURRICULUM IN THE HISTORY OF ART

For the degree of Bachelor of Fine Arts in the History of Art

The curriculum in the history of art offers a broad cultural education which unites academic and studio training. The curriculum provides sound preparation for the graduate study required for museum work or teaching at the college level.

A total of 122 semester hours is required for the degree.

GENERAL REQUIREMENTS**HOURS**

Rhet. 105 or 108.....	4
One approved sequence of at least 6 hours in each of the following areas: humani- ties, social science, natural science.....	18
Electives (see college list of approved electives) ¹	28-46
Supportive electives: In addition to the general education requirements a minimum of 6 hours chosen with the consent of the adviser in one of the following areas: ancient and modern literature, anthropology, classics, history, or philosophy.....	6
Total	56-74

SUPPORTING REQUIREMENTS IN ART

Art 111 and 112 — Introduction to the History of Art.....	8
Art 113 — Orientation to Art and Design.....	0
Art 117 and 118 — Drawing I and II.....	6
Art 119 and 120 — Design I and II.....	6
Art electives.....	10-16
Total	30-36

ADVANCED ART HISTORY

Advanced art history.....	18-36
Total	18-36

¹ One foreign language through the 104 level or equivalent is required. French or German is strongly recommended.

CURRICULUM IN INDUSTRIAL DESIGN

For the degree of Bachelor of Fine Arts in Industrial Design

The curriculum in industrial design provides education in three-dimensional design for production, to meet the needs of people and their environment. Emphasis is placed on the awareness of the market demand for design, cognizance of methods and materials of production and their relative costs, creation of designs which are in visual harmony with their environment and which are satisfying to the consumer, and responsiveness to the changes in technology and cultural patterns.

A total of 122 semester hours is required for the degree.

GENERAL REQUIREMENTS**HOURS**

Rhet. 105 or 108.....	4
-----------------------	---

One approved sequence of 6 hours plus a 3-hour elective in social science.....	9
One approved sequence of 6 hours plus a 3-hour elective in humanities.....	9
One approved sequence of 8 hours in one of the natural sciences.....	8
Total	30

ART HISTORY

Art 111 — Introduction to Ancient and Medieval Art.....	4
Art 112 — Introduction to Renaissance and Modern Art.....	4
Art 210 — History of Furniture and Interiors.....	2
Advanced art or architecture history.....	3
Total	13

GENERAL ART AND DESIGN

Art 113 — Orientation to Art and Design.....	0
Art 117 and 118 — Drawing I, II.....	6
Art 119 and 120 — Design I, II.....	6
Art 121 and 122 — Drawing Theory I, II.....	4
Art 160 — Graphic Design Production.....	3
Art 161 — Graphic Design I.....	3
Total	22

INDUSTRIAL DESIGN

Art 133 and 134 — Design Workshop I, II.....	4
Art 175 — Design Methods.....	2
Art 271 and 272 — Materials and Processes.....	6
Art 275 and 276 — Industrial Design I, II.....	6
Art 277 and 278 — Industrial Design III, IV.....	10
Total	28

ELECTIVES

Technical electives from approved list, minimum.....	6
Art electives.....	6-11
General electives (see college list of approved electives).....	12-17
Total	29

Technical Electives**HOURS**

Adv. 281 — Introduction to Advertising.....	3
Adv. 382 — Advertising Creative Strategy.....	3
Adv. 383 — Advertising Media Policy and Strategy.....	3
Adv. 388 — Advertising in Contemporary Society.....	3
Arch. 251 — Statics and Dynamics.....	4
Arch. 252 — Strength of Materials and Design Applications.....	4
Arch. 323 — Social and Behavioral Factors.....	3
Arch. 326 — Impact of Technology on Design.....	3
B. Adm. 202 — Principles of Marketing.....	3
B. Adm. 210 — Management and Organizational Behavior.....	3
B. Adm. 247 — Introduction to Management.....	3
B. Adm. 320 — Marketing Research.....	3
B. Adm. 344 — Consumer Market Behavior.....	3
Comm. 220 — Processes and Systems of Communications.....	3
C.S. 101 — Introduction to Automatic Digital Computing.....	3
C.S. 103 — Introduction to Social and Behavioral Science Digital Computer Programming.....	3
L.A. 213 — People, Land, and Environment.....	2-4
Math. — Calculus or Geometry.....	3
M.E. 180 — Engineering Materials and Processes.....	3
Phycs. 140 — Practical Physics: How Things Work.....	3
Phycs. 150 — Physics and the Modern World.....	3
Physl. 305 — Principles of Ergonomics.....	4

Physl. 306 — Quantitative Methods in Ergonomics.....	4
Psych. 258 — Human Performance in Man-Machine Systems.....	3
Psych. 356 — Human Factors in Equipment Design.....	3

CURRICULUM IN BIOCOMMUNICATION ARTS

For the degree of Bachelor of Science in Biocommunication Arts

Premedical Illustration and Design Program

The curriculum offers extensive and intensive training leading to professional competence in the field of medical illustration and design. The Department of Art and Design offers a two-year program which prepares a student to apply for admission to the program in biocommunication arts. The junior and senior year requirements for the degree, Bachelor of Science in Biocommunication Arts, are offered by the University of Illinois College of Associated Health Professions with programs at both the Urbana-Champaign and Chicago Medical Center campuses.

Admission to this program is limited, and only the best-qualified students are admitted. For additional information contact: College of Associated Health Professions, Department of Biocommunication Arts, 1919 West Taylor, Chicago, IL 60612.

Prerequisites for Admission

Sixty-three credit hours are required for admission to the program in biocommunication arts.

GENERAL REQUIREMENTS

HOURS

Rhet. 105 — Principles of Composition or Rhet. 108 — Forms of Composition.....	4
Six hours approved humanities electives.....	6
Six hours approved social science electives.....	6
Biol. 104 — Animal Zoology and Physl. 103 — Introduction to Human Physiology.....	12
Life science electives to meet the 12-hour minimum	
General electives.....	2

ART AND DESIGN

Art 113 — Orientation to Art (Freshmen only).....	0
Art 111 — Introduction to Ancient and Medieval Art.....	4
Art 112 — Introduction to Renaissance and Modern Art.....	4
Art 117 — Drawing I.....	3
Art 118 — Drawing II.....	3
Art 119 — Design I.....	3
Art 120 — Design II.....	3
Art 125 — Life Drawing.....	2
Art 126 — Life Drawing.....	2
Art 161 — Graphic Design I.....	3
Total	27

ART ELECTIVES

Six hours to be chosen from:

Art 121 — Drawing Theory.....	2
Art 176 — Drawing and Rendering.....	2
Art 201 — Watercolor I.....	2
Art 151 — Sculpture.....	2
Art 159 — Graphic Design: Basic Skills.....	3
Art 160 — Graphic Design: Production.....	3
Art 129 — Anatomy I.....	2
Art 130 — Anatomy II.....	2
Total	6

CURRICULUM IN PAINTING

For the degree of Bachelor of Fine Arts in Painting

The curriculum in painting provides an extensive training as preparation for professional practice in painting and printmaking in their various aspects. The first two years are devoted primarily to the study of design and composition and the acquisition of representational skills; the last two years are devoted to the development of creative expression in painting, drawing, printmaking, and other media. When followed by a program leading to the degree of Master of Fine Arts in Painting and Printmaking, this curriculum is recommended as preparation for teaching painting and related subjects at the college level.

A total of 122 hours is required for this degree.

GENERAL REQUIREMENTS

HOURS

Rhet. 105 or 108.....	4
One approved sequence of 6 hours in each of the following areas: humanities, social sciences, and natural sciences.....	18
Total	22

ART HISTORY

Art 111 and 112 — Introduction to the History of Art.....	8
Advanced art history.....	6
Total	14

GENERAL ART AND DESIGN

Art 113 — Orientation to Art and Design.....	0
Art 117 and 118 — Drawing I and II.....	6
Art 119 and 120 — Design I and II.....	6
Art 125 and 126 — Life Drawing I and II.....	4
Art 225 and 226 — Intermediate Drawing.....	4
Art 131 and 132 — Elementary Composition.....	4
Total	24

PAINTING

The student must complete ten courses in painting and composition to a minimum of 26 hours. Qualified students are encouraged to arrange special projects in conjunction with advisers. Painting and composition courses presently include:

Art 141 and 142 — Still Life.....	4
Art 231 and 232 — Intermediate Composition.....	6
Art 233 and 234 — Advanced Composition.....	6
Art 243 and 244 — Intermediate Painting.....	4
Art 245 and 246 — Advanced Painting and Drawing.....	6

ELECTIVES

General electives (see college list of approved electives).....	14-18
Professional electives (including one course in printmaking).....	18-22
Total	34

CURRICULUM IN SCULPTURE

For the degree of Bachelor of Fine Arts in Sculpture

The curriculum in sculpture provides a broad and solid foundation in the fundamental disciplines of drawing, design, and painting, including both traditional and contemporary concepts. The learning of the time-honored techniques of sculpture such as modeling and carving is required, and experimentation with welding, metal

casting, and plastics is fostered. The student is encouraged to experience a wide range of materials, techniques, methods, and styles.

A total of 122 semester hours is required for the degree.

GENERAL REQUIREMENTS	HOURS
Rhet. 105 or 108.....	4
One approved sequence of at least 6 hours in each of the following areas: humanities, natural sciences, and social sciences.....	18
Total	22

HISTORY OF ART

Art 111 and 112 — Introduction to the History of Art.....	8
Advanced art history.....	6
Total	14

GENERAL ART AND DESIGN

Art 113 — Orientation to Art and Design.....	0
Art 117 and 118 — Drawing.....	6
Art 119 and 120 — Design I and II.....	6
Art 125 and 126 — Life Drawing.....	4
Art 141 and 142 — Still Life.....	4
Art 192 — Metalwork and Jewelry.....	2
Art 194 — Pottery.....	2
Total	24

SCULPTURE

The professional student must complete ten courses in sculpture to a minimum of 24 hours. Qualified students are encouraged to arrange special projects in conjunction with advisers. Sculpture courses presently include:

Art 151 and 152 — Sculpture I and II.....	4
Art 253 and 254 — Intermediate Sculpture.....	4
Art 255 and 256 — Sculpture Material and Techniques.....	6
Art 257 and 258 — Advanced Sculpture.....	4
Art 259 and 260 — Advanced Sculpture Material and Techniques.....	6

ELECTIVES

General electives (see college list of approved electives).....	20-34
Professional electives.....	14-18
Total	36

Department of Dance

The Department of Dance offers two undergraduate degrees in dance: a Bachelor of Fine Arts degree with emphasis in technique, composition, and performance; and a Bachelor of Arts in the Teaching of Dance, leading to public school certification. Applicants for both degrees are required to satisfy a qualifying audition prior to approval for admission. Auditions are held on designated days during the academic year. Instructions regarding the scheduling and content of auditions will be sent to all applicants by the Office of Admissions and Records upon receipt of a completed application.

This is primarily a modern dance department in terms of technical, choreographic, and performance focus. Ballet is offered as an integral part of a dancer's training.

The Department of Dance consists of eight full-time and four part-time faculty members who are all experienced teachers. Members of the technique-composition

faculty have had professional performing experience and are active choreographers and performers. The resident faculty is augmented by visiting artists-in-residence each year. There are approximately sixty undergraduate and twelve graduate dance majors in the department.

The Department of Dance is housed along with the Departments of Theatre and Opera in the Krannert Center for the Performing Arts, and utilizes the unique performing and production resources of the center. Numerous opportunities for performance exist with the Illinois Dance Theatre, the representative company of the department; in faculty and student concerts; and in musical and opera productions in the Krannert Center.

CURRICULUM IN DANCE

For the degree of Bachelor of Fine Arts in Dance

The B.F.A. curriculum in dance is an intensive program of study for the dedicated student, offering concentration in the areas of technique, composition, and performance. The curriculum also includes requirements in production, improvisation, music theory and literature for dance, history, theory and philosophy, notation or fundamentals, and repertory. Electives may be taken in technique, dances of other cultures, advanced improvisation, Labanotation, accompaniment, choreographer-composer workshop, and independent study. Admission is by audition.

Program requirements include core daily technique classes consisting of three modern and two ballet classes per week each semester in residence plus elective technique classes for a minimum of one additional credit hour per semester. Technique placement is assigned by the faculty, and majors must achieve the advanced technical level in both modern and ballet for a minimum of two semesters prior to graduation. The improvisation/composition sequence consists of 10 hours of studio courses culminating in the performance of a senior choreographic project. A minimum of 6 hours of credit is required in performance/repertory courses. The curriculum includes up to 21 hours of professional electives which may be taken in professional dance courses and/or related arts and sciences.

Evaluation of majors is an ongoing process. Continued enrollment in the program is contingent upon satisfactory performance. Students are expected to maintain a minimum 3.75 grade-point average in all professional course work and a 4.0 cumulative average in technique classes in order to remain in good standing in the department.

It is possible for transfer students to complete degree requirements in a three-year period contingent upon prior completion of general education requirements and the fulfillment of the advanced technique requirement for two semesters prior to graduation.

A total of 130 hours is required for this degree.

GENERAL EDUCATION

	HOURS
Rhet. 105 or equivalent	4-6
Humanities sequence ¹	6
Social science sequence ¹	6
Natural science sequence	9
Physl. 103, 104, 105, 106, or 107 ²	4
Physl. 234	5
Total	25-27

PROFESSIONAL COURSES IN DANCE

Technique	32 (minimum)
Dance 160/166 (3), 260/266 (3), 360/366 (3)	
Four credit hours per semester.	
To include core technique classes each semester in residence, consisting of three ¹	

modern and two ballet classes per week (3 hours credit), plus elective technique courses for a minimum of 1 additional credit hour per semester.	
Improvisation	2
Dance 162 — Improvisation I.....	1
Dance 163 — Improvisation II.....	1
Composition	6
Dance 164 — Beginning Composition.....	2
Dance 264 — Intermediate Composition.....	2
Dance 365 — Advanced Composition.....	2
Production	8
Dance 118 — Introduction to Production I.....	1
Dance 119 — Introduction to Production II.....	1
Dance 131/331 — Production Practicum (1 hour per lab for a total of 4 hours).....	4
Dance 375 — Dance Production Workshop.....	2
Music for dance.....	6
Dance 168 — Music Theory and Practice for Dance.....	3
Dance 269 — Music Literature for Dance.....	3
Dance education.....	1-3
One of the following:	
Dance 243 — Creative Dance for Children.....	3
Dance 244 — The Teaching of Dance to Adolescents and Adults.....	3
Dance 351 — Independent Teaching Project.....	1-3
Orientation to dance.....	2
Dance 150 — Orientation to Dance as Art and Education.....	2
Dance history.....	6
Dance 340 — History of the Dance I.....	3
Dance 341 — History of the Dance II.....	3
Repertory and performance.....	6
Dance 130/330 — Performance Practicum (1-2 per dance).....	2
Dance 335 — Dance Repertory Workshop (up to 4 hours).....	2
A total of 6 hours is required; at least 2 hours must be taken in 335.	
Theory and philosophy of dance.....	3
Dance 346 — Theory and Philosophy of Dance.....	3
Movement fundamentals/notation.....	1-3
One of the following:	
Dance 147 (1), Movement Fundamentals	
Dance 347 (3 hours or ¾ unit), Labanotation I	
Total	72-74

ELECTIVES³

26-32

Recommended:

Additional courses in ballet and modern technique: 160, 166, 260, 266, 360, 366 (up to 16 additional hours may be counted toward degree requirements)	
Dance 130 — Performance Practicum ⁴	
Dance 328 — Choreographer-Composer Workshop	
Dance 330 and 355 — Performance and repertory courses ⁴	
Dance 351 — Special Problems (up to 8 hours)	
Dance 363 — Improvisation, III.....	1
Dance 369 — Accompaniment for Dance.....	1
Total	26-32

¹ Humanities and social science sequence: see College of Fine and Applied Arts approved sequences.

² Students electing Physl. 103 must have had high school chemistry. Physl. 104, 105, 106, 107 (self-paced courses, 1 hour credit each) may be substituted for Physl. 103 for those who have not had high school chemistry. Physl. 103, or the 104 to 107 series are prerequisites for Physl. 234.

³ A minimum of 10 hours of electives must be in the area of general electives. (See college of Fine and Applied Arts—approved list.)

⁴ A maximum of 16 hours may be accumulated in the 130/330/335 courses toward degree requirements.

CURRICULUM FOR THE PREPARATION OF TEACHERS OF DANCE

For the degree of Bachelor of Arts in the Teaching of Dance

The B.A. curriculum in dance is designed to prepare and certify dance specialists as teachers of dance for grades K-12. Admission is by audition. This is an intensive program of study which emphasizes the creative and technical aspects of dance as well as the theory and practice of teaching dance in the elementary and secondary schools, and community situations. Courses in music for dance, dance history, dance production, and performance are an integral part of the program. Methods courses and extensive clinical experiences begin in the sophomore year and continue into the senior year, culminating with student teaching the second semester. The Illinois Office of Education requirements of a minimum 100 hours of pre-student teaching field experiences are met through the following courses: Dance 243, 244, 245, Ed. Pr. 150.

For teacher education requirements applicable to all curricula, see pages 135 to 140.

The B.A. major must maintain a cumulative grade-point average of 3.75 in all professional courses in order to continue enrollment in the curriculum. A total of 130 hours is required for the degree. Graduates of this curriculum are eligible for the Standard Special Certificate K-12 (pending decision by the Illinois State Board of Education and the State Teacher Certification Board) or the Standard Secondary Certificate as defined by the Illinois Certification Board. The general education requirements of the University are met in this curriculum, and all required courses in professional education are included.

It is possible for transfer students to complete degree requirements in a three-year period contingent upon prior completion of the general education requirements.

GENERAL EDUCATION

HOURS

Speech and rhetoric.....	6-7
Sp. Com. 111 (3) and 112 (3)	
or	
Rhet. 105 (4) or 108 (4) and a speech communication performance elective	
Humanities sequence ¹	6
Social science sequence.....	6-7
Pol. S. 150.....	3
Hist. 152 or 262.....	3-4
Natural science sequence.....	9
Physl. 103 or equivalent.....	4
Physl. 234.....	5
Psych. 100 or 103.....	3
Physical education.....	3
To be elected from the following areas:	
P.E. 101 — Dance Activities.....	1
P.E. 110 — Gymnastic Activities.....	1
Third hour to be selected from either area.	
Electives ²	14
Electives should be chosen in consultation with major adviser. The following courses are recommended but not exclusive:	
Music education, art education, and elementary education courses as appropriate, with approval of major adviser.	
P.E. 100 — Developmental Activities (sections open) (1)	
P.E. 109 — Team Sports Activities (sections open) (1)	
P.E. 250 — Bioscientific Foundations of Man Moving (3)	
P.E. 251 — Theory of Prescribing Exercise (3)	
P.E. 252 — Prevention and Care of Athletic Injuries (3)	
P.E. 261 — Rhythmics and Gymnastique Moderne (2)	
P.E. 266 — Basic Movement and Body Mechanics (1)	
H. Ed. 281 — First Aid (2)	

Music, theatre, and courses in related areas, as appropriate, with approval of major adviser

Additional courses in ballet: 166, 266, 366 (as placed)

Dance 330/335 — Performance and Repertory

Dance 363 — Improvisation, III (1)

Dance 347 — Labanotation, I (3)

Dance 369 — Accompaniment for Dance (1)

Dance 346 — Theory and Philosophy of Dance (3)

Total47-49

INTERDISCIPLINARY ARTS

Music for dance6

Dance 168 — Music Theory and Practice for Dance3

Dance 269 — Music Literature for Dance3

Production6

Dance 118 — Introduction to Production for the Performing Arts I1

Dance 119 — Introduction to Production for the Performing Arts II1

Dance 131/331 — Production Practicum (1 hour per lab for a total of 4 hours)4

Total12

PROFESSIONAL EDUCATION

Standard Secondary Certification Option

Ed. Pr. 150 — School and Community Experiences1-2

Se. Ed. 240 — Principles of Secondary Education2

Ed. Psy. 211 — Educational Psychology3

Educational policy studies elective³2 or 3

Dance 245 — Teaching of Dance in Public Schools3

Dance 246 — Instructional Methods in Dance Education3

Ed. Pr. 242 — Educational Practice in Secondary Education8

Standard Special Certification K-12 Option

Ed. Pr. 150 — School and Community Experiences1-2

Se. Ed. 240 — Principles of Secondary Education or El. Ed. 233 — Classroom Programs in Childhood Education2

Ed. Psy. 236 — Child Development for Elementary Teachers3

Educational policy studies elective³2 or 3

Dance 245 — Teaching of Dance in Public Schools3

Dance 246 — Instructional Methods in Dance Education3

Ed. Pr. 238 — Educational Practice for Special Fields in Elementary Schools⁴3-5

Ed. Pr. 242 — Educational Practice in Secondary Education⁵3-5

Additional Required Professional Education Courses for Both Options

Dance 147 — Movement Fundamentals1

Dance 150 — Orientation to Dance as Art and Education2

Dance 243 — Creative Dance for Children3

Dance 244 — Teaching of Dance for Adolescents and Adults3

Total29-34

PROFESSIONAL COURSES IN DANCE (Core Program)

Technique24 (minimum)

Dance 160/166 (3), 260/266 (3), 360/366 (3), 250 (1-4).

Three credit hours per semester (minimum), to include core technique classes each semester in residence as placed. B.A. majors are required to achieve the intermediate level of modern technique for at least two semesters prior to student teaching. The total number of hours accumulated to be counted toward degree requirements is 24. A minimum of one hour in dance forms other than modern and ballet is required.

Improvisation2

Dance 162 — Improvisation I1

Dance 163 — Improvisation II1

Composition6

Dance 164 — Beginning Composition2

Dance 264 — Intermediate Composition.....	2
Dance 365 — Advanced Composition.....	2
Production	2
Dance 375 — Dance Production Workshop.....	2
Performance	2
Dance 130/330 — Performance Practicum.....	2
or	
Dance 335 — Dance Repertory Workshop.....	2
Dance history.....	6
Dance 340 — History of the Dance I.....	3
Dance 341 — History of the Dance II.....	3
Total	42

¹ Humanities sequence: see College of Fine and Applied Arts—approved sequences.

² See College of Fine and Applied Arts—approved electives. A maximum of 7 hours of electives may be taken as professional electives. Physical education electives must be taken as professional electives.

³ The following courses are open to undergraduates to meet certification requirements: E.P.S. 201, 300, 301, 302, 304, 305, and 308.

⁴ Ed. Pr. 238 and 242 must be taken for a combined minimum total of 8 hours.

TEACHER EDUCATION MINOR IN DANCE

REQUIRED COURSES	HOURS
Orientation to dance.....	2
Dance technique courses.....	9
Improvisation	2
Beginning composition	2
Music theory and practice for dance.....	3
Creative dance for children.....	3
Teaching of dance.....	3
Total	24

Department of Landscape Architecture

The Department of Landscape Architecture offers a four-year undergraduate curriculum leading to the professional degree of Bachelor of Landscape Architecture and a graduate curriculum leading to the Master of Landscape Architecture.

The undergraduate curriculum is a balanced program of technical, design, and general education courses which equip the student with the necessary skills for professional practice in private offices or public agencies. The graduate curriculum offers advanced work and opportunities for specialization in selected areas toward potential careers in teaching, public service, or private practice.

Departmental headquarters and the library are located in Mumford Hall. Classrooms, studios, and offices are located in Mumford Hall and in 1203, 1205, and 1205½ West Nevada Street, Urbana.

CURRICULUM IN LANDSCAPE ARCHITECTURE

For the degree of Bachelor of Landscape Architecture

This curriculum requires 128 semester hours of credit for graduation.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
L.A. 100 — Introduction to Landscape Architecture		1	L.A. 101 — Introduction to Landscape Architecture	1
L.A. 180 — General Drafting and Graphics		2	Bot. 100 — General Botany ³	4
Geog. 103 — Earth's Physical Systems ³		4	Math. 104 — Algebra and Trigonometry, or Math. 114 — Plane Trigonometry	2-3
Rhet. 105 or 108 — Composition		4	Elective (general education sequence) ¹	3
Elective (general education sequence) ¹		3	Elective (general education sequence) ¹	3
Elective (general education sequence) ¹		3	Supporting elective ²	3
Total		17	Total	16-17
SECOND YEAR				
L.A. 133 — Landscape Design		5	L.A. 134 — Site Design	5
L.A. 150 — Landscape Surveys		3	L.A. 142 — Landform Design and Construction	3
Supporting elective ²		3	L.A. 181 — Visual Communications I	3
Elective		3	Elective (general education sequence) ¹	3
U.P. 171 — Planning Cities and Regions		3	Supporting elective ²	3
Total		17	Total	17
THIRD YEAR				
L.A. 235 — Recreational and Community Design		5	L.A. 214 — History of Landscape Architecture	3
L.A. 243 — Site Engineering		3	L.A. 236 — Design Workshops I	5
L.A. 251 — Plant Materials and Design I		4	L.A. 244 — Site Construction	3
Supporting elective ²		3	L.A. 252 — Plant Materials and Design II	4
Total		15	Total	15
FOURTH YEAR				
L.A. 253 — Planting Design		4	L.A. 246 — Professional Practice	3
L.A. 282 — Visual Communications II		3	L.A. 338 — Design Workshops II	5
L.A. 337 — Regional Landscape Design		5	Supporting elective ²	3
Supporting elective ²		3	Elective	5
Total		15	Total	16

¹ A minimum of 6 credit hours of approved sequence courses is required in each of the areas of humanities, social sciences, and natural sciences for a minimum of 18 credit hours (see College of Fine and Applied Arts—approved general education sequences).

² A minimum total of 18 credit hours of professionally related courses selected from the recommended list of supporting electives is required, with a minimum of 3 credit hours in each of the categories of history, communications, techniques, and environment. (These are in addition to general education requirements. Consult the Department of Landscape Architecture or the College of Fine and Applied Arts for the current list of recommended supporting electives.)

³ Bot. 100 or Geog. 103 may be used as one of the two natural science (6 hours) sequence courses with the appropriate subsequent course (see College of Fine and Applied Arts—approved general education sequences).

A student must have and maintain a minimum 3.5 cumulative University of Illinois grade-point average and a minimum 3.5 grade-point average in all required landscape architecture courses to continue beyond the sophomore level design year (completion of L.A. 134).

School of Music

All applicants for music curricula are required to satisfy a qualifying audition in the major performance area prior to approval for admission. In addition, applicants for music composition or history of music programs are required to submit original scores or other pertinent writings to substantiate their ability to pursue work in their chosen program of studies. Auditions are held on designated dates during the academic year.

Applicants who cannot appear in person may submit tape recordings and other required materials, but all are urged to complete the requirement as early as possible to expedite approval for admission. Each applicant must write to the director of the School of Music, University of Illinois at Urbana-Champaign, 3034 Music Building, Urbana, IL 61801, specifying his or her major performance area and curriculum, to make specific audition arrangements.

The School of Music offers a curriculum in music, with four options leading to the degree of Bachelor of Music, and a curriculum in music education with six areas of specialization, leading to the degree of Bachelor of Science in Music Education. A student enrolled in any applied music curriculum pursues throughout the four years of his or her course a major applied subject (such as piano, voice) in which two thirty-minute lessons a week are taken; and a minor or secondary applied subject for two years during which one thirty-minute lesson a week is taken. Students in composition and history of music must complete 16 hours in the major applied music subject. Public performance is a definite part of the training in applied music, and all students, when sufficiently advanced, are required to participate in student programs. As part of the requirements for the Bachelor of Music degree in applied music and composition, senior students must present a satisfactory public recital.

Courses leading to the Bachelor of Arts degree with a field of concentration in music in the College of Liberal Arts and Sciences are offered to qualified students. (See page 392.) Courses in music leading to this degree are predominantly in the fields of theory, history, and applied music. At the end of their first year, students in the A.B. curriculum are required to pass the instrumental or vocal qualifying audition held for those outside the School of Music who wish to do work in applied music.

Applied music and courses in the history, theory, and appreciation of music are open to all qualified students in the University.

Graduate courses leading to the degree of Master of Music, Master of Science in Music Education, Advanced Certificate in Music Education, Doctor of Education in Music Education, Doctor of Philosophy in Musicology, and Doctor of Musical Arts in Composition, Choral Music, and Performance and Literature are offered under the regulations of the Graduate College.

The University Symphony Orchestras, Chamber Orchestra, Wind Ensemble, Collegium Musicum, Contemporary Chamber Players, jazz bands, choral groups (Oratorio Society, University Chorus, Women's Glee Club, Men's Glee Club, University Choir), and small vocal ensembles are open to qualified students from any college. The Oratorio Society, University Chorus, Madrigal Singers, Opera Group, and other ensembles are also open to members of the faculty and staff and residents of the community who are admitted by audition or by permission of the respective conductors. All students seeking degrees in the School of Music are required to complete four semesters of music ensemble courses. A student may register for a maximum of two such courses concurrently and may use a maximum of 6 semester hours of ensemble credit to apply toward his or her degree.

The faculty and students of the School of Music present concerts and recitals each week of the school year. The School of Music also presents frequent radio broadcasts on and off campus and participates in television programs. Chamber

music concerts are given frequently throughout the year by members of the faculty of the School of Music. Faculty artists and student musical groups are available for off-campus performances through the Office of Continuing Education and Public Service in Music, 608 South Mathews Avenue, Urbana, IL 61801.

The School of Music occupies the Music Building, Tina Weedon Smith Memorial Hall, and space in the Krannert Center for the Performing Arts. The facilities are equipped extensively with classrooms, studios, practice rooms, experimental-electronic music laboratories, musical instruments and audio-equipment, and several auditoria designed for public recitals and concerts.

CURRICULUM IN MUSIC

For the degree of Bachelor of Music

This curriculum requires 130 semester hours of credit for graduation.

The general education sequence requirements in the humanities, social sciences, and natural sciences and electives must be met from the college elective and general education sequence lists starting on page 309.

Instrumental Music Major

The instrumental major may be taken in piano, organ, harpsichord, violin, viola, violoncello, string bass, classical guitar, flute, clarinet, oboe, bassoon, alto saxophone, cornet or trumpet, french horn, trombone, baritone, tuba, percussion, or harp.

A student enrolled in this program takes two applied subjects, one a major (32 hours) and the other a minor (8 hours).

Juniors and seniors must present satisfactory public recitals as part of the requirements for the Bachelor of Music degree.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Major applied music subject		4	Major applied music subject	4
Minor applied music subject		2	Minor applied music subject	2
Music 101 — Fundamentals of Music			Music 102 — Fundamentals of Music	
Theory and Practice I		3	Theory and Practice II	3
Music 110 — Basic Music Literature		2	Music 107 — Aural Skills I	1
Rhet. 105 or 108, or Sp. Com. 111 —			Elective or Sp. Com. 112 — Verbal	
Verbal Communication		3-4	Communication	2-3
Total		14-15	Elective	2
			Total	14-15
SECOND YEAR				
Major applied music subject		4	Major applied music subject	4
Minor applied music subject		2	Minor applied music subject	2
Music 103 — Fundamentals of Music			Music 104 — Fundamentals of Music	
Theory and Practice III		3	Theory and Practice IV	3
Music 108 — Aural Skills II		1	Music 109 — Aural Skills III	1
Music 213 — History of Music I		3	Music 214 — History of Music II	3
Foreign language		4	Foreign language	4
Total		17	Total	17
THIRD YEAR				
History of music ¹		3	History of music ¹	3
Major applied music subject		4	Major applied music subject	4
Theory of music ³		3	Theory of music ³	3
Music ensemble		1	Music ensemble	1
Electives		6	Electives	6
Total		17	Total	17

FOURTH YEAR

Major applied music subject	4	Major applied music subject	4
Music 330 or 331 — Applied Music Pedagogy or Piano Pedagogy I (piano and string majors only) ²	2	Music 330 or 332 — Applied Music Pedagogy or Piano Pedagogy II (piano and string majors only) ²	2
Music ensemble	1	Music ensemble	1
Elective	3	Electives	5
Electives or professional electives	6	Electives or professional electives	5
Total	16	Total	17

¹ To be chosen from Music 310, 311, 312, 313, 314, 315, or 317.

² String majors will register into Music 330; piano majors will register into Music 331 and 332.

³ The music theory requirement for the junior year is to be satisfied by Music 300 and 308, 3 hours each, or by Music 308, 6 hours, with each semester devoted to a specifically listed topic.

Music Composition Major

Within this program, major emphasis may be placed on the theory of music. Necessary course adjustments require approval of the theory division.

Seniors must present a satisfactory recital of original compositions as part of the requirements for the Bachelor of Music degree. If the major is theory, an advanced project determined and approved by the theory division is required.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Applied music ¹		2	Applied music	2
Music 101 — Fundamentals of Music Theory and Practice I		3	Music 102 — Fundamentals of Music Theory and Practice II	3
Music 106 — Composition		2	Music 107 — Aural Skills I	1
Music 110 — Basic Music Literature		2	Elective or Sp. Com. 112 — Verbal Communication	3-4
Rhet. 105 or 108, or Sp. Com. 111 — Verbal Communication		3-4	Elective	3
Elective		3	Music 106 — Composition	2
Total		15-16	Total	14-15

SECOND YEAR

Applied music	2	Applied music	2
Music 103 — Fundamentals of Music Theory and Practice III	3	Music 104 — Fundamentals of Music Theory and Practice IV	3
Music 106 — Composition	2	Music 106 — Composition	2
Music 108 — Aural Skills II	1	Music 109 — Aural Skills III	1
Music 213 — History of Music I	3	Music 214 — History of Music II	3
French, German, or Italian	4	French, German, or Italian	4
Total	15	Total	15

THIRD YEAR

Applied music	2	Applied music	2
History of music ²	3	History of music ²	3
Music 200 — Instrumentation I	2	Music 201 — Instrumentation II	2
Theory of music ³	3	Music 301 — Fugue	3
Music 306 — Composition	3	Theory of music ³	3
Music ensemble	1	Music ensemble	1
Elective	4	Elective	4
Total	18	Total	18

FOURTH YEAR

Applied music	2	Applied music	2
Music 306 — Composition	3	Music 306 — Composition	3
Music 320 — Proseminar	2	Music 320 — Proseminar	2
Music ensemble	1	Music 315 — Contemporary Music	3
Electives	6	Music ensemble	1
Elective or professional elective	3	Elective	4
Total	17	Elective or professional elective	2
		Total	17

¹ Whether or not piano has been the applied music subject, the student must acquire a thorough practical knowledge of the pianoforte.

² To be chosen from Music 310, 311, 312, 313, 314, 315, or 317.

³ The music theory requirement for the junior year is to be satisfied by Music 300 and 308, 3 hours each, or by Music 308, 6 hours, with each semester devoted to a specifically listed topic.

History of Music Major

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Applied music ¹		4	Applied music ¹	4
Music 101 — Fundamentals of Music			Music 102 — Fundamentals of Music	
Theory and Practice I		3	Theory and Practice II	3
Music 110 — Basic Music Literature		2	Music 107 — Aural Skills I	1
Rhet. 105 or 108, or Sp. Com. 111 —			Elective or Sp. Com. 112 — Verbal	
Verbal Communication		3-4	Communication	2-3
Elective or professional elective		2	Electives or professional electives	4
Total		14-15	Total	14-15

SECOND YEAR

Applied music ¹	4	Applied music ¹	4
Music 103 — Fundamentals of Music		Music 104 — Fundamentals of Music	
Theory and Practice III	3	Theory and Practice IV	3
Music 108 — Aural Skills II	1	Music 109 — Aural Skills III	1
Music 213 — History of Music I	3	Music 214 — History of Music II	3
French or German ²	4	French or German ²	4
Total	15	Total	15

THIRD YEAR

History of music ³	3	History of music ³	3
Theory of music ³	3	Theory of music ³	3
Music ensemble	1	Music ensemble	1
French or German ²	4	French or German ²	4
Literature ⁴	3	Literature ⁴	3
Electives (nonmusic)	4	Electives (nonmusic)	4
Total	18	Total	18

FOURTH YEAR

History of music ³	3	History of music ³	3
Music 229 — Thesis	2	Music 299 — Thesis	2
History	3	History	3
Music theory (306, 307, 308, 318)	2-3	Music theory (306, 307, 308, 319)	2-3
Music ensemble	1	Music ensemble	1
Electives or professional electives	6-7	Electives or professional electives	5-6
Total	18	Total	17

¹ Whether or not piano has been the applied music subject, the student must demonstrate reasonable facility in piano by the end of the sophomore year.

² Two years in one language are required except with special permission of adviser.

³ To be chosen from Music 310, 311, 312, 313, 314, 315, or 317.

⁴ Engl. 363 and 364 are recommended.

³ The music theory requirement for the junior year is to be satisfied by Music 300 and 308, 3 hours each, or by Music 308, 6 hours, with each semester devoted to a specifically listed topic.

Voice Major

The major applied music subject throughout the course includes work in vocal diction as well as private lessons in voice. At least 8 hours each in Italian, French, and German are required for the voice major. A student who has not completed two years of one of these languages in high school should begin his or her study of languages during the freshman year.

Juniors and seniors must present satisfactory public recitals as part of the requirement for the Bachelor of Music degree.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS	
Music 101 — Fundamentals of Music	Theory and Practice I	3	Music 102 — Fundamentals of Music	Theory and Practice II	3
Music 110 — Basic Music Literature		2	Music 107 — Aural Skills I		1
Music 166 — English Diction, or Music	167 — Italian Diction	1	Music 166 — English Diction, or Music	167 — Italian Diction	1
Music 180 — Piano		2	Music 180 — Piano		2
Music 181 — Voice		3	Music 181 — Voice		3
Rhet. 105 or 108, or Sp. Com. 111 —	Verbal Communication	3-4	Elective or Sp. Com. 113 — Verbal	Communication	2-3
Total		14-15	Elective		2
			Total		14-15
SECOND YEAR			SECOND SEMESTER		
Music 103 — Fundamentals of Music	Theory and Practice III	3	Music 104 — Fundamentals of Music	Theory and Practice IV	3
Music 108 — Aural Skills II		1	Music 109 — Aural Skills III		1
Music 168 — German Diction, or Music	169 — French Diction	1	Music 168 — German Diction, or Music	169 — French Diction	1
Music 180 — Piano		2	Music 180 — Piano		2
Music 181 — Voice		3	Music 181 — Voice		3
Music 213 — History of Music I		3	Music 214 — History of Music II		3
Foreign language		4	Foreign language		4
Total		17	Total		17
THIRD YEAR			THIRD SEMESTER		
History of music ¹		3	History of music ¹		3
Music ensemble		1	Music ensemble		1
Theory of music ²		3	Theory of music ²		3
Music 366 — Vocal Repertoire I		1	Music 367 — Vocal Repertoire II		1
Music 381 — Voice		3	Music 381 — Voice		3
Foreign language		4	Foreign language		4
Elective		3	Elective		3
Total		18	Total		18
FOURTH YEAR			FOURTH SEMESTER		
Music ensemble		1	Music ensemble		1
Music 330 — Applied Music Pedagogy		2	Music 330 — Applied Music Pedagogy		2
Music 381 — Voice		3	Music 381 — Voice		3
Electives		6	Electives		6
Electives or professional electives		4	Elective or professional elective		3
Total		16	Total		15

¹ To be chosen from Music 310, 311, 312, 313, 314, 315, or 317.

² The music theory requirement for the junior year is to be satisfied by Music 300 and 308, 3 hours each, or by Music 308, 6 hours, with each semester devoted to a specifically listed topic.

CURRICULUM IN MUSIC EDUCATION

For the degree of Bachelor of Science in Music Education

A minimum of 130 hours of credit is required for graduation. This curriculum prepares its graduates for teaching instrumental and choral music in grades K through 12. For teacher education requirements applicable to all curricula, see pages 135 to 140.

GENERAL EDUCATION COMPONENT	HOURS
Verbal communication (Sp. Ed. 111 and 112 plus American or English literature, or Rhet. 105 or 108, a performance-based speech course, plus American or English literature)	9
Psychology	3
Approved natural science sequence	6
Approved humanities sequence	6
Approved social science sequence	6
Physical education activities and/or health	3
Total	33
 PROFESSIONAL AND/OR GENERAL ELECTIVES	 13
 BASIC MUSICIANSHIP COMPONENT	
Applied Major	12
Music Theory, Sightsinging, & Eartraining	15
Music History and Literature	8
Ensembles	4
Total	39
 EDUCATION COMPONENT	
History and/or Philosophy of Education	2
Child Growth and Development	3
Total	5
 PROFESSIONAL COMPONENT	 40
 EDUCATIONAL PRACTICE ¹	
Introduction to Teaching	2
Techniques of Teaching	3
Pre-Clinical Experiences	2
Student Teaching ²	8-16
Total	15

¹ If public school certification is not desired, the student selects 13 hours in consultation with his adviser, 7 hours of which must be from the student's applied major, music theory, or music history.

² Only 8 hours of student teaching apply toward the 130 hours needed for graduation.

TEACHER EDUCATION MINOR IN INSTRUMENTAL MUSIC

The teacher education minor in instrumental music is currently being revised to meet Illinois Office of Education certification requirements. Current information concerning this minor is available in the School of Music.

TEACHER EDUCATION MINOR IN VOCAL MUSIC

The teacher education minor in vocal music is currently being revised to meet Illinois Office of Education certification requirements. Current information concerning this minor is available in the School of Music.

Department of Theatre

The curricular options in the Department of Theatre provide intensive and extensive preparation for the rigorous demands of a professional career in the theatre. A strong commitment to work in the theatre and a realistic understanding of its intellectual, aesthetic, and physical requirements is therefore necessary in students who enter the department's program.

Before acceptance in the undergraduate programs in theatre, applicants must participate in Preadmission Clinics, which take place in the Krannert Center for the Performing Arts on six or more weekends of each year. The clinics afford the faculty an opportunity to explain the nature of the study programs and to audition or interview candidates for admission. Those interested in studying acting prepare a five-minute audition, comprised of at least two pieces from dramatic works; those interested in design, directing, technical theatre, or playwriting present a portfolio of previously accomplished work in theatrical production.

Three study curricula, or options, are offered after the satisfactory completion of the freshman program required of all students. The Comprehensive Theatre Option is meant for students of directing, playwriting, and specialties like acting which usually involve further study at the graduate level. The Professional Studios in Acting and in Theatre Design and Technology are meant for those students who, in the judgment of the faculty, are ready to master those specialties in an intensive undergraduate program.

The Department of Theatre is one of the resident producing organizations of the Krannert Center for the Performing Arts, in which it presents fourteen productions annually during the regular academic year and a repertory season in the summer. The theatres and workshops of the Krannert Center serve as laboratories for theatre students, who have the opportunity to learn and to work alongside an outstanding staff of theatre professionals in preparing performances in theatre, opera, dance, and Kabuki.

CURRICULUM IN THEATRE

For the degree of Bachelor of Fine Arts in Theatre

A minimum of 128 hours of credit is required for the degree.

FRESHMAN PROGRAM FOR ALL THEATRE CURRICULA

First Year	First Semester	Hours	Second Semester	Hours
Theat. 106 — Basic Practice I		6	Theat. 107 — Basic Practice II	6
Theat. 108 — Basic Practice Lab		2	Theat. 108 — Basic Practice Lab	2
Theat. 109 — Dramatic Form/Content		3	Theat. 110 — Literature of Modern Theatre	3
Rhet. 105 or 108 — Composition		4	General education sequence	6
General education sequence		3	Total	17
Total		18		

Students who satisfactorily complete this freshman program will, in consultation with the theatre faculty, determine the appropriate registration in one of the three curricula which follow.

Comprehensive Theatre Option

The student in the Comprehensive Theatre Option must devise a program of study in consultation with his or her adviser and file this program in the departmental office by the end of the second year; this program of study should include elective choices in preparation for graduate work in theatre. Each semester the student in the Comprehensive Theatre Option will be required to complete satisfactorily production contracts with the University Theatre, in addition to any production or performance efforts coordinated through Theatre Practicum or any other credit-earning course.

GENERAL REQUIREMENTS	HOURS
Rhetoric	4
General education sequences	
Natural science sequence.....	6
Humanities sequence.....	6
Social science sequence.....	6
Total	22

REQUIRED THEATRE CREDITS

Specified first-year theatre courses (Theat. 106, 107, 108, 109, 110).....	22
Development of Theatrical Forms I, II (Theat. 261, 262).....	12
Theatre electives.....	22
Total	56

ELECTIVES

General electives.....	12
General and/or professional electives.....	38
Total	50

Note: Total hours earned in theatre courses could vary between 60 and 94 semester hours, depending on use of elective hours designated as either general or professional electives.

Professional Studio in Acting

Students intending careers as professional actors are selected by audition for the Professional Studio in Acting after successful completion of the Freshman Program for All Theatre Curricula or its equivalent. Criteria for selection include potential for professional calibre performance, commitment to theatre, the necessary discipline for intensive study, and agreement to complete the three-year curriculum.

Each semester the acting studio member will be required to complete satisfactorily production contracts with the University Theatre. It is assumed that the student will audition for all University Theatre productions and play one role each semester if cast. The student must be cast in at least one University Theatre production each year to continue in the Professional Studio in Acting.

GENERAL REQUIREMENTS	HOURS
Rhetoric	4
General education sequences	
Natural science sequence.....	6
Humanities sequence.....	6
Social science sequence.....	6
Total	22

REQUIRED THEATRE CREDITS

Specified first-year theatre courses (Theat. 106, 107, 108, 109, 110).....	22
Acting Studio I-VI (Theat. 151, 152, 253, 254, 255, 256).....	48
Development of Theatrical Forms I-II (Theat. 261, 262).....	12
Total	82

ELECTIVES

General electives.....	12
General and/or professional electives.....	12
Total	24

Professional Studio in Theatre Design and Technology

Students intending careers in professional theatre design and technology are selected for the Professional Studio at the sophomore level. To be considered for this curriculum, a candidate must have completed the Freshman Program for All Theatre Curricula or its equivalent. Criteria for selection to, and invitation for, continuance in the professional studio, significant artistic progress, potential for professional calibre work, commitment to theatre, and the necessary discipline for intensive study and practice.

In each semester the student will be required to complete satisfactorily production contracts with the University Theatre, in addition to any production work coordinated through the Studio or Special Problems in Production classes.

GENERAL REQUIREMENTS**HOURS**

Rhetoric	4
General education sequences	
Natural science sequence.....	6
Humanities—art history	8
Social science sequence.....	6
Total	24

REQUIRED THEATRE CREDITS

Specified first-year theatre courses (Theat. 106, 107, 108, 109, 110).....	22
Design Studio I-IV.....	24
Scenographic techniques, costume history (Theat. 223, 224, 345, 346).....	20
Development of Theatrical Forms I-II (Theat. 261, 262).....	12
Total	93

ELECTIVES

General and/or professional electives (Art 121, 122 recommended).....	11
Total	11

Evaluation and departmental distinction: Significant parts of every student's work will be done in theatrical production projects which cannot be adequately assessed in the award of grades. Hence, at the conclusion of each semester a Board of Student Evaluation reviews the work of each student and, with the aid of an adviser chosen by the student, rates the student's performance in relation to: attitude, attendance/promptness, quality of work. The ratings and the recommendations from the faculty to the student will be seriously considered by the student and his or her adviser.

Those students considered to have done exceptional work during a semester will be named to the departmental Commendation List. To qualify for the Commendation List a student must present a semester grade-point average of more than 4.0 together with a record of exemplary performance in University Theatre productions.

Department of Urban and Regional Planning

The Department of Urban and Regional Planning offers a junior-senior program leading to the degree of Bachelor of Arts in Urban Planning. The undergraduate program is intended to prepare students both for careers in public service and for graduate work in urban planning or related fields. The curriculum combines general course work in urban studies with specific instruction in the theory and practice of urban and regional planning.

For admission to the Department of Urban and Regional Planning a student must complete 60 semester hours of acceptable undergraduate college work and present a grade-point average of at least 4.0 (A = 5.0). Applicants with less than a 4.0 average will be considered in special cases where strong career motivation and aptitude can be demonstrated. Additional admission requirements may be imposed.

Since they must have junior standing to be eligible to enter the program, students at the University of Illinois at Urbana-Champaign are advised to register as freshmen and sophomores in the general curriculum of the College of Liberal Arts and Sciences and follow a broad general education program with no more than 20 semester hours in any one discipline. Students at other institutions should follow similar programs.

Students at the University of Illinois should make arrangements to apply for transfer into the Department of Urban and Regional Planning during the advance enrollment period in the second semester of their sophomore year. Students completing their freshman and sophomore studies at institutions other than the University of Illinois should follow the procedures for Admission of Transfer Students prescribed in the "General Information" section of this catalog on page 23. The department does not recommend that students with more than 90 hours (or 135 hours if on a quarter system) enter the undergraduate program.

The department's administrative offices are at 1003 West Nevada Street, Urbana. Classrooms and workshop space are located at 909 and 1001 West Nevada Street and 807 South Lincoln Avenue. The City Planning and Landscape Architecture Library is in Mumford Hall.

The Department of Urban and Regional Planning also offers a program of graduate studies leading to the Master of Urban Planning degree. The Bureau of Urban and Regional Planning Research, a unit within the department, provides a vehicle for the involvement of both faculty and students in a wide range of public policy-oriented research projects, continuing education programs, community service activities, and publication projects.

CURRICULUM IN URBAN AND REGIONAL PLANNING

For the degree of Bachelor of Arts in Urban Planning

A total of 120 hours is required for this degree.

FIRST AND SECOND YEARS

Completion of the freshman and sophomore years in the general curriculum or the sciences and letters curriculum of the College of Liberal Arts and Sciences, or an equivalent program of a recognized university, college, or community college. Such programs should include the following:

Rhet. 105 or equivalent.

A two-course sequence (6 semester hours minimum) each in humanities, natural science, and social science.

An introductory course each in economics, sociology, and political science.

Appropriate electives with no more than 20 semester hours in any one discipline, including the above.

Note: Because of limited enrollment in urban planning, admission is highly competitive. Students who continue in the College of Liberal Arts and Sciences, if they are not admitted to urban planning, will have to complete the LAS foreign language requirement.

THIRD YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
U.P. 171 — Planning of Cities and Regions		3	U.P. 236 — Planning Workshop I	6
U.P. 271 — Urban Planning Practice		3	Urban planning elective ²	3
Quantitative methods ¹		3	Urban studies elective ³	3
Urban planning elective ²		3	General elective ⁴	3
Urban studies elective ³		3	Total	15
Total		15		

FOURTH YEAR

Urban planning electives ²	6	U.P. 374 — Urban Planning Theory	3
Urban studies electives ²	6	Urban planning electives ²	6
General elective ⁴	3	Urban studies elective ³	3
Total	15	General elective ⁴	3
		Total	15

¹ Soc. 185 or other statistics course, subject to approval of departmental adviser.

² Eighteen hours of elective courses within the Department of Urban and Regional Planning are to be selected from the list below:

U.P. 199 — Undergraduate Open Seminar	1-5
U.P. 240 — Planning Internship	0-6
U.P. 260 — Special Problems	2-6
U.P. 315 — Environmental Change and Public Policy	3
U.P. 320 — Planning for Historic Preservation	3
U.P. 325 — U.S. Population and Land Settlement Policy	3
U.P. 337 — Planning Workshop II	6
U.P. 338 — Planning Workshop III	6
U.P. 348 — The Air Pollution System	2
U.P. 351 — Development of American Planning Thought	3
U.P. 352 — Evolution of American Cities	3
U.P. 355 — Introduction to Transportation Planning	3
U.P. 356 — Methods of Transportation Planning	3
U.P. 360 — Introduction to Social Planning	3
U.P. 374 — Urban Planning Thought	3
U.P. 376 — Planning Analysis	3
U.P. 378 — Law and Planning Implementation	3
U.P. 379 — Legal Basis of Governmental Planning	3
U.P. 380 — Survey of Regional Planning	3
U.P. 382 — Managing Urban Development	3
U.P. 384 — Urban Design and Planning Methods	3
U.P. 386 — Environmental Policy and Law	3
U.P. 387 — Special Topics in Urban and Regional Planning	3
U.P. 393 — Environmental Quality Management	3

³ Fifteen hours of urban studies elective courses are required, in addition to introductory courses listed under the first two years, with approval of departmental adviser. (Suggested urban studies courses include, but are not limited to, Anth. 174; Arch. 317, 323, 379; C.E. 230, 240, 333; Econ. 360; Fin. 364, 365; Geog. 373, 378, 383, 384, 385; Pol. S. 305, 306, 353, 361; Soc. 223, 225, 276, 360. Additional urban planning courses, in excess of the 33 hours required, may be applied toward the urban studies requirement.)

⁴ General electives as needed to complete the total hours required are to be selected from the approved college list. Excess urban planning and/or urban studies courses may be applied toward this requirement.

TEACHER EDUCATION MINOR IN URBAN STUDIES

Students electing the urban studies minor must consult with the head of the Department of Urban and Regional Planning. All programs must be approved by an adviser in the Department of Urban and Regional Planning.

A minimum of 21 hours of course work in urban and regional planning and urban studies (approved urban studies courses listed above) is required for the completion of this minor. Two courses must be selected from the following: U.P. 351, U.P. 360, U.P. 374 (or equivalents should these courses be unavailable in a given year).

College of Liberal Arts and Sciences

University of Illinois at Urbana-Champaign
270 Lincoln Hall
Urbana, IL 61801

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The College of Liberal Arts and Sciences is the largest and third oldest college at the Urbana-Champaign campus, serving a diverse group of undergraduate students. The college is primarily and fundamentally a place for learning. The faculty is distinctive in its ability to transmit knowledge and in its commitment to extend the frontiers of knowledge through research. In keeping with its size and diversity, the college offers a wide variety of academic programs, giving the student breadth of learning and access to scholars of national and international reputation. The college offers academic programs leading to specialization in seventy-five fields of study. Superior students are encouraged to participate in departmental honors programs contributing to experience and exposure through inquiry into individual laboratory and library problems. Students who can benefit from a year's study in a foreign country may participate in a variety of year abroad programs.

Although the variety of programs and the multiplicity of courses offered by its units provide opportunities for needed specialization, the college also encourages growth both in basic educational skills and in general education. Several common requirements reflect these goals: fluency and facility in English; literacy in at least one foreign language; an understanding of the modes and systems of thought in the general areas of humanities, social sciences, and in physical and biological sciences. Because of the size and diversity of the student body, many options are available to the student to achieve these goals. Students are encouraged to seek advice from faculty, staff, and other resources, but ultimately students must accept responsibility for planning a coherent program of learning to satisfy their own academic goals, for preparing for an occupational or professional future, and for developing the capacity to reach constructive conclusions through thoughtful deliberation.

DEPARTMENTS AND CURRICULA

The College of Liberal Arts and Sciences includes four schools. The School of Life Sciences consists of the Departments of Botany; Entomology; Microbiology; Physiology and Biophysics; Ecology, Ethology, and Evolution; and Genetics and Development, and it administers the interdepartmental concentration option in biology. The School of Humanities is composed of the Departments of Classics; English; English as a Second Language; French; Germanic Languages and Literatures; History; Linguistics; Philosophy; Slavic Languages and Literatures; Spanish, Italian, and Portuguese; Speech Communications; and the Programs in Comparative Literature and in Religious Studies. Departments in the School of Social Sciences are Anthropology, Economics, Geography, Political Science, and Sociology. The School of Chemical Sciences encompasses Biochemistry, Chemical Engineering, and Chemistry. In addition, there are several departments not assigned to schools including Astronomy, Geology, Mathematics, Psychology, and Speech and Hearing Science.

The college's undergraduate academic programs are grouped into three categories: the sciences and letters curriculum, specialized curricular programs, and secondary teacher education programs.

The general curriculum is not a formal degree program. The general curriculum office serves as an advising center and college office for students who have not decided on a program of study. Individual advising, group orientation sessions, and printed materials describing fields of concentration, curricula, and career opportunities are some of the resources available to students through this office. Entering freshmen and continuing students with less than 45 semester hours may select the general curriculum and may remain in the program until they complete 56 academic hours. During this academic interim, all college policies and regulations apply to general curriculum students.

The sciences and letters curriculum includes the traditional nucleus of specializations in the biological sciences, humanities, physical sciences, and social sciences. In addition to the departmental courses prescribed for the field of concentration, students must fulfill the foreign language and general education requirements. Both these general requirements and the listing of departmental fields of concentration are described beginning on page 353. In addition this curriculum includes a special interdisciplinary concentration, Individual Plans of Study, and interdepartmental concentrations in humanities, Asian studies, religious studies, and Russian language and area studies.

Specialized curricula are highly prescriptive programs which are offered as preprofessional study or preparation for graduate pursuits. These curricula include the teacher education curricula, which upon satisfactory completion, confer a bachelor's degree and the state certificate for teaching. Although many of the general college requirements are similar to those in the sciences and letters concentrations, in some cases requirements may vary. The preprofessional health curricula are not degree programs at the Urbana-Champaign campus, but rather are designed as programs of studies leading to admission candidacy into one of the health professions.

ADMISSION REQUIREMENTS

General admission requirements and procedures of the College of Liberal Arts and Sciences are outlined in the admissions section starting on page 15. These requirements were established to insure that all entering students are intellectually capable of completing degree programs successfully and of gaining the most value from the educational opportunities available.

Prospective freshmen should seek a broad preparation in their secondary school program and are strongly encouraged to include at least two years of algebra and a year of plane geometry and four years of a foreign language. Successful completion of four years of a single foreign language in secondary school will satisfy the college foreign language degree requirement. Although mathematics is not a degree requirement, a solid foundation will assist a student in making the most of the educational opportunities here.

It is recommended that students continue to elect academic subjects during the last year in high school. Continued good study habits and intellectual exercise will help entering freshmen successfully through beginning college-level programs. All new freshmen are also urged to take the University of Illinois placement examinations to determine correct course placement and to attend the Advanced Enrollment Program during the summer. (See page 45.)

ADVISING

Academic advising can serve an important role in a student's education. The choice of a curriculum or field of concentration, the selection of individual courses, and the development of postgraduate goals, all of which can be aided substantially

by advising, vitally affect the direction a person takes, both inside and outside the academic community. On a more personal level, a continuing and interested association with an individual faculty member can be particularly rewarding to a student on a campus of this size.

Students who have successfully completed at least 30 hours (who are presumed to have a basic understanding of the academic routines) may act as their own advisers in submitting a request for a program of courses and in adding or dropping courses. This arrangement is not intended in any way to discourage student consultation with an academic adviser; indeed, such consultation is strongly encouraged. Rather, the authority of the student to sign his or her own schedule card and change-of-program card should relieve advising contacts of their more mechanical and clerical aspects, enabling students and advisers to spend their time together in more substantial areas of discussion. Within this arrangement, however, it should be noted that most students following requirements for a field of concentration must obtain an adviser's approval for the courses to be submitted for their field requirements before the end of the fifth semester.

In addition to departmental faculty advisers, the associate and assistant deans of the College of Liberal Arts and Sciences stand ready to assist students. Students with academic problems and those who are unable to obtain information from other sources are encouraged to use the services of the dean's staff.

SPECIAL OPPORTUNITIES

African Studies

Students in all colleges and schools of the University who desire a knowledge of African affairs and cultures are invited to consult, either directly or through their advisers, with the chairperson and faculty associated with the program in order to develop course programs suited to their individual needs and objectives. This program is sponsored and administered by the African Studies Program.

Among the many opportunities offered by the program are instruction in African languages and culture, financial support to graduate students through the NDFL Fellowships, and field access to Africa.

Afro-American Academic Program

The primary purposes of the Afro-American academic unit are: 1) general instruction in the origins, histories, and cultures of Afro-American populations throughout the Americas; and 2) intensive study of specific periods, movements, and other expressions of the African-American experience within several disciplines: anthropology, English, economics, history, political science, psychology, Spanish, and educational policy studies. An additional aspect of Afro-American studies currently being undertaken is the development of a research assistance program which will provide professional services to faculty and students engaged in academic work related to Afro-American materials. Students and faculty are also invited to consult with the director for the development of courses suited to the enhancement of Afro-American interests.

Individual Plans of Study

Individual Plans of Study (IPS) is a concentration program in the science and letters curriculum. Students who qualify for IPS may design their own special curricula from University course offerings. Interested students should contact Individual Plans of Study office. See also page 380 for further description.

Prelaw Advising

The education of a lawyer begins long before he or she enters law school. Effective and satisfying pursuit of the profession may depend not only upon mastery of the scope and operation of the legal system, but also upon proficiency in verbal expression, comprehension of and ability to analyze complex subjects, understanding of the physical and social worlds in which we live, ability to associate and work with others, and disposition to accept and discharge responsibility. A law school cannot develop all these qualities in its students during three years of legal training. Thus good law schools everywhere require substantial prelegal study as a condition of admission to law study. This period of education before law school should be looked upon as a very important phase of one's preparation for a place in the legal profession and in society generally. A student should select his or her prelegal studies for maximum benefit rather than excessive regard for minimum requirements.

Because prior education in diverse fields may prove valuable to the law student and to the graduate lawyer, schools of law have no specific prelegal requirements. Students are advised, however, to consult the assistant dean for law advising concerning appropriate course offerings which can be advantageously pursued by individuals interested in a career in law. Certainly courses in literature, philosophy, logic and mathematics, the humanities, and the social sciences generally will promote creative and critical thinking, an understanding of human values and institutions, and the ability to express oneself in a coherent and convincing manner. Basic courses in accountancy and government are highly desirable. A handbook has been prepared by a faculty committee on prelaw advising which should prove to be useful to undergraduates contemplating a career in law.

Study Abroad

LIBERAL ARTS STUDY ABROAD

The College of Liberal Arts and Sciences has established a special course (L.A.S. 299) which provides credit for foreign study. This course is open also to students who are enrolled in other colleges within the University. A student's program for study abroad must have prior approval from the major department, the student's college, and the Study Abroad Office. Final determination of appropriate credit is made upon the student's completion of the work and after returning to campus.

The course grants from 0 to 15 semester hours of credit each semester and may be repeated to a maximum of 30 semester hours per academic year, or to a total of 36 semester hours including summer study.

Inquiries should be addressed to the Study Abroad Office, University of Illinois at Urbana-Champaign, 3024 Foreign Languages Building, Urbana, IL 61801.

STUDY ABROAD IN JAPAN

The University of Illinois at Urbana-Champaign offers a program of study in Japan on the campus of Konan University in Kobe, near Osaka and Kyoto in western Japan. The program provides students with an intensive and in-depth introduction to Japanese language and culture by combining classroom and independent study with family living and yet offering ample opportunities for travel.

The course of study covers two semesters. While in Japan students carry a full load of courses and receive the same credits they would normally earn on the home campus. The curriculum consists of one course in Japanese language and two survey lecture courses or seminars in English in such disciplines as history, art, religious studies, etc. In addition, each student undertakes, each semester, an independent study project of his or her own design, subject to the approval of the resident program director. This project counts toward fulfillment of field of con-

centration requirements with the approval of the student's on-campus academic adviser. Students will be housed with Japanese families living in the Kobe/Osaka area.

The program is open to any student in good standing at the University of Illinois regardless of field of concentration or college. There are no special prerequisites; no knowledge of Japanese is required. While primarily designed for undergraduates, beginning graduate students may be accepted into the program under special circumstances.

The cost of the program is approximately the same as the cost for a student in residence on the Urbana-Champaign campus, plus the cost of transportation to and from Japan.

Interested students should write or contact the Center for Asian Studies, University of Illinois at Urbana-Champaign, 1208 West California Avenue, Urbana, IL 61801.

INTERCOLLEGIATE CENTER FOR CLASSICAL STUDIES IN ROME

The University of Illinois participates in the Intercollegiate Center for Classical Studies in Rome sponsored by Stanford University. The program consists of two terms, corresponding in general with an extended semester system. Instruction, educational field trips, vacations, and examinations are scheduled so that for each term the student completes the equivalent of two academic quarters of work. Students accepted for the fall term may either return on completion of that term or remain for the full academic year.

During each term the curriculum provides a balance of Greek readings, Latin readings, ancient history (Greek and Roman), ancient art, archaeology, and elementary Greek if students require it. The normal course load for each term is 18 semester hours.

To be eligible for admission an applicant must be a concentrator in classics or art history; have had at least one semester or two quarters of Greek; and should have a general grade average of B. The selection committee may make certain exceptions, and good students without Greek should apply.

The center is located in a villa containing classrooms, a library, and living accommodations for students and faculty. The cost of \$2,125 per term includes travel to Rome from home or college, whichever is closer; tuition; room; board; the major cost of trips outside Rome; and ordinary medical services at the center.

Students accepted for this program register at their home campuses, and those holding scholarships having an actual cash value will retain them. Illinois state tuition scholarships are not available for this program. The center awards a limited number of scholarships based on need and academic record.

Undergraduate students are usually nominated to participate in the program during their junior year. Early application is essential since nominations to the managing committee are made at least 120 days before the opening of each session. Applications for admission and scholarships and additional information may be obtained from the Department of Classics, University of Illinois at Urbana-Champaign, 4072 Foreign Languages Building, Urbana, IL 61801.

YEAR ABROAD PROGRAM IN FRANCE

The University of Illinois sponsors a year abroad program in France which constitutes the equivalent of a year in residence on the American campus. The program consists of five weeks of language review and cultural orientation at the University of Grenoble, followed by eight months at the University of Paris. Students take courses in French language, literature, history, geography, art, political institutions, and other subjects of particular interest to each participant. All courses are taught by French professors. Enrollment is not limited to students whose area of specializa-

tion is in French, and students concentrating in other subjects who can meet entrance requirements are welcome. The program is open to sophomores, juniors, and seniors.

An applicant should have at least a 3.5 ($A = 5.0$) University grade-point average and a 3.5 grade-point average in French. Prior to the year of participation in the program the student should have completed the following courses: one semester or two quarters of French literature (introduction, survey, century, or genre course), and a year of language courses beyond the customary two years of introductory French or its equivalent.

Students pay for transportation, living expenses, books, tuition, medical insurance, and a modest administrative fee. The total cost is comparable to the average expense incurred during the academic year on the campus at Urbana-Champaign. Fellowships, loans, and tuition and fees waivers are all applicable to the program.

Transfer students are eligible for admission but during the time of their participation they must be enrolled at the sponsoring institution.

The application deadline is March 1. Application forms and a detailed brochure are available from the Department of French, University of Illinois at Urbana-Champaign, 2090 Foreign Languages Building, Urbana, IL 61801.

STUDY OPPORTUNITIES IN AUSTRIA

The Department of Germanic Languages and Literatures sponsors a two-semester program at the Pädagogische Akademie, Baden, Austria. Students take courses in language, literature, education, and civilization at the Akademie and elective courses at either the Akademie in Baden or at an institution in Vienna. Up to 34 hours of residence credit are granted upon completion of the program.

Applicants should have at least a 3.75 ($A = 5.0$) overall grade-point average, a 4.0 grade-point average in German, and language proficiency at the Ger. 211 level. Students in the curriculum preparatory to the teaching of German can fulfill several College of Education requirements in Baden. Qualified students in colleges other than the College of Liberal Arts and Sciences are encouraged to participate and to develop individual programs with the aid of their advisers. Transfer students are eligible for admission but must be enrolled at the University of Illinois during the time of their participation.

Special low-cost transatlantic travel arrangements are available. The cost of room and board at the Urbana-Champaign campus normally approximates the cost of both transatlantic travel and room and board at Baden. Beyond that, students pay only regular University of Illinois tuition and off-campus fees. Fellowships, loans, and tuition and fees waivers are applicable to the program. Detailed information about the program is available from the Austria-Illinois Exchange Program, Department of Germanic Languages and Literatures, University of Illinois at Urbana-Champaign, 3072 Foreign Languages Building, Urbana, IL 61801.

RUSSIAN LANGUAGE STUDY AT LENINGRAD STATE UNIVERSITY

The University of Illinois is one of twelve American colleges and universities which sponsor a cooperative Russian Language Program at Leningrad State University under the auspices of the Council on International Educational Exchange. The semester program lasts sixteen weeks with several weekend side trips, and the summer program provides six weeks of instruction and two weeks of travel.

Classes are conducted in Russian by the university faculty; the curriculum is largely devoted to the intensive study of language and literature. American students live in dormitories with Soviet students, eat in the university cafeteria, and participate in the student life of the university.

Most participants are students of language, but the program is open to students of literature, history, area studies, and other disciplines as well. Limited

scholarship funds are provided by sponsoring universities, the USOE, and private foundations. On occasion, the U.S. Office of Education has provided funds for the summer program, and scholarship funds for the semester program have been granted by the Ford Foundation.

Additional information and application forms are available from the Department of Slavic Languages and Literatures, University of Illinois at Urbana-Champaign, 3092 Foreign Languages Building, Urbana, IL 61801.

SPANISH SUMMER PROGRAM IN MEXICO

The Committee on Institutional Cooperation, of which the University of Illinois is a member, sponsors an annual eight-week summer program of Spanish at the Universidad Ibero-Americana in Mexico City. It is intended primarily for students whose area of specialization is Spanish, but it is open to undergraduate students from other disciplines who have a demonstrated ability in the use of Spanish. Participants are expected to enroll in a full program of three basic courses for which they may receive 8 semester hours of credit which is acceptable as residence work toward the University of Illinois degree.

Each applicant must have the equivalent of a third-year college-level competence in Spanish, show a 4.0 (A = 5.0) grade-point average in Spanish courses and be in good academic standing, and arrange for a letter of recommendation attesting to scholarship and language competence from a faculty member in his or her home department. Exceptional second-year students will also be considered under the above conditions.

The fee for the program is approximately \$900 and includes one-way transportation to Mexico City, room and board, tuition, and certain scheduled excursions. Limited scholarship aid is available for some participants.

Completed applications must be received by the director of the program by mid-March. Further information may be obtained from the Department of Spanish, Italian, and Portuguese, University of Illinois at Urbana-Champaign, 4080 Foreign Languages Building, Urbana, IL 61801.

UNIVERSITY OF ILLINOIS YEAR ABROAD PROGRAM IN SPAIN: BARCELONA AND MADRID

The Urbana-Champaign and Chicago Circle campuses sponsor a year abroad program in Spain which is equivalent to two semesters of study in residence. Thirty semester hours of credit may be earned in this nine-month program which begins each year in August.

After an orientation session in Salamanca and Madrid, students complete two semesters of study at the University of Barcelona. The program is designed for juniors concentrating in Spanish or the teaching of Spanish, but seniors and well-qualified sophomores may also apply. Students studying other areas will be considered if their work would be enhanced by a year's study of language and literature. Highly qualified students from other institutions are also eligible to participate in this program. Students must have completed a fourth-semester course in Spanish or the equivalent and have at least a 4.0 (A = 5.0) grade-point average in Spanish and a minimum overall grade-point average of 3.5 to be eligible for consideration.

The cost for each student is about \$3,000, which includes one-way air fare, plus University of Illinois tuition and fees. The application deadline is March 1; additional information and application forms are available from the Department of Spanish, Italian, and Portuguese, University of Illinois at Urbana-Champaign, 4080 Foreign Languages Building, Urbana, IL 61801.

HONORS PROGRAMS

Dean's List

Placement on the Dean's List is awarded at the end of each semester to those students who, while carrying at least 9 hours of traditionally graded courses, are in the upper 20 percent of their respective classes. Course work graded credit-no credit, satisfactory-unsatisfactory, and course work taken for graduate credit are excluded. Students with work graded *excused* or *deferred* are not considered for the Dean's List until grades have been submitted for that work. Students receiving grades of Ex or Df should notify the honors dean when the work is complete if they believe they should be placed on the Dean's List.

James Scholar Program in Liberal Arts and Sciences

The official honors program within the College of Liberal Arts and Sciences is known as the Edmund J. James Scholar Program. The purpose of this program is to provide the opportunity for students with exceptional ability to pursue a more rigorous academic program, and to join with faculty who share their interest in academic excellence. The James Scholar standing can be earned in any year by any undergraduate student in any curriculum. There are particular privileges and curricular opportunities which include availability of the departmental honors adviser and the honors dean in the college office, enrollment in honors courses, sections, seminars, and colloquia, and individualized honors credit arrangements in specific courses. In addition, James Scholars have open access to the University Library which is ordinarily available only to graduate students and faculty. This is of particular value to those participating in independent study and/or undergraduate research. James Scholars, by the nature and demands of their work, are well prepared to complete their college degrees with honors. The James Scholar standing is available to students who meet the following criteria. The top 15 percent of entering freshmen are invited immediately into the program as James Scholar Designates. Continuing students in the college must maintain a cumulative average of 4.5 and must complete two honors courses in the academic year. The satisfaction of these requirements determines further continuation in the program as a James Scholar Nominee. Official certification of James Scholar standing is made at the end of the academic year upon completion of these requirements. Further information about the James Scholar program is available from the LAS honors dean at 270 Lincoln Hall.

Honors at Graduation

College honors at graduation are awarded on the basis of academic excellence and satisfaction of one of the following: (1) successful completion of 25 hours of honors courses (or of work on honors learning agreements); (2) successful completion of 50 hours of 200- and 300-level course work; or (3) earning departmental distinction. Provided that one of the foregoing curricular tests is satisfied, the award of college honors is made according to the following ranges: *Cum laude* if the college grade-point average places a student in the top 12 percent of the graduating class but not in the top 7 percent; *Magna cum laude* if the college grade-point average places a student in the top 7 percent of the graduating class but not in the top 3 percent; and *Summa cum laude* if the college grade-point average places a student in the top 3 percent of the graduating class.

Departmental Distinction

Students who have shown exceptional competence in one or more areas of study may earn distinction in their fields of concentration or curriculum. Criteria for awarding distinction are established by the departments. Students interested in working for distinction should consult their honors adviser early in their junior year. Students may obtain information about requirements from the departmental and curriculum advisers but generally in addition to meeting the scholastic requirements and the minimum requirements for his or her concentration, a student graduating with departmental distinction normally satisfies at least one of the following requirements: he or she must present an acceptable thesis, or must pass a comprehensive examination prepared by the major department or other competent body, or must pursue a special course of study, of at least 4 semester hours, approved by the major department.

Distinction in Teacher Education Curricula

A student who has completed a curriculum in teacher education may be recommended for distinction in the teaching of his or her area of specialization if he or she has shown superior ability in that area. Information about requirements may be obtained from the adviser in the area of specialization.

Phi Beta Kappa

Eligibility for election to Phi Beta Kappa is determined on the basis of high academic achievement. Although no one is elected with a grade-point average less than 4.5 (A=5.0), the minimum average varies for each election due to standards established by the national United Chapters. Fulfillment of a broad liberal arts education is considered a prerequisite for election: this is interpreted to include completion of courses in the humanities, social sciences, and physical and biological sciences (with at least one laboratory science), and a fourth-semester proficiency in a foreign language.

Elections are held in the spring each academic year. A student may be considered after he or she has completed 75, 90, and 105 hours, and after graduation. Transfer students are eligible only after completing 105 hours, of which 45 must have been earned in residence at the Urbana-Champaign campus.

As standards are subject to change in detail and may go beyond the courses required for particular curricula, students interested in this honor should contact the chapter secretary for details.

Awards

Elliott Ritchie Alexander Award. Each year the Illinois (Alpha) Chapter of Phi Lambda Upsilon presents an appropriate book to the student, whose name is engraved on a permanently displayed trophy. This award is made to a junior in the School of Chemical Sciences in recognition of outstanding scholastic achievement in the first two years.

Alpha Chi Sigma Plaque. Zeta chapter of Alpha Chi Sigma, chemical professional fraternity for men and women, each year recognizes the freshman who attains the highest scholastic average for his or her first semester of work in the curriculum in chemistry or chemical engineering. The selectee's name is engraved on a plaque displayed in the Chemistry Library.

American Institute of Chemical Engineers Award. This award, which includes a certificate, a two-year subscription to the *AIChE Journal*, and a pin, is presented

to the chemical engineering student who has attained the highest grade-point average during his or her freshman and sophomore years.

Martha Belle Barrett Prizes in History. Two awards of at least \$100 each are made annually. One goes to the student with the highest grade average in history courses and the other is awarded to the senior who writes the best honors thesis under the supervision of a member of the Department of History. The winners of the awards are selected by the Department of History.

Chemical Rubber Company Achievement Award. A copy of the *Handbook of Chemistry and Physics* is presented each year to the outstanding student in freshman chemistry.

Cohn Scholarship Program for Undergraduate Study in the Humanities. Through the generosity of the Clarence and Pauline Cohn Memorial Fund several substantial monetary awards are granted annually to undergraduates whose undergraduate fields of concentration are in the humanities. Inquiries about the Cohn Scholarship Program should be directed to the School of Humanities.

DANK Prize. A cash prize, certificate, and letter of commendation are awarded by the Chicago Northern Suburbs Chapter of the German-American National Congress (DANK) to the student with junior-year standing who has demonstrated outstanding ability in the study of German language and culture.

Dante Prize. The Dante Society of America offers an annual prize of \$100 for the best essay on a subject related to the life or works of Dante written by a student in any college or university in America, or by anyone who has graduated from such a college or university within the last three years. Essays may be left at the office of the Department of Spanish, Italian, and Portuguese, or sent to the Dante Society of America, Widener Library, Harvard University, Cambridge, Massachusetts 02138. They must reach the society by May 1. Inquiries concerning this prize may be made at the department office or sent to the Dante society.

Donald W. Doerscher Memorial Award. This award is made annually to the senior in the College of Liberal Arts and Sciences who has consistently done the most outstanding work in the field of philosophy. The winner of this award is selected by the Department of Philosophy, or a faculty committee acting for the department.

Donald E. Eisele Memorial. A cash award is given annually to a senior in chemical engineering for scholastic achievement and service to his or her profession.

Joseph S. Flores Award. The Department of Spanish, Italian, and Portuguese, University of Illinois at Urbana-Champaign, established this award in 1976, honoring Professor Joseph S. Flores for his achievements during forty-one years of service to the University. The cash award (\$200 in 1976; will probably be increased in the future years) will be presented annually to an outstanding undergraduate majoring in Hispanic studies.

Reynold Clayton Fuson Award. A substantial award is given to the student in chemistry or chemical engineering, who, through the first semester of his or her senior year, has achieved a unique accomplishment or development in academic performance, including research.

Geology Alumni Association Senior Award. A Brunton compass is awarded each year to the graduating senior in geology who is most outstanding in scholarship.

Algernon Dewaters Gorman Prize. This prize is awarded at the spring commencement every third year to the student in chemistry or chemical engineering with junior standing who has the highest grade-point average and has earned not less than 25 hours credit in chemistry or chemical engineering. The average is based on all courses taken on this campus exclusive of physical education and military.

Illinois Institute of Chemists Award. Three certificates are awarded by the Chicago chapter of the American Institute of Chemists each year to the graduating seniors in biochemistry, chemistry, and chemical engineering who by demonstrated

records of leadership ability, character, and scholastic achievement, have shown the potential for advancement in their professions.

Iota Sigma Pi Prize. A cash prize of \$20 is awarded each year by the honorary chemical sorority, Iota Sigma Pi, to the woman in the senior class who has the highest scholastic average in her University work with chemistry as her major subject.

Mimi Jehle Award. A cash prize is presented each year to the outstanding student completing the curriculum for the degree of Bachelor of Arts in the Teaching of German. Selection is made on the basis of overall scholastic average and performance in the educational practice course.

Kendall Award. A monetary award donated by the Kendall Company is made each year by the Illinois (Alpha) Chapter of Phi Lambda Upsilon to the student in the School of Chemical Sciences who shows the greatest promise in his or her chosen field.

Agnes Sloan Larson Award. Substantial monetary awards are given at the beginning of the sophomore year to chemical sciences students who compiled the most outstanding records as freshmen.

Werner Marx Award. A book prize is given annually to an undergraduate who has demonstrated excellence and creativity in the study of German language and literature.

Merck Award. Three copies of the *Merck Index* are presented each year, one to each outstanding senior in the chemistry, chemical engineering, and biochemistry curricula.

Phi Lambda Upsilon Cup. Alpha chapter of Phi Lambda Upsilon, honorary chemical society, awards a cup annually to a sophomore in recognition of outstanding scholastic achievement in the School of Chemical Sciences. The cup is on display in the main hall of the Chemistry Annex.

J. Kerker Quinn Awards. Several substantial annual awards established by the late Professor J. Kerker Quinn for undergraduate students specializing in creative writing in the English department, with preference given to students with creative writing ability regardless of their financial need. Awarded only by nomination of candidates and administered by judges acting for the Department of English.

Worth Huff Rodebush Award. A substantial monetary award is given in the second semester each year to the most able senior who has demonstrated his or her intention to make a career of biochemistry, chemistry, or chemical engineering.

Degree Programs

CURRICULUM IN SCIENCES AND LETTERS

For the degree of Bachelor of Arts or Bachelor of Science in Liberal Arts and Sciences

This curriculum leads to the degrees of Bachelor of Arts and Bachelor of Science. Concentrators in the physical sciences (which include mathematics), the biological sciences, and psychology may receive the degree of Bachelor of Science. The degree desired must be indicated on the registration document at the time of registration for the last semester of work.

Graduation Requirements

Although each student has a faculty adviser, students are responsible for meeting the requirements for graduation. Therefore, students should familiarize themselves

with the requirements listed below and should refer to them when planning a program.

A total of 120 semester hours, excluding more than 4 hours of basic physical education and excluding most military training, is required for graduation. A student must spend either the first three years, earning not less than 90 semester hours, or the last year, earning not less than 30 semester hours, in residence at the Urbana-Champaign campus uninterrupted by course work elsewhere. The hours must be applicable toward the degree sought. In addition, transfer students in the sciences and letters curriculum must satisfy a residence requirement in their field of concentration, as described on page 356. For complete information about other requirements see the pages indicated below.

Advanced courses	355	General education	below
Electives	355	Grade-point average	113
English	111	Physical education	112
Field of concentration	356	Residence	110
Foreign languages	below		

Foreign Language Requirements

A knowledge of a foreign language equivalent to that resulting from four semesters of study of a foreign language commenced in college is required. Completion of four years of the same foreign language in high school also satisfies this requirement. Or if a student has passed three semesters of a foreign language at the college level or three years in high school, he or she may complete the requirement by passing three semesters of a second foreign language. Proficiency examinations are offered in those languages which are included in the curricula of the College of Liberal Arts and Sciences. Students transferring from other colleges may present in satisfaction of the language requirement two years (four semesters) of college credit in a language not offered at the University of Illinois.

Students planning to enter the Graduate College are advised to consult their department of concentration or the graduate school at which they plan to matriculate regarding applicable language requirements.

General Education

A fundamental role of the College of Liberal Arts and Sciences is found in its policy toward general education. In contrast to the largely occupational objectives of the professional college, the goals of this college embody breadth as well as depth of learning. In addition to achieving a high level of competency in a field of concentration, students are expected to acquire an understanding of the methods of inquiry in at least one field in the humanities, the social sciences, and the biological and physical sciences. Through this academic involvement in other fields of knowledge students should be able to place their specialized training into a broader context of learning and culture. Another purpose of the general education requirement is to provide an opportunity for students to investigate new areas of study which may foster new academic or occupational interests.

The College Committee on Undergraduate Education has approved a great variety of courses in the hope that students will elect appropriate sequences, especially at upper levels and thus challenge the notion that general education courses are those introductory offerings which must be put behind at the earliest possible time. In the view of the committee, it is desirable to spread one's work in general education over a four-year period; if a student is capable of meeting the intellectual demands and prerequisites of a 200- or 300-level course, he or she may well find this work more stimulating and ultimately more satisfying than a beginning course.

The following regulations apply to the election of general education courses:

- All students in the sciences and letters curriculum must complete at least 6 hours of designated course work in *one* department, or in an especially approved sequence from different departments, in each of the following four areas: biological sciences, humanities, mathematics or physical sciences, and social sciences.
- A student may not use courses in his or her major area to satisfy the requirement in another area.
- A student may not ordinarily use courses from one department to satisfy the distributional requirement in more than one area.
- A student may not use courses ordinarily taken for fulfillment of the basic foreign language and rhetoric requirements to meet the general education requirement. Ordinarily, 199 courses may not be used to fulfill the general education requirement.
- Students should consult the *LAS Student Handbook* and departmental and college advisers for the current list of courses which may be used to satisfy the general education requirement.

Since 1972 students have been able to satisfy the requirements in general education by passing, at an appropriate level, the respective CLEP General Examination (i.e., those in humanities, social science and history, and in natural science). Credit hours have also been earned by successful students. Students may not earn credit via the Natural Science General Examination although they may be given a waiver from the physical science and/or the biological science requirements by achieving specified scores. Credit and waiver may be earned by successfully passing the humanities and the Social Science and History Examinations.

Courses offered through the School of Life Sciences will qualify as general education courses in the biological sciences areas. In addition, biologically related courses in several other departments (anthropology, geography, and psychology) may be used to satisfy the biological sciences requirement.

Courses in literature offered by the program in Asian studies, the classics, comparative literature, English, French, Germanic and Slavic languages, Spanish, Italian, and Portuguese will meet the humanities requirement. Certain other courses in anthropology, architecture, art, history, humanities, linguistics, philosophy, religious studies, speech communication, and theatre will also meet the requirement.

Courses offered by the Departments of Astronomy, Biochemistry, Chemical Engineering, Chemistry, Geology, and Physics will meet the general education requirement in the physical sciences. Some courses offered by the Departments of Geography, Mathematics, and Philosophy will also meet the requirement in addition to some courses offered under the LAS rubric.

Generally, courses offered by the Departments of Anthropology, Economics, Geography, Political Science, Psychology, and Sociology will meet the requirement in the social sciences. Additionally, some courses in history, linguistics, and speech communication will meet the requirement.

A more comprehensive and current listing of appropriate courses and sequences may be found in the *LAS Student Handbook*.

Advanced Courses

At least 30 hours must be earned in courses numbered 200 or above.

Electives

Undergraduate Courses: An elective course in the sciences and letters curriculum is one that is *not* used in fulfillment of any of the minimum specific graduation requirements of the college: rhetoric, foreign language, general education, field of

concentration (including cognate courses). Students following a field of concentration may use as electives:

1. Courses offered by the College of Liberal Arts and Sciences;
2. Courses offered by departments and schools in other colleges of the University which sponsor fields of concentration in LAS (that is, art — excluding applied art courses, computer science, economics, finance, music — excluding applied music courses, or physics); and
3. A maximum of 24 hours to be counted toward graduation of courses not included in (1) or (2). Examples of courses in this category are engineering courses, applied art courses, and applied music courses.

Graduate Courses: Students of high academic standing within 10 semester hours of a bachelor's degree may be given the privilege of electing courses in the Graduate College for graduate credit with the consent of the dean of that college; students within 25 hours of a bachelor's degree may petition the Graduate College for permission to elect graduate courses for undergraduate credit. In either case, the student should have a 4.0 average or higher on courses taken beyond the sophomore level. Interested students should first consult the College of Liberal Arts and Sciences.

Fields of Concentration

A change in the concept of a student's in-depth study of an academic discipline within the curriculum in sciences and letters was approved by the faculty of the College of Liberal Arts and Sciences in the spring of 1972. In place of the requirements in a major subject and minor subject(s), the faculty approved the concept of a field of concentration, including both core courses in the subject itself and cognate courses in supporting subjects. The intent in adopting the concept of a field of concentration was twofold: (1) to provide a vehicle through which interdisciplinary studies could more easily be effected than is possible with departmentally oriented majors and minors, and (2) to insure that the related work (other than core courses) is an integral part of the focus of a student's program.

A change of such magnitude, affecting graduation requirements for students in every department of the college, obviously has required considerable time to implement. For this reason, the requirements for fields of concentration apply to those students who matriculated at a college in August 1973 or later. Students who matriculated prior to August 1973 may complete the requirements for a major and minor, or may instead elect to follow the requirements for a field of concentration.

A field of concentration will normally consist of 40 to 50 hours of course work designated by a department and approved by the faculty of the college. Of these hours approximately 12 to 20 hours will consist of cognate course work. Ordinarily, at least one-half of the course work for the field of concentration should be chosen from courses numbered 200 or above.

Students in the curriculum in sciences and letters should select the field of concentration no later than the end of the fourth semester. The introduction of fields of concentration has prompted many academic departments to provide more flexibility to their students in the selection of courses within the field. Many departments allow a student to elect some courses with the approval of an academic adviser. Most students will therefore have to consult with an adviser, and submit a list of adviser-approved courses prior to the beginning of their sixth semester. Note that this procedure is an exception to the general college policy that a student beyond freshman level may act as his or her own adviser.

The following general regulations apply to students pursuing a field of concentration in the sciences and letters curriculum:

- In order to graduate, a student shall earn at least a 3.0 average in all courses which are included in the field of concentration average and which are taken

on this campus, and at least a 3.0 average in all courses which are included in the field of concentration average and which are taken here and elsewhere. Consult the department or the college office for a list of the courses which are included in the field of concentration average for a given concentration.

- A student may not use any course taken under the credit-no credit option to satisfy the minimum requirements of the field of concentration. The phrase "minimum requirements" refers to cognate work as well as core courses.
- A transfer student shall normally complete on this campus at least 12 semester hours of advanced-level core course work (course work within the department) in the field of concentration.

SCIENCES AND LETTERS CONCENTRATIONS

Actuarial Science

This concentration is sponsored by the Department of Mathematics. See page 390.

American Civilization

This program is now part of the humanities field of concentration. See page 376.

Anthropology

Anthropology, which views human behavior and society (both past and present) in a worldwide cross-cultural perspective, combines scientific and humanistic interests in a modern social science framework. It consists of biological anthropology (human genetics and evolution and the zoological order of Primates), archaeology (the prehistory of cultures and the origins and growth of human technology), socio-cultural anthropology (the comparative study of social structures and institutions from simple primitive to complex urban settings), and anthropological linguistics (the comparative study of languages and communications). Although they should strive for topical and geographic balance, undergraduates may specialize in one of these four branches, and they may also study some world culture area intensively through an area studies program. Anthropology is an appropriate field of concentration for those seeking a general liberal education, for those preparing for professional study and careers in law, medicine, or commerce and for those planning further graduate study in anthropology. Professional anthropologists work as research scientists and teachers in museums, universities, and archaeological surveys or as staff members in government agencies, social service programs, and business firms where international understanding or human and social concerns are important.

A total of 40 hours including 28 hours within anthropology and 12 cognate hours is required. The hours in anthropology must include either Anth. 110 or the 102-103 sequence, but not both. At least 12 hours in anthropology and at least 6 of the cognate hours must be in advanced courses (200-level or above). Students are strongly urged to take Anth. 220, 230, 240, and 270. A balance among courses in the sub-disciplines (archaeology, biological anthropology, cultural and social anthropology, and linguistics) is highly recommended. Students shall take all of their cognate hours either within the School of Humanities, the School of Life Sciences, or the School of Social Sciences or within the Departments of Economics, Geology, Mathematics, or Psychology. All students should discuss their selection of anthropology and cognate courses with a departmental adviser. Modifications of these requirements can be worked out between the student and adviser and, with the approval of the head of the department, will be submitted to the college office to establish individual requirements for a field of concentration in anthropology.

Departmental Distinction: A grade-point average of 4.6 (A=5.0) in a minimum of 32 hours of anthropology courses, which must include at least 4 hours of Anth. 291 and/or 293, and a senior honor thesis (or equivalent project) written for Anth. 293, are required for graduation with some degree of departmental distinction. Application is made when the thesis is submitted to the departmental Honors Board by the faculty member who supervised the student in Anth. 293; application must be made at least one month before the date of graduation. The Honors Board will award Distinction or High Distinction (or deny Distinction) on the basis of the quality of the honors thesis and grade-point averages. Students earning High Distinction may appear before the Honors Board for an oral examination that will determine whether they qualify for Highest Distinction. Students who do not qualify academically, but who feel that they are worthy of departmental distinction on some other grounds, may, with the approval of a faculty sponsor, petition the head of the department for special consideration by the Honors Board.

Art History

Students who wish to take a considerable number of studio courses as part of their concentration should enroll in the history of art option offered by the Department of Art and Design within the College of Fine and Applied Arts.

Like the other humanities, history of art as an undergraduate area of concentration offers an enrichment of and a preparation for life, rather than training for a specific occupation. The concentrator who goes on to graduate work can look forward primarily to becoming a teacher of the subject or a member of the staff of a museum or to employment in commercial art galleries.

The concentrator may elect to obtain either a comprehensive knowledge of the field or more intensive training in one of the eight areas which follow: African, Oceanic and Pre-Columbian; Ancient (ancient Near East, Egypt, Greece, and Rome); Medieval; Renaissance; Baroque; Modern; Oriental (China, India, Japan, and related cultures); or American. Architecture is considered to be an integral part of the visual arts for the purposes of concentration in history of art. In order to assure that flexibility within the area of concentration may not unintentionally lead to dissipation of effort, close contact between the student and adviser is considered essential.

Requirements: Art 111 and 112, and in addition at least 24 hours of advanced work in history of art, including not less than one course in four of the eight areas listed above. Courses in history of architecture, excluding Arch. 210, may be used with the approval of the adviser for as many as 12 advanced hours. At least 15 hours of advanced work must be selected with the approval of the adviser from among cognate courses listed under the different areas. German or French is strongly recommended to satisfy the requirement in foreign language. Where highly significant factors suggest the taking of courses other than those recommended, the adviser may approve such substitution.

Comprehensive Option: Some advanced work should be taken in as many of the different areas as possible. Among cognates, at least 3 hours must be in history or humanities. Cognate courses: Anth. 260, 316, 372; Comm. 307, 308, 319; Dance 340; Hist. 323, 324; Phil. 230, 323, 324, 332, 361; Relst. 230, 362; Music 213, 214, 316; Sp. Com. 307; Engl. 273, 274, 275, 364, 365, 367, 375, 382, 387; Rhet. 227; U.P. 351.

Specialization Options: It is assumed that as many courses as possible will be taken in the student's special area of interest in history of art and history of architecture. Hence, only the recommended cognate courses are listed. Where there may be but few specialized courses offered in cognate fields, appropriate courses of wider spread included under the comprehensive program may be substituted in consultation with an adviser.

1. African, Oceanic, and Pre-Columbian.
Anth. 220, 222, 315, 316, 333, 348, 349, 350, 358, 361, 363, 367, 372, 375, 376, 381; Hist. 215, 216, 386; Ling. 320; Music 316, 317; Phil. 230; Sp. Com. 387.
2. Ancient.
Cl. Civ. 201, 202, 221, 222, 230, 331, 332, 390, 391; Grk. 201, 202, 301, 302, 371, 391; Hist. 381-384; Lat. 201-202, 391; Phil. 303, 309, 310.
3. Medieval.
Cl. Civ. 347; C. Lit. 313; Engl. 202, 311; Fr. 335; Ger. 311; Grk. 371; Hist. 203, 204, 304, 332, 347; Ital. 222, 311, 312, 313; Lat. 361; Music 310; Phil. 304; Relst. 201, 202, 340, 371; Span. 309.
4. Renaissance.
Cl. Civ. 201, 202, 221, 222, 331, 332, 390, 391; Engl. 204, 315-319, 321; Fr. 220, 335; Grk. 371; Hist. 305, 306, 315, 320, 323, 333, 339; Ital. 222; Lat. 201-202; Music 311; Phil. 317; Relst. 306, 371.
5. Baroque.
Cl. Civ. 201, 202, 221, 222, 331, 332, 390, 391; Dance 340; Engl. 204, 206, 274, 315-319, 321, 323, 326-329, 382; Fr. 223-228, 255, 335, 336; Hist. 306, 309, 315, 321, 323, 325, 329, 333, 334; Grk. 371; Ital. 221; Lat. 201-202; Music 312, 313; Phil. 306 (or 307, 308), 312; Port. 221; Relst. 306, 371; Span. 240, 311, 314.
6. Modern (nineteenth and twentieth centuries).
Comm. 217, 220, 251; C. Lit. 327; Dance, 341; Engl. 207, 240-248, 255, 256, 259, 260, 273, 274, 275, 331, 334, 335, 341, 342, 343, 346, 347, 350, 351, 362, 366, 383; Fr. 230, 231, 233, 234, 256, 336, 355, 356; Ger. 330-335; Ital. 321, 322; Hist. 211, 212, 310-314, 316, 322, 324, 326-328, 330, 335, 336, 340, 341, 342; Music 314, 315; Phil. 311, 313, 316, 318, 340, 341, 345, 363; Relst. 369; Russ. 315, 317, 324, 335, 337; Slav. 319; Scan. 362; Soc. 221, 251; Span. 241, 305-307; Sp. Com. 207, 213, 307, 308, 319.
7. Oriental.
Anth. 315, 382, 383, 384; As. St. 303; Chin. 207-210, 305-308, 311, 312; Hist. 387, 390, 391, 392, 394, 395, 396; Japan. 205, 206, 310; Music 317; Phil. 369; Relst. 328, 387; Sansk. 309; Soc. 328. Students who have decided to make the history of oriental art their major study in undergraduate and graduate work would be well advised to satisfy the language requirement with Chinese or Japanese instead of a modern European language.
8. American.
Dance 341; Engl. 249, 250, 255, 256, 259, 260, 346, 347, 350, 351, 362, 368; Hist. 260, 261, 262, 271, 350-364, 367, 371-373; Music 334, 335; Phil. 313; Pol. S. 317, 326, 351, 397; Sp. Com. 350; U.P. 351.

Departmental Distinction: 1. For admission to the program for departmental distinction in art history, the student will be expected to have achieved a cumulative grade-point average of at least 4.25.

2. The student who desires to enter the program should discuss the matter with the honors adviser before or during the first semester of the junior year.

3. Members of the program will be expected to maintain a grade-point average of at least 4.5 in all courses in art history, and to take, in addition to the minimum number of hours required for concentration, a course in independent research (Art 200) of at least 4 semester hours.

4. Any recommendation for the degree with Distinction, High Distinction, or Highest Distinction will be based on the quality of the work done in the course in independent research and the grade-point average in courses in art history.

5. The report produced in the course in independent research will be due no later than four weeks before the end of the semester.

Both the supervisor of the independent research and another member of the

faculty in art history will read the report in order to ascertain the level of achievement.

Asian Studies

This program is sponsored by the Center for Asian Studies. The program of studies permits either a single geographical regional focus (East Asia—China and/or Japan; South Asia; Southeast Asia; the Middle East) in an integrated language and area, or general area program; or a language-literature-linguistics specialization; or a program of cross-cultural studies. While individual programs of study must be approved by the director of the center or by an adviser designated by him, the following general information and statements of requirements will assist students in planning programs of study.

The area of concentration in Asian studies consists of a minimum of 40 semester hours of course work selected from three of four discipline distribution categories: humanities, social sciences, language-literature-linguistics, related courses and fields. A complete list of approved courses is available from the center. Students must designate one of these categories as a primary concentration with a minimum of 20 hours of course work, a secondary category with a minimum of 12 hours of course work, and a tertiary category with a minimum of 8 hours of course work. The category "related courses and fields" may not be offered as a primary concentration. Courses offered within each category should be distributed over several disciplines. Students selecting language-literature-linguistics as their primary discipline-distribution may not include the first-year level of their language of specialization in the 20-hour minimum.

Departmental Distinction: The Center for Asian Studies does not currently have a program for departmental distinction. A program, however, is currently being developed, and interested students should contact the center for further details.

Astronomy

The field of concentration in astronomy demands both a broad and in-depth exploration into astronomy and allied disciplines, rather than a focusing on one relatively limited area of the subject. Specific programs of study for individual students must be designed and periodically updated through mutual discussions between students and their academic advisers. Students should note sequential prerequisites for courses.

Requirements: The basic concentration consists of a minimum of 46 hours distributed as follows:

1. Astr. 101 and 102, or 210;
2. Math. 120, 130 or 131, and 240 or 241;
3. Phys. 106, 107, and 108;
4. A minimum of 18 hours in 300-level astronomy and physics courses, of which at least 12 hours must be in astronomy courses.

Additional courses recommended for concentrators, especially those intending to pursue graduate study in astronomy, include: Math. 343, 345; Phys. 321 and 322, 341 and 342, 360, 362, and 386 and 387.

Departmental Distinction: A student concentrating in astronomy may earn distinction by attaining a minimum grade-point average of 4.25 in 300-level astronomy and physics courses and by completing a thesis project under the supervision of a faculty member. Credit up to 4 hours may be earned by enrollment in Astr. 290 during the thesis work. The level of distinction (Distinction, High Distinction, Highest Distinction) is based in part on the quality of the astronomy and physics course work, and in part on the quality of the thesis as determined by a faculty committee.

Biology

This program is now a part of the life sciences field of concentration. See page 381.

Botany

This program is now a part of the life sciences field of concentration. See page 381.

Chemical Sciences

(Including Biochemistry and Chemistry)

BIOCHEMISTRY

Biochemistry is an advanced interdisciplinary science requiring training in chemistry and life sciences. Therefore, students planning to concentrate in biochemistry take an initial course program similar to the chemistry curriculum or honors biology sequence. Such beginning training assures adequate prerequisites to meet the advanced course work requirements of biochemistry. Important prerequisites include the basic courses in mathematics (through calculus) and physics (through Physcs. 102, or preferably 108).

Requirements: Bioch. 352, 353, and 355; organic chemistry through Chem. 336; and one year of physical chemistry (Chem. 342 and 344, or alternately, Chem. 340 and 346). Mathematics through Math. 240, 241, or 245; physics through Physcs. 102 or 108; and two 300-level courses (totaling 6 hours) in the life sciences.

Departmental Distinction: Students in biochemistry registered in Bioch. 292 — Senior Thesis become candidates for graduation with departmental distinction. The level of distinction is determined by the quality of research as evaluated by the research faculty members.

CHEMISTRY

Students may specialize in chemistry by following either (1) the professional chemistry curriculum (leading to the Bachelor of Science in Chemistry) or (2) chemistry concentration in the sciences and letters curriculum (leading to the Bachelor of Science — or Arts — in Sciences and Letters).

Chemistry Curriculum: The chemistry curriculum is a rigorous specialized program intended for those planning careers in chemistry. It meets the professional standards prescribed by the American Chemical Society. The requirements are detailed on page 405.

Chemistry Concentration: In contrast, although chemistry concentration in the sciences and letters curriculum is used by some students planning chemistry careers, it is more often employed by students wishing to obtain a chemistry background for use in related fields. Some students who change their fields to chemistry after their freshman year will find the chemistry concentration requirements most compatible with their preparation.

Chemistry concentration requires not less than 20 hours in chemistry and biochemistry, excluding Chem. 100 through 110 and Chem. 199. There must be included Chem. 340 or 342 and two other 300-level courses, at least one of them outside physical chemistry. Mathematics through Math. 240, 241, or 245, and physics through Physcs. 102 or 108 must also be completed.

Sequence of Courses: Students who desire thorough training in the fundamentals of chemistry should select the following courses: Basic courses — Chem. 107 and 109, 108 and 110, 136 and 181, 336, 342 and 383, 344 and 385, 315; specialized courses — advanced offerings selected from biochemistry; chemical engineering;

and analytical, inorganic, organic, and physical chemistry. Students whose Chemistry Placement Test scores do not qualify them for registration in Chem. 107 may substitute the alternative sequence Chem. 101, 102, and 122¹ for Chem. 107-110. Students majoring in other disciplines having limited chemistry requirements should seek advice from their own departmental advisers.

Departmental Distinction: Chemistry students become candidates for departmental distinction by registering in a senior thesis course (Chem. 292 or Bioch. 292). The level of distinction conferred is determined by the quality of the senior thesis work with the following restrictions: Only students with overall grade-point averages of at least 4.0, 4.25, or 4.5 are considered for Distinction, High Distinction, or Highest Distinction, respectively.

Cooperative Education Program: Students accepted into the Chemistry Cooperative Education Program spend alternating semesters in paid work-study positions in industry or government. Transcript recognition is given as well as a certificate of participation at graduation. Additional information and applications are available in the School of Chemical Sciences Placement and Advising Office, 107 Noyes Laboratory.

Classics

Students concentrating in the classics must choose one of the options in classical civilization, Greek, or Latin, and take an additional 24 hours of cognate courses in the manner described below.

Classical Civilization Option: Twenty hours of classical civilization courses, excluding Cl. Civ. 100, but including Cl. Civ. 110, 112, 201, 202 and 6 hours of 300-level courses.

Note: Although a reading knowledge of Greek or Latin is not a prerequisite for the Classical Civilization Option, students selecting this option are strongly advised to satisfy the college foreign language requirements with one of these languages. Students wishing to pursue an academic career in classical studies are advised that a good reading knowledge of French, German, and Italian is necessary, and a strong background in history, linguistics, philosophy, literary theory, and criticism is highly desirable. Students interested in classical archaeology should also take appropriate courses in anthropology, art, and history as well as in the Greek and Latin languages.

Greek Option: Twenty-four hours of Greek including 6 hours of 300-level courses. Credit is not accepted for both Grk. 101-102 and 111-112. No more than 12 hours of credit in New Testament Greek will be accepted from other institutions.

Latin Option: Twenty-four hours of Latin, excluding Lat. 101, 102, and 280, and including 6 hours of 300-level courses.

Cognate Courses: Twenty-four hours distributed as follows:

1. Six hours from Hist. 181, 182, 381, 382, 383, 384.
2. Six hours from Arch. 211, 310; Art 217, 218, 301, 303, 304, 305; Cl. Civ. 231, 232, 343, 344, 391.
3. Twelve hours from one or two of the following groups of courses with at least 6 hours in each group chosen.
 - a. Classical civilization (not open to students electing the Classical Civilization Option) and classical archaeology;
 - b. Any 200- and 300-level Greek courses (not open to students electing the Greek Option);

¹ Students electing the Chem. 101, 102, 122 sequence may include the credit for Chem. 122 toward the 20-hour field of concentration requirement.

- c. Any 200- and 300-level Latin courses (not open to students electing the Latin Option);
- d. Phil. 303, 309, 310; Pol. S. 393;
- e. Relst. 201, 202, 240, 241, 340;
- f. Appropriate courses in comparative literature, English, history, humanities, or a modern foreign language;
- g. Linguistics.

Departmental Distinction: The Department of the Classics encourages qualified undergraduate students to enroll for its honors programs. Students with at least a 4.5 average in courses relevant to classical studies should consult with a member of the departmental honors committee before or at the beginning of the semester in which they plan to start honors work.

Departmental honors are awarded with Distinction, High Distinction, or Highest Distinction after the work done in the course selected has been evaluated by the honors committee.

A student who receives the consent of the honors committee to proceed to honors work must take four hours, usually over two semesters, in *either* a 292 senior thesis *or* a 298 senior survey course. The student should choose and obtain the consent of an adviser in accordance with his or her own interests and field of study. The adviser need not be a member of the honors committee.

When the grade for 292 or 298 has been assigned, the honors committee will assess the student's total record in classical courses to decide the level of departmental distinction. Normally distinction will not be awarded unless a grade of A has been assigned for the honors course taken.

Comparative Literature

Students who elect comparative literature as a field of concentration must complete the requirements of the College of Liberal Arts and Sciences, as well as the general education requirements of the University. In addition, they must complete 45 semester hours in the courses indicated below, at least 15 hours being in courses numbered 300 or above. Besides knowing English, students must have sufficient linguistic skills in at least one foreign language to participate in 200- and 300-level literature courses offered by the various foreign language and literature departments.

As soon as students are contemplating choosing comparative literature as a field of concentration, they should consult the faculty adviser, who will assist them in selecting appropriate courses which will be especially helpful as preparation for the advanced comparative training beginning with the junior year. Courses in classical civilization and in literature (particularly courses dealing with works from several countries) are especially recommended to be taken at relatively early stages of study. An ample selection of such courses on the 100 and 200 levels exists in the various literature departments.

The distribution of course work allows for considerable flexibility. It must include:

1. At least 12 hours in comparative literature courses, including C. Lit. 201 or C. Lit. 202, or both. The other 9 hours should be selected from different types of courses: 301-302, 351, 361, 371, 381, 391.
2. At least 15 hours in one literature in the original (ancient or modern, including Far Eastern and African), 12 of which are at the 200 level or above, studied in depth and in its historical development. (Normally this is the primary literature of the student's educational background.)
3. At least 9 hours at the 200 level or above in a second literature in the original. With the assistance of the adviser, these courses should be carefully chosen so as to correlate meaningfully with the student's primary literature. Students may center their interest on cultural periods such as Medieval, Renaissance, Neo-

Classical and Enlightenment, or Modern (nineteenth and twentieth centuries) or on genres, relations, or critical theory.¹

4. At least 9 hours in any single national literature or several, including comparative literature, or in other humanistic fields, e.g., history, philosophy, speech, art, music, psychology, sociology, theatre, anthropology, and Asian studies. Since some of the courses in these subjects are more suitable than others to balance a student's individual program of concentration in comparative literature, it is essential that students abide by the guidelines given to them by their adviser.

Departmental Distinction: Students interested in departmental distinction should consult their program adviser for information on required grade-point average and opportunities for special projects under C. Lit. 293 — Senior Thesis and Honors.

Computer Science

MATHEMATICS AND COMPUTER SCIENCE

This field of concentration is sponsored by the Departments of Mathematics and Computer Science. It is designed to prepare students for professional or graduate work in mathematics and computer science. See also the curricula in computer engineering and computer science in the College of Engineering.

Requirements:

1. Required courses:
 - a. Calculus through Math. 240 or Math. 241 or Math. 245.
 - b. Math. 347, C.S. 121, C.S. 221, C.S./Math. 257.
2. At least one course from each of the following five lists:
 - a. Math. 361, Math. 363.
 - b. C.S./Math. 313, Math. 317, Math. 319.
 - c. Math. 315, Math. 318, C.S./Math. 383.
 - d. Math. 341, Math. 345.
 - e. Math. 314, C.S./Math. 375, C.S./Math. 391.
3. At least three courses from the following list:

C.S. 264, C.S. 273, C.S. 281, C.S. 321, C.S. 323, C.S. 325, C.S. 326, C.S./Math. 358, C.S./Math. 359, C.S./Math. 373.

Notes:

- Students who transfer into this field of concentration after having taken a 100-level computer science course other than C.S. 121 may, with the consent of the adviser, substitute this course for C.S. 121. All other students in this field of concentration must take C.S. 121.
- A student taking a cross-listed course in this field of concentration may designate it as either mathematics or computer science.
- Assuming no advance placement in calculus, and assuming that C.S. 121 is taken, this field of concentration totals at least 50 hours.

Departmental Distinction: Students interested in attaining departmental distinction in mathematics and computer science should consult with the honors adviser for program requirements early in their junior year.

¹ If one of the literatures studied is English, students who plan to continue in a graduate program in comparative literature will be expected to acquire a reading knowledge of a second foreign language (i.e., one foreign language for the B.A., two foreign languages for the M.A., three foreign languages for the Ph.D.).

Economics

Economics is the study of the problems caused by scarcity and how societies deal with these problems. While economics is a social science, it also shares common interests with the business-oriented disciplines and increasingly uses the quantitative approach relying on mathematics and statistics as important tools. The program outlined below attempts to combine a minimum of required courses with maximum flexibility.

Requirements: The field of concentration in economics requires a minimum of 46 hours distributed as follows:

1. At least 27 hours of economics courses, including
 - a. Econ. 101.
 - b. Econ. 171, or 172 and 173; 172 and 173 are strongly recommended.
 - c. Econ. 300 and 301.
 - d. Additional economics courses excluding 199, 294, 295, and 299.
2. Math. 125 and 134; Math. 244 and Math. 315 (special section) are recommended in addition.

The following alternative sequences are suggested for students with strong backgrounds in mathematics and for students who perceive a continuing need for training in mathematics.

- a. Math. 120 and 130; Math. 240 and 315 are recommended in addition.
 - b. Math. 120 and 131; Math. 241 and 315 are recommended in addition.
 - c. Math. 135 and 245; Math. 315 is recommended in addition.
3. At least 18 hours of cognate courses. Students must complete their field of concentration by selecting one of the options listed below or by *proposing alternative courses appropriate for their educational or career objectives*. Other options and in some cases specific courses are suggested in the *Economics Bulletin* available in the office of undergraduate studies of the department. All programs must be approved by the director of undergraduate studies of the department, 226 David Kinley Hall.
 - a. Social science and humanities.
18 hours of cognate courses from the following:
advanced language (6 hours only), anthropology, geography, history, political science, and sociology, with at least 12 hours in one discipline.
 - b. Business economics.
18 hours of cognate courses including C.S. 105 and Accy. 201 (or equivalent) selected from any combination of courses in accountancy, business administration, and finance, with no more than 12 hours in any one field.
 - c. Prelaw.
18 hours of cognate courses from history, philosophy, political science, speech communication, and urban planning. (Consult the *Economics Bulletin* for suggestions for specific courses.)
 - d. Government and the economy.
Econ. 214, 389, and 315; 18 hours of cognate courses from business administration, political science, psychology, and sociology. (Consult the *Economics Bulletin* for suggested courses.)
 - e. Transportation economics.
Econ. 214, 384, and 386; 18 hours of cognate courses from geography, urban planning, and engineering. (Consult the *Economics Bulletin* for suggested courses.)
 - f. Quantitative economics.
Econ. 272, 374, 375; Math. 244 (or equivalent), 315; 18 hours of cognate courses from business administration, computer science, mathematics, and philosophy.

g. International economics.

Econ. 328, 329; 18 hours of cognate courses from business administration, communications, geography, history, and political science, with 12 hours in one discipline. (Consult the *Economics Bulletin* for suggested courses.)

h. Urban economics.

Econ. 360, 361; 18 hours of cognate courses from finance, geography, and urban planning. (Consult the *Economics Bulletin* for suggested courses.)

Departmental Distinction: The requirements for graduation with distinction in economics are as follows:

1. General grade-point average of 4.25 with 4.5 in economics courses.
2. Registration in department office at beginning of senior year or registration in Econ. 294-295 — Senior Research.
3. Completion of an independent research project under the supervision of a department faculty member. This is usually done by enrollment in 294-295 but is sometimes done by taking 299. Project is to be completed by end of graduating semester.
4. Recommendation by faculty research adviser for Distinction or Highest Distinction on the basis of independent research project. Highest Distinction is subject to the approval of the departmental honors committee.

English

ENGLISH

The study of English and American literature is the study of traditions, masterpieces, and critical theory and practice. Students who concentrate in English have many options in planning a field of study, but the basic program is designed to accommodate students who seek to broaden their familiarity with our literature, to intensify their language skills for personal and professional reasons, and to learn more about literature's relationship to the other arts, history, philosophy, psychology, and the modern languages.

Requirements: The basic concentration consists of 50 hours, including at least 30 hours of English courses and 20 hours of approved cognate courses.

1. English courses.

A normal prerequisite to advanced courses in the concentration consists of Engl. 101 and Engl. 102 or 103 or 215. The concentration shall include a course in Shakespeare at the 300 level and 27 additional hours in the English department courses, including at least 9 hours at the 300 level (excluding the course in Shakespeare) and no more than 9 hours at the 100 level. The concentration must also include at least 18 hours at the 200 and 300 levels from the following groups: 6 hours in Group I: British literature to 1800; and 3 hours from each of the following groups: Group II: British literature after 1800; Group III: American literature; Group IV: theme, mode, genre, and interdisciplinary courses; and Group V: a major author other than Shakespeare. No single course may be used to fulfill the requirement of two groups.

Group I: Engl. 202, 204, 206, 209, 315, 316, 321, 326, 327, 328, 329.

Group II: Engl. 207, 210, 240, 247, 331, 333, 334, 335, 341, 342.

Group III: Engl. 249, 250, 255, 256, 259, 260, 346, 347, 350, 351, 368.

Group IV: Engl. 241, 242, 243, 244, 245, 246, 247, 248, 249, 273, 274, 275, 277, 280, 281, 304, 361, 362, 364, 365, 366, 367, 368, 375, 382, 383, 387.

Group V: Engl. 311, 317, 323, 343, 355.

Six hours in rhetoric courses, chosen from Rhet. 143, 144, 145, 202, 205, 227, 263, 305, 306, and 355, may be included in the concentration.

Six hours in independent study courses (Engl. 199 and 290) may be included in the concentration.

2. Cognate courses.

English concentrators have three options: (1) an approved sequence of 20 hours in one field other than rhetoric; (2) an approved sequence of 20 hours in two fields, with at least 8 hours in the lesser of the two; (3) a topical cognate, comprising courses from three or more fields and combined into an intellectually or professionally coherent study. English concentrators often arrange cognates in history, political science, economics, philosophy, art, comparative literature, psychology, and cinema studies. Possibilities for topical cognates include:

- a. Premedical: chemistry, biology, biochemistry, and physics courses from the approved premedical sequence.
- b. Precommerce: economics, finance, accountancy, and business administration courses selected in consultation with an academic adviser and with a clear professional objective in mind.
- c. Medieval studies: courses such as Hist. 173, 204, 304, 307; Relst. 121; Arch. 311, 312; Art 111, 307, 308, 309; Ital. 309, 333.
- d. Asian studies: courses chosen from Chin. 201-204, 207-208, Japan. 201-204, 205-206, 301-306, as well as from Asian studies.
- e. Cinema studies: courses such as Art 180, 242, 280, 388; Fr. 288; Human. 295; Scan. 390; Sp. Com. 207, 307.

3. Special recommendations.

- a. Students interested in the departmental honors program should consult the English Advising Office.
- b. Students interested in the English teacher-training program must consult with the teacher-training adviser, preferably by the middle of the sophomore year. Requirements for the teacher-training program differ from requirements for the regular field of concentration.
- c. Students planning to enter graduate school should elect as many 300-level courses as possible, including a course in either Chaucer or Milton and a course in the history or structure of the English language. Further, these students should consult the specific requirements of the graduate schools they plan to enter.

Departmental Distinction: The Department of English offers three courses (Engl. 296, 297, and 298) which are normally restricted to concentrators with a grade-point average of 4.25 (A = 5.0). In addition it offers two honors tutorials (Engl. 291 and 293). A student may earn consideration for the rank of Distinction in English in the following ways: (1) 9 hours of honors seminars plus Engl. 291; (2) 9 hours of honors seminars plus Engl. 293; (3) 6 hours of honors seminars plus Engl. 291 and 293. Honors courses may be used to fulfill the hour and group requirements for the concentration.

In order to be considered for the further rank of High Distinction in English the student must write a thesis. Students should not enroll in Engl. 293 unless they have already taken enough honors work to enable them to complete the program. The specific level of distinction is determined by the honors committee, the instructors of the seminars, the student's tutor, and such other faculty members as may be asked to read the honors thesis. If, in the opinion of this group, a candidate fails to earn any kind of distinction, he or she will still receive credit for the honors courses he or she has taken. This group may also award a prize for the outstanding honors essay written in an academic year.

An English education major whose schedule is too crowded to permit him or her to take the 12 hours required may, with the specific approval of the English education adviser, earn consideration for distinction by completing two seminars plus Engl. 293. English education majors who are in doubt about their programs should consult with their adviser.

RHETORIC

The field of concentration in rhetoric consists of a minimum of 44 hours distributed as follows:

1. At least one course in expository writing selected from Rhet. 143 or 227.
2. Nine additional hours of rhetoric selected from Rhet. 143, 144, 145, 205, 227, 305, 306, 355.
3. One course in Shakespeare (Engl. 318 or 319).
4. Nine additional hours of English selected from 200- and 300-level courses.
5. Journ. 326 may be counted toward the concentration with an adviser's permission.
6. An additional 20 hours of cognate course work selected in consultation with an adviser. Cognate courses should either all be in one discipline or be related to each other by topic, time period, or area.

Departmental Distinction: A student concentrating in rhetoric and composition who meets the University grade-point requirement (4.25 or higher [A=5.0]) may earn distinction by completing 9 hours of honors work. This credit must involve a significant writing project in Rhet. 355 (Creative Writing Tutorial) and any two of the following three honors courses: Engl. 296, 297, 298. The level of distinction (Distinction, High Distinction) is determined by the honors committee, the instructors of the seminars, the student's tutor, and two other faculty members who will be asked to evaluate the 355 writing project. If, in the opinion of this group, a candidate has not earned distinction, he or she may still receive credit for the honors courses he or she has taken. Honors courses may be used to satisfy appropriate requirements for the concentration.

Entomology

This program is now a part of the life sciences field of concentration. See page 381.

Finance

The field of concentration in finance requires at least 24 hours in finance courses and 21 hours of allied course work. The cognate work may include prerequisite courses for finance courses.

Finance courses may be selected from any combination of the subfields listed below. Work in economic principles is directly or indirectly a prerequisite for all finance courses, and Econ. 101 should be taken in the sophomore year. Students who expect to elect Fin. 254 or any other course for which Fin. 254 is a prerequisite should take its prerequisites, Accy. 105 or 201 and Econ. 172, in the sophomore year. Students are urged to take Math. 134 and C.S. 105. Although these courses are not required, they do provide analytical tools which are useful in the field of finance.

The cognate work may be taken in any one or two of the following areas related to various aspects of finance: anthropology, economics, geography, history, philosophy, political science, psychology, sociology, and mathematics. In addition, students concentrating in real estate and urban economics may take urban and regional planning, architecture, and civil engineering courses suggested below as listings in this field. If two areas are chosen, at least 9 hours must be taken in each one. In exceptional cases, courses in other areas may be taken in satisfaction of this requirement if the adviser is satisfied that they are pertinent to particular subfields.

The selection of courses, both in finance and in cognate work, should be made with the approval of an adviser to insure that the program is properly adapted to the student's educational interests. The following areas and cognate courses are suggested:

1. Business finance.
Fin.: 254, 150, 280, 281, 235, and 258 or 252 plus two other finance courses.
Cognate: Accy. 208, 266, 274; Econ. 173, 300; C.S. 105; Math. 125; B. Adm. 202, 374.
2. Insurance.
Fin.: 254, 235, 260, 262 and either 360-363, or 370-371 plus two other finance courses.
Cognate: Accy. 274; B. Adm. 200, 202, 261; Econ. 173, 288, 300 or 301, 315.
3. Investments.
Fin.: 254, 150, 235, 237, 280 or 281, 252 or 258 plus two other finance courses.
Cognate: Accy. 208, 266, 274; B. Adm. 202; C.S. 105; Econ. 173, 300, 301; Math. 125.
4. Money and banking.
Fin.: 254, 150, 258, 252 plus four other finance courses.
Cognate: Accy. 208, 274; C.S. 105; Econ. 173, 214, 288, 301, 307, 328, 329.
5. Real estate and urban economics.
Fin.: 254, 150, 364, 365, 366, 367 plus two other finance courses.
Cognate: Accy. 274, Arch. 379; C.E. 216; Econ. 300, 360; Geog. 366, 383.
6. Risk management.
Fin.: 254, 260, 262, 280 or 281, 360, 370, 371 plus one other finance course.
Cognate: Accy. 266; B. Adm. 200, 210, 261, 321, 374; C.S. 105; Econ. 173, 300 or 301; I.E. 335, 357, 358.

A suggested cognate sequence would involve 9 hours in economics and 12 hours in a related field.

Departmental Distinction: Students interested in attaining departmental distinction in finance should consult with the honors adviser for program requirements.

French

The field of concentration requires 45 to 48 hours distributed as follows.

Requirements: 30 to 35 hours in French courses beyond the prerequisites Fr. 201, 202, 211, 215 or their equivalent, excluding all 100-level courses and Fr. 255, 256, 270, 280 and including courses as outlined in individual options below. (Note: Fr. 199 may be included if approved by the option adviser in the concentrator's individual option.) In three options (literature, language and linguistics, civilization) the student will take the section of Fr. 290 appropriate to that option (reading list discussed under the guidance of a tutor) in the senior year of undergraduate study. For Fr. 290 the student will normally repeat enrollment for 1 hour per semester for a total of 2 hours credit. The Fr. 290 requirement is not applicable to students in the commercial studies option.

Also required are 12 to 15 hours in courses chosen from other departments or programs. Students must consult with the option adviser in selecting these courses, especially those with prerequisites.

Option I: Literature:

1. Six courses in French literature of which at least two must be taken in French literature prior to 1800 and two in French literature from 1800 to the present.
2. Two courses in French civilization.
3. Two courses in French language and linguistics.
4. Fr. 290: I. Major Tutorial in Literature. Students must consult with option adviser.
5. Twelve to 15 hours in other departments. Students must consult with option adviser.

Option II: Language and Linguistics:

1. Six courses in French language and linguistics, including Fr. 212 and Fr. 316.
2. One course in each of the following:
 - a. French literature to 1800.
 - b. French literature from 1800 to the present.
 - c. French civilization.
3. One additional course in either French civilization, French film, French language, or French literature.
4. Fr. 290: II. Major Tutorial in Language and Linguistics.
5. Twelve to 15 hours in other departments. Students must consult with option adviser.

Option III: Civilization:

1. Five courses in French civilization.
2. One course in cinema as related to French civilization.
3. One course from each of the following:
 - a. French literature to 1800.
 - b. French literature from 1800 to the present.
4. Two courses in French language and linguistics.
5. Fr. 290: III. Major Tutorial in French Civilization. Students must consult with option adviser.
6. Twelve to 15 hours in other departments. Students must consult with option adviser.

Option IV: Commercial Studies:

1. Four courses in French civilization.
2. One course in cinema as related to French civilization *or* one course in any period of French literature.
3. Four courses in French language (Fr. 319 and 320 particularly recommended).
4. Fr. 285 and 286, *Le français des affaires*, I and II.
5. An approved core of at least 15 hours in business administration, finance, and/or economics in consultation with the appropriate adviser.
6. Students electing this option are encouraged to elect calculus (Math. 124 and 134) and economics (Econ. 101 and 172) in fulfillment of general LAS education requirements in the physical and social sciences.

Year Abroad Program: See page 347.

Departmental Distinction: Regulations concerning the conferring of departmental distinction are outlined as follows, but interested students *must* consult the honors adviser early in their undergraduate career.

In order to qualify for distinction, a student must have a 4.50 or better cumulative grade-point average. In addition to meeting the minimum requirements for the option chosen in the French field of concentration, a student who wants to graduate with distinction must complete two additional courses on the advanced level in French or in cognate areas, and must register in Fr. 292 and present an undergraduate honors thesis of at least twenty pages (double spaced) which shows clear evidence of original research. The thesis shall be read by two other faculty members besides the instructor of 292.

The following averages calculated on the work done in French at the 200 level and above will serve as a basis for distinction: 4.50, Distinction; 4.75, High Distinction; 5.0, Highest Distinction.

The honors adviser may at his or her discretion adjust the relationship between the G.P.A. and the thesis, e.g., a thesis of exceptional quality with a G.P.A. of 4.5 or 4.75 may qualify for Highest Distinction; or, on the other hand, a thesis which is only satisfactory, plus a G.P.A. of 5.0, would qualify only for Distinction. In such cases the honors adviser shall consult two other faculty members.

Geography

The core of courses includes 18 hours of geography. Twelve hours will be selected from introductory physical geography (Geog. 102-103) and human geography (Geog. 104-105) courses. Students must also select Geog. 271 — Spatial Analysis and Geog. 296, a 2-hour seminar on the scope and methods of geography.

Students must select one of the following seven options. All geography majors, regardless of specialization, are strongly advised to elect techniques courses as part of their program. Students normally select courses from Geog. 185, 272, 273, 290 (spatial programming and multivariate analysis), 370, 373, 377, 378.

Students who elect the general human and physical geography, urban and social geography, historical and regional studies, and economic geography options are encouraged to include Math. 124, 134 (Introductory Analysis for Social Scientists) as part of their undergraduate programs, either as electives or as fulfillment of the physical science general education requirement. The physical environment, natural resource evaluation, and spatial graphics and analysis options have specific mathematics requirements (see below).

OPTIONS

1. *General human and physical geography.*

Twelve hours of geography (6 hours of physical geography and 6 hours of human geography), in addition to the core courses, to be selected from all advanced (200-300 level) geography courses.

In addition to courses in geography, students must select at least 12 hours in consultation with the adviser from the following departments: agronomy; agricultural economics; anthropology; biology; botany; civil engineering; ecology; ethology, and evolution; forestry; geology; history; landscape architecture; political science; psychology; sociology; and urban and regional planning.

Total hours in concentration: 42.

2. *Urban and social geography.*

Twelve hours in addition to the core courses, to be selected from Geog. 290, 314, 325, 326, 327, 365, 366, 383, 384, 385, 386.

In addition to courses in geography, students should select at least 12 hours in consultation with the adviser, from the following departments: agricultural economics, anthropology, communications, economics, history, landscape architecture, political science, psychology, sociology, and urban and regional planning.

Total hours in concentration: 42.

3. *The physical environment (the earth's land, biota, and climate).*

Courses may be selected in geomorphologic, biographic, and climatologic processes. In addition to the core, 12 hours must be selected from advanced physical geography courses, of which one course must be from each of the following groups. Group 1 is Geog. 290 (vegetation geography), 303, 304, and 305, and Group 2 is composed of Geog. 312, 313, 315, 318, and 348.

Undergraduate majors in the field of concentration are required to select Math. 120, Phys. 101, and Chem. 101-102. These courses may be used as fulfillment of the general education physical science option.

In addition to the above courses, the student should include, in consultation with the adviser, 9 to 12 hours of courses in agronomy; atmospheric sciences; biology; botany; civil engineering; forestry; geology; and ecology, ethology, and evolution.

Total hours in concentration: 49-52.

4. *Historical and regional studies.*

Students in this option may concentrate in historical geography, historic preser-

vation, or the geography of some continental region. In addition to the core courses, students must complete 12 hours from Geog. 223, 290, 314, 323, 325, 326, 327, 331, 332, 342, 353, 355, 381, 382, 383.

Students specializing in the study of a foreign area should select an appropriate language to fulfill the foreign language requirement. In addition to courses in geography, students should select 12 to 15 hours, in consultation with the adviser, either from those courses recommended by the African, Latin American, Russian and East European, or West European area studies program, from the American Civilization option, or from the departments of architecture, history, landscape architecture, and urban and regional planning.

Total hours in concentration: 42-45.

5. *Natural resource evaluation.*

Fifteen to 17 hours of geography in addition to the core courses. Normally 9 hours will be selected from Geog. 214, 290 (vegetation), 303, 304, 305, 314, 361, 363, and 6 to 8 hours will be in geographic techniques [Geog. 370, 290 (multivariate methods), 377, 378].

The student must select Chem. 101-102 and 6 to 9 hours from civil engineering; biology; botany; and ethology, ecology, and evolution. In addition, students must complete Math. 124, 134, which may constitute their physical science general education sequence. Econ. 101 should also be included in the students' program.

Total hours in concentration: 47-52.

6. *Economic geography.*

Fifteen to 17 hours of geography in addition to the core courses. Normally 9 hours will be selected from Geog. 290, 314, 361, 362, 363, 366, and 383, and 6 to 8 hours will be in geographic techniques [Geog. 185, 290 (multivariate analysis), 370, 371, 373, 377, 378].

Supporting courses, totaling 12 to 15 hours, should be chosen in consultation with the adviser from the following departments: agricultural economics, civil engineering, economics, finance, political science, sociology, and urban and regional planning. Econ. 101 must be included in the student's program.

Total hours in concentration: 47-50.

7. *Spatial graphics and analysis.*

Fifteen hours of geography in addition to the core courses. Normally 9 to 12 hours in geographic techniques [Geog. 185, 290 (spatial programming and multivariate methods), 370, 373, 377, 378], with the remaining hours being selected from advanced geography courses].

Students selecting this option must complete Math. 112 and Math. 114, and, in addition, are strongly urged to select Math. 124, 134.

Supporting courses totaling 12 to 15 hours should be selected in consultation with the adviser from the following departments: art and design, civil engineering, communications, computer science, general engineering, landscape architecture, mathematics, and urban and regional planning.

Total hours in concentration: 50-53.

Departmental Distinction: All students concentrating in geography who have maintained a University grade-point average of 4.25 and who satisfactorily complete an independent project (Geog. 291) in their senior year will be eligible to graduate with distinction in geography. Students should consult their adviser about distinction requirements as soon as they enter the field of concentration, and no later than the end of their junior year. Distinction is awarded on three levels — Distinction, High Distinction, and Highest Distinction. The level of award is based on an assessment of the student's grade-point average in geography and on the quality of the independent project.

The grade-point averages in geography normally required for graduation with distinction are: Distinction, 4.25; High Distinction, 4.5; Highest Distinction, 4.75.

The independent study course (Geog. 291) satisfying distinction requirements will normally be a research project equivalent to 4 hours of credit which may be completed over one or two terms, including the summer session. The project will be reviewed by a committee of three faculty — the project adviser and two others selected by the student. Projects will be assessed as “superior,” “good,” or “satisfactory.”

The honors adviser will review the student's grade-point average in geography and the project committee's judgments and recommend to the department head the level of distinction to be awarded.

Geology

This field of concentration is designed for students who want a more flexible course of study than is provided by the curriculum in geology (08). The program is designed mainly for those wishing to obtain a reasonably liberal education and/or a background in geology for use in fields such as business, environmental science and technology, mineral economics, regional planning, journalism, law, sales, or library science. It will not prepare a student for graduate work in the geological sciences unless the student selects a plan of courses in background mathematics, chemistry, and physics fully comparable to that in the curriculum in geology.

Requirements: Prerequisites — Geol. 107, 108;¹ qualification for Math. 120 or 135 and for Chem. 101 or 107.

1. Geology — 20 hours including:

Geol. 233 or 332 (4)

Geol. 222 or 320 or 321 (4)

Geol. 215 (8)

An additional 300-level course (4)

2. Cognate course work — 31 hours including:

Math. 120 or 135 (5)

Chem. 101, or 107 and 109 (4 or 5)

Phycs. 101 or 106 (5 or 4)

Life science (6)

An additional 12 hours to be approved by a departmental adviser (12)

Departmental Distinction: The Department of Geology awards departmental distinction without designation of level. Departmental distinction will be recommended for students who (1) maintain a minimum grade-point average of 4.5 ($A = 5.0$) in all geology courses and 4.0 in all other science and mathematics courses, and (2) complete an honors thesis based on independent research including 4 hours credit in Geol. 293. A student who believes he or she is likely to qualify for departmental distinction should consult with the honors adviser during his or her sixth semester. The student then must seek a faculty member in the Department of Geology who will supervise the research project. A statement by the supervisor indicating his or her willingness to serve in this capacity and the topic of the research should be sent to the honors adviser by the start of the student's seventh semester. The thesis must be completed by the end of the student's final semester.

¹ Students planning to concentrate in geology should take Geol. 107-108; students who decide to concentrate in geology after taking Geol. 101 or 102 must take an additional 4 hours of 100-level work excluding Geol./LAS 142 and 143. Geol. 107 or 108 is strongly recommended to complete the total of 8 hours of 100-level work; see a departmental adviser.

Germanic Languages and Literatures

The Department of Germanic Languages and Literatures offers five options within its field of concentration. Each option focuses on a particular aspect of Germanic studies while allowing students the flexibility to design their own individualized programs in consultation with an adviser. The options are: language and literature, literature in the European context, language studies, modern German studies, and Scandinavian studies.

A minimum of 45 hours for each option excluding courses on the first- through fourth-semester level and excluding German courses in translation. Students electing one of the Germanic options are expected to attain a fourth-semester level of proficiency in German or Scandinavian prior to beginning their concentration course work. Ger. 293 or Scan. 293 — Honors Senior Thesis is recommended for eligible students in each option, in addition to the basic requirements.

Language and literature: Designed as a traditional study of German, providing students with a balanced knowledge of German language, literature, and civilization.

1. Twenty-nine hours in German, including 211, 212, 231, 232, 301, 302, 311, 312, 320, 365.
2. Twenty hours of cognate course work outside of Germanic languages and literature selected in consultation with an adviser.

German literature in the European context: Designed to expand the students' view of literature by acquiring a broad knowledge of German, drawing on courses offered by other literature departments, and exploring the relationship of literature to the arts, history, politics, and culture.

1. Same as number 1 above.
2. Twenty hours of cognate course work outside of Germanic languages and literature selected in consultation with an adviser. The study of other literatures in their original language is recommended.

Language studies: Designed to acquaint students with the structure and development of Germanic languages.

1. Twenty-nine hours in German, including 211, 212, 231, 232, 301, 302, 311, 312, 320, 365.
2. Twenty additional hours, including Gmc. 367, Scan. 101 and 102, Ling. 300 and one additional linguistics course, and Engl. 303.

Modern German studies: Designed to provide students an understanding of present-day civilization and culture in German-speaking countries of Central Europe.

1. Twenty-nine hours in German, including 211, 212, 231, 232, 301, 302, 320, 365, and two of the following: 330, 331, 332, 335, 390.
2. Either one year abroad with the department's study program in Baden, Austria, or with an approved program in another German-speaking country, or 20 hours of cognate course work outside of Germanic languages and literature selected in consultation with an adviser.

Scandinavian studies: Designed for students who will be able to spend a year abroad studying in Scandinavia.

1. Twelve hours in Scandinavian beyond Scan. 101-104. Scandinavian courses in translation are acceptable.
2. Twenty-four hours of study abroad in Scandinavian through an approved LAS 299 program (in, e.g., language, literature, history, art, political science, or linguistics). Nine additional hours of cognate work outside of Scandinavian studies must be selected in consultation with an adviser.

Year Abroad Program: See page 348.

Departmental Distinction: Concentrators in the Department of Germanic Lan-

guages and Literatures are urged to consult the departmental honors adviser by the second semester of their junior year for information pertaining to senior honors work and honors awards in the department. Concentrators in the department whose University grade-point average is 4.3 or higher should enroll in Ger. 293 — Senior Thesis and Honors Course, for a total of 4 hours of credit in their last year of study. These hours are not to be included in the total number of hours necessary for fulfilling the minimum departmental concentration requirements. Students may be awarded departmental distinction if the prescribed honors work is successfully completed. This can be done for Highest Distinction by students with at least a 4.7 University average and a 5.0 in departmental courses, who write a thesis of superior quality; for High Distinction by students with at least a 4.5 University average and a 4.7 average in departmental courses, who write a distinguished thesis; or for Distinction by students with at least a 4.3 University average and a 4.5 average in departmental courses, who write a paper of merit. Final determination of the merit of the thesis will be made by a committee of three faculty members appointed for each student. Juniors interested in special independent study are advised to consult with the head of the department.

Students enrolled in the Curriculum Preparatory to the Teaching of German may be awarded departmental Distinction, High Distinction, or Highest Distinction on the basis of the same grade-point average as stated above plus enrollment in 2 hours of Ger. 293 — Senior Thesis and Honors Course and on the basis of their grade (an obligatory A) in Educational Practice in Secondary Education. Letters of recommendation are solicited from the supervising and the cooperating teachers in this work for evidence of exceptional teaching.

AWARDS

Mimi Jehle Award. A cash prize is presented each year to the outstanding student completing the curriculum for the degree of Bachelor of Arts in the Teaching of German. Selection is made on the basis of overall scholastic average and performance in the educational practice course.

Werner Marx Award. A book prize is given annually to an undergraduate who has demonstrated excellence and creativity in the study of German language and literature.

History

A field of concentration in history requires a total of 44 hours in addition to a prerequisite of one freshman-sophomore survey sequence.

Students in the history curriculum should acquire a broad background from the study of the human experience in different cultures and time periods. A wide distribution of courses is therefore advisable; this is especially true for those who wish to enter teaching, government service, or professional schools for law, social work, museum and library science, business administration, or labor and industrial relations. Undergraduate students who concentrate in history may declare their history courses as satisfying either the humanities or the social sciences general education component and utilize cognate courses in completing the companion distribution requirement. Students are strongly urged to consult the department's advising staff, especially during advance enrollment and registration.

Requirements: Twenty-four hours in history, all in courses at the 200- and 300-level; one freshman-sophomore survey sequence (Hist. 111-112, 131-132, 151-152, 168-169, 171-172, 173-174, 175-176, 181-182) must be taken as a prerequisite. The courses taken must include at least 12 hours in an area of specialization and at least 6 hours in a second area. The following areas may be selected: Ancient, Medieval, and Renaissance (Europe); Modern Europe since 1500 (including Russia); the

United States and Latin America; Africa and the Near and Middle East; South, Southeast, East Asia. With the approval of the departmental adviser and in consultation with a sponsoring professor, a student may develop before the beginning of the senior year a special topical, geographical, or chronological area of concentration (for example, prelaw, Latin American studies, the world from 1789 to 1914). All students are required to take Hist. 298, for which the prerequisites are 14 hours in history, 6 of them at the advanced level.

In addition, students are required to take 20 hours of cognate courses outside the history department. The traditional areas for cognates are: ancient and modern languages (excluding the first-year elementary courses and also excluding the second-year courses if those courses are being used to fulfill the language requirement in the College of Liberal Arts and Sciences), anthropology, art history, classical archaeology and civilization, economics, English, American and comparative literature, geography, library science, music history, philosophy, political science, psychology, religious studies, and sociology. Nonhistory courses chosen from the multidisciplinary fields of African studies, Asian studies, Latin American studies, Russian language and area studies, and medieval civilization are also accepted as cognates if they meet the criteria of relevance and academic level. History of science students and premedical and pre dental students may offer cognate work in the physical and life sciences. All cognate courses should be related by time, area, and/or topic to the area of concentration and are subject to the approval of the history department adviser. Twelve of the 20 hours in cognate courses must be at the advanced level.

For details on the field of concentration in history and the honors program, see the pamphlet *The Undergraduate History Program* obtainable in 300 Gregory Hall.

Departmental Distinction: The fundamental goal of the honors program of the Department of History is to provide the opportunity for history concentrators of marked ability and high scholastic standing to focus on their own historical interests. Since independent study in the senior year is an essential aspect of the program, students with at least a 4.25 University grade-point average are encouraged to apply for admission at the end of the junior year. After selecting a supervising professor and topic and signifying intent to an honors adviser (forms for approval may be obtained in the departmental office), the student should register for Hist. 293 in two semesters for a total of 6 hours credit. The student's research and writing are carried on in direct and frequent consultation with the supervising professor. The completed thesis must be submitted to a designated faculty committee several weeks in advance of graduation. The quality of the thesis, the performance in an informal oral examination, and grades in past history courses are all considered in certifying the student for graduation with Distinction, High Distinction, or Highest Distinction.

History of Art

See Art History on page 358.

Humanities

The School of Humanities is an association of humanities departments in the College of Liberal Arts and Sciences and, in cooperation, the College of Fine and Applied Arts. In addition to their own concentrations, these departments have developed an interdisciplinary program of study, sponsored by the School of Humanities, which encompasses several distinct programs designed to acquaint students in a coherent manner with topics that cross disciplinary boundaries. At present, the field of concentration in humanities includes program options in: American civilization, cinema studies, history and philosophy of science, medieval civilization,

and Renaissance studies. Since the school is unable to sponsor options in all specialties or topics of humanistic study, students whose interests do not coincide with one of the specific options are encouraged to consult with the school office and to consider developing their own program through the Individual Plans of Study concentration. Enrollment in the field of concentration in humanities requires a declaration of one of the options.

Each option of the field of concentration in humanities is supervised by a committee of faculty whose own scholarship and educational interests have involved them in interdisciplinary teaching and research. An adviser for students is available in each option and is responsible for approving students' plans of study. Action on matters other than course selection is taken by the committee.

Concentration:

1. Elect one of the options offered within the concentration in humanities and file an option declaration with the School of Humanities office no later than the end of the first semester of the junior year. Students who do not begin work on option requirements by their junior year will be at a disadvantage.
2. Select specific courses counted toward completion of an option with the advice and approval of the option adviser. Any coherent program, subject to specific option requirements, developed in consultation with the option adviser is acceptable.
3. For the elected option complete a minimum of 45 hours of courses applicable toward the concentration and in accord with the distribution requirements listed below (a, b, and c); at least 25 hours must be at the 200 and 300 level. *Note: Some course selections may require prerequisite courses.* Total hours will most likely be in excess of the 45-hour minimum; however, most students will complete two or perhaps three college general education distribution requirements in the process.
 - a. Elect and complete in consultation with an adviser at least 36 hours of topically oriented course work with at least 6 hours in each of three different departments or programs.
 - b. Complete a junior seminar and tutorial of at least 3 hours in the elected option.
 - c. Complete a senior seminar and tutorial or senior thesis of at least 3 hours as specified in the elected option.

OPTIONS

American civilization: This option offers a comprehensive introduction to the study of American civilization primarily through the study of art, history, literature, philosophy, and the social sciences.

Requirements (48 hours)

- a. Two introductory courses of at least 3 hours each chosen with approval of the option adviser; the introductory courses should provide a broad overview of the development of American culture.
- b. At least 9 additional hours selected from among the following: Engl. 249, 255, 259, 260, 346, 347, 350, 351, and 362.
- c. At least 9 additional hours selected from among the following: Hist. 260-262, 353-360, 362-364, 367-374.
- d. At least 6 hours selected from among the following: Arch. 315 and 316; Art 323, 324, and 325; Phil. 313, 316, 323.
- e. At least 12 additional hours selected in consultation with the option adviser from courses offered in the departments of anthropology, economics, geography, political science, and sociology.
- f. Substitutions for any of the above specific courses may be permitted with the approval of the option adviser.

- g. At least 3 hours in the Junior Tutorial and Seminar — Human. 297.
- h. At least 3 hours in the Senior Tutorial and Seminar — Human. 298.

Cinema studies:¹ This option offers an interdisciplinary introduction to the study of film from various literary, cultural, and social perspectives. The emphasis is on developing methods and skills of critical interpretation, but students are also encouraged to acquire basic competence in the technical aspects of filmmaking by completing at least one course in cinematography. The option's underlying aim is to enrich the individual by exposure to the most significant patterns, philosophies, and artifacts of history and of narrative and dramatic expression.

Requirements

- a. Acquire a knowledge of at least one foreign language relevant to the student's interest in film studies. The language should be selected in consultation with the option adviser.
- b. An introductory course: Engl. 104.
- c. A two-semester general survey of world film: Human. 261 and 262.
- d. A course in film theory and criticism: Human. 361.
- e. At least one course in filmmaking: Art 180 or 280 or 388 or equivalent.
- f. Substitutions for specific courses listed above will be approved by the option adviser only in exceptional cases.
- g. At least 18 additional hours in film courses offered in individual departments in the School of Humanities. At least 9 of these hours must be in courses offered in foreign language departments, and at least two languages must be represented in the total.
- h. At least 12 additional hours of cinema-related courses in one or more of the following general fields: aesthetics, art or architectural history, communications, criticism, cultural anthropology, foreign language studies, linguistics, literature (fiction and/or drama), modern history, music, philosophy, photography, theatre. Specific courses and sequences in these fields are to be approved at the discretion of the option adviser, except that courses that are eligible to satisfy requirement g may not be approved under requirement h.
- i. Three hours in the Junior Tutorial and Seminar — Human. 297. This course will involve an independent research project in a field of cinema defined by the student and the submission of a substantial piece of writing growing out of this research.
- j. Three hours in the Senior Tutorial and Seminar — Human. 298. This course will involve the completion of a significant paper somewhat comparable to a senior honors thesis.

History and philosophy of science: This option is designed to allow students to combine the study of science (including mathematics), the history of science, and the philosophy of science in an integrated program. Within the framework of specific requirements, individual programs of study will be designed to fit the student's particular interests.

Requirements (45 hours)

- a. At least 15 hours from among the following with at least 6 hours in Group I and 6 hours in Group II.
Group I: Phil. 270, 317, 318, 329, and 371.
Group II: Hist. 247, 248, 249, 300, 338, and 349; Chem. 390; Geol. 303; Psych. 360. Substitutions for the above specific courses may be permitted with the approval of the option adviser.
- b. At least 24 hours of course work in a single discipline selected from the following: biology, botany, ecology, ethology, and evolution, entomology, genet-

¹ Pending final approval as of March 1979.

ics and development, microbiology, physiology, astronomy, biochemistry, chemistry, chemical engineering, geology, mathematics, or physics. In consultation with the option adviser, a student may design an interdepartmental program of science courses: in this case, at least 6 of the 24 hours must be at the 300 level.

- c. At least 3 hours in the Junior Tutorial and Seminar — Human. 297.
- d. At least 3 hours in the Senior Tutorial and Seminar — Human. 298.

Medieval civilization: This option is intended to introduce students to medieval culture, provide them with a sense of dates, names, ideas, and movements in sequence, and thus give them a synoptic view of the field. Students whose interests are primarily literary should consult with an adviser in comparative literature or one of the language and literature departments. The required courses are designed to encourage students to read medieval texts, insofar as practical, in the manner that a medieval university student would have read them. In addition, a certain amount of training in the reading and interpretation of medieval documents and in the study of Latin and the medieval vernacular languages will bring students closer to the thought of the period.

Requirements (45 hours)

- a. Acquire a reading knowledge of a foreign language relevant to the student's interests in medieval civilization. In most instances, this requirement will coincide with the college foreign language requirement. The language should be selected in consultation with the option adviser.
- b. Two introductory courses of at least 3 hours each selected in consultation with the option adviser.
- c. Complete two advanced-level topically oriented courses of at least 3 hours each selected in consultation with the option adviser. Selected courses should focus on a topic central to medieval civilization and should emphasize the international cultural and social unity of medieval civilization; sample topics include medieval vernacular literatures, mythology, the Bible and medieval exegesis, iconography, paleography and the medieval book, cosmography, geography in the Middle Ages, or the influence of Islam. Departmental courses, such as Cl. Civ./Hist. 347 and Lat. 361, or special topics courses, such as Human. 295, may be used to complete this requirement, but courses must be selected with the adviser's approval.
- d. Complete 24 hours of medieval-related course work selected in consultation with the option adviser from the departments of art, history, literature, music, philosophy, and religious studies.
- e. Complete at least 3 hours of the Junior Seminar and Tutorial — Human. 297. The medieval civilization topic of Human. 297 will require an ability to read primary and secondary sources in a foreign language.
- f. Complete at least 3 hours of the Senior Thesis — Human. 292. The thesis should ordinarily be in one of the following areas: art, medieval Latin literature, vernacular literature, liturgy and worship, philosophy and theology, history, or science.

Renaissance studies: This option incorporates course work in the Renaissance and related periods and places an emphasis on independent study and the completion of research papers in the junior and senior years.

Requirements (45 hours)

- a. Complete a minimum of 15 hours of Renaissance-related course work in a single discipline at the 200 and 300 level from among the following: art, history, literature, or music.
- b. Complete at least 24 hours of Renaissance-related course work in the following areas with at least one course in each: art, history, music, philosophy, and literature. At least one of these courses must be in classical literature or culture.
- c. Acquire a reading knowledge of a foreign language relevant to the student's

interests in Renaissance study, selected in consultation with the option adviser.

- d. Complete at least 3 hours in the Junior Seminar and Tutorial—Human. 297, which will lead to the completion of a research paper which demonstrates an ability to initiate and complete a thorough study of a topic on the Renaissance. The successful completion of this paper is a prerequisite to the Senior Seminar and Tutorial.
- e. Complete at least 3 hours in the Senior Seminar and Tutorial—Human. 298, which will lead to the completion of a significant research paper.

Departmental Distinction: In order to become eligible for distinction in humanities, students must arrange a specific honors program and a date of completion with their respective option advisers not later than the end of their junior year. In addition, these minimum requirements must be met:

1. Cumulative college grade-point average of 4.5.
2. Grade-point average of 4.75 in all course work applied to completing option requirements.
3. One semester of independent study or thesis in addition to minimum option requirements in a course approved in advance by the option adviser.

The awarding of distinction and the level of distinction (Distinction or High Distinction) will be determined by the option advisory committee after evaluating completion of the prearranged honors program and the honors independent study or thesis.

Individual Plans of Study (IPS)

The student in IPS carries out a personally designed academic program. The guiding principle of an IPS program is to meet the educational need of the student if other established curricula do not suffice. Each individual program is usually based upon the student's perception of a problem, an area of personal concern, a social issue, or an interdisciplinary concentration.

An IPS program is often multidisciplinary and may include regular courses from several departments and colleges as well as independent study either on campus or in the field. Since each program is personalized, there is no prescribed pattern of course work; each student proposes an individualized program. Acceptance into IPS requires approval of this proposal by a faculty adviser, by the IPS director and staff, and by the IPS Advisory Committee.

IPS students must meet the regular LAS requirements of rhetoric, general education, foreign language, and advanced hours. They must also complete at least 120 semester hours and meet the residency requirement.

Students are encouraged to apply to IPS during their sophomore or junior year. However, students who make late decisions about their educational goals are free to discuss possibilities of acceptance with the staff.

Departmental Distinction: Any IPS student who has shown exceptional competence in his or her individual plan of study may be awarded distinction in his or her field(s) in accordance with the principles and procedures set forth on page 351 and with the following guidelines. The distinction task itself may grow out of course work but should comprise achievement that is over and above regular course activities. The task selected by an IPS student to demonstrate his or her worthiness for graduation with distinction should be set up as early as feasible, preferably during the junior year. The student should discuss his or her initial outline for the project with his or her IPS staff adviser. The task must be proposed by the fourth week of the student's senior year. The initial outline of the project must be approved by an IPS staff adviser and the IPS advisory committee, and evaluated by a committee of at least three appropriate faculty members. The student's description of

the finished project and individual letters of evaluation from the committee members will be reviewed by the IPS staff and advisory committee for final judgment at the end of the student's final semester.

Italian

This concentration is sponsored by the Department of Spanish, Italian, and Portuguese. See page 402.

Latin

This program is now part of the classics field of concentration. See page 362.

Latin American Studies

A concentration in Latin American studies provides an integrated exploration of a major world area. Depending upon the student's interests and career aspirations, individual programs of study are designed in close consultation with a faculty adviser appointed by the director of the Center for Latin American and Caribbean Studies. Study programs should be planned with both an areal or regional focus (e.g., Brazil, the Andean countries), and a disciplinary or topical focus. A disciplinary focus may be limited to one field (e.g., economics, literature) or may be broader in scope (e.g., social science, humanities); a topical focus would include study in depth of subjects such as population or economic development. All study programs should reflect an integrative, cross-disciplinary approach, and courses must be taken in at least three disciplines.

Students are also expected to demonstrate a substantial command of Spanish or Portuguese. This requirement may be satisfied by taking an approved sequence of courses in either language or by passing a proficiency examination. Although not a requirement, students concentrating in Latin American studies are urged to include, during the summer or regular academic year, a period of foreign residence and study in their program. The student's adviser and the Study Abroad Office are prepared to assist students in making these arrangements.

Students electing Latin American studies must complete all general education sequences required in the sciences and letters curricula of the College of Liberal Arts and Sciences. The field of concentration itself consists of a minimum of 42 semester hours of course work. Two principal focuses must be identified, one of which must be disciplinary or topical, and not more than 9 hours can be taken in courses which are designated as "related." Specific distribution is as follows:

1. Primary focus (20 hours).
2. Secondary focus (10 hours).
3. Two courses in Spanish or Portuguese composition or conversation (5 to 6 hours) beyond the level specified by the LAS language requirement, or the equivalent as demonstrated by special examination.
4. Two semesters in Advanced Special Topics, L.A. St. 295.

Life Sciences

(Including Bioengineering and Biology Programs and the Departments of Botany; Ecology, Ethology, and Evolution; Entomology; Genetics and Development; Microbiology; and Physiology and Biophysics)

The School of Life Sciences is an association of biology departments in the College of Liberal Arts and Sciences. These departments have cooperated in developing a field of concentration in life sciences with a number of different options suitable for

students with different educational objectives. Because of the interdependency of the biology subdisciplines and their reliance on the physical sciences, all undergraduates in this field are required to have a strong background in cognate sciences and broad exposure to biological materials, phenomena, and principles. In more specific terms, all students must have at least *two semesters of introductory biology with laboratory, calculus, organic chemistry with laboratory, and one year of college physics*. Students who do not begin mathematics and chemistry in their freshman year generally will be at a disadvantage. In the advanced biological areas, students are expected to gain experience with living systems at the molecular, cellular, organismic, population, and community levels. The ways of achieving this training differ somewhat in the several options outlined below. The options available are bioengineering, biology general, biology honors, botany, ecology and ethology, entomology, genetics and development, microbiology, and physiology and biophysics.

Requirements:

1. Each student is required to complete all requirements of an elected option in order to satisfy the requirements of life sciences field of concentration.
2. Each student must file an option declaration statement with the school office no later than the end of the first semester of the junior year.

Note: A student concentrating in life sciences may not apply toward graduation more than 15 hours of 100-level courses (including cross-listed courses on this campus and courses transferred from other institutions).

BIOENGINEERING OPTION

Administered by the Department of Physiology and Biophysics, the bioengineering option represents a broad, interdisciplinary field that brings together engineering, biology, and medicine to study basic biological phenomena and to create new techniques and devices to deal with specific medical problems. Its practice ranges from the fundamental study of the behavior of biological materials to the development of medical instruments.

Students in this option must obtain a strong background in mathematics, physics, and chemistry in addition to the biological sciences. A number of engineering course sequences are also required. Students with specific career objectives should consult with their advisers as early as possible in order to choose appropriate courses.

Courses in addition to those listed below may be required for entrance to medical school or graduate programs in either engineering or the life sciences.

Requirements:

1. Biol. 110 and 111 (or approved equivalent).
2. Chem. 107-109 and Chem. 108-110 and Chem. 131 and 134.
3. Math. 120, 130, 240 and 345; or 120, 131, 241 and 345; or 135, 245, 345.
4. Phys. 106 and 107 and 108.
5. Physl. 301-303 and 302-304.
6. Five engineering and bioengineering courses (two or more of the following sequences).
 - Systems and modeling:* (E.E. 260, 308, Bioen./E.E. 375) or approved systems sequence
 - Bioinstrumentation:* (E.E. 260, 244, Bioen./E.E. 377) or (E.E. 306, 307, Bioen./E.E. 377)
 - Biomaterials:* Bioen. 306, 308
 - Transport phenomena:* (Bio-Fluid Mechanics, Heat and Mass Transfer) Contact Bioengineering Office at 164 M.E. Bldg. for course numbers.
 - Ultrasonics:* E.E. 374
 - Radiobiology:* Physl. 331
 - Computer programming:* C.S. 101

Recommended Cognate Study:

1. Physiology
2. Biophysics
3. Advanced engineering or physics courses
4. Biochemistry
5. Physical chemistry

Distinction: In addition to the above requirements, candidates must enroll in Bioen. 270 and, working with a bioengineering faculty adviser, prepare a report based on laboratory or library research. This report will be submitted to a committee which will recommend the level of distinction.

BIOLOGY GENERAL OPTION

This option, administered by the General Biology Committee, provides maximum flexibility by allowing the student to design his or her own program. In selecting courses at the 200- and 300-level, the student should strike a balance between breadth and specialization. It is desirable that programs contain a core of courses which provide a logical progression into a specialized area. The program should contain courses which complement the core and provide a wider view of biology. Students electing this option, therefore, must discuss these matters with their advisers and file an approved study plan in the school office at the same time as the option declaration statement. The study plan may be revised with adviser approval.

Requirements:

1. Biol. 110 and 111.
2. Math. 120 or 135.
3. Chem. 101 and 102, or Chem. 107-109 and 108-110; *and* Chem. 131 and 134, or Chem. 136 and 181.
4. Phycs. 101 and 102, or Phycs. 106, 107, and 108.
5. Twenty additional hours in life sciences at the 200-level or above. Up to 5 hours of the 20-hour requirement may be in special topics courses (Biol. 290, Bot. 290, Entom. 290, Mcbio. 290, Physl. 290).

Recommended Cognate Study: Field and/or laboratory experimental courses in biology; additional calculus, statistics, and/or computer science; or biochemistry.

Departmental Distinction: In addition to the above requirements, candidates for distinction must:

1. Register with the Biology Distinction Committee early in their senior year;
2. Maintain a minimum grade-point average of at least 4.0 (A = 5.0);
3. Submit a satisfactory report of an independent study project (290 or 292 rubric) to the Biology Distinction Committee one month prior to graduation.

BIOLOGY HONORS OPTION

This option, administered by the Honors Biology Committee, is designed for superior students who wish to pursue an intensive introductory biology program and, concurrently, to gain a strong background in the physical sciences. This option provides suitable preparation for graduate and professional training in biology.

Requirements:

1. Admission by interview in spring of freshman year.
2. Chem. 107 and 109, 108 and 110, and 136 and 181; *or* 101, 102, and 136 and 181.¹

¹The former sequence is recommended, and preference will be given on admission to students following it.

3. Phys. 106, 107, 108.
4. Math. 240.
5. Bioch. 350 and 355.
6. A 200- or 300-level course in statistics.²
7. Biol. 151, 251, and 351 (instead of 110 and 111).³
8. Ten hours of 300-level life sciences courses (other than Biol. 351 and 371), two of which may be in undergraduate research (290 and 291 rubrics).

Recommended Cognate Study: A course in computer science (C.S. 101 or 121) is strongly recommended.

Departmental Distinction: In addition to the above requirements, candidates for distinction must:

1. Consult with biology honors adviser early in their junior year.
2. Complete an undergraduate research project.
3. Present an acceptable written report on the research to the Biology Distinction Committee one month prior to graduation.

BOTANY OPTION

This option is intended to provide undergraduate training for life science concentrators who seek a broad plant science background in preparation for advanced work in botany or applied plant sciences. Opportunity is provided within the option for students to study a wide variety of basic and applied botanical specializations.

Requirements:

1. Bot. 100 and an additional lecture-laboratory course in life sciences, or Biol. 110-111.
2. Chem. 101 and 102, or Chem. 107-109 and 108-110; Chem. 131 and 134.
3. Math. 120 or 135.
4. Phys. 101 and 102, or Phys. 106, 107, and 108.
5. Plant taxonomy (Bot. 260), genetics (Biol. 210), plant physiology (Bot. 330), plant morphology (Bot. 304), and plant ecology (Bot. 381).
6. Individual study (Bot. 290 or 292) during the junior-senior year.
7. Required cognate study: At least 10 hours of additional course work selected in consultation with an individual faculty adviser from the following — agronomy, biochemistry, biology, chemistry, entomology, forestry, geography, geology, horticulture, mathematics, microbiology, physics, physiology, and plant pathology.

Recommended Cognate Study: Statistics and/or computer science; biochemistry.

Departmental Distinction: The Department of Botany offers an honors program for students showing exceptional competence in the area. Students successfully completing this program are awarded a degree with Distinction, High Distinction, or Highest Distinction in botany depending upon the quality of the work done. Candidates for the honors program must register their candidacy with the botany advising committee, preferably not later than the beginning of the junior year.

Requirements for graduation with distinction:

1. *Grade-point average.* Candidates must maintain a minimum grade-point average

² Biol. 371, Agron. 340, or Math. 263, 361, or 363 are recommended, as is additional training in statistics. Suitable sequences for those taking more than a single course are Biol. 371, 373; Agron. 340, 440; and Math. 361, 363.

³ Continuation in the honors biology option requires a grade of B or better in each of these courses.

No 100-level course in life sciences (other than Biol. 151) is acceptable.

Advisers may not make any substitutions or other changes in the above requirements.

of 4.25 overall and 4.5 in biological science courses fulfilling the botany option requirements.

2. *Enrollment in Bot. 292 — Senior Thesis.* This course may be repeated for a maximum of 10 hours. A thesis must be submitted and approved following an oral examination (normally scheduled in the month before graduation) to receive credit. Candidates for distinction should choose a thesis adviser sometime during the junior year. A thesis committee, consisting of an adviser and two other faculty members, will help select a suitable topic and evaluate the thesis. The senior thesis must be submitted to this committee no later than one month before graduation.

ECOLOGY AND ETHOLOGY OPTION

This option, administered by the Department of Ecology, Ethology, and Evolution, is intended to provide undergraduate training for life sciences concentrators who have a special interest in the closely related areas of animal ecology and behavior. Students following this option will be prepared to pursue advanced degrees in ecology and ethology or to compete for jobs in zoos, governmental agencies (such as departments of conservation and environmental protection agencies), environmental consulting firms, and pest management firms. Because of the broad scope of this option and the numerous relevant courses, specific course requirements are few. Suggested course work for specialized curricula can be obtained from the department. The student, in consultation with an option adviser, should develop a program in environmental or behavioral biology with cognate study in animal and plant ecology and natural history, physiology, geology, geography, psychology, social sciences, and related areas.

Requirements:

1. Biol. 110 and 111.
2. Math. 120 or 135.
3. Chem. 101 and 102, or Chem. 107-109 and 108-110; Chem. 131 and 134, or Chem. 136 and 181.
4. Phys. 101 and 102, or Phys. 106, 107, and 108.
5. Biol. 210, E.E.E. 212, Biol. 301, and E.E.E. 346.
6. At least 5 additional life science hours at the 100 level or above, chosen in consultation with an adviser

Recommended Cognate Study: Courses in statistics (Biol. 371), computer science (C.S. 103), and biochemistry (Biochem. 350).

Departmental Distinction: In addition to the above requirements, candidates for distinction must:

1. Maintain a minimum grade-point average of at least 4.0 (A = 5.0) and 4.25 in option requirements.
2. Complete an undergraduate research project, including at least 2 hours of E.E.E. 290.
3. Submit an acceptable report to the departmental distinction committee at least one month before graduation.

ENTOMOLOGY OPTION

This option is intended to provide undergraduate training to life science concentrators who seek a broad science background in preparation for advanced work in entomology or who intend to specialize in entomology as preparation for professional work in such areas as economic entomology, industry, or positions in local, state, or federal government. Opportunities are provided within the option for students to obtain exposure to a wide variety of entomological specializations.

Requirements:

1. Biol. 110 and 111.
2. Chem. 101 and 102, or Chem. 107-109 and 108-110; Chem. 131 and 134, or Chem. 136 and 181.
3. Math. 120 or 135.
4. Physcs. 101 and 102, or Physcs. 106, 107, and 108.
5. Entom. 301 and 302, plus one additional 300-level entomology course.
6. A course in statistics.
7. Eleven hours of additional life science courses chosen in consultation with an entomology adviser.

Recommended Cognate Study: Undergraduate research (Entom. 290) directed by a member of the Department of Entomology or by an entomologist of the State Natural History Survey.

Departmental Distinction: In addition to the above requirements, candidates for all levels of distinction must maintain a minimum overall grade-point average of 4.0 with 4.5 in courses fulfilling the entomology option and must complete the following:

1. An undergraduate research project shall be undertaken, including a minimum of 4 hours in Entom. 290. The student shall contact the departmental distinction adviser at the beginning of the junior year in order to be placed in such a project.
2. An undergraduate dissertation on the above research shall be presented for approval by the Departmental Undergraduate Distinction Committee by the last day of class in the graduation semester.

Based upon evidence of excellence as measured by the quality of the report, the Departmental Undergraduate Distinction Committee shall make a decision as to whether and at what level distinction shall be granted.

GENETICS AND DEVELOPMENTAL BIOLOGY OPTION

This option is intended to provide undergraduate training for students who wish to prepare for graduate study in genetics and/or developmental biology. Students may design their programs to include specialized training at the molecular, cellular, organismic, or population levels of biological organization, but some breadth of training is required of all students.

Requirements:

1. Biol. 110 and 111.
2. Math. through 240 or 241 or 245.
3. Chem. 101 and 102, or Chem. 107, 108, 109, and 110.
4. Chem. 131 and 134, or Chem. 136 and 181.
5. Bioch. 350, or 352 and 353.
6. Physcs. 101 and 102, or 106, 107, and 108.
7. Biol. 210.
8. Biol. 211 or 333, or Bot. 335.
9. In addition, each student must take (a) at least one of the following courses designated with an asterisk, which include laboratory experience, and (b) at least one course in each of three of the following four groups:

Group I (Cells and Molecules): Biol. 213,* 307, 331; Mcbio. 327,* 330, 351; Physl. 301, 303,* 312.

Group II (Organisms): Biol. 318,* 321,* Bot. 304,* Entom. 301,* Mcbio. 200, 201,* E.E.E. 232,* 320.*

Group III (Populations): Biol. 301, 309, 316; E.E.E. 212,* Entom. 303.

Group IV (Advanced): Biol. 305, 311, 312, 313,* 314,* 315, 317, 335, 367; Mcbio. 316; E.E.E. 332, 350,* 352.*

Recommended Cognate Study:

1. A course in statistics (Biol. 371 recommended) or computer science.
2. Biochemistry laboratory (Bioch. 355).
3. Independent laboratory study (Biol. 290) directed by a member of the Department of Genetics and Development.

Departmental Distinction: Candidates for distinction, in addition to meeting the above requirements, must:

1. Maintain an accumulative grade-point average of at least 4.0.
2. Submit a satisfactory report, approved by the research adviser, of an independent study project to the departmental office no later than one month prior to graduation. The determination of the award of distinction will be made by a departmental committee.

MICROBIOLOGY OPTION

This option is intended to provide a strong educational background in microbiology and its supporting disciplines. Students satisfying the requirements of the microbiology option may expect to be well prepared for graduate study or for entry into a wide variety of technical occupations, including research, health services, industrial, and agricultural activities. Students may design their study programs to extend their experience in genetics or other areas of biology, in biochemistry or other areas of chemistry, or in social and economic aspects of microbiology.

Requirements:

1. Biol. 110 and 111.
2. Math. 120 and one of the following: Math. 130, 131, or 161 or Biol. 371 or C.S. 101.
3. Chem. 101 and 102, or Chem. 107-109 and 108-110.
4. Chem. 131 and 134.
5. Biochem. 350, or Biochem. 352 and 353.
6. Biochem. 355 (preferable) or Chem. 122.
7. Physcs. 101 and 102, or Physcs. 106, 107, and 108.
8. Biol. 210.
9. Mcbio. 200 and 201.
10. At least 15 hours of 300-level microbiology courses, including at least one course from each of the following groups:

Group I: Mcbio. 316, 330, 331

Group II: Mcbio. 309, 327, 351 (at least three sections of 351 must be taken)

Group III: Mcbio. 311, 312, 326

Recommended Cognate Study: Independent laboratory study (Mcbio. 290).

Departmental Distinction: In addition to the above requirements, candidates for distinction must:

1. Submit a satisfactory senior thesis (Mcbio. 292).
2. Maintain a minimum grade-point average of 4.5 (A = 5.0) in filling the above requirements.

Students who wish to enter the departmental distinction program should contact the microbiology adviser prior to the end of their junior year. The department only recognizes a single level of distinction, although students may still be eligible for any of the three levels of distinction recognized by the college.

PHYSIOLOGY OPTION

Physiology is a subdivision of experimental biology which is concerned with the analysis of function in living cells or organisms with particularly strong emphasis

on regulation and integration. Specialties within the field include subjects related to behavior (integrative neurophysiology), to the relations of lower organisms to their environments (comparative physiology or physiological zoology), to the relations of the human species to its environment (ergonomics and human physiology), to interrelations between and functioning of organ systems in the whole organism (mammalian physiology), and to the fundamental molecular and cellular mechanisms of life (cell physiology and biophysics).

Numerous choices must be made among pathways in the physical sciences in physiology and in related areas of biology. It is essential therefore that a student concentrating in physiology consult with his or her adviser as early as possible and at frequent intervals thereafter. In addition to offering counsel for making these choices, the adviser is also the proper person for approving any substitutions in the curriculum which is listed below:

Requirements:

1. Biol. 110 and 111 (or approved equivalent).
2. Chem. 107-109 and Chem. 108-110 (101 and 102 acceptable) and Chem. 131 and 134.
3. Biochem. 350 or Biochem. 352-353.
4. Math. 120 and 130.
5. At least one year of physics (Phycs. 101-102 acceptable; Phycs. 106, 107, 108 recommended).
6. Biol. 210 or approved equivalent .
7. Physl. 301 and 302; Physl. 303 and 304 (Physl. 290 research, Biochem. 355, or another laboratory course in physiology may be substituted for either Physl. 303 or 304, but not both).
8. Three additional hours of physiology or biophysics.
9. Two courses from one of the following areas:

Behavioral biology: E.E.E. 246, 346, 353; Psych. 211

Organismic biology: Biol. 333; Bot. 330, 335, 336; E.E.E. 232, 340

Cellular biology: Biol. 213, 307, 311; Mcbio. 313, 330, 351

Recommended Cognate Study: Physical chemistry, statistics, differential equations.

Departmental Distinction: Candidates for distinction must enroll in Physl. 290 and, working with a departmental adviser, prepare a report based on laboratory or library research. This report will be submitted to a committee which will recommend the level of distinction to the faculty.

BIOPHYSICS OPTION

This option, administered by the Biophysics Division of the Department of Physiology and Biophysics, is designed for the student who wishes a strong background in the physical sciences and mathematics, but is basically interested in the life sciences. It is designed to provide guidelines as to which physical and life science courses especially complement each other. Because of the many possible course choices available, it is important that students within this option consult with their option adviser throughout the entire undergraduate program.

Requirements:

1. Biol. 110 and 111; or Bot. 100 and Physl. 103.
2. Chem. 107, 108, 109, and 110.
3. Chem. 131 and 134; or Chem. 136 and 181.
4. Math. 130 and 240.
5. Math. 343.
6. Phycs. 106, 107, and 108.
7. Bioph. 301 and 302.

8. Twelve additional hours of 200-level or higher work in offerings from life sciences, chemistry, biochemistry, physics, mathematics, or bioengineering.

Recommendations:

Advanced undergraduate courses highly recommended include:

1. Cell physiology (Physl. 301 [Lecture] and 303 [Lab]).
2. Biochemistry (Bioch. 350 [Lecture] and 355 [Lab]).
3. Differential equations (Math. 345).
4. Statistics (Math. 263).
5. Numerical analysis (Math. 287).
6. Electromagnetic theory (Phycs. 341 and 342).
7. Kinetic theory, thermodynamics, and statistical mechanics (Chem. 342 and 344; or Phycs. 361).
8. Genetics (Biol. 210).
9. Atomic physics (Chem. 396 or Phycs. 383; or Phycs. 386 and 387).

The above listing of recommended courses is not intended to be limiting; the individual student should consult his or her faculty adviser about other advanced undergraduate cognate courses toward fulfillment of the option which may not be listed above.

Departmental Distinction: To earn distinction in the biophysics option in the School of Life Sciences field of concentration at graduation, the candidate must enroll in Bioph. 290 and, working with a biophysics faculty adviser, prepare a report based on theoretical or experimental research. This report will be submitted to a committee which will recommend to the faculty the level of distinction.

Linguistics

Undergraduate instruction in linguistics has two purposes: it is intended to prepare students for various careers in which the scientific study of language is of significance; it is, furthermore, the basis for a continued professional training toward the M.A. and Ph.D. degrees in this field.

The field of concentration requires a minimum of 44 hours including 30 hours within linguistics and 14 cognate hours. The hours in linguistics must include Ling. 200, 225, 300, 301, and 302; the balance selected from among other 200- and 300-level courses. Students are expected to take two additional courses in each of two special areas of linguistics, such as psycholinguistics, applied linguistics, sociolinguistics, mathematical and computational linguistics, non-Western language structure, and area linguistics (African, Classics, East Asian, Germanic, Indo-European, Romance, Semitic, Slavic, South Asian). Students should take all of their cognate hours in linguistically relevant courses in any one or more of the following departments: anthropology, classics, computer science, English, English as a second language, French, Germanic, philosophy, psychology, Slavic, Spanish, Italian, and Portuguese, speech and hearing science, and speech communication.

In addition to the basic requirement of 44 hours described above, students are encouraged to undertake two years of study of a second foreign language in addition to the language used to satisfy the college foreign language requirement. This second language may be either a Western or non-Western language. Each student's program, including the selection of the special areas and second language credit, is to be worked out in consultation with the departmental adviser.

Departmental Distinction: Candidates for the degree with Distinction must register their candidacy with their adviser no later than the beginning of the second semester of the junior year. The student must achieve a grade-point average of at least 4.4 (A = 5.0) for the required 30 hours in linguistics including at least 4 hours credit for individual study. For graduation with High or Highest Distinction, the same minimum requirements apply, plus the submission of a senior honors thesis to

be submitted to the Department of Linguistics by the first day of the month preceding the month of graduation.

Mathematics

ACTUARIAL SCIENCE

The field of concentration is designed to prepare students to enter the actuarial profession.

Requirements:

1. Calculus through Math. 240, 241, or 245, or equivalent.
2. C.S. 101, 105, or 121, or equivalent.
3. Math. 310, 311, 370 (students who pass Part I of the Actuarial Examinations may replace Math. 311 with a course listed in 9 below).
4. Either Math. 361, 362, or Math. 363, 364.
5. Math. 371, 372 (students may replace Math. 372 with a course listed in 9 below with the adviser's approval).
6. Fin. 260, 262.
7. At least three of: Fin. 360, 363, 370, 371 (students with a grade-point average of 4.0 (A = 5.0) or better may substitute Fin. 294, 295 for one of these courses, with consent of a finance department adviser in the risk and insurance area).
8. Students are urged to elect Accy. 101 or 201 and B. Adm. 261 in their junior or senior year.
9. Suggested electives: one or more of Math. 313, 315, 347, 358, 359, 365, 368, 369, 383, 384.

Departmental Distinction: To qualify for Distinction the student must take Math. 372, have an average in mathematics courses of at least 4.25, and pass one actuarial society examination. To qualify for High or Highest Distinction, the student must pass two exams, with Highest Distinction going to those whose average in mathematics is at least 4.75. Finance courses may also be given consideration in close decisions.

Students wishing to qualify for distinction should consult the honors adviser during the first semester of their junior year.

MATHEMATICS

An entering student with adequate preparation in high school mathematics should enroll in Math. 120 during the first semester and in Math. 130 or 131 during the second semester of his or her freshman year. Admission to Math. 120 normally requires a passing grade on the Mathematics Placement Test. A student ineligible for Math. 120 should enroll in algebra (Math. 111 or 112) and trigonometry (Math. 114) during his or her first semester. Two different options are offered:

Option 1: For students intending to continue the study of mathematics in graduate school.

1. Calculus through Math. 240, 241, or 245, or equivalent.
2. Math. 317, 318, 332, 347, and 348.
3. Nine additional hours of mathematics courses with numbers greater than 290.
4. C.S. 101 or 121, or equivalent.
5. One of the following science sequences:
 - a. Astr. 210.
 - b. Any 8 hours of chemistry.
 - c. Phys. 106, 107.

Option 2: For students interested primarily in a general liberal education.

1. Calculus through Math. 240, 241, or 245, or equivalent.

2. At least one course from each of the following lists:
 - a. Math. 313, 314, 317, 319, 353.
 - b. Math. 315, 318, 383.
 - c. Math. 303, 323, 332, 381.
 - d. Math. 361, 363.
 - e. Math. 341, 344, 346, 347, 384.
3. At least 6 additional hours of mathematics courses with numbers greater than 290.
4. C.S. 101 or 121, or equivalent.
5. It is required that at least 10 hours be taken in a secondary subject in which mathematical methods are employed. Each student must have advance approval from the departmental undergraduate adviser.

Departmental Distinction:

1. To be eligible for distinction a student must take at least five courses whose numbers are greater than 295 and that are *not* on the following list: 300, 301, 302, 305, 306, 307, 310, 311, 315, 343, 344, 345, 346, 351, 357, 367, 369, 370, 371, 372, 383, 386, 388.
2. To receive Distinction, High Distinction, or Highest Distinction, a student should ordinarily have a grade-point average in mathematics courses beyond calculus of at least 4.25, 4.5, or 4.75 respectively. A student interested in distinction should consult the chairperson of the honors committee during the first semester of his or her junior year.
3. The Department of Mathematics will take into consideration outstanding mathematical achievements.

MATHEMATICS AND COMPUTER SCIENCE

This concentration is sponsored jointly by the Departments of Mathematics and Computer Science. See page 364.

STATISTICS

Designed to prepare students for professional and graduate work in statistics.

1. Calculus through Math. 240, 241, or 245, or equivalent.
2. Math. 347, Math. 365.
3. One course from each of the following four lists:
 - a. Math. 346, 348.
 - b. Math. 361, 363.
 - c. Math. 362, 364.
 - d. Math. 366, 368.
4. At least 15 hours in a secondary subject, approved by the department, in which statistical methods are applicable. Not more than 6 of these hours may be in courses emphasizing statistical methods.
5. Students are urged to obtain a knowledge of basic computer programming.

Departmental Distinction: See departmental distinction statement under mathematics.

Medieval Civilization

This program is now part of the humanities field of concentration. See page 376.

Microbiology

This program is now part of the life sciences field of concentration. See page 381.

Music

The field of concentration in music is designed for students whose academic interests are broader or more compelling than can be accommodated within the several FAA music programs (see p. 329). This program, which incorporates a high degree of flexibility beyond the core of required courses, is not professionally oriented, but can prepare the way for graduate study in music theory, composition, or the various branches of musicology.

Requirements:

All students in the music concentration must complete or proficiency the following core of courses for a total of 29 to 31 credit hours:

Music 101-104, 107-109, and one 300-level music theory course;

Music 110, 213-214, and one 300-level musicology course.

All students in the concentration must, in addition, possess or acquire some mastery of keyboard skills, which may be demonstrated by successfully completing Music 160-161, or through an appropriate audition. (Students who wish to pursue studies in applied music are required to satisfy the instrumental or vocal qualifying audition designed for students outside the School of Music; credits earned in applied music beyond the keyboard requirement stated above are generally considered elective.)

The remainder of the program, consisting of at least 8 to 9 additional hours of upper-level music courses and 11 to 12 hours of cognate work in other fields, is planned by the student with the help of a departmental adviser of his or her choice, subject to the approval of the departmental advising chairperson. Three general options are available in the music concentration: music history, ethnomusicology, and music theory/composition. The choice of courses within these options may vary considerably according to the interests of the student. The following models illustrate the types of programs recommended but specify neither absolute requirements nor limitations.

Music history option:

1. With emphasis on medieval/Renaissance music.
 - a. Music 307, 308 and either 310 or 311.
 - b. Cognate courses chosen from Hist. 111, 112, 203, 204, 304, 305 (or 332 and 333);
A course in medieval or Renaissance literature (e.g., Engl. 202, 204, C. Lit. 204);
Art 111;
Lat. 101, 102.
2. With emphasis on music since the Renaissance.
 - a. Music 308, 313, 314, 315.
 - b. Cognate courses chosen from Hist. 111, 112, 309, 310 (or 312, 313), 323, 324;
Engl. 206 and 207 or C. Lit. 363, 364;
Art 112.

Ethnomusicology option:

1. With emphasis on American Indian cultures.
 - a. Music 308, 317 (6 hours) and one additional course from the series 310-315.
 - b. Cognate courses chosen from Anth. 110 (or 103), 230, 331, 332 (or 333 or 361);
Relst. 363;
Hist. 151, 152.

2. With emphasis on India and Middle Eastern culture.
 - a. Music 308, 317 (6 hours) and one additional course from the series 310-315.
 - b. Cognate courses chosen from Anth. 110 (or 103), 230, and 368; Relst. 297.
3. With emphasis on African and Afro-American cultures.
 - a. Music 308, 317 (6 hours) and one additional course from the series 310-315.
 - b. Cognate courses chosen from Anth. 110 or 103, 124, 230, and 261; One sequence in Afro-American history such as Anth. 367 and Hist. 215 or Hist. 253-254.

Music theory/composition option

1. With emphasis on music theory.
 - a. Music courses chosen from Music 300-309.
 - b. Cognate courses chosen to include Math. 118; One course in English composition (e.g., Rhet. 133 or equivalent); One course in philosophy with emphasis on aesthetics (e.g., Phil. 101, 102, 105, or 323).
2. With emphasis on composition.
 - a. Music 106, 204-206, 306.
 - b. Cognate courses chosen to include Math. 118; One course in English composition (e.g., Rhet. 133 or equivalent); One course in philosophy with emphasis on aesthetics (e.g., Phil. 101, 102, 105, or 323).

Departmental Distinction: Students interested in attaining departmental distinction should consult with the honors adviser no later than the second semester of their junior year. In order to be eligible for departmental distinction, a student must have a cumulative grade-point average of 4.4 or above (at the end of the sixth semester) and must complete 4 hours of Music 229 — Thesis and Advanced Undergraduate Honors in Music. Distinction will be recommended at the discretion of the faculty after an evaluation of the student's overall record and the completed thesis.

Philosophy

The concentration in philosophy involves taking a minimum of 40 hours of philosophy and cognate course work and consists of three parts: (1) the core philosophy courses (14 hours); (2) a cognate program, involving at least 12 hours of course work in some other department(s); and (3) further course work in philosophy, including at least one additional 300-level course.

1. *Core philosophy courses.* If possible, concentrators should take these courses prior to their senior year.
 - a. Either Phil. 102 (Logic and Reasoning) or Phil. 202 (Symbolic Logic). Persons who are thinking of graduate work in philosophy should take 202.
 - b. Phil. 303 (History of Ancient Philosophy).
 - c. Phil. 306 (History of Modern Philosophy). Phil. 307 and 308 may be substituted for 306.
 - d. Phil. 321 (Ethics and Value Theory).
2. *Cognate course work.* A concentrator may select either of two types of cognate program and work out a specific program of the type chosen with the help and approval of a departmental adviser.

Option I: Intensive Study in Another Discipline. This comprises a minimum of 12 hours of course work, normally at the 200 level or higher.

Option II: A special program of study built around a unifying theme or topic. This will involve a minimum of two courses in philosophy and at least 12 hours

of course work outside of philosophy. Normally this outside work will be advanced work. The program may be built around an historical period and include philosophy courses relating to the period, together with other courses concerning the history, literature, culture, etc., of the period. The program may concern the philosophy of a certain subject—language, politics, science, religion, art, etc.—supplemented by study in the related field. Other possibilities include the study of a particular philosophical problem with outside work in appropriate disciplines. The following are some examples of such special programs:

- a. Ancient Greece: E.g., Phil. 309, 310, 317; Hist. 381; Art 217; Pol. S. 393; Cl. Civ. 301, 332.
 - b. History and philosophy of science: E.g., Chem. 101, 102, and Biol. 110, 111 (to satisfy the general education requirements in the physical and biological sciences); Phil. 317, 318, 370; Hist. 331, 348; Chem. 131; Biol. 151, 210. This program stresses biological sciences. Other programs might stress physics, psychology, or some other science.
 - c. Nineteenth-century Europe: E.g., Phil. 311, 345; Art 221; Engl. 333, 334; Hist. 311; Russ. 315.
 - d. Philosophy and religion: E.g., Phil. 230, 324, 363, 369; Relst. 231, 340, 387; Anth. 363 or Soc. 229 and 328.
 - e. Philosophy, government, and law: E.g., Phil. 103, 104, 336; Econ. 214, 306; Pol. S. 351, 354; Hist. 345, 346.
 - f. Theory of knowledge: E.g., Phil. 330 or 331, 317, 318; Math. 118, 119; Phys. 150; Hist. 323 or 324.
3. *Further course work.* The remainder of a student's concentration is planned by the student with the help and approval of an adviser. It will consist primarily of other philosophy courses (to include at least one 300-level philosophy course) but may also include additional cognate courses.

Departmental Distinction: To become a candidate for graduation with distinction in philosophy, a concentrator must either have a general grade-point average of at least 4.0 at the end of the junior year or obtain the special permission of the chairperson of the department; he or she should register with the departmental honors adviser at the beginning of the senior year. Prior consultation with the honors adviser early in the junior year is strongly recommended.

Candidates must take at least 26 hours of course work in philosophy, including (a) the core courses, 102 or 202, 303, 306, and 321; (b) at least two additional 300-level courses; (c) the advanced undergraduate seminar (298), or, with the consent of the chairperson, the individual study course (290); (d) the thesis course (292); and (e) an honors thesis. Normally, candidates should take 292 for two semesters in the senior year; exceptions require the consent of the chairperson. A candidate must pass an oral examination on the thesis, administered by the candidate's thesis director and another member of the department appointed by the chairperson, after consultation with the candidate. Eligibility for graduation with distinction also requires the accumulation of a grade-point average of at least 4.0 in all philosophy courses taken; and normally this minimum accumulated average must be higher—4.25 for Distinction, 4.5 for High Distinction, and 4.75 for Highest Distinction.

Satisfaction of these requirements prior to the end of a candidate's final semester enables the candidate to be considered for graduation with distinction. Upon their satisfaction, a committee of two members of the department (normally the candidate's oral examiners) is appointed by the chairperson. This committee then determines if the candidate is to be graduated with distinction and, if so, at what level. This determination is based upon the quality of the candidate's general course work in philosophy, the quality of the work done in the seminar (or individual study course) and on the thesis, and the candidate's performance in the oral examination.

Physics

This field of concentration allows students maximum flexibility to develop scientifically oriented careers in fields requiring a physics background. See also the engineering physics, LAS physics, and LAS teaching of physics curricula.

Requirements:

1. General physics and calculus satisfied by the sequence Physcs. 106, 107, and 108, or equivalent, together with the sequence Math. 120, 130, and 240, or equivalent.
2. Twenty hours of 200- or 300-level physics courses including Physcs. 321, 341, and 342.
3. Twenty additional hours of scientifically oriented courses selected with departmental approval from the following areas, with at least two courses in each area chosen: astronomy, atmospheric sciences, chemistry, various branches of engineering, environmental sciences (see departmental office for listing), geology, life sciences, mathematics, philosophy, social sciences, and education oriented toward teaching of science.

Departmental Distinction: Degrees with distinction are granted to students who complete 8 additional hours of 300- or 400-level physics courses or advanced courses in closely related technical subjects such as nuclear engineering, solid state electronics, astrophysics, etc., and who have attained overall grade-point averages as follows: Distinction, 4.2; High Distinction, 4.5; Highest Distinction, 4.8.

Physiology

This program is now part of the life sciences field of concentration. See page 381.

Political Science

The Department of Political Science encourages students to acquire a broad understanding of political science and to pursue in depth selected subfields of the discipline. To accomplish these objectives, the department provides courses of study which introduce students to the discipline and to its principal subfields. Among these are American government, politics, and administration; comparative government, politics, and administration; international relations, organization, and foreign policy; normative theory; and political behavior and empirical theory. Cognate courses are an integral part of the program and should be selected with a view toward building a coherent structure of courses adapted to the student's particular needs.

Requirements: The field of concentration in political science requires 44 hours. Of these, 24 hours must be within the Department of Political Science, to be distributed as follows:

1. Pol. S. 150.
2. Any three of the courses Pol. S. 100, 240, 260, 270, 280.
3. At least four additional courses at the 200 or 300 level. (Most 300-level courses will require as a prerequisite the appropriate 200-level course [or, in the case of American politics courses, 150] or consent of instructor.)

Not more than 6 hours of individual study courses in political science may be included in the field of concentration. Pol. S. 293 is reserved for those seniors doing honors theses for distinction in political science, and may not be counted in the 44-hour minimum required for the field of concentration.

Outside the department, at least 20 cognate hours are required in one or two of the following fields: anthropology, economics, English, education, finance, foreign language, geography, history, mathematics, philosophy, psychology, social work,

sociology, speech communication, or urban planning. Cognate courses should normally complement subfield concentrations in political science chosen by the student. If two fields are chosen, a minimum of 8 hours in each is required. At least 12 of these 20 hours must be at the 200 level or above. (Courses taken in satisfaction of the college foreign language requirement may not normally be used as cognate courses.)

Students may also choose certain interdepartmental curricula, such as area studies or medieval civilization, as a cognate field of study. Students choosing interdisciplinary cognate study (drawn from three or more departments) or any special cognate field not listed above must have written permission from the Department of Political Science undergraduate adviser or their faculty adviser.

Departmental Distinction: In order to qualify for graduation with distinction in political science, concentrators must have a grade-point average of 4.25 or better in all political science courses. These must include Pol. S. 293, in which the student must have enrolled for at least 4 hours credit and completed a senior honors thesis. The thesis must be submitted to the thesis supervisor by the tenth day of the month preceding the month of graduation. The departmental honors board will assign Distinction, High Distinction, or Highest Distinction according to the grade-point average and quality of the thesis.

Portuguese

This concentration is sponsored by the Department of Spanish, Italian, and Portuguese. See page 402.

Psychology

This field of concentration is designed both for students seeking a general sciences and letters baccalaureate with psychology as a focal area and for students intending to pursue graduate or professional postbaccalaureate training in psychology or related fields. Students electing the field of concentration in psychology may pursue their studies by specializing in a content area of psychology. Suggested patterns of both psychology and nonpsychology courses recommended for various areas of specialization may be obtained from the Psychology Undergraduate Advising Office.

Core Program Requirements: All students with a field of concentration in psychology must have at least 24 hours of psychology, including required courses from the following areas:

1. One course in introductory psychology.
2. A course in statistics or research design in psychology.
3. Two courses from Psych. 210, 217, 230, 248, 289.
4. Two courses from Psych. 201, 216, 238, 245, 250, 258, 339.

One of the following courses may be substituted for one of the courses listed in area (3) above or for one of the courses listed in area (4) above: Psych. 324, 325, 326, 335, 348, 356, 360.

A maximum of 4 credit hours of Psych. 199 may be counted toward the concentration in psychology (unless a prior exemption is made in a specific case by the undergraduate academic adviser). Six hours of credit for individual study (200 level) may be counted toward the field of concentration.

The student who plans graduate study in psychology is reminded that most graduate schools require undergraduate laboratory courses in psychology. It is strongly recommended that two laboratory courses be taken from among Psych. 311, 330, 331, 332, 333, 345, 347, 350, 390. Also recommended for graduate preparatory training is mathematics through calculus, one year of laboratory science other than psychology, and computer science. Some graduate programs require proficiency in foreign language, usually French, German, or Russian.

Cognate and Related Course Requirements: In addition to the core program, all students must take 20 additional hours of course work that will meaningfully complement the 24 core hours in psychology. At least 12 hours must be outside of psychology, and the remaining 8 hours may be either outside of psychology or in psychology courses. These courses must be approved by the undergraduate academic adviser.

Departmental Distinction: Requirements for graduation with departmental distinction in psychology are as follows: Admission to the psychology department's honors program [a 4.5 (A = 5.0) grade-point average in psychology and 4.50 cumulative grade-point average is required for application]; credit in Psych. 291, 293, 297, and 298; and an acceptable bachelor's thesis.

Religious Studies

The following course programs are examples of acceptable patterns for a concentration in religious studies. Any coherent program worked out in consultation with an adviser is permitted. A careful use of independent studies courses (Relst. 290, 490) is also encouraged for the development of suitable concentrations.

The first concentration is designed for students seeking a broad liberal arts education with a focus in religious studies. Persons thinking of the ministry or rabbinate are encouraged to consider it seriously. It should be recognized that the high number of hours involved amounts to offering more than usual guidance in the choice of electives.

The last five concentrations are designed especially for students thinking about graduate work in one of the traditional areas of religious studies.

RELIGION AND CULTURE (53-hour minimum)

1. Methods: Relst. 100.
2. Language: Hebr. 205, 206; *or* Grk. 111, 112.
3. Core courses: Relst. 201, 202, 241, 340.
4. Cognate fields:
 - (1) Hist.: (a) 111 and 112; *or* (b) 371 and 372; *or* 203 *or* 304, and 305 *or* 306 *or* 332.
 - (2) Phil.: (a) 101, and 230 *or* 324 *or* 210 *or* 321; *or* (b) 303 and 306.
 - (3) Engl.: (a) 115 and 116; *or* (b) any approved combination of courses which covers a wide range of literature (selected from such courses as 209, 210, 240, 241, 242, 248, 255, 256).
5. Related studies in the social sciences (at least 6 hours split between two of the following programs):
 - (1) Soc.: 100, 131, 202, 206, 221, 223, 224, 225, 228, 229, 240, 275, 276.
 - (2) Anth.: 102, 103, 173, 174, 210, 230.
 - (3) Psych.: 100, 201, 216, 250, 338.
6. Arts: A basic survey such as Art 115 *or* Music 113; *or* any other course of religion such as Art 209, 213, 218, 301, 303, 305, 307, 308, 309, 326, 327, 328, 330, 331, 332; and Music 213, 310, 311, 316, 320.
7. Other religious traditions (at least one of the following): Relst. 286, 288, 307, 363, 387, 388, 389.

PHILOSOPHY OF RELIGION (38-hour minimum)

1. Survey and methods: Relst. 110 (or 100). Phil. 230; also recommended, Phil. 101.
2. Basic work in philosophy: Phil. 303, 306; also recommended, either Phil. 103 *or* 210 *or* 321; also recommended, either Phil. 270 *or* 327.
3. Basic work in religion: at least one course in a Western religious tradition (e.g.,

Relst. 120, 201, 202) and at least one course in an Eastern religious tradition (e.g., Relst. 286, 288, 387, 388, 389).

4. Advanced work in some tradition or area of philosophy, with a coherent sequence (such as Phil. 304 and 326; or 311, 315, and 341; or 316 and 330; or 321, 322, and 335) and Phil. 324.
5. Advanced work in a religious tradition, with a coherent sequence such as (for Judaism) Relst. 204, 240, 241; (for Christianity) Relst. 202, 340 (or 369), 304 (or 306); (for Islam) Relst. 204, Hist. 173, 307; (for Hinduism) Relst. 286, 295, 387; (for Buddhism) Relst. 288, 387, 388.

ASIAN RELIGIONS (42-hour minimum)

Concentrators in Asian religions may pursue their interest in either India, China, or Japan, or in Hinduism, Buddhism, Chinese, or Japanese religions. The student should select the courses more pertinent to his or her interest.

1. Methods: Relst. 100.
2. Core courses (three of the following, at least one from each area):
 - (1) East Asian religions: Relst. 288, 295, 388, 389.
 - (2) South Asian religions: Relst. 286, 295, 387.
3. Language (at least four semesters): Chinese, Japanese, or Sanskrit.
4. Other religious traditions (two courses): Christianity, Judaism, or philosophy of religion.
5. Cognate courses (three of the following):
 - (1) East Asian area: Hist. 168, 171, 391; Art 328; Chin. 209, 210; Relst. 388; Soc. 328; Anth. 168.
 - (2) South Asian area: Anth. 168; Hist. 387; Relst. 387; Ling. 382, 383; Soc. 328; Sansk. 309.

BIBLICAL STUDIES (45-hour minimum)

1. Perspectives on religion: Relst. 100 or Phil. 230.
2. Core courses: Relst. 201, 202, and 241 or 340.
3. Language: Hebr. 205, 206, 210, 311; or Grk. 111, 112, 200, 371 (or Grk. 101, 102, 201, 202) or Hebr. 205, 206, and Grk. 111, 112 (or 101, 102).
 Note: Students who intend to pursue graduate work in this field are encouraged to learn German and French as well. The study of other ancient languages, such as Arabic or Coptic, may also prove valuable.
4. Other religious traditions (two of the following): Relst. 286, 295, 387; 288, 388, 389; 307.
5. One of the following sequences:
 - (1) Relst. 298 (alternative 240); Hist. 203 or 304; Hist. 305 or 306 or 332; Hist. 381.
 - (2) Relst. 298 (alternative 240); Phil. 101; Phil. 303 or 306; Phil. 324 or 363 or Relst. 294.
 - (3) Relst. 298 (alternative 240); Soc. 229; Anth. 363; Phil. 324 or 363 or Relst. 294.

Recommended electives: Hist. 181, 182, 203, 304, 305, 306, 332, 381, 382, 383, 384; Phil. 230, 324, 303, 306; for courses in literature, the social sciences, and the arts see the suggestions in the concentration pattern "Religion and Culture."

JUDAICA (46-hour minimum)

1. Methods: Relst. 100 or 230.
2. Hebrew: Relst. 205, 206, 210, 311; or M. Hbr. 201, 202, 303, 304.
3. Core courses: Relst. 201, 241; 240; two of the following: 202, 220, 221.
4. Other religious traditions (one course from each group):

(1) Relst. 286, 288, 387, 389.

(2) Soc. 229, 328; Hist. 173, 174, 307.

5. Area studies (four courses from one group):

(1) America: Hist. 350, 351, 371, 372; Anth. 174; Pol. S. 317; Phil. 313; Soc. 225.

(2) Continental Europe: Hist. 221, 309, 310, 311, 312, 314, 315, 316, 318, 319, 323, 324, 335, 336; Pol. S. 336; Fr. 255, 256; Ger. 201, 202, 203. A student may substitute two university or college courses in French or German for two of the above courses.

(3) Russia: Hist. 320, 321, 325, 326, 327, 328; Pol. S. 335, 384; Anth. 381; Russ. 114, 315, 317, 319. A student may substitute two university or college courses in Russian for two of the above courses.

(4) Modern Middle East: Hist. 303, 308, 344; Econ. 359; Pol. S. 338. A student may substitute M. Hbr. 307 or 308 for one of the above courses.

(5) Classical world: Hist. 381, 382, 383, 384; Cl. Civ. 201, 221, 222, 315, 332; Phil. 303, 309, 310; Art 217, 218. A student may substitute two university or college courses in classical or koine Greek for two of the above courses.

WESTERN RELIGION (44-hour minimum)

Because of the nature of this concentration, core courses are not distinguished from cognate courses. The religious studies adviser will arrange electives with the student in conjunction with the history undergraduate adviser.

1. Core courses: Relst. 201, 202, 220, 340; Hist. 304, 306, 371, 372; Anth. 103 or 110.

2. Methods or languages (either number 1 or number 2):

(1) Language courses: Four semesters of Latin, German, or another relevant language (or the equivalent thereof including high school training).

(2) Methods: Soc. 229; Anth. 230 or 260; Anth. 363.

3. Electives (at least two of the following courses). Students are encouraged to take further courses from this list:

(1) Hist. 181 or 182; 305; 307; 332 or 333; 298 (when applicable).

(2) Relst. 286; 288; 295; 387; 388; 389.

(3) Phil. 303 or 306; Soc. 229; Anth. 363.

Departmental Distinction: Distinction in the program is granted on the basis of excellence in religious studies as demonstrated in course work and a senior thesis. The final determination of distinction is by vote of the faculty of the Program in Religious Studies.

Rhetoric

This concentration is sponsored by the Department of English. See page 368.

Russian

The field of concentration in Russian consists of at least 45 hours distributed as follows:

1. A minimum of 15 semester hours of Russian language from the following courses (with at least 6 hours at the 300 level): Russ. 211-214, 290, 303, 304, 307, 308, 313, 314.

2. A minimum of 15 semester hours of Russian literature from the following courses: Russ. 116, 215, 216, 222, 225, 324, 335, 337, 360, 370. Russ. 215, 216, and either 315 or 317 are required.

3. A minimum of 15 semester hours of cognate courses distributed in one of the following ways:

- a. Five courses at the 200 or 300 level in a single language other than Russian.
- b. Fifteen semester hours of literature courses in the several departments of European literature (including comparative literature) selected so as to complement the Russian literature courses selected in (2) above.
- c. Russ. 114, Hist. 219, and any three of the following courses: Anth. 381; Econ. 357; Geog. 353; Hist. 320, 321, 325, 326, 327, 328; Pol. S. 335, 383; Slav. 319 (cinema); Soc. 350.
- d. Other combinations of courses amounting to 15 semester hours may be chosen with the approval of the departmental adviser, as long as the courses concern some aspect of Russian and Slavic culture.

Departmental Distinction: Concentrators in the department who are potential candidates for distinction are urged to consult the departmental honors adviser, preferably by the second semester of their junior year.

In order to graduate with the various levels of departmental distinction, the candidate must meet the following requirements:

1. For Distinction: a grade-point average of at least 4.30 in the department courses, plus Russ. 293.
2. For High Distinction: a grade-point average of at least 4.50 in department courses, plus Russ. 293.
3. For Highest Distinction: a grade-point average of at least 4.75 in department courses, plus Russ. 293.

Russ. 293 is a senior honors thesis course where, under supervision of a senior staff member, the student carries on independent research work culminating in a thesis or research paper of superior quality.

Russian Language and East European Studies

Two fields of concentration are offered: (1) field of concentration in Russian language and area studies; and (2) field of concentration focusing more broadly on Eastern Europe as well as Russia.

The aim of each field of concentration is to provide the student with: (a) a base in one discipline such as will permit him or her, without much additional work, to qualify for graduate study if he or she so desires; (b) an interdisciplinary spread focused on the geographic area selected; and (c) a start toward the language training needed for the area.

Field of Concentration in Russian Language and Area Studies:

1. At least 16 hours of Russian language courses or equivalent proficiency. This requirement may be met by completing Russ. 104 or 105 or 106 or 112 or 124. Persons contemplating graduate work in this field are advised to gain command of the Russian language as soon as possible.
2. At least 20 hours in courses focusing on Russia or the Soviet Union, including at least one course from each of three departments other than the department used for component (3). Although some of the courses used to count under (2) may be from the same discipline as that used for (3), any one course can be counted in only one category rather than in both. Courses currently being offered that focus entirely on Russia include: Anth. 381, 382; Econ. 357; Geog. 353; Hist. 219, 320, 321, 325-328; Pol. S. 335, 383; Russ. 114, 115, 116, 199, 217, 301, 302, 315, 317, 321, 322, 323, 324, 325, 335, 337; Soc. 350. Others may be counted upon permission of the center director.
3. At least 20 semester hours in a single discipline. Among those disciplines that are most commonly used with this field are anthropology, economics, geography, history, political science, Russian, and sociology. Among disciplines also used are education, English, fine arts, French, German, journalism, linguistics, mathematics, philosophy, psychology, and various natural sciences.

Others are permitted. If a foreign language is used for this component, 20 hours must be taken beyond the introductory courses (i.e., normally the first two years, or the 101-104 sequence). Students are expected to obtain the advice of a faculty member in their chosen discipline to help in the planning of this part of their program.

Field of Concentration in East European and Russian Studies:

1. At least 16 hours (normally two college years) or equivalent proficiency in one approved language (usually Russian), plus at least two semesters or equivalent proficiency in a second approved language. Approved languages are languages used to a significant extent in East Europe or the Soviet Union or for the study of those areas. The choice is to be made in consultation with the center director, who will take into account the student's educational goals. Students should bear in mind that professional work in these areas usually requires extensive language training.
2. At least 20 hours in courses focusing on Eastern Europe as well as Russia, subject to the general rules mentioned under (2) above. In addition to the courses mentioned there dealing with Russia, the following are offered dealing with Eastern Europe: Hist. 329, 330; Pol. S. 346; Slav. 319. Others may be included upon permission of the center director. (See below.)
3. At least 20 semester hours in a single discipline, as explained in (3) above.

Additional courses: In addition to courses that deal wholly with Eastern Europe or the USSR and are mentioned under both fields above, there are many others that are devoted in a significant degree to Russia and Eastern Europe. They are normally taught by faculty members who have some knowledge of East European languages and may be counted toward the above fields if the center director approves. In cases where only a small fraction of a course deals with Russia or Eastern Europe, partial credit toward concentration requirements may be given.

Among the additional courses that may be mentioned especially for their East European or Russian content are Ag. Ec. 318; Econ. 255; Educ. 304; Hist. 298 (when taught by persons in this field); Hist. 311, 312, 315, 316, 318, 319, and 394; Pol. S. 396.

Among the East European languages offered in addition to Russian are Czech, Polish, Modern Greek, Rumanian, Serbo-Croatian, and Ukrainian. Others, such as Bulgarian, Hungarian, Latvian, Lithuanian, Macedonian, Slovenian, Turkish, and Uzbek, may be studied under special arrangements, including those provided by the center.

Departmental Distinction: Students hoping to qualify for distinction in a field sponsored by this center should consult with the center director at the beginning of the junior year or earlier in order to prepare a suitable plan. This plan will usually include the writing of a substantial research paper in consultation with some faculty member of the center. Acceptance is determined by an interview with the director of the center. Levels of distinction are determined only by evaluation of the quality of the student's research paper.

Sociology

Sociology is concerned with and uses a variety of intellectual tools and technical skills to analyze several different areas of social life. Sociology concentrators are expected to develop these tools and skills in one of five optional fields of concentration. Students are expected to distribute their selections among the options as described below.

Requirements: A minimum of 30 hours in sociology including Soc. 100, 184, 185, and 200, a minimum of 9 hours of course work chosen from one of the sociology options below, and another 9 hours in any other sociology option. Students must also

take 12 cognate hours in their chosen sociology option. Students who expect to attend graduate school in sociology should also consider taking Soc. 385 and 387.

The course distribution and cognate areas for five options in sociology are described below.

Theory and Methods Option: Soc. 301, 310, 325, 332, 336, 383, 385, 386, 387, 388. Cognate areas: C.S. 103; Phil. 102, 270, 325, 330, 335, 343, 371; Hist. 247, 248; Pol. S. 394-397.

Social Organization Option: Soc. 202, 206, 208, 221, 223, 224, 225, 229, 231, 246, 251, 259, 260, 264, 309, 311, 315-318, 321, 322, 324, 326, 331, 335, 358, 359, 360. Cognate areas: Anth. 320, 321, 370; Econ. 236, 238, 240, 255; LIR and Econ. 315, 341, 343, 345; Hist. 253, 254, 273, 350, 351, 357, 358, 363, 364, 379, 396; Pol. S. 235, 326, 328, 350, 353, 354, 370, 388, 392, 396; Soc. W. 317.

Demography and Human Ecology Option: Soc. 223, 270, 275, 276, 318, 321, 329, 343, 345, 356, 364, 383, 384, 385, 387, 388. Cognate areas: Anth. 103, 210, 230, 321, 330; C.S. 103; Math. 135, 145, 161, 371, 372; U.P. 171, 325; Biol. 316, 351; Econ. 236, 238, 345, 350, 352, 353, 354, 356, 361; Geog. 361, 362, 365, 366, 383, 384, 385; H. Ed. 110, 391; Hist. 350, 351; Arch. 323; E.E.E. 212, 311, 345; Soc. W. 345.

Social Interaction Option: Soc. 131, 201, 212, 231, 240, 246, 316, 320, 321, 323, 332, 333, 340, 352, 359. Cognate areas: Psych. 202, 210, 333, 339, 348, 353, 354; Phil. 325, 332; P.E. 349; Anth. 132, 244, 371, 379; Comm. 370; Geog. 385; H.D.F.E. 304; Ling. 332; Leist. 231.

Comparative Sociology Option: Soc. 206, 208, 219, 222, 223, 224, 235, 246, 263, 277, 309, 318, 321, 326, 327, 328, 329, 330, 336, 343, 350, 355, 364, 371, 373; Anth. 168, 169, 173, 182, 222, 260, 261, 321, 330, 331, 332, 333, 334, 349, 350, 360, 361, 364, 367, 368, 369, 373, 377, 378, 379, 381, 382, 383, 384, 385, 386, 387; As. St. 186; Econ. 255, 350, 352, 353, 354, 357, 358, 359; Hist. 171, 172, 211, 212, 316, 376, 385, 386, 389, 393, 394, 396; L.A. St. 295; Pol. S. 241, 245, 335, 336, 337, 338, 339, 340, 342, 343, 345, 346, 347, 348, 349, 388.

Departmental Distinction: For entry into the departmental distinction program in sociology, a student must have a grade-point average of at least 4.5 and have completed Soc. 100, 184, 185, 200, and two additional 300-level sociology courses. As part of the program the student will enroll in Soc. 291 and 293, working with a departmental adviser. If the student maintains the 4.5 grade-point average, completes Soc. 291 and 293, and at least two other 300-level sociology courses, he or she will be awarded departmental Distinction. High Distinction will be awarded upon completion of the requirements and a grade-point average of 4.75 or above, and Highest Distinction will go to those with a grade-point average of 4.75 or above and a thesis judged superior by a departmental committee.

Spanish, Italian, and Portuguese

SPANISH

The field of concentration requires 44 hours distributed as follows.

1. At least 27 hours in Spanish courses above the 100 level, of which the following (or equivalent) must be included: Span. 200, 209, 211, 217, 232, 233, 240, 241, 242, 298, and at least one course at the 300 level. Students are advised that graduate-level courses (for example, 405, 417, 424, 432, 433, and 453) may be open to them with the consent of the instructor, in consultation with their adviser.
2. At least 15 to 17 hours, chosen in consultation with an adviser, in one related area (or a combination of two or three, with no less than 8 hours in each) to complete the required 44 hours. There is a wide choice in cognate courses since

the student's interests may vary from Spanish language and literature (both continental and Spanish American) to commerce in Spanish-America, or international law, or Latin American studies. The following are possible cognate areas: any of the other modern or ancient languages and literatures which may be appropriate to individual interests; humanities (comparative literature, comparative religion, linguistics, philosophy); social sciences (anthropology, geography, history, Latin American studies, political science, sociology); education; fine arts; journalism. Other possibilities can be approved in individual cases (such as biology, chemistry, commerce, communications, economics, engineering, finance, physics, physiology, psychology).

Year Abroad Program: See page 349.

ITALIAN

The field of concentration requires 44 hours distributed as follows.

1. At least 26 hours in Italian courses beyond the prerequisites of Ital. 101-104, chosen from Ital. 209, 211, 212, 221, 309, 311, 312, 321, 322, 331, 333, or another 300-level course. Ital. 199, 290, and 293 may be included with the approval of the undergraduate adviser of Italian and the course instructor. Students are advised that graduate-level courses (for example, 411, 412, 415, 416, 422, 451, 452, and 462) may be open to them with the consent of the instructor and in consultation with their adviser.
2. At least 15 to 18 hours, chosen in consultation with an adviser, in one related area (or a combination of two or three, with no fewer than 8 hours in each) to complete the required 44 hours. There is a wide choice in cognate courses since the student's interests may vary from Italian language and literature to international banking, law, art history, music, or painting. The following are possible cognate areas: any of the other modern or ancient languages and literatures which may be appropriate to individual interests; humanities (comparative literature, comparative religion, linguistics, philosophy); social sciences (anthropology, geography, history, Latin American studies, political science, sociology); education; fine and applied arts (architecture, art history, fine arts); journalism. Other possibilities can be approved in individual cases (biology, chemistry, commerce, communications, economics, engineering, physics, physiology, psychology).

PORTUGUESE

The field of concentration requires 44 hours distributed as follows.

1. At least 26 hours in Portuguese courses beyond the prerequisites of Port. 101-104 and Port. 111-112, including Port. 209, 212, 221, 222, 301-304, and 362. Port. 199 and 290 may be included with the approval of the undergraduate adviser for Portuguese and the course instructor. Students are advised that graduate-level courses (for example, 405-408, 462, and 491) may also be open to them with the consent of the instructor.
2. At least 15 to 18 hours, chosen in consultation with an adviser, in one related area (or no fewer than 8 hours in each of two) to complete the required 44 hours. There is a wide choice of cognate courses since the student's interests may vary from Iberian literature to animal husbandry in Angola and urbanology in Brazil. The following are possible cognate areas: any of the other modern or ancient languages and literatures which may be appropriate to individual interests; humanities (comparative literature, comparative religion, linguistics, philosophy); social sciences (anthropology, geography, history, Latin American studies, political science, sociology); education; fine and applied arts (architecture, art history, fine arts); journalism. Other possibilities can be approved in individual cases (biology, chemistry, commerce, communications, economics, engineering, physics, physiology, psychology).

Departmental Distinction: To qualify for consideration for departmental distinction, a student must maintain a 4.25 grade-point average and must register for the appropriate senior thesis course. By completing a thesis, the student will receive credit for the course. Whether or not departmental distinction is to be awarded, and if so, at what level, will be determined by the thesis director in consultation with the honors adviser. Prospective candidates for departmental distinction should consult with the honors adviser by the beginning of their senior year to make arrangements for naming a thesis director.

Speech Communication

The Department of Speech Communication offers two options within its field of concentration: rhetorical and communication theory, and interpretation. The field of concentration consists of a minimum of 48 hours distributed as follows.

1. A minimum of 29 hours in courses in speech communication, at least 15 of which must be at the 200 level or above.
2. A minimum of 12 hours in cognate courses chosen from departments or programs whose offerings are appropriate to the option selected. Students must obtain the approval of a speech communication adviser for their programs of courses.
3. A minimum of 7 additional hours in speech communication or cognate courses selected in consultation with an adviser.

Rhetorical and Communication Theory Option:

This option provides a broad acquaintance with theory, practice, and criticism in rhetorical and communication theory.

Requirements: The student must take at least one speech communication course from each of the following areas.

1. Interpersonal and small group communication: Sp. Com. 113, 211, 230, 313, 332, 335.
2. Persuasion and social influence: Sp. Com. 213, 221, 223, 320, 321, 324.
3. Rhetorical theory: Sp. Com. 102, 210, 315, 317, 322.
4. Criticism of public discourse: Sp. Com. 177, 252, 253, 254, 323, 350, 353.

Additional hours in speech communication and in cognate fields will be chosen in consultation with, and with the approval of, a departmental adviser. The resulting program may be distributed among the four areas listed above, or it may be a specialized program organized around a theme or topic.

Interpretation Option:

Requirements: In this option the student must elect Sp. Com. 141, 142, 161, 243, 255, 342, 344, and 345.

Additionally the student must elect at least 18 hours in literature courses approved by a speech communication adviser. These should include a course in Shakespeare, a course in American literature, a course in English literature before 1800, and a course in English literature from 1800 to present.

Departmental Distinction: The Department of Speech Communication encourages superior students to participate in programs leading to departmental Distinction or High Distinction. Admission to the departmental honors program requires an all-University grade-point average of 4.25 and a curriculum average of 4.5. All students seeking either level of distinction must maintain these averages and must complete 12 hours of courses in the department numbered 300 or above. Up to 4 hours of credit in Sp. Com. 291 (honors independent study) or 293 (honors thesis) may be counted toward the 12 hours of credit in courses numbered 300 or above. To achieve High Distinction a candidate must complete an undergraduate thesis acceptable to the department.

Statistics

This field of concentration is sponsored by the Department of Mathematics. See page 391.

Specialized Curricula

CURRICULA IN CHEMICAL ENGINEERING AND CHEMISTRY

The following curricula in chemistry and chemical engineering afford more specialized training than is required of students who make chemistry their concentration in the sciences and letters curriculum which is described on page 361.

CURRICULUM IN CHEMISTRY

For the degree of Bachelor of Science in Chemistry

A total of at least 130 semester hours of course work as outlined below, with a 3.0 (A = 5.0) academic grade-point average or better, is required for graduation. The Department of Chemistry will supply upon request a brochure showing recommended semester-by-semester programs for the completion of the curriculum.

Each graduate of the chemistry curriculum is certified to the American Chemical Society as having met its specifications for professional education in chemistry.

Certain substitutions by equivalent courses or sequences are normally allowed. For example, Chem. 101, 102, and 122 can be substituted for Chem. 107, 108, 109, 110. Mathematics through 241 or 245 can be substituted for the sequence Math. 120, 130, 240 below. Such substitutions do not affect the requirement of a total of 130 semester hours for graduation. Some substitutions, such as Physcs. 101, 102, in place of 106, 107, 108, are not allowed. All proposals for substitutions must be discussed with the academic adviser.

REQUIREMENTS	HOURS
Chem. 107, 108, 109, 110, 136, 181, 336, 383, 342, 344, 385, and 315	35
Math. 120, 130, 240	13
Physcs. 106, 107, 108	12
Advanced (300- and 400-level) chemistry and/or biochemistry courses, including 4 semester hours of laboratory work	10
Additional technical electives chosen from: (1) biochemistry; (2) Chem. 292; (3) chemistry, 300 level; (4) Chem. 199, 3 hours maximum; (5) computer science; (6) mathematics courses, 249 and higher; (7) physics, life sciences, or geology courses, 200 level or higher; (8) Biol. 151	12
Chem. 292 and Bioch. 292 are especially recommended and will reduce the amount of laboratory work required in the 10 hours of advanced chemistry and biochemistry from 4 to 2.	
At least the first two years of high school or two semesters of university work in one foreign language. German is most strongly recommended.	
Rhetoric (4 hours), humanities (6 hours), and social sciences (6 hours) to meet the all-University requirements in rhetoric and general education	16
Thirty-two hours of free (technical and/or nontechnical) electives, not including any credit in satisfaction of the above requirements, and not including any courses taken preparatory to the chemistry, mathematics, or physics requirements above	32
Minimum total	130
Departmental Distinction: The requirements for graduation with distinction are the same as for the sciences and letters concentration in chemistry; see page 361.	

Cooperative Education Program in Chemistry

See "Chemistry," under Sciences and Letters Concentrations, on page 361.

CURRICULUM IN CHEMICAL ENGINEERING

For the degree of Bachelor of Science in Chemical Engineering

A total of 129 hours of credit is required for graduation as shown below and on page 407.

The chemical engineering curriculum is arranged in quite a flexible manner to permit students to use their elective hours and to substitute courses to arrange programs incorporating various specific areas of chemical engineering or interdisciplinary areas. For example, sequences can be set up in conjunction with the student's adviser to emphasize environmental engineering, basic physical sciences, biochemical engineering, engineering practice, or many other options. It will be advantageous to students to plan their course sequences with an adviser as early in their academic careers as possible.

Students entering without adequate preparation in mathematics and chemistry may find it difficult to complete the chemical engineering curriculum in four years. A typical program, including all required courses and electives, is shown below. Individual students may vary the order in which the various courses are taken to suit their individual needs. However, care must be exercised in scheduling to insure that necessary course prerequisites are met.

Students in the curriculum of chemical engineering must maintain a 3.5 general average, excluding military training, in order to be accepted by the department as juniors and seniors. Students with less than a 3.5 will be considered on an individual basis if they demonstrate strong career motivation and aptitude.

Departmental Distinction: Students in chemical engineering registered in Ch. E. 292 (Senior Thesis) or 390 (Projects) become candidates for departmental distinction. The level of distinction to be recommended is determined by the quality of the special work done, in addition to the requirements that the overall grade-point averages (for work done at the University of Illinois, exclusive of military training) of 4.2, 4.4, and 4.6 are required for the citations of Distinction, High Distinction, and Highest Distinction, respectively.

FIRST YEAR	FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS	
Chem. 107 ¹ — General Chemistry	3	Chem. 108 — General Chemistry	.....	3
Chem. 109 — General Chemistry Lab.	2	Chem. 110 — General Chemistry Lab.	.....	2
Math. 120 — Calculus and Analytic Geometry, I	5	Math. 130 — Calculus and Analytic Geometry, II	.....	5
Rhet. 105 or 108 — Composition	4	Phys. 106 — General Physics (Mechanics)	.....	4
Elective ³	3	Ch. E. 161 — The Chemical Engineering Profession	.....	1
Total	17	Total	.....	15
SECOND YEAR					
Chem. 136 — Organic Chemistry	3	Ch. E. 261 — Introduction to Chemical Engineering	.....	3
Chem. 181 — Structure and Synthesis	2	Chem. 336 — Organic Chemistry ⁴	.....	3
Math. 240 — Calculus of Several Variables	3	C.S. 101 — Introduction to Automatic Digital Computing	.....	3
Phys. 107 — General Physics (Heat, Electricity, and Magnetism)	4	Phys. 108 — General Physics (Wave Mo- tion, Sound, Light, and Modern Physics)	.....	4
Elective ³	3	Elective ³	.....	3
Total	15	Total	.....	16

THIRD YEAR

Ch. E. 370 — Chemical Engineering Thermodynamics	3	Ch. E. 371 — Fluid Mechanics and Heat Transfer	4
Chem. 342 — Physical Chemistry	4	Chem. 344 — Physical Chemistry	4
Chem. 383 — Dynamics and Structure	2	Chem. 385 — Chemical Fundamentals	4
Math. 345 — Differential Equations and Orthogonal Functions	3	Electives ^{2,5}	4
Electives ^{2,5}	5	Total	16
Total	17		

FOURTH YEAR

Ch. E. 373 — Mass Transfer Operations ..	4	Ch. E. 390 — Chemical Engineering Projects	2
Ch. E. 374 — Chemical Engineering Laboratory	3	Ch. E. 377 — Synthesis and Design of Chemical Systems	3
Ch. E. 381 — Chemical Rate Processes and Reactor Design	2	Electives ^{2,5}	12
Electives ^{2,5}	7	Total	17
Total	16		

¹ Students required to take Math. 112, 114, and, consequently, do not satisfy the prerequisite for Chem. 107 should enroll in Chem. 101.

² Students must complete at least one social science sequence of a minimum of 6 semester hours and one humanities sequence of a minimum of 6 semester hours.

³ One year of one foreign language is required for the Bachelor of Science degree. Two units of high school credit in one foreign language are equivalent to one year of college credit. Students who take four semesters of foreign language in college may satisfy the humanities elective by taking 8 hours of the intermediate foreign language (103-104) plus at least 3 additional hours from among the courses listed in the general education humanities requirements of the sciences and letters curriculum. (See page 354.)

⁴ Biach. 350 may be substituted for Chem. 336.

⁵ Students must take at least 18 hours of technical electives in fields such as chemical engineering, chemistry, biochemistry, physics, mathematics, or engineering. These must include at least 5 hours of chemical engineering electives plus at least 6 additional hours of 300-level electives (or Ch. E. 292).

CURRICULUM IN GEOLOGY

For the degree of Bachelor of Science in Geology

The curriculum in geology is recommended for students who plan to enter graduate study in geology and become professional geologists. It offers more training in geology and basic science than is required of students who make geology their field of concentration in the sciences and letters curriculum in liberal arts and sciences. Requirements for the field of concentration in geology are described on page 373.

After the completion of 60 semester hours of college or university credit, a student must have and maintain thereafter a grade-point average of at least 3.5 (A = 5.0) in all subjects, excluding military training, and a grade-point average of at least 3.5 in science and mathematics courses required in the curriculum. These requirements apply to all the academic work done by a student, including any transfer credit from other institutions. Students with transfer credit must also maintain an average of at least 3.5 in all subjects and in sciences and mathematics taken at this campus.

A total of 126 semester hours of credit is required for graduation. The Department of Geology will supply upon request a brochure showing a recommended semester-by-semester program for the completion of the curriculum.

REQUIREMENTS**HOURS**

Geol. 107, ¹ 108, ¹ 215, ² 311, 320, 321, 332, and 335	36
At least 8 hours from Geol. 301, 309, 336, 338, 350, and 360	8

Math. 120, 130, 240; or 120, 131, 241; or 135, 245.....	13 or 10
Chem. 101, 102; or 107, 108, 109, 110.....	8 or 10
Physcs. 106, 107 (108 recommended in addition); or 101, 102.....	8 or 10
Bot. 100 and Biol. 104; or Biol. 110 and 111. Substitutions require approval of adviser. (Credit obtained through CLEP examination in the natural sciences does not satisfy this requirement).....	8 or 10
At least one course in a cognate subject such as mathematics, chemistry, physics (including Physcs. 108), life sciences, engineering, computer science, and statistics. Approval of adviser required. If the cognate course is in mathematics, chemistry, physics, or life sciences, it must be beyond the level of the required courses enumerated above.....	3-4
Rhet. 105 or 108 (4 hours); approved sequences in humanities (6 hours) and social science (6 hours).....	16
Foreign language — See the sciences and letters curriculum foreign language requirements for ways in which the requirement may be satisfied. German, Russian, or French is strongly recommended.....	0-16
Electives, not including any credit in satisfaction of the above requirements and not including any courses taken preparatory to the science or mathematics requirement described above. Recommended areas include geology, mathematics, chemistry, physics, life science, engineering, computer science, statistics.....	3-29
Total	126

¹ Students planning to follow the curriculum in geology should take Geol. 107 and 108. Students who decide to follow the curriculum in geology after first taking Geol. 101 should enroll in Geol. 108; students who decide to follow the curriculum in geology after first taking Geol. 102 should enroll in Geol. 107. The combination Geol. 101 and 102 will be accepted as a substitute for the sequence Geol. 107 and 108, but students should be aware that these courses are not intended for science majors. Geol./LAS 142 and 143 cannot be used as a substitute for Geol. 107 and 108, and credit in these courses does not count in the total hours of credit required in the curriculum.

² Geol. 215 is a summer field course taught off campus. Students having particular interests in fields such as mineralogy, petrology, and structural geology may petition to substitute an approved offering of Geol. 315, such as Geology of the British Isles. Prerequisites for such substitution are Geol. 311, 321, 332, and consent of the instructor prior to the start of the spring semester.

Departmental Distinction: Students who maintain a minimum grade-point average of 4.5 in all geology courses and 4.0 in all other science and mathematics courses, and who complete an acceptable bachelor's honors thesis based on independent research including 4 hours credit in Geol. 293, are recommended for graduation with departmental distinction.

CURRICULUM IN HUMAN RESOURCES AND FAMILY STUDIES

For the degree of Bachelor of Science in Human Resources and Family Studies

A minimum of 120 hours is required for graduation. A human resources and family studies student in the College of Liberal Arts and Sciences, eligible for graduation with Honors, shall be certified for departmental distinction if H.R.F.S. 291 or 292 is satisfactorily completed.

The following number of hours in the designated areas of study and certain specific courses listed below are required in all options of the human resources and family studies curriculum.

REQUIREMENTS

HOURS

Basic disciplines — Design, humanities, natural sciences, and social sciences, to include a minimum of:	40-58
Art and design (studio course)	2
Humanities ¹	6
Natural sciences ¹ to include:	12

Principles of physical science (minimum 3 hours) and principles of biological science (minimum 3 hours).

See option listings for specific science requirements for each option.

Social sciences ¹ to include at least one course in principles of economics and one in principles of psychology	9
Foreign language ²	0-16
Human resources and family studies ³	28-44
Math. 111 or 112, or exemption by Mathematics Placement Test	0-5
Rhet. 105 or 108, or Sp. Com. 111 and 112	4-6
Other option requirements ³	0-24
Electives, to bring total to 120	0-52

¹ All LAS students must complete at least 6 hours of designated course work in one department, or in an especially approved sequence from different departments, in each of the following four areas: biological sciences; humanities; mathematics or physical sciences; and social sciences. See *LAS Student Handbook* for the list of courses approved for general education. For social sciences, LAS accepts the courses approved by the faculty of SHRFS. Options in which the required courses are not sufficient to satisfy LAS requirements for general education in the areas of biological sciences and mathematics or physical sciences include: (1) apparel design, (2) child and family, (9) retailing, and (10) textiles and clothing.

² See the sciences and letters curriculum foreign languages requirement on page 354 for ways in which this may be satisfied.

³ For human resources and family studies and option requirements, see pages 185 through 199.

Departmental Distinction: Students interested in attaining departmental distinction in human resources and family studies should consult with the honors adviser for program requirements.

CURRICULUM IN PHYSICS

For the degree of Bachelor of Science in Physics

The curriculum in physics is recommended for students who plan to enter graduate study in physics or who wish to prepare to enter government or industrial laboratory research positions upon attaining the bachelor's degree (see also the engineering physics, sciences and letters concentration in physics, and teaching of physics curricula).

A minimum of 126 hours of credit is required for graduation. To be permitted to register in advanced physics or mathematics courses in this curriculum, a student must have a grade-point average of at least 3.5 (A = 5.0) in all subjects excluding military science and a grade-point average of at least 3.5 in all courses completed in physics and mathematics.

Entering freshmen normally take mathematics, chemistry, a foreign language, and either rhetoric or an elective in the first semester and begin physics in the second semester. Then, by taking Phycs. 108 and 341 concurrently, the basic foundation courses prerequisite to the advanced courses can be concentrated in the first two years.

REQUIREMENTS

HOURS

Chem. 101, 102 (Chem. 107, 108, 109, and 110 may be substituted by students who desire a more rigorous sequence.)	8
Math. 120, 130, 240, or equivalent and Math. 343, 345 (A student with insufficient high school mathematics may need to take Math. 112, 114 before Math. 120 but receives no credit toward the degree.)	19
Phycs. 106, 107, 108, 341, 342, 321, 386, 387, and one course chosen from Phycs. 303, 322, 361, 371, 389	38
Rhet. 105 or 108	4

General education (Courses chosen to meet the general education requirements of the sciences and letters curriculum except that students offering 1 unit or more of biology for admission may substitute additional courses in humanities or social science for the biological science requirement)	18
Foreign language (A reading knowledge of a modern foreign language. German, French, or Russian is recommended. See the sciences and letters curriculum foreign language requirement on page 354 for ways in which this may be satisfied.)	16
Free electives (Students are advised to include 6-8 hours of physics and 3-6 hours of mathematics among their electives.)	23
Total	126

Departmental Distinction: Students in the liberal arts and sciences physics curriculum are granted department distinction on the following overall grade-point averages: Distinction, 4.2; High Distinction, 4.5; Highest Distinction, 4.8. In addition to the usual course requirements of the liberal arts and sciences physics curriculum, a candidate for distinction must have 8 additional hours of 300- or 400-level physics courses or advanced courses in closely related technical subjects such as nuclear engineering, solid state electronics, astrophysics.

CURRICULUM IN SPEECH AND HEARING SCIENCE

For the degree of Bachelor of Arts in Speech and Hearing Science

A minimum of 124 hours of credit is required for graduation.

This curriculum provides a broad background in the biological, behavioral, physical, linguistic, and social foundations of human communication suitable as a basis for graduate and professional training in speech and hearing science for the individual who does not desire to become a speech pathologist or audiologist. This curriculum prepares the student to be a researcher.

REQUIREMENTS	HOURS
Biological science, including Physl. 234	12
E.E. 220 — Basic Electrical Engineering	3
Foreign language — See the sciences and letters curriculum foreign language requirement on page 354 for ways in which this requirement may be satisfied.	0-16
Humanities, college-approved sequence	6
Ling. 325 — Introduction to Psycholinguistics	3
Math. 120, 130, 240, or equivalent	13
Phys. 106, 107, 108	12
Psych. 100, 235, 311, 330, 331, 390 ¹	24
Rhet. 105 or 108	4
Sp. H.S. 301, 375, 376, 383, 385, 390	20

¹ Qualified students may substitute Psych. 306.

Departmental Distinction: Majors in speech and hearing science will qualify for the degree with Distinction in speech and hearing science if their all-University grade-point is 4.25 to 4.5 and speech and hearing grade-point is 4.5 to 4.74, and they elect one of the following procedures:

1. Enroll in Sp. H.S. 291 for 4 semester hours in addition to the minimum credit hours required for a degree and receive faculty recommendation.
2. Pass a comprehensive written and/or oral examination. The examination will be conducted by a committee appointed by the head of the department.

Majors in speech and hearing science will qualify for the degree with High Distinction in speech and hearing science if their all-University grade-point is 4.5 or better and their speech and hearing grade-point is 4.75 or better, and they elect one of the following procedures:

1. Enroll in Sp. H.S. 291 for 4 semester hours in addition to the minimum credit hours required for a degree and receive faculty recommendation.

2. Pass a comprehensive written and/or oral examination. The examination will be conducted by a committee appointed by the head of the department.

Majors in speech and hearing science will qualify for the degree with Highest Distinction in speech and hearing science if their all-University grade-point is 4.5 or better and their speech and hearing grade-point is 4.75 or better and they complete the following two procedures:

1. Enroll in Sp. H.S. 291 for 4 semester hours in addition to the minimum credit hours required for a degree, and
2. Complete an acceptable bachelor's thesis approved by the sponsoring faculty member and the honors adviser.

Teacher Education Curricula

This section contains a description of requirements of programs leading to the bachelor's degree in teacher education. More detailed information pertaining to specific course requirements for each area of specialization is provided by faculty advisers. It is essential that students fulfill the specific course requirements of their program in order to be eligible for the bachelor's degree in teacher education. Only through regular communication with the teacher education adviser may students be assured of the appropriateness of their semester program. Also see Council on Teacher Education on page 135 for information pertinent to all teacher education curricula.

General education requirements of the College of Liberal Arts and Sciences must be fulfilled by students pursuing teacher education curricula in that college. When these curricula include an appropriate sequence in the humanities, the social sciences, or the natural sciences as a part of the major teaching area requirements, that sequence fulfills the corresponding general education requirements.

GENERAL EDUCATION REQUIREMENTS

HOURS

Sp. Com. 111 and 112, Rhet. 105 and a speech performance elective, Rhet. 108 and a speech performance elective	6-7
Natural sciences	6-8
History of the United States (Hist. 151, 152)	3-4
American government (Pol. S. 150)	3
General psychology	3
Foreign language	16
Health and/or basic physical education activities	3
Humanities	6
Total	46-50

PROFESSIONAL EDUCATION REQUIREMENTS¹

The following requirements are common to all programs preparatory to teaching in secondary schools, except as noted:

Orientation to professional education (Se. Ed. 101)	2
Principles of secondary education (Se. Ed. 240)	2
Psychology of teaching and learning (Ed. Psy. 211)	3
Foundations of American education (E.P.S. 201)	3
Techniques of teaching (Se. Ed. 241)	4-5
Educational practice (Ed. Pr. 242)	5-8
Total	19-23

¹ At the time of printing, all teacher training curricula were under revision to include a minimum of 100 clock hours of clinical experience prior to student teaching. Consult your adviser for specific requirements.

CURRICULUM PREPARATORY TO THE TEACHING OF BIOLOGY

For the degree of Bachelor of Science in the Teaching of Biology

While this curriculum is primarily designed for students preparing to teach biology, it also permits the breadth of work in the sciences required for teaching general science. The courses outlined below total 129 hours. A minimum of 120 hours, excluding military training, is necessary for graduation. Exemptions will be granted in language and mathematics, depending upon the student's high school experience. While students are no longer required to complete a teacher education minor, those desiring a minor must select it from those listed on page 139. The requirements for the minor in general science are fulfilled by those completing this curriculum.

Departmental Distinction: In order to graduate with distinction (Bachelor of Science) in biology teacher education, the student must meet the following requirements:

1. Have at least a 4.5 grade-point average for all work completed.
2. Present a letter from his or her student teaching *evaluator* as evidence of excellent performance in student teaching capacity.

GENERAL EDUCATION REQUIREMENTS

HOURS

Forty to 42 hours in general education courses. (See page 411.) The requirements of the major satisfy the natural sciences requirement.

PROFESSIONAL EDUCATION REQUIREMENTS

(See page 411.)

REQUIREMENTS OF THE MAJOR

Mathematics	
College algebra and trigonometry	5
Statistics	3-4
Chemistry	
General	8-10
Organic	5
Physics	10
Biology	
General	10
Advanced (200- and 300-level courses or equivalent)	
Genetics	4
Microbiology	6-8
Animal or plant physiology	5-6
Invertebrate biology	3-5
Vertebrate biology	3-5
Plant biology	3-5
Environmental biology	3-5
Total	68-82

TEACHER EDUCATION MINOR IN BIOLOGY

Twelve hours of electives are to be chosen from the various departments in the School of Life Sciences, in consultation with the adviser. An attempt should be made to obtain background in each of the general areas in the School of Life Sciences to give the students minoring in the teaching of biological sciences as much breadth as possible as prospective biology teachers.

REQUIRED COURSES

HOURS

Principles of Biology I (Biol. 110)	5
Principles of Biology II (Biol. 111)	5

Genetics (Biol. 210)	4
Electives to be taken in the life science areas chosen in consultation with the biology education adviser.	12
Total	26

TEACHER EDUCATION MINOR IN GENERAL SCIENCE

Additional hours in other sciences such as astronomy, geology, and physical geography are recommended for the student completing the minor in general science.

REQUIRED COURSES	HOURS
General physics (Phycs. 101, 102)	10
Principles of biology (Biol. 110, 111)	10
General chemistry	8
Total	28

CURRICULUM PREPARATORY TO THE TEACHING OF CHEMISTRY

For the degree of Bachelor of Science in the Teaching of Chemistry

This curriculum is designed to prepare the student to teach physical science with a major in chemistry and a minor in physics or mathematics. A minimum of 125 hours of credit is required for graduation.

Students may elect to minor in either mathematics or physics. Regardless of the minor the curriculum requires the completion of the general physics sequence, including Phycs. 107, and one year of calculus. The minor in either mathematics or physics shall consist of at least 6 hours of 300-level mathematics or physics respectively in addition to the elementary courses.

Departmental Distinction: Students in this curriculum may earn Distinction, High Distinction, or Highest Distinction in the teaching of chemistry. Distinction is awarded on the basis of performance in student teaching and academic achievement.

GENERAL EDUCATION REQUIREMENTS

Fifty to 52 hours in general education courses. (See page 411.) Requirements of the major satisfy the natural sciences requirement. A minimum of 4 hours of biological science and a minimum of 6 hours of humanities are required in addition to courses required for teacher certification.

PROFESSIONAL EDUCATION REQUIREMENTS

Nineteen to 21 hours in professional education courses. (See page 411.)

REQUIREMENTS OF THE MAJOR

The sequence of chemistry courses chosen by the student is somewhat flexible and depends upon previous educational experience as well as other factors. The following two sequences of chemistry courses are recommended. The first is the less rigorous program and might be followed by a student whose high school background is not particularly strong. The second is similar to that followed by students in the chemistry curriculum. An intermediate program involving other courses, may be chosen with the consent of the departmental adviser, but, in all cases, the course program should include a course in physical chemistry and two additional courses at the 300 level.

FIRST SEQUENCE	HOURS
General chemistry	8
Elementary quantitative analysis	5

Basic organic chemistry and structure and synthesis (Chem. 136, 181)	5
Physical chemistry	5
Additional chemistry	9
Total	32

SECOND SEQUENCE

General chemistry	10
Organic chemistry	6
Structure and synthesis (Chem. 181)	2
Inorganic chemistry (Chem. 315)	3
Physical chemistry	6
Dynamics, structure, and physical methods (Chem. 383)	2
Additional chemistry	3
Total	32

TEACHER EDUCATION MINOR IN CHEMISTRY

REQUIRED COURSES

HOURS

General chemistry	8
Elementary quantitative analysis	5
Elementary organic chemistry, including laboratory	5
Physical science electives (preferably physics)	8-10
Total	26-28

TEACHER EDUCATION MINOR IN PHYSICAL SCIENCE

Twenty-four semester hours in the field with approximately one-half of the work in chemistry and the other half in physics. Additional work in other physical sciences, such as astronomy, geology, and physical geography, is recommended. This minor is intended primarily for students preparing to teach mathematics.

TEACHER EDUCATION MINOR IN CINEMA STUDIES

Upon electing this minor, students should consult with the director of the Unit for Cinema Studies for assignment to a faculty adviser. The sequence of courses counted toward completion of this minor must be approved in writing by the director of the Unit for Cinema Studies prior to the completion of the student's sixth semester. See Cinema Studies in the *Timetable* each semester for a list of courses currently being offered. Contact the Unit for Cinema Studies for a more detailed description of these courses.

REQUIRED COURSES

HOURS

Engl. 104 — Introduction to Film	3
Art 180 or 280 or 388 Cinematography or equivalent ¹	3
Human. 261 — Survey of World Cinema, I	3
Human. 262 — Survey of World Cinema, II or Human. 361 — Film Theory and Criticism	3
Human. 297 — Junior Seminar and Tutorial or equivalent ¹	3
Other cinema studies courses	9 ²
Total	24

¹ The cinema studies option adviser may approve a specific substitution for the cinematography and the junior seminar/tutorial requirements if the student is unable to secure these courses.

² This total must include courses in at least two different departments of the School of

Humanities. It must also include at least 3 hours at the 300 level. One humanities cinema studies course (besides Human. 297) offered directly by the school may be counted toward this requirement.

TEACHER EDUCATION MINOR IN COMPUTER SCIENCE

REQUIRED COURSES	HOURS
C.S. 121 — Introduction to Computer Programming.....	4
C.S. 221 — Program and Data Structures.....	3
Two of the following four courses:.....	6
C.S. 257 — Introduction to Numerical Analysis	
C.S. 264 — Introduction to the Structure and Logic of Computers	
C.S. 273 — Introduction to the Theory of Computation	
C.S. 281 — Introduction to Computer Circuitry	
Two 300-level computer science courses.....	6
Total	19

CURRICULUM PREPARATORY TO THE TEACHING OF EARTH SCIENCE

For the degree of Bachelor of Science in the Teaching of Earth Science

This curriculum is designed for students preparing to teach earth science as their major area of specialization. Students in this curriculum are required to complete a teaching minor in biology, chemistry, general science, mathematics, or physical science.

Including general and professional education requirements, the courses outlined below total 129 to 136 hours; the minimum number of hours for graduation is 125. The college requirements of 30 hours of advanced courses must be met.

Departmental Distinction: See geology concentration for requirements.

GENERAL EDUCATION REQUIREMENTS

Forty to 42 hours in general education courses. (See page 411.) Requirements for the major satisfy the natural science requirement.

PROFESSIONAL EDUCATION REQUIREMENTS

Nineteen to 21 hours in professional education courses. (See page 411.)

REQUIREMENTS OF THE MAJOR	HOURS
Earth sciences	
General geology	8
Minerals and rocks (Geol. 233)	4
Paleontology and stratigraphy (Geol. 222)	4
Regional field study (Geol. 115)	2
Physical geography (meteorology and climatology)	4
General astronomy ¹ (Astr. 210)	3
Electives ²	8
Supporting sciences (may fulfill, in part, the teacher education minor)	
General chemistry	4
Mathematics ³	2-5
Principles of biology (Biol. 110)	5
General physics (Phycs. 101)	5
Total	49-52

¹ Students who do not take a year of physics should take descriptive astronomy; students may also elect to take astronomy for teachers.

² A minimum of 8 additional hours in earth science is required. Recommended courses are introductory soils, oceanography, advanced physical geography, or geomorphology, and

other appropriate advanced courses in agronomy, astronomy, geology, and geography.

³ Mathematics through trigonometry is required. Calculus and analytic geometry are recommended for all students.

REQUIREMENTS OF THE TEACHER EDUCATION MINOR

Students in this curriculum are required to complete one of the following teacher education minors: biology (page 412); chemistry (page 414); general science (page 414); mathematics (page 427); or physical science (page 414).

TEACHER EDUCATION MINOR IN EARTH SCIENCE

REQUIRED COURSES

HOURS

Descriptive astronomy (Astr. 101, 102)	8
Physical Geography I	4
General geology (Geol. 107, 108)	8
Regional field study (Geol. 115)	2
Minerals and rocks (Geol. 233)	4
Total	26

CURRICULUM PREPARATORY TO THE TEACHING OF ENGLISH

For the degree of Bachelor of Arts in the Teaching of English

A minimum of 128 hours is required for graduation in this curriculum. Students are required to complete one teaching minor or to fulfill requirements for an alternative to a minor. Students who elect the teacher education major in literature must complete the teacher education minor in rhetoric or in English as a second language.

Departmental Distinction: The English Education Honors Program is designed for English education majors in the College of Liberal Arts and Sciences. Its purposes are to give University of Illinois students who are preparing themselves to become teachers of English in junior and senior high schools an alternative opportunity to graduate with honors, a wider range of choices for independent honors research projects, and a greater variety of methods and procedures in conducting their research. Its purpose is not to discourage English education majors in the College of Liberal Arts and Sciences from pursuing honors in the English concentration; as a matter of fact, all LAS English education majors may pursue honors in the English concentration and/or in English education as well.

All candidates for any level of distinction must:

1. Register as an honors candidate in the English Education Advising Office of the Department of English no later than the second week of the second semester of the junior year.
2. Have a minimum cumulative grade-point average of 4.25 in all course work.
3. Take and pass with a high grade Engl. 291 — Honors Individual Study, for 1 semester hour credit. The primary purpose of this course will be the planning of an independent research project, including the preparation of a formal proposal for the project.
4. Take and pass with a high grade Engl. 293 — Honors Senior Thesis, for 3 semester hours credit. This course will involve: (a) the conducting of the independent research project planned in Engl. 291; (b) the writing of a final report, including a presentation of the findings and a summary of the implications of the findings; and (c) the taking of an oral examination based on the project report.
5. Receive the recommendation of the English Education Area Committee.

In addition to satisfying the general requirements listed above, the candidate

for Distinction must earn a minimum of a 4.5 grade-point average in his or her English major course work and in his or her professional course work (including Se. Ed. 241, 336, and Ed. Pr. 242). The candidate for High Distinction and for Highest Distinction must earn a minimum of 4.7 and 4.9 respectively in the above courses. In addition, candidates for Highest Distinction must select and submit a star paper. For additional information about this program, students should see the English education adviser.

GENERAL EDUCATION REQUIREMENTS

Forty-three to 47 hours in general education courses. (See page 411.) The humanities requirement is fulfilled through major teaching field courses. Students in this curriculum must complete a course in oral interpretation of literature (3 hours).

PROFESSIONAL EDUCATION REQUIREMENTS

Students in this curriculum must complete a course (Se. Ed. 336) in the teaching of reading (3 hours) in addition to the prescribed professional education courses (26 hours). (See page 411.)

REQUIREMENTS OF THE MAJOR

HOURS

Option 1: Teacher Education Major in English

A minimum of 6 hours chosen from Engl. 101, 102, 103, and 198	6
Shakespeare (Engl. 118)	3
Survey of American literature	6
Survey of English literature	6
Literary criticism (Engl. 215)	3
Engl. 302 — Descriptive English Grammar	3
Engl. 301 — Introduction to the Study of the English Language, or Engl. 303 — Historical Introduction to the English Language	3
Engl. 381 — Theory and Practice of Written Composition	3
Engl. 385 — Literature for the High School	3
Advanced electives in literature	6
Total	42
Any approved teacher education minor (see page 139) or an approved alternative to a minor (see an adviser for details)	18-30

Option 2: Teacher Education Major in Literature

Available only with the teacher education minor in rhetoric or in English as a second language.

A minimum of 6 hours chosen from Engl. 101, 102, 103, and 198	6
Shakespeare (Engl. 118)	3
Survey of American literature	6
Survey of English literature	6
Literary criticism (Engl. 215)	3
Engl. 385 — Literature for the High School	3
Advanced electives in literature	9
Total	36

TEACHER EDUCATION MINOR IN RHETORIC

Available only with a teacher education major in literature.

REQUIRED COURSES

HOURS

Rhet. 105 and a speech performance elective, or Rhet. 108 and a speech performance elective, or Sp. Com. 111 and 112	6-7
Rhet. 133 — Principles of Composition, or Rhet. 143 — Intermediate Expository Writing ..	3
Rhet. 144 — Narrative Writing	3
Engl. 381 — Theory and Practice of Written Composition	3
Engl. 302 — Descriptive English Grammar	3

Electives in rhetoric or related fields	6-7
Total	24-26

TEACHER EDUCATION MINOR IN ENGLISH AS A SECOND LANGUAGE

Option 1

Available only with a teacher education major in literature.

REQUIRED COURSES	HOURS
Rhet. 105 and a speech performance elective, or Rhet. 108 and a speech performance elective, or Sp. Com. 111 and 112	6-7
E.S.L./Ling. 388-389 — Linguistics in Language Learning I and II	8
Ling. 300 — Introduction to Linguistics, or Ling. 200 — Elements of Linguistics	3
Rhet. 133 — Principles of Composition, or Rhet. 143 — Intermediate Expository Writing ..	3
E.S.L. 302 — Descriptive English Grammar	3
Ling./Anth./Comm. 370 — Language, Culture, and Society, or Ling. 305 — Introduction to Applied Linguistics	3
Total	26-27

Option 2

Available only with a teacher education major in a foreign language, speech, or social studies.

REQUIRED COURSES	HOURS
Rhet. 105 and a speech performance elective, or Rhet. 108 and a speech performance elective, or Sp. Com. 111 and 112	6-7
E.S.L./Ling. 388-389 — Linguistics in Language Learning I and II	8
Ling. 300 — Introduction to Linguistics, or Ling. 200 — Elements of Linguistics	3
Rhet. 133 — Principles of Composition, or Rhet. 143 — Intermediate Expository Writing ..	3
E.S.L. 302 — Descriptive English Grammar	3
Engl. 116 — Masterpieces of American Literature, or Engl. 256 — Survey of American Literature II	3
Total	26-27

Option 3

Available only with a teacher education major in English, including E.S.L. 302 — Descriptive English Grammar.

REQUIRED COURSES	HOURS
Rhet. 105 and a speech performance elective, or Rhet. 108 and a speech performance elective, or Sp. Com. 111 and 112	6-7
E.S.L./Ling. 388-389 — Linguistics in Language Learning I and II	8
Ling. 300 — Introduction to Linguistics, or Ling. 200 — Elements of Linguistics	3
Ling. 305 — Introduction to Applied Linguistics, or Ling./Sp. Com. 301 — General Phonetics, or Sp. Com. 208 — Speech and Hearing Problems in the Classroom	3
Sp. H.S. 109 — Introduction to Physiological Phonetics	3
Ling./Anth./Comm. 370 — Language, Culture, and Society	3
Total	26-27

TEACHER EDUCATION MINOR IN ENGLISH

REQUIRED COURSES	HOURS
Rhet. 105 or 108	4

Two courses in American literature	6
Two courses in English literature	6
Engl. 381 — Theory and Practice of Written Composition, or Rhet. 133 — Principles of Composition, or Rhet. 143 — Expository Writing	3
Engl. 302 — Descriptive English Grammar	3
Electives in English or American literature	6
Total	28

CURRICULA PREPARATORY TO TEACHING FOREIGN LANGUAGES

The College of Liberal Arts and Sciences offers curricula for the preparation of teachers of French, German, Latin, Russian, and Spanish. Teacher education minors are also available in these languages and Italian and Portuguese. A supplementary program, substituted for the normally required teacher education minor, is available for those students who plan to teach a foreign language in elementary school as well as secondary school. See page 425.

GENERAL EDUCATION REQUIREMENTS

HOURS

Rhetoric and speech (any one of the three options listed)	6-7
Sp. Com. 111 and 112, or Rhet. 105 and a speech performance elective, or Rhet. 108 and a speech performance elective	
Biological or physical science (any approved sequence)	6-8
History of the United States (Hist. 151 or 152)	3-4
American Government (Pol. S. 150)	3
General psychology (Psych. 100 or 103)	3
Health and/or physical education	3
Total	24-28

PROFESSIONAL EDUCATION REQUIREMENTS

Introduction to Foreign Language Education (Human. 279)	3
Principles of Secondary Education (Se. Ed. 240)	2
Educational Practice (Ed. Pr. 150)	1
Foundations of American Education (E.P.S. 201)	3
Parateaching ¹	2
Psychology of Teaching and Learning (Ed. Psy. 211)	3
Educational Practice (student teaching) (Ed. Pr. 242)	8
Total	22

¹ Students are required to complete Fr. 270, Ger. 270, Lat. 270, Russ. 270, or Span. 270 depending on their area of concentration.

CURRICULUM PREPARATORY TO THE TEACHING OF FRENCH

For the degree of Bachelor of Arts in the Teaching of French

A minimum of 120 hours is required for graduation.

Departmental Distinction: In order to qualify for Distinction, a student must have a 4.5 or better cumulative grade-point average as well as a 5.0 in practice teaching. In addition to meeting the course requirements specified for the major, a student who wants to graduate with departmental Distinction must complete two additional courses on the advanced level in French or in his or her teaching minor. He or she has the option of registering in Fr. 292 and writing an honors thesis, which will be read by two other faculty members besides the instructor of 292, or of providing two letters of recommendation evidencing exceptional teaching.

GENERAL EDUCATION REQUIREMENTS

Twenty-four to 28 hours in general education courses. (See page 419.) The humanities requirement as well as the college foreign language requirement is fulfilled by the requirements of the major.

PROFESSIONAL EDUCATION REQUIREMENTS

Twenty-two hours in professional education courses. (See page 419.)

TEACHING AREA OF CONCENTRATION: French**HOURS**

Elementary French (Fr. 101-102 or equivalent)	8
Intermediate French (Fr. 133-134 or equivalent)	8
French literature (Fr. 201-202 or equivalent)	6
Oral French (Fr. 211-212-217 or equivalent)	10
French composition (Fr. 215 or equivalent)	3
French civilization (Fr. 335-336 or equivalent)	6
Teachers' course (Fr. 280 or equivalent). This course will count as part of the professional education requirements for certification purposes. Normally taken during the student teaching semester.	4
French electives selected from among advanced-level courses in French civilization, language, and/or literature.	5
Total ¹	50

Note: French Study Abroad (Fr. 299) is strongly recommended.

TEACHER EDUCATION MINOR

Students in this curriculum are required to complete a teacher education minor. See page 139 for a list of approved minors and the colleges which offer them. See page 425 for requirements to be fulfilled by those planning to teach French in both elementary and secondary schools.

¹ The total of 50 hours may be reduced by as much as 16 hours through prerequisite credit for work equivalent to Fr. 101-104 taken in secondary school.

TEACHER EDUCATION MINOR IN FRENCH**REQUIRED COURSES****HOURS**

Elementary French (Fr. 101-102 or equivalent)	8
Intermediate French (Fr. 133-134 or equivalent)	8
Oral French (Fr. 211-212 or equivalent)	6
Total	22

CURRICULUM PREPARATORY TO THE TEACHING OF GERMAN

For the degree of Bachelor of Arts in the Teaching of German

A minimum of 120 hours of credit is required for graduation.

Departmental Distinction: Students enrolled in the curriculum preparatory to the teaching of German may be awarded departmental Distinction, High Distinction, or Highest Distinction on the basis of the same grade-point average as required for concentrators in Germanic languages and literature, plus enrollment in two hours of Ger. 293 — Honors Senior Thesis, and on the basis of their grade (an obligatory A) in educational practice in secondary education. Letters of recommendation are solicited from the supervising and the cooperating teachers in this work for evidence of exceptional teaching.

GENERAL EDUCATION REQUIREMENTS

Twenty-four to 28 hours in general education courses. (See page 419.) The humanities requirement as well as the college foreign language requirement is fulfilled by the requirements of the major.

PROFESSIONAL EDUCATION REQUIREMENTS

Twenty-two hours in professional education courses. (See page 419.)

TEACHING AREA OF CONCENTRATION: German

	HOURS
Elementary German (Ger. 101-102 or equivalent)	8
Intermediate German (Ger. 103-104 or equivalent)	8
German conversation and writing (Ger. 211-212 or equivalent)	6
Introduction to German literature (Ger. 231-232 or equivalent)	6
Teachers' course (Ger. 280 or equivalent. This course will count as part of the professional education requirements for certification purposes. Must be taken during the student teaching semester.)	4
Advanced conversation, composition, and syntax (Ger. 301 or equivalent)	3
Advanced conversation (Ger. 302 or equivalent)	1
History of German civilization (Ger. 320 or equivalent)	4
Modern German Poetry (Ger. 330) or The German Novelle (Ger. 331) or German Drama (Ger. 332) or Literature and Culture of the German Democratic Republic (Ger. 335)	3
Structure of the German language (Ger. 365 or equivalent)	3
German elective	3
Total¹	49

Note: German Study Abroad (Ger. 299) is strongly recommended.

¹ The total of 49 hours may be reduced by as much as 16 hours through prerequisite credit for work equivalent to Ger. 101-104 taken in secondary school.

TEACHER EDUCATION MINOR IN GERMAN

REQUIRED COURSES	HOURS
Elementary German (Ger. 101-102)	8
Intermediate German (Ger. 103-104)	8
Conversation and writing (Ger. 211-212)	6
Total	22

TEACHER EDUCATION MINOR IN ITALIAN

REQUIRED COURSES	HOURS
Elementary Italian (Ital. 101-102 or equivalent)	8
Intermediate Italian (Ital. 103-104 or equivalent)	8
Composition and Conversation I and II (Ital. 211-212)	6
Total	22

CURRICULUM PREPARATORY TO THE TEACHING OF LATIN

For the degree of Bachelor of Arts in the Teaching of Latin

A minimum of 120 hours of credit is required for graduation.

Departmental Distinction: The requirements for Distinction in the teaching of Latin are the same as those for Distinction in classics.

GENERAL EDUCATION REQUIREMENTS

Twenty-four to 28 hours in general education courses. (See page 419.) The humanities requirement as well as the college foreign language requirement is fulfilled by requirements of the major.

PROFESSIONAL EDUCATION REQUIREMENTS

Twenty-two hours in professional education courses. (See page 419.)

TEACHING AREA OF CONCENTRATION: Latin

	HOURS
Elementary Latin (Lat. 101-102 or equivalent)	8
Intermediate Latin (Lat. 103-104 or equivalent)	8
Latin composition (Lat. 113-114 or equivalent)	4
Survey of Latin literature (Lat. 201-202 or equivalent)	6
Teachers' course (Lat. 280 or equivalent. This course will count as part of the professional education requirements for certification purposes. Must be taken during the student teaching semester.)	4
Readings from Latin literature (Lat. 391 or equivalent)	6
Ancient history (Hist. 181-182 or equivalent)	6
Classical archaeology (Cl. Civ. 131-132 or equivalent)	6
Total ¹	48

¹ The total of 48 hours may be reduced by as much as 16 hours through prerequisite credit for work equivalent to Lat. 101-104 taken in secondary school.

TEACHER EDUCATION MINOR IN LATIN**REQUIRED COURSES**

	HOURS
Elementary Latin (Lat. 101-102, or equivalent)	8
Intermediate Latin (Lat. 103-104, or equivalent)	8
Elementary Latin composition (Lat. 113-114, or equivalent)	4
Survey of Latin literature (Lat. 201-202, or equivalent)	6
Teachers' course (Lat. 280)	4
Total	30

The total of 30 hours may be reduced as much as 16 hours through prerequisite credit for secondary school work equivalent to Lat. 101-104. One semester of readings in Latin literature will be required in such cases.

TEACHER EDUCATION MINOR IN PORTUGUESE**REQUIRED COURSES**

	HOURS
Elementary Portuguese I and II (Port. 101-102)	8
Intermediate Portuguese (Port. 103-104)	8
Intermediate composition and conversation (Port. 211)	3
Introduction to Portuguese and Brazilian literature (Port. 201) or Readings in Portuguese (Port. 290)	3
Total	22

CURRICULUM PREPARATORY TO THE TEACHING OF RUSSIAN

For the degree of Bachelor of Arts in the Teaching of Russian

A minimum of 120 hours of credit is required for graduation.

Departmental Distinction: Concentrators in the department who are potential candidates for distinction are urged to consult the departmental honors adviser, preferably by the second semester of their junior year.

In order to graduate with departmental distinction, the candidate must meet the following requirements:

1. For Distinction: a grade-point average of at least 4.30 in the department courses, plus Russ. 293.
2. For High Distinction: a grade-point average of at least 4.50 in department courses, plus Russ. 293.
3. For Highest Distinction: a grade-point average of at least 4.75 in department courses, plus Russ. 293.

Russ. 293 is a senior honors thesis course. Under supervision of a senior staff member, the student undertakes independent research work culminating in a thesis or research paper of superior quality.

GENERAL EDUCATION REQUIREMENTS

Twenty-four to 28 hours in general education courses. (See page 419.) The humanities requirement as well as the college foreign language requirement is fulfilled by the requirements of the major.

PROFESSIONAL EDUCATION REQUIREMENTS

Twenty-two hours in professional education courses. (See page 419.)

TEACHING AREA OF CONCENTRATION: Russian

	HOURS
Courses in language and literature	
Russ. 101-102 — First-Year Russian, or equivalent	8
Russ. 103 — Second-Year Russian, or equivalent	4
Russ. 104 — Grammar Review and Conversation, or equivalent	4
Russ. 211-212 — Russian Conversation, I and II, or Russ. 303-304 — Advanced Reading and Conversation, I and II	6
Russ. 213-214 — Russian Composition, I and II, or Russ. 313-314 — Advanced Composition and Usage, I and II	6
Russ. 215-216 — Introduction to Russian Literature, I and II	6
Russ. 308 — Russian Phonetics and Pronunciation	3
Russ. 315 — Nineteenth-Century Literature in Translation, or Russ. 115, 116, 225, or 317.3	3
Russ. 280 — Teachers' Course, or equivalent. (This course will count as part of the professional education requirements for certification purposes. Must be taken during the student teaching semester.)	4
Total ¹	44
Courses in Russian history and civilization	
Hist. 219 — Survey of Russian history from early times to present, or Hist. 320, 321, 326, 327, or 328	3
Russ. 114 — Russian Civilization	4
Total	7

¹ The total of 44 hours may be reduced by as much as 16 hours through prerequisite credit for work equivalent to Russ. 101-104 taken in secondary school.

TEACHER EDUCATION MINOR

Students in this curriculum are required to complete a teacher education minor. See page 139 for a list of approved minors and the colleges which offer them. See page 425 for requirements to be fulfilled by those planning to teach Russian in both elementary and secondary schools.

ELECTIVES

Recommended electives (at least 3 hours) include Art 111, 112; C. Lit. 340, 368; Music 130, 131; Phil. 101; Slav. 319; Hist. 313-314; courses in Russian and East European area studies (Geog. 353, Soc. 350); advanced courses in the major or minor field.

TEACHER EDUCATION MINOR IN RUSSIAN

REQUIRED COURSES	HOURS
Russ. 101-102 — First-Year Russian, or equivalent	8
Russ. 103 — Second-Year Russian, or equivalent	4
Russ. 104 — Grammar Review and Conversation	4
Russ. 211-212 — Russian Conversation, I and II	6
Total	22

CURRICULUM PREPARATORY TO THE TEACHING OF SPANISH

For the degree of Bachelor of Arts in the Teaching of Spanish

A minimum of 123 hours of credit is required for graduation.

Departmental Distinction: In order to be considered for departmental distinction in the teacher education curriculum a student must:

1. Have a University grade-point average of at least 4.0;
2. Display exceptional teaching ability, attested to by at least two letters of reference; and
3. Complete an approved project or series of projects, consisting of one or more of the following options:
 - a. Ongoing participation in programs of service to others, such as those available through Volunteer Illini Projects;
 - b. An honors thesis, selected and written in consultation with the honors adviser and/or other appropriate faculty members;
 - c. Any other project(s) suggested by the student and approved by the honors adviser.

The awarding of departmental distinction, and the level of distinction to be awarded (Distinction, High Distinction, Highest Distinction), will be determined by an honors committee consisting of the honors adviser and at least two other faculty members; all three components will be considered — overall grade-point average, teaching ability, and honors project(s).

Students interested in earning departmental distinction are urged to consult their adviser early in their academic career (at least by the beginning of their junior year) in order to obtain more detailed information and make appropriate plans.

GENERAL EDUCATION REQUIREMENTS

Twenty-four to 28 hours in general education courses. (See page 419.) The humanities requirement as well as the college foreign language requirement is fulfilled by the requirements of the major.

PROFESSIONAL EDUCATION REQUIREMENTS

Twenty-three hours in professional education courses. (See page 419.)

TEACHING AREA OF CONCENTRATION: Spanish	HOURS
Elementary Spanish (Span. 101-102 or equivalent)	8
Intermediate Spanish (Span. 103-104) or equivalent	8
Spanish language: Spanish phonetics and syntax (Span. 209 or equivalent)	3
Spoken Spanish (Span. 211 and 215 or equivalent)	4-6
Spanish composition (Span. 217 or equivalent)	3
Spanish civilization: Spanish and Spanish American (Span. 232 and 233 or equivalent) ..	4
Introduction to the study of Hispanic literature (Span. 200 or equivalent)	2
Spanish literature (Span. 240 or 241 or equivalent, Medieval-Golden Age or eighteenth century to present)	3

Spanish American literature (Span. 242 or equivalent)	3
Teachers' course (Span. 280 or equivalent. This course will count as part of the professional education requirements for certification purposes. Must be taken during the student teaching semester.)	4
Syntax (Span. 352 or equivalent)	3
Spanish electives: one or two 200- or 300-level courses	3-6
Total ¹	48-53

¹ The total number of hours may be reduced by as many as 16 hours through prerequisite credit for work equivalent to Span. 101-104 taken in secondary school.

FOREIGN STUDY

It is strongly recommended that future teachers of Spanish engage in one or more semesters of study in a Spanish-speaking country. A number of the curricular requirements listed above may be met through the Year Abroad Program or other approved programs; see pages 346 through 349.

TEACHER EDUCATION MINOR IN SPANISH

REQUIRED COURSES	HOURS
Elementary Spanish (Span. 101-102 or equivalent)	8
Intermediate Spanish (Span. 103-104 or equivalent)	8
Spanish Language (Span. 209 or equivalent)	3
Oral Spanish (Span. 211 or equivalent)	2
Spanish Composition (Span. 217 or equivalent)	3
Total	24

Specialty for Teaching a Foreign Language in Both High School and Elementary School

This specialty offers preparation for those who wish to teach a foreign language and another subject in a high school or a foreign language only in an elementary school under Illinois teacher certification regulations. A student who wishes to prepare for teaching a foreign language in the elementary school, as contrasted with one who wishes to prepare for general elementary school teaching, should substitute the following for the teacher education minor required in the foreign language teacher education curricula.

	HOURS
Child development for elementary teachers (Ed. Psy. 236)	3
Classroom programs in childhood education (El. Ed. 233)	2
The teaching of language arts in the elementary school (El. Ed. 333)	3
Primary reading (El. Ed. 336)	3

The student teaching must be done in the seventh or eighth grade.

If these requirements are met, students will be qualified to apply directly to the Illinois Office of Education for the special certificate, which will permit them to teach a foreign language in all grades of the public schools, as well as for the high school certificate. The special certificate does not qualify graduates to teach any elementary school subjects other than the foreign language.

The student may complete a teacher education minor, but additional hours will be required.

CURRICULUM PREPARATORY TO THE TEACHING OF GEOGRAPHY

For the degree of Bachelor of Science in the Teaching of Geography

A minimum of 123 hours is required for graduation. Students are required to complete one teaching minor. It is strongly recommended that the minor supplement the nature of the major. A student emphasizing physical geography should select a minor from the biological or physical sciences, whereas a student emphasizing human geography should select a minor from the social sciences.

Departmental Distinction: All students majoring in the teaching of geography who have maintained a University grade-point average of 4.25, who satisfactorily complete an independent study project, and demonstrate superior performance in their student teaching will be eligible for graduation with distinction. Students should consult their adviser about distinction requirements as soon as they enter the field of concentration, and no later than the end of their junior year.

Distinction is awarded on three levels—Distinction, High Distinction, and Highest Distinction. The level of award is based on an assessment of the student's grade-point average in geography, the quality of the independent project, and the student teaching supervisor's report.

Grade-point average in geography normally required for graduation with distinction is as follows: Distinction: 4.25; High Distinction: 4.5; Highest Distinction: 4.75.

The independent study course (Geog. 290) satisfying distinction requirements will normally be taken for 4 hours credit in the senior year and consist of either a research project in geographic education or a developmental project in the teaching of geography. The project may be completed in one or two terms including the summer session. The project will be reviewed by a committee of three faculty—the project adviser and two others selected by the student. Projects will be assessed as "superior," "good," or "satisfactory."

Assessment of performance in student teaching will be based on the grade for student teaching and the supervisor's report. Normally graduation with distinction will require a grade of A in student teaching.

The honors adviser will review the student's grade-point average in geography, the project committee's judgments, and the student teaching supervisor's report, and recommend to the department head the level of distinction to be awarded.

GENERAL EDUCATION REQUIREMENTS

Forty-six to 50 hours in general education courses. (See page 411.) Students must complete a 6- to 8-hour sequence in biological science.

PROFESSIONAL EDUCATION REQUIREMENTS

Twenty hours in professional education courses. (See page 411.)

REQUIREMENTS OF THE MAJOR

	HOURS
Introduction to physical geography	4
Introduction to human geography	4
Scope and methods of geography (Geog. 296)	2
Geography electives: selected in consultation with the adviser and including at least one course in each of the following areas: physical geography, economic or social geography, and regional geography	22
Total	32

TEACHER EDUCATION MINOR

See page 139, at least.....20

TEACHER EDUCATION MINOR IN GEOGRAPHY

REQUIRED COURSES	HOURS
Introduction to physical geography	4
Introduction to human geography	4
Scope and methods of geography (Geog. 296)	2
Geography electives: selected in consultation with the adviser and including at least one course in each of the following areas: physical geography, economic or social geography, and regional geography	15
Total	25

CURRICULUM PREPARATORY TO THE TEACHING OF MATHEMATICS

For the degree of Bachelor of Science in the Teaching of Mathematics

This curriculum offers training for teachers of high school and junior college mathematics. A minimum of 120 hours of credit is required for graduation.¹

Departmental Distinction: A subcommittee of the area committee shall be appointed each year to select candidates for graduation with distinction on the basis of the following criteria:

1. Overall grade-point average:
 - 4.25+ for Distinction
 - 4.50+ for High Distinction
 - 4.75+ for Highest Distinction
2. Grade-point average in mathematics and education courses:
 - 4.4+ for Distinction
 - 4.6+ for High Distinction
 - 4.8+ for Highest Distinction
3. Recommendation of the student's teaching supervisor and other evidence of the student's teaching work for candidates for High Distinction and Highest Distinction.

GENERAL EDUCATION REQUIREMENTS

Forty-six to 50 hours in general education courses. (See page 411.) Students pursuing this curriculum may satisfy the natural science requirement by either a minimum of 6 hours in biological sciences or a minimum of 6 hours in physics including LAS 140-141. Courses in physics or LAS 140-141 are preferred.

PROFESSIONAL EDUCATION REQUIREMENTS

Twenty hours in professional education courses. (See page 411.)

REQUIREMENTS OF THE MAJOR

	HOURS
Calculus and analytic geometry	13
Topics on geometry (Math. 302)	3
Abstract algebra (Math. 317)	3
Real analysis (Math. 344 or 347)	3
Probability-statistics (Math. 263, 361, or 363)	3
Computer science (C.S. 101, 105, or 121)	3
Students must also select at least three additional courses from the field lists below, including courses from at least two different lists. (With the approval of the Under-	

¹ Students may not receive more than 5 semester hours with grades of C or below in the calculus sequence. Students must maintain an average of 3.5 in mathematics courses beyond calculus.

graduate Advising Office, topics courses such as Math. 307, 351 may be counted in the field list most appropriate to the content of a particular offering of that course.) . . .	9
Geometry-topology: Math. 303, 323, 332	
Analysis: Math. 306, 341 or 345, 346 or 348, 384	
Algebra: Math. 305, 315 or 318, 319, 353, 383	
Probability-statistics: Math. 362, 364, 368	
Total	37

TEACHER EDUCATION MINOR IN MATHEMATICS

REQUIRED COURSES	HOURS
Calculus and analytic geometry (completed through multiple integrals and infinite series)	13
Topics on geometry (Math. 302)	3
Selected topics for secondary school teachers (Math. 305)	3
Elective — with one of the following preferred — advanced aspects of Euclidean geometry, abstract algebra, linear algebra, real variable theory, computer science. . . .	3
Total	22

COMBINED SCIENCES AND LETTERS – EDUCATION PROGRAM FOR MATHEMATICS TEACHERS

For the degree of Bachelor of Arts or Bachelor of Science

This program leads to the degree of Bachelor of Arts, or Bachelor of Science, with a major in mathematics. A student must maintain a 4.0 (A=5.0) grade-point average in mathematics and a 3.75 all-University grade-point average to remain in the program. All requirements for the sciences and letters curriculum must be met. (See page 353.) A total of 120 hours is required for graduation.

GENERAL EDUCATION REQUIREMENTS

Fifty-two to 59 hours in general education courses. (See page 411.) Students in this curriculum are required to take at least 6 hours in biological sciences and at least 6 hours in physics courses using techniques of the calculus. (Phycs. 106, 107 meet the physics requirement.)

PROFESSIONAL EDUCATION REQUIREMENTS

Twenty hours in professional education courses. (See page 411.)

REQUIREMENTS OF THE MAJOR	HOURS
Calculus and analytic geometry	13
Topics on geometry (Math. 302)	3
Abstract algebra (Math. 317)	3
Linear algebra (Math. 318)	3
Real analysis (Math. 347)	3
Probability-statistics (Math. 361 or 363)	3
Computer science (C.S. 101, 105, or 121)	3
Three additional courses chosen from: Math. 303, 305, 306, 314, 319, 323, 332, 341, 346, 348, 351, 353, 354, 362, 364, 368, 383, 384	9
Total	40

REQUIREMENTS OF THE MINOR

Each candidate must complete either (a) a teaching minor in accountancy, biology, chemistry, computer science, economics, foreign language, physics, physical science, or social science or (b) 10 hours of course work in a field cognate to mathematics and consisting of courses making use of mathematical principles and techniques. Approval of the department Undergraduate Advising Office is required for the cognate course sequence.

CURRICULUM PREPARATORY TO THE TEACHING OF PHYSICS

For the degree of Bachelor of Science in the Teaching of Physics

This program is for students preparing to teach physical science. A minimum of 126 hours of credit is required for graduation.

Departmental Distinction: Distinction in the curriculum preparatory to the teaching of physics is determined by a combination of grade-point average and achievement in student teaching. The levels of distinction are as follows. In addition to the student's practice teaching experience as evaluated by the departmental honors adviser and the teaching supervisor, Distinction requires a 4.2 grade-point average; High Distinction, 4.4; Highest Distinction, 4.6. Students desiring distinction should consult with the department honors adviser during the junior year.

GENERAL EDUCATION REQUIREMENTS

Forty to 42 hours of general education courses. (See page 411.) The requirement in natural sciences is fulfilled by teaching major requirements.

PROFESSIONAL EDUCATION REQUIREMENTS

Nineteen hours of professional education courses. (See page 411.)

REQUIREMENTS OF THE MAJOR

	HOURS
General chemistry	8
Mathematics	
Calculus and analytic geometry	16
Differential equations and orthogonal functions (Math. 349)	3
Total	19
Physics	
General physics (Phycs. 106, 107, 108)	12
Atomic physics and quantum theory (Phycs. 383)	3
Electricity and magnetism (300 level) (Phycs. 341)	5
Physics of light (300 level) (Phycs. 371)	4
Electives in physics	8
Total	32
Total	59

REQUIREMENTS OF THE TEACHER EDUCATION MINOR

See page 139, at least.....20

TEACHER EDUCATION MINOR IN PHYSICS

REQUIRED COURSES

	HOURS
General physics and advanced physics	18
General chemistry	8
Total	26

TEACHER EDUCATION MINOR IN PSYCHOLOGY

A minimum of 22 hours in psychology with at least one course (a minimum of 3 hours) in each of the following areas: introductory psychology; statistics; personality—developmental, experimental, and social. It is strongly recommended that the additional hours include courses dealing with methods of research in psychology.

CURRICULUM PREPARATORY TO THE TEACHING OF SOCIAL STUDIES

For the degree of Bachelor of Arts in Teaching Social Studies

A minimum of 120 hours is required for graduation. This curriculum prepares its graduates for teaching social studies in grades 6-12. The choice of options will be determined in consultation with the faculty adviser for this curriculum.

Departmental Distinction: To be eligible for graduation with distinction, students must have a grade-point average of 4.25 in the major field which is history.

In consultation with the major adviser during the spring semester of the junior year, students are encouraged to make the necessary arrangements for graduation with distinction.

Students who are eligible select two members of the Department of History to sit as the examining committee. At a time mutually convenient to all, the members of the examining committee will give the student a one-hour oral examination over the content of the courses which the student took from the professors involved as examiners.

The examining committee will make its recommendation and forward it to the major adviser. This then is reported to the College of Liberal Arts and Sciences. In cases where the recommendation is to deny distinction, no record is kept and the college is not informed.

GENERAL EDUCATION REQUIREMENTS

Forty-six to 50 hours in general education courses. (See page 411.)

PROFESSIONAL EDUCATION REQUIREMENTS

Twenty-two hours in professional education courses. (See page 411.)

REQUIREMENTS OF THE MAJOR AND MINOR

HOURS

Option A

History courses	20
Survey of non-American history	6-8
United States history (advanced hours)	6
European or non-Western history (advanced hours)	6
One course chosen from each of four fields (anthropology, economics, geography, political science, psychology, sociology) with a concentration of 8-9 hours in two.....	22-24
Teacher education minor in an approved teaching field outside the social studies area	20-24
Total in option A	62-68

Option B

History courses	20
Survey of non-American history	6-8
United States history (advanced hours)	6
European or non-Western history (advanced hours)	6
Concentration in two social studies fields other than minor field	16-18
Minor within the social studies area (anthropology, economics, geography, political science, psychology, sociology)	20
Total in option B	56-58

TEACHER EDUCATION MINOR IN SOCIAL STUDIES

For a *minor in social studies*, a student must complete at least 8 hours of work in each of two of the following subjects; economics, geography, political science, psychology, sociology. The minimum total required for a minor is 24 hours which may include 8 hours of electives in history.

TEACHER EDUCATION MINOR IN HISTORY

For a *minor in history*, a student must complete 5 to 6 hours in advanced courses in American history, 8 hours in general European history, and 2 or 3 hours in one of the following: ancient, English, medieval, or Latin American history. The minimum total required for a minor is 24 hours.

CURRICULUM PREPARATORY TO THE TEACHING OF SPEECH

For the degree of Bachelor of Arts in the Teaching of Speech

This program is designed to give the teacher a foundation in the areas of public speaking, communication, and theatre arts. A minimum of 128 hours of credit is required for graduation.

Departmental Distinction: The requirements for distinction in the curriculum preparatory to the teaching of speech are the same as those for speech communication.

GENERAL EDUCATION REQUIREMENTS

Forty-nine to 53 hours in general education courses. (See page 411.) The humanities requirement is fulfilled by 9 hours (required) of electives in literature.

PROFESSIONAL EDUCATION REQUIREMENTS

Twenty hours in professional education courses. (See page 411.)

REQUIREMENTS FOR THE MAJOR

	HOURS
Principles of effective speaking or advanced oral communication	3
Voice and articulation or speech and hearing problems in the classroom	2-3
Group discussion and conference leadership	3
Public discussion and debate	2
Oral interpretation	3
Elements of stagecraft	4
Fundamentals of acting	3
Directing I	3
Principles of radio and television broadcasting	3
Electives chosen from one of the following areas:	9-12
(Nine hours must be at the 200 level or above.)	
I. Oral interpretation	
II. Public discourse	
III. Interpersonal communication	
IV. General (12 hours required)	
Total	35-39

REQUIREMENTS FOR THE TEACHER EDUCATION MINOR

See page 139, at least.....20

TEACHER EDUCATION MINOR IN SPEECH

REQUIRED COURSES

	HOURS
Principles of effective speaking	3
Advanced oral communication or persuasion	3
Oral interpretation	3
Fundamentals of acting	3
Dramatics for teachers	3

Speech for teachers, or the teaching of speech	3
Voice and articulation	2
Discussion and group leadership or interpersonal communication	3
Rhetoric (includes Rhet. 105 or 108)	6
Total	29

CURRICULUM IN SPEECH AND HEARING SCIENCE

For the degree of Bachelor of Science in Speech and Hearing Science

The curriculum in speech and hearing science is a preprofessional degree program. The curriculum is designed to prepare students to enter professional training at the graduate level in any major graduate program in speech pathology or audiology. Students who desire certification for work in the public schools can fulfill certification requirements by meeting entrance requirements for the Graduate College and completing the Master of Science degree. To qualify for registration in courses specified for the first semester of the senior year the student must have a grade-point average of no less than 4.0 (A = 5.0). The degree requires at least 128 hours, excluding military training.

For those not wishing to pursue teacher certification or a clinical program, please refer to the curriculum for the degree of Bachelor of Arts in Speech and Hearing Science on page 410.

Departmental Distinction: See requirements for Bachelor of Arts in Speech and Hearing Science on page 410.

GENERAL EDUCATION REQUIREMENTS

HOURS

Sp. Com. 111 and 112, or Rhet. 105 and a speech performance elective, or Rhet. 108 and a speech performance elective	6-7
Biological science, including Physl. 234	6-8
Physical science	6-8
History of the United States ¹	3
American government (state and federal constitutions) ¹	3
Foreign language	16
Health and/or physical education	3
Humanities	6
Total	49-54

PROFESSIONAL EDUCATION

For students planning to pursue the school speech and hearing program the following are recommended.

HOURS

Exceptional children	3
Classroom problems in childhood education and special education	2
Mental and educational measurement of exceptional children	3
Total	8

REQUIREMENTS FOR THE MAJOR

HOURS

Psychology:	
Statistical thinking in psychology	3
Child psychology or child development	3
Psychology of personality	3
Psychology of learning	3
Total	12
Speech and hearing science:	
Voice and articulation	2
Principles of effective speaking	3
Survey of historical and professional aspects of speech pathology and audiology	2

Introduction to physiological phonetics	3
Speech science	8
Development of spoken language	3
Hearing science	3
Speech pathology	6
Psychological appraisal in speech pathology and audiology	3
Introduction to hearing disorders	3
Audiometry.....	3
Aural rehabilitation	3
Basic diagnostic and therapeutic principles of speech correction	3
Practicum in speech diagnosis and therapy	3
Total	48

REQUIREMENTS OF THE MINOR

Recommended minor areas include: psychology, education, mathematics, physiology, linguistics, psycholinguistics, and education of the deaf.

¹ Students not planning to fulfill teacher certification requirements for the school speech and hearing science program by completing the Master of Science degree may substitute an approved social science sequence for history of the United States and American government.

Joint Degree Programs

BACCALAUREATE—MASTER OF ACCOUNTING SCIENCE DEGREE PROGRAM

The B.A./B.S.—M.A.S. program is designed to enable qualified students to earn both a bachelor's degree in either the College of Liberal Arts and Sciences or the College of Commerce and Business Administration, and the Master of Accounting Science degree in the Department of Accountancy in five years rather than the normal six years. The program integrates an undergraduate education with a professional education without diluting the quality or purpose of either. Program objectives will be met primarily by students completing courses during their fourth year which are simultaneously electives in their baccalaureate programs and requirements for the M.A.S. Students who are interested in the joint degree should contact a program adviser early in their initial year.

Eligibility

The program is open to all students in the Colleges of Liberal Arts and Sciences and Commerce and Business Administration who meet the requirements below. In most cases, participants in the B.A./B.S.—M.A.S. program will complete their undergraduate concentrations or majors by the end of their third year. As a consequence, some students will have to plan their course work carefully to meet their undergraduate educational objectives and to participate in the program; this will be particularly true for undergraduates whose concentrations or majors require extensive sequential course work. To provide adequate guidance to participants, the program has the following three stages:

STAGE ONE

Since the B.A./B.S.—M.A.S. program is based on careful course selection and program planning, interested students should consult with a B.A./B.S.—M.A.S. adviser

during their first year. The program's objectives and requirements will be explained so that the students, in consultation with their baccalaureate degree program adviser, may plan their course work to meet both objectives.

STAGE TWO

Students who wish to participate in the B.A./B.S.-M.A.S. program must make formal application by March 31 in the second semester of their junior year. To be eligible for consideration, they must meet the following requirements:

1. Minimum 4.25 cumulative grade-point average with at least 75 hours of course work completed.
2. Minimum score of 550 on the Graduate Management Admissions Test (GMAT); this examination must be taken before formal application. GMAT applications, which must be filed one month before the test date, are available in the Student Services Building.
3. Filing of a course plan with the appropriate program adviser showing the distribution of undergraduate courses. Normally, prospective applicants will have filed such plans during their freshman and sophomore years as well.
4. Completion and return of an application, including any supplementary materials that may be requested, to the appropriate program adviser before the March 31 deadline. Admission to the B.A./B.S.-M.A.S. program will be made on a competitive basis.

STAGE THREE

During the first semester of their fourth year, participating students must apply to the Graduate College for admission to the Master of Accounting Science program. Normally students who have attained a B average for the first semester M.A.S. courses will be admitted to the M.A.S. program.

During the first seven semesters, students will register in an *undergraduate* college. At stage three, students register in the M.A.S. *graduate* program. Most students will be awarded a baccalaureate degree after completion of their eighth semester; some students, however, may receive their baccalaureate degree after their seventh semester if they have completed all degree requirements.

Students who do not attain a B average for the first semester M.A.S. courses may, if circumstances warrant, petition the M.A.S. program for conditional continuance through the program's normal appeals procedure. Students who are not admitted to the M.A.S. program or who elect not to continue will retain their undergraduate status and will be free to elect courses necessary to complete baccalaureate degree requirements within their college. M.A.S. courses satisfactorily completed during the first semester are applied toward completion of the undergraduate degree; in most instances, these students will need to complete only two electives to graduate.

The Program

Although participants' courses are distinctly divided between undergraduate and graduate levels, the B.A./B.S.-M.A.S. program requires a course distribution based on a 3-1-1 pattern; the first three years are devoted to undergraduate courses, the fourth year is devoted primarily to graduate courses for undergraduate credit, and the last year is devoted to graduate courses for graduate credit.

GUIDELINES FOR THE FIRST THREE YEARS

1. Complete a minimum of 96 semester hours applicable toward graduation: an average of 16 hours per semester. Approximate distribution of hours follows:

Approximately 50 hours for the concentration or major and minor, including prerequisite courses. The concentration or major and minor should be so designated that at least two of the four general education areas are completed as part of the concentration or major and minor.

Four hours for rhetoric.

Eight hours for foreign language, assuming placement at the 103 level, for LAS students.

Approximately 22 hours of electives *within* the undergraduate college. Some students will have more than 22 hours, others less. Students who need more than 50 hours for their concentration or major and minor, who need more than 8 hours for foreign language, or who cannot combine general education requirements with the required calculus sequence, Math. 124-134, may have fewer electives or may have to attend a summer session.

2. Complete all specific college requirements except total hours.
3. Elect calculus (Math. 124-134) to complete the physical science general education requirement; elect sociology, economics, or psychology to complete the social science general education requirement; and elect statistics, such as Econ. 172-173. These courses need not necessarily be taken to complete the general education requirements, but students should plan their program to include them.

GUIDELINES FOR THE FOURTH YEAR

1. Accy. 501 and 503 for undergraduate credit: 8 hours.
2. Econ. 400 for undergraduate credit: 4 hours.
3. B. Adm. 472 for undergraduate credit: 4 hours.
4. Application to M.A.S. program for first semester of fourth year.
5. Admittance to M.A.S. program for second semester of fourth year.
6. Accy. 502 and 504 for graduate credit: 2 units.
7. Business administration courses for graduate credit: 2 units from approved list of courses.
8. C.S. 400 for no credit.
9. Baccalaureate degree awarded at end of fourth year.

With the approval of their advisers students may substitute other courses for those listed above. For example, a student who has an equivalent course should substitute another course to satisfy the unit requirement.

GUIDELINES FOR FIFTH YEAR

1. Accy. 462, 481, and 594: 3 units.
2. Electives selected from approved list of courses: 5 units. Concentrations are available in auditing, financial accounting, information systems, international accounting, management accounting, nonbusiness accounting, and taxation.
3. M.A.S. awarded at end of fifth year.

Interested students should write or contact the College of Liberal Arts and Sciences, 270 Lincoln Hall, or the Department of Accountancy, University of Illinois at Urbana-Champaign, 360 Commerce (West), Urbana, IL 61801.

BACCALAUREATE—MASTER OF BUSINESS ADMINISTRATION DEGREE PROGRAM

The B.A./B.S.—M.B.A. program is designed to enable qualified students to earn both a bachelor's degree in either the College of Liberal Arts and Sciences or the College of Commerce and Business Administration and the Master of Business Administration degree in five years rather than the normal six years. The program

integrates an undergraduate education in such diverse fields as English, political science, or economics with a professional business education without diluting the quality or purpose of either. Program objectives will be met primarily by students' completing courses during their fourth year which are simultaneously electives in their baccalaureate programs and requirements for the M.B.A. Students who are interested in the joint degree should contact the program adviser (112 English Building, 333-7108) early in their initial year.

Eligibility

The program is open to all students in the Colleges of Liberal Arts and Sciences and Commerce and Business Administration who meet the requirements below. In most cases, participants in the B.A./B.S.-M.B.A. program will complete their undergraduate concentrations or majors by the end of their third year. As a consequence, some students will have to plan their course work carefully to meet their undergraduate educational objectives and to participate in the program; this will be particularly true for undergraduates whose concentrations or majors require extensive sequential course work. To provide adequate guidance to participants, the program has the following three stages:

STAGE ONE

Since the B.A./B.S.-M.B.A. program is based on careful course selection and program planning, interested students should consult with a B.A./B.S.-M.B.A. program adviser during their first year. The program's objectives and requirements will be explained so that the students, in consultation with their baccalaureate degree program advisers, may plan their course work to meet both objectives.

STAGE TWO

Students who wish to participate in the B.A./B.S.-M.B.A. program must make formal application by March 31 in the second semester of their junior year. To be eligible for consideration, they must meet the following requirements:

1. Minimum 4.25 cumulative grade-point average with at least 75 hours of course work completed.
2. Minimum score of 550 on the Graduate Management Admissions Test (GMAT); this examination must be taken before formal application. GMAT applications, which must be filed one month before the test date, are available in the Student Services Building.
3. Filing of a course plan with the appropriate program adviser showing the distribution of undergraduate courses. Normally, prospective applicants will have filed such plans during their freshman and sophomore years as well.
4. Completion and return of an application, including any supplementary materials that may be requested, to the appropriate program adviser before the March 31 deadline. Admission to the B.A./B.S.-M.B.A. program will be made on a competitive basis.

STAGE THREE

During the first semester of their fourth year, participating students must apply to the Graduate College for admission to the Master of Business Administration program. Those students normally will be admitted to the M.B.A. program if they have attained a B average for the first semester M.B.A. courses.

During the first seven semesters, students will register in an *undergraduate* college. At stage three, students register in the M.B.A. *graduate* program. Most students will be awarded their baccalaureate degree after the completion of their

eighth semester; some students, however, may receive their baccalaureate degree after their seventh semester if they have completed all degree requirements.

Students who do not attain a B average for the first semester M.B.A. courses may, if circumstances warrant, petition the M.B.A. program for conditional continuance through the program's normal appeals procedure. Students who are not admitted to the M.B.A. program or who elect not to continue will retain their undergraduate status and will be free to elect courses necessary to complete baccalaureate degree requirements within their colleges. M.B.A. courses satisfactorily completed during the first semester are applied toward completion of the undergraduate degree; in most instances, these students will need to complete only two electives to graduate.

The Program

Although participants' courses are distinctly divided between undergraduate and graduate levels, the B.A./B.S.-M.B.A. program requires a course distribution based on a 3-1-1 year pattern; the first three years are devoted to undergraduate courses, the fourth year is devoted primarily to graduate courses for undergraduate credit, and the last year is devoted to graduate courses for graduate credit.

GUIDELINES FOR THE FIRST THREE YEARS

1. Complete a minimum of 96 semester hours applicable toward graduation: an average of 16 hours per semester. Approximate distribution of hours follows:

Approximately 50 hours for the concentration or major and minor, including prerequisite courses. The concentration or major and minor should be so designed that at least two of the four general education areas are completed as a part of the concentration or major and minor.

Four hours for rhetoric.

Eight hours for foreign language, assuming placement at the 103 level, for LAS students.

Approximately 22 hours of electives *within* the undergraduate college. Some students will have more than 22 hours, others less. Students who need more than 50 hours for their concentration or major and minor, who need more than 8 hours for foreign language, or who cannot combine general education requirements with the required calculus sequence, Math. 124-134, may have fewer electives or may have to attend a summer session.

2. Complete all specific college requirements except total hours.
3. Elect calculus (Math. 124-134) to complete the physical science general education requirement; elect sociology, economics, or psychology to complete the social science general education requirement; and elect statistics, such as Econ. 172-173. These courses need not necessarily be taken to complete the general education requirements, but students should plan their programs to include them.

GUIDELINES FOR THE FOURTH YEAR

1. B. Adm. 400, 408, 460, and 472: 16 hours.
2. Application to M.B.A. program in first semester of fourth year.
3. Admittance to M.B.A. program for second semester of fourth year.
4. B. Adm. 401 and 409 for undergraduate credit: 8 hours.
5. B. Adm. 420 and 473 for graduate credit: 2 units.
6. Baccalaureate degree awarded at end of fourth year.

FIFTH YEAR

1. B. Adm. 443, 444, 451, 467 and four electives: 8 units.
2. M.B.A. awarded at end of fifth year.

Preprofessional Health Programs

ACADEMIC ADVISING

Since students interested in health professions are expected to enter degree programs of their choice, their academic advising is provided by the departmental offices of the curricula or fields of concentration that they have selected. Generally, students interested in dentistry, medical dietetics, medical laboratory sciences, or physical therapy are advised to elect the general biology option of the field of concentration in life sciences. Students interested in pharmacy or professional nursing are advised to elect the general curriculum.

PROFESSIONAL SCHOOL ADVISING

The Health Professions Information Office, University of Illinois at Urbana-Champaign, is located in 2 Student Services Building, 610 East John Street, Champaign, IL 61820. The mission of this office is fourfold: (1) to provide an opportunity for students interested in the health professions to assemble a confidential file of faculty letters of evaluation, (2) to provide for both students and faculty a resource center for information concerning careers in the health professions, (3) to provide an opportunity for deans and admissions officers to visit this campus to interview prospective applicants and to acquaint students with the unique educational features that characterize their institutions, and (4) to provide personal and individual career counseling and guidance for those students interested in pursuing a recognized health profession.

The office acts as a clearinghouse to supply students with standard faculty evaluation forms by which they may secure letters of evaluation from the faculty at any time during their college career. This office will keep these letters in a confidential file and will duplicate and forward them, unedited, to the professional schools designated by the applicant.

TRANSFER CREDIT FROM PROFESSIONAL SCHOOLS

If a student has satisfied both college or concentration residency requirements, it is possible to transfer basic medical science credit satisfactorily completed at a fully accredited medical or dental school for courses acceptable to the field of concentration and to apply that credit to the requirements for the baccalaureate degree from the College of Liberal Arts and Sciences. The amount of transfer credit cannot exceed 30 semester hours, and duplication of courses completed on this campus will not be permitted. Credit will be counted only upon completion of one year's professional study.

Students planning to complete their baccalaureate degree requirements by attendance at a medical or dental school must obtain an evaluation of credit *before* attending that school. Because it is quite possible that less than the maximum amount of credit may be acceptable as transfer credit, it is essential that students consult their admissions and records officer in the college office as early as possible.

If there is any question whether or not a course meets the criteria for acceptability or the amount of credit to be granted, the student will be responsible for providing the necessary information upon which the head of the appropriate department (or his or her designate) on this campus will make a recommendation to the college regarding the acceptance of credit. Final determination of the credit will be made by the dean of the College of Liberal Arts and Sciences or his or her designate.

Effective August 1975 and thereafter, the prior agreement regarding transfer credit from professional schools must be included in the student's field of concentration contract form.

PREPROFESSIONAL TRAINING

Because of the very large number of students interested in the health and allied health professions and the limited number of spaces in professional schools, the competition for admission to professional programs is very severe. In reality, those admitted to professional programs have academic records well above the stated minimum requirements. It is, therefore, extremely important for students at the preprofessional level to plan for alternative academic and career goals. Beginning in August 1976, students interested in the health and allied health professions have been directed into degree programs in the college so that they can make progress toward meeting requirements for a bachelor's degree at the same time that they complete course requirements for admission to their desired health or allied health profession. By doing this, students who are not successful in gaining admission to a professional program may complete a degree program without prolonging study beyond eight semesters.

PREPROFESSIONAL REQUIREMENTS FOR DENTISTRY

Preprofessional training for dentistry is basically a three-year program, although 60 to 70 percent of the students being admitted to dental schools have a bachelor's degree. It is advisable, therefore, to complete the requirements for admission to dental school in conjunction with fulfilling requirements for a bachelor's degree.

It is essential that a student knows the specific requirements for admission to each of the dental schools to which he or she plans to apply. These requirements are listed in the *Admission Requirements of the American Dental Schools*, published by the American Association of Dental Schools, 1625 Massachusetts Avenue, N.W., Washington, D.C. 20036.

All U.S. and Canadian dental schools require: (1) That all applicants take the Dental Admissions Test (DAT) as recommended and approved by the American Dental Association. For information concerning the test write to the Division of Educational Measurements, American Dental Association, 211 East Chicago Avenue, Chicago, IL 60611. The application forms can also be obtained from the Health Professions Information Office, 2 Student Services Building. (2) Letters of evaluation from all applicants. (3) An interview may be requested by the committee on admissions. The American Association of Dental Schools sponsors a centralized application service (AADSAS). Application request cards can be obtained through the Health Professions Information Office, 2 Student Services Building, or by writing AADSAS, P.O. Box 1003, Iowa City, IA 52240.

Courses should include:

Rhetoric: Two semesters. Recommended: Sp. Com. 111 and 112, or Rhet. 105 or 108, and 133.

Mathematics (prerequisites for chemistry and physics): Math. 112 and 114.

Chem. 101, 102; 131, 134, and 122 or 336 or Bioch. 350.

Biol. 110 and 111.

Phys. 101-102 or 106, 107, and 108.

Humanities: An approved general education sequence.

Social sciences: An approved general education sequence.

Electives: Foreign language, Math. 120, social sciences, and humanities beyond the minimum requirements strongly recommended.

PREPROFESSIONAL REQUIREMENTS FOR MEDICAL DIETETICS

Minimum requirements for admission are 60 semester hours, exclusive of physical education and military science, with at least a 3.5 (A = 5.0) grade-point average in the following:

Rhetoric or verbal communication: two semesters. Recommended: Sp. Com. 111 and 112, or Rhet. 105 and Sp. Com. 101, or Rhet. 133.

Biological sciences: One year of biology and one course in microbiology with laboratory. Recommended: Physl. 101 or 102 and Mcbio. 100 and 101.

Physical sciences: Chemistry through organic with laboratory. Recommended: Chem. 101, 102, 131, and 134.

Mathematics: College algebra (Math. 112 or equivalent).

Humanities: An approved general education sequence.

Psych. 100 or 103.

Two courses in anthropology or two courses in sociology. Recommended: Anth. 103 and 210 or Soc. 100 and 321.

Economics: One course. Recommended: Econ. 101.

Electives: To complete a total of 60 semester hours.

Note: If a student must delay enrolling in Chem. 101 until the spring semester, it will be necessary to attend summer school to complete chemistry and biology requirements in two years.

PREPROFESSIONAL REQUIREMENTS FOR MEDICAL LABORATORY SCIENCES

Minimum requirements for admission are 60 semester hours, exclusive of physical education and military science, with at least a 3.0 (A = 5.0) grade-point average in the following:

Rhetoric: One semester.

Mathematics (to fulfill prerequisite for chemistry): Math. 112 or equivalent.

Chem. 101, 102, 122, and 131.

Biological sciences: Biol. 110 and 111; and Mcbio. 100 and 101, or Mcbio. 200 and 201.

Humanities: An approved general education sequence.

Social sciences: An approved general education sequence.

Electives: To complete a total of 60 semester hours. Recommended: Math. 120 and a foreign language.

Note: If a student must delay enrolling in Chemistry 101 until the spring semester, it will be necessary to attend summer school to complete chemistry and biology in two years.

PREPROFESSIONAL REQUIREMENTS FOR MEDICAL RECORD ADMINISTRATION

Minimum requirements for admission are 90 semester hours, exclusive of physical education and military science, with at least a 3.0 (A = 5.0) grade-point average in the following:

Rhetoric: Two semesters. Recommended: Sp. Com. 111 and 112, or Rhet. 105 or 108 and Rhet. 133.

Biological sciences: Three courses — Physl. 103 and 234 required. Mcbio. 113 recommended.

Physical sciences: An approved general education sequence.

Humanities: An approved general education sequence.

Social sciences: An approved general education sequence. Recommended: psychology or sociology.

Electives: To complete a total of 90 semester hours. Recommended: H. Ed. 110 and 216, Psych. 201 and 245, Soc. 185, Biol. 106, Phil. 102, and B.&T.W. 251.

PREPROFESSIONAL REQUIREMENTS FOR MEDICINE

Although a few students are admitted to medical school after three years of pre-professional training, over 95 percent of the students have a bachelor's degree. Therefore, students should pursue study in a degree program. There is no prescribed curriculum for premedical students. The fields of concentration in life sciences, chemistry or biochemistry, and the curriculum in chemical engineering are especially suitable since requirements in these curricula overlap to some extent with medical school requirements. A concentration in psychology or in the humanities or fine arts is acceptable to medical school; in practice, however, it is difficult to concentrate in these areas and fulfill the present medical school requirements, especially if the student plans to apply for entry after three years.

The strong sequential nature of some programs, such as the science departments, requires that appropriate course selections be made in the first year if a sound program is to be achieved. For example, it is important that the entering science-oriented students elect mathematics since calculus is a prerequisite for some courses in chemistry, physics, and the life sciences.

All American and Canadian medical schools require: (1) That all applicants take the Medical College Admission Test (MCAT) as recommended and approved by the Association of American Medical Colleges. The applicant must have obtained a satisfactory score on the MCAT, which must be taken no later than October of the year prior to enrollment. For information concerning the test, write to Medical Colleges Test, American Testing Program, Box 168, Iowa City, IA 52240. The application forms can also be obtained from the Health Professions Information Office, University of Illinois at Urbana-Champaign, 2 Student Services Building, Urbana, IL 61801. (2) Letters of evaluation from all applicants. (3) An interview may be requested by the committee on admissions.

The American Association of Medical Schools sponsors a centralized application service, the American Medical College Application Service (AMCAS). Applications are available *only* from AMCAS, Suite 301, 1776 Massachusetts Avenue, N.W., Washington, D.C. 20036. Application request cards can be obtained from the Health Professions Information Office, 2 Student Services Building.

Students anticipating a career in medicine are advised to obtain additional information from those medical schools in which they are interested. Specific admission requirements for individual medical schools are listed in *Medical School Admission Requirements*, published by the Association of American Medical Colleges, One Dupont Circle, N.W., Washington, D.C. 20036.

PREPROFESSIONAL REQUIREMENTS FOR NURSING

The University offers a degree program leading to the Bachelor of Science in Nursing for students coming directly from high school or for registered nurses who meet a specific set of requirements. The program is made up of two phases: a pre-professional year in the College of Liberal Arts and Sciences at Urbana-Champaign or at any other accredited college or university, and the professional phase administered by the College of Nursing, University of Illinois at the Medical Center, Chicago. A baccalaureate degree completion program for registered nurses is also offered on the Urbana campus by the College of Nursing.

Graduates of hospital schools of nursing or associate degree nursing programs, are admitted with advanced standing, the exact amount of credit to be granted depending on the nature of the work done, validating examinations, and the quality of performance in sequential courses.

Admission to the professional phase is on recommendation of the Admissions Committee of the College of Nursing after completion of the following requirements

with an overall grade-point average of 3.5 ($A = 5.0$) and a minimum grade of C in chemistry and biology courses:

Rhetoric: Rhet. 105 or 108.

Chemistry: Chem. 101 and 102.

Biological science: Biol. 104.

Humanities: 6 hours.

Psych. 100

Soc. 100

Academic electives: 3 hours to complete a total of 30 hours.

For additional information about the programs in nursing, write to the Office of Admissions and Records, 1737 West Polk Street, Chicago, IL 60612.

Information regarding the baccalaureate degree completion program for registered nurses may be obtained from the College of Nursing at 1115½ West Oregon Street, Urbana, IL 61801.

PREPROFESSIONAL REQUIREMENTS FOR OCCUPATIONAL THERAPY

Preprofessional training for occupational therapy generally is a two-year program. Minimum requirements for admission are 60 semester hours with at least a 3.5 ($A = 5.0$) grade-point average including the following courses:

Behavioral sciences: 12 hours. Psychology: general and abnormal (Psych. 100 and Psych. 238); human development (Introduction to Human Development and Observation and Analysis of Behavior) (child psychology and an additional psychology course may be substituted).

Social sciences: 9 hours. Soc. 100 and any combination of sociology, anthropology, economics, and political science.

Physl. 103 — Introduction to Human Physiology (prerequisite: high school chemistry is strongly recommended) and Physl. 234 — Human Anatomy and Physiology.

Communication skills: Principles of Composition and Voice and Articulation, or Verbal Communication.

Creative media: Pottery, Basic Elements of Weaving, Introduction to Woodworking.

Humanities: Approved general education sequence.

Physical education: 4 hours of credit will be accepted toward the total of required 90 semester hours.

Physical sciences or biological sciences: Approved general education sequence.

Electives: To complete the required 90 semester hours.

PREPROFESSIONAL REQUIREMENTS FOR PHARMACY

Preprofessional training for pharmacy is basically a one-year program. Minimum requirements for admission are 30 semester hours, exclusive of physical education and military science, with at least a 3.25 ($A = 5.0$) grade-point average in the following:

Rhetoric: Sp. Com. 111 and 112 preferred, or Rhet. 105 or 108.

Mathematics: Math. 112¹ and 114.

Chemistry: Chem. 101² and 102.

Biological sciences: Biol. 104 and Bot. 100.

Electives: To complete a total of 30 semester hours. Recommended: Psych. 100, Soc. 100, Math. 120, and humanities to expand cultural background.

¹ If student places into Math. 112, he or she should request approval of the chemistry department to take Chem. 101 concurrently with Math. 112.

² If student must delay enrolling in Chem. 101 until second semester of freshman year, it will be necessary to attend summer school to complete chemistry in one year.

PREPROFESSIONAL REQUIREMENTS FOR PHYSICAL THERAPY

Preprofessional training for physical therapy is a two-year program. Minimum requirements for admission are 60 semester hours, exclusive of military service, with at least a 3.5 ($A = 5.0$) grade-point average in the following:

Rhetoric: One semester.

Mathematics: Math. 112 and 114.

Chemistry: Chem. 101 and 102.

Biology: Biol. 110 and 111.

Psychology: Psych. 100 or 103 or 105, and 216 and 238.

Physics: Phys. 101 and 102.

Physical education: Two courses.

Humanities: An approved general education sequence.

Electives: To complete a total of 60 semester hours. Recommended: anthropology, health education, additional psychology and sociology.

Note: If a student must delay enrolling in Chem. 101 until second semester of freshman year, it will be necessary to attend summer school to complete chemistry and biology requirements in two years.

PREPROFESSIONAL REQUIREMENTS FOR VETERINARY MEDICINE

Students wishing to complete the preprofessional requirements for veterinary medicine in the College of Liberal Arts and Sciences may do so within a variety of curricula. However, courses required are equivalent to those recommended for students majoring in the biological sciences, and especially in the life sciences field of concentration. See page 381.

Because of the very severe competition for admission, students should plan to complete a bachelor's degree program. For fall 1978 there were approximately five qualified applicants for each space available in the entering class in veterinary medicine. The mean grade-point average of admitted students was 4.64 ($A = 5.0$).

Specific information about veterinary medicine, including admission requirements, may be found beginning on page 453.

Graduate School of Library Science

*University of Illinois at Urbana-Champaign
410 David Kinley Hall
Urbana, IL 61801*

GRADUATE STUDY447

Graduate School of
Library Science

University of Illinois at Chicago
Chicago, Illinois 60607
(312) 996-3000

1988

1988-1989

Although the Graduate School of Library Science is a graduate professional school, it offers a series of courses at the undergraduate level. These courses may be taken as electives, or as a minor in the College of Liberal Arts and Sciences or in the College of Education. These courses give the student instruction in the fundamental principles and practices of librarianship providing the basic preparation for his or her professional studies in a fifth year. These same courses also may be taken as electives by students in other colleges.

A sound, well-balanced intellectual background is needed for a career in library work. By its nature, the work of the librarian is far-ranging and encyclopedic in subject coverage, even in the most highly specialized libraries. History, literature, the social sciences, the natural sciences, and foreign languages are all valuable to the prospective librarian.

In addition to a broad general education, the student should develop a strong major in some subject area during the last two years of undergraduate work or in graduate study. Such subjects as chemistry, physics, mathematics, education, engineering, law, agriculture, and computer science are particularly needed in modern library development and, when combined with library training, lead to a great variety of interesting, well-paying library positions.

The knowledge of foreign languages which the student should acquire before entering the Graduate School of Library Science varies with the type of library work in which he or she is interested. For bibliographical work, reference, cataloging, and most types of work in college, university, and other scholarly libraries, a reading knowledge of at least two modern foreign languages is desirable.

The dean of the Graduate School of Library Science is glad to answer any inquiries from students who choose library science as a minor, regarding the type of preprofessional education best suited to their particular needs and interests.

GRADUATE STUDY

For information about the graduate programs in library science, see the announcements of the Graduate School of Library Science and the Graduate College, or write to the Dean, Graduate School of Library Science, University of Illinois at Urbana-Champaign, 410 David Kinley Hall, Urbana, IL 61801.

TEACHER EDUCATION MINOR IN LIBRARY SCIENCE

The Graduate School of Library Science has offered courses for advanced undergraduates in the College of Liberal Arts and Sciences who wish to qualify both as classroom teachers and as librarians in small elementary, junior high, and senior high schools, or as assistant librarians in large schools. Full professional training leading to a master's degree in library science is required of those who wish to prepare for positions in large schools, for supervisory positions in the school library field, and for positions as instructional materials specialists.

Students interested in this program should contact the director of the Graduate School of Library Science, 329 Library.

School of Social Work

*University of Illinois at Urbana-Champaign
1207 West Oregon Street
Urbana, IL 61801*

ADMISSION REQUIREMENTS	451
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THE UNIVERSITY OF CHICAGO
DIVISION OF THE PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY
5708 SOUTH CAMPUS DRIVE
CHICAGO, ILLINOIS 60637

SCIENCE OF MATERIALS

Volume 1, Number 1
January 1978

The School of Social Work offers a program of undergraduate and graduate study leading to the professional degrees of Bachelor of Social Work, Master of Social Work, and Doctor of Social Work. Students desiring help in planning their undergraduate programs are urged to consult an undergraduate adviser in the School of Social Work.

The undergraduate courses in social work are for those individuals who wish to pursue a course of academic study and supervised field work which prepares them for direct social work practice and graduate study in social work.

The program is accredited by the Council on Social Work Education. A completed program includes studies in the School of Social Work and in selected departments within the University of Illinois at Urbana-Champaign. The focus of the curriculum is on teaching the basic skills and knowledge necessary in a variety of settings: child welfare, family services, medical and rehabilitation programs, corrections, public welfare, mental health, and services to the aged. Upon graduation, opportunities for employment in social welfare include a broad array of positions with governmental and private social service agencies.

Beginning freshmen interested in a career in social work are advised to enroll in the general curriculum of the College of Liberal Arts and Sciences and to meet with a social work adviser as early as possible to plan a program of study.

ADMISSION REQUIREMENTS

Students may apply for admission to the B.S.W. program after completion of 30 but not more than 80 semester hours of college work. Students are admitted after completing 45 semester hours of undergraduate college-level work. Admission is based on three criteria: (1) a grade-point average of at least 4.00 (A = 5.00) for the first 45 semester hours; (2) satisfactory progress in the required General Education course work, which includes 4 semester hours of rhetoric and 6 semester hours of credit in each of three areas — humanities, math or physical sciences, and biological sciences; and (3) demonstrated volunteer and/or paid work experience in human service areas. Opportunities for admission are reduced if all criteria are not met. However, applicants who do not meet the minimum requirements will be considered on an exceptional basis if they demonstrate strong career motivation and aptitude.

The first part of the report deals with the general situation of the country and the progress of the war. It is followed by a detailed account of the military operations in the West, including the Battle of the Marne and the subsequent advance to the Scheldt. The author then discusses the political and economic conditions in Germany and the impact of the war on the civilian population. The report concludes with a summary of the author's observations and a prediction of the future course of the war.

INTERNATIONAL MOVEMENTS

The second part of the report deals with the international movements of the war. It discusses the actions of the various nations and the role of the United States. The author also touches upon the diplomatic relations between the warring parties and the efforts to bring about a peace settlement. The report provides a comprehensive overview of the global context of the conflict.

College of Veterinary Medicine

*University of Illinois at Urbana-Champaign
137 Veterinary Medicine Building
Urbana, IL 61801*

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College of William & Mary

Office of the Registrar
P.O. Box 2000
Williamsburg, VA 23187-2000
Phone: (804) 251-2000

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The College of Veterinary Medicine educates men and women in medical disciplines involving the animal kingdom. The four-year professional curriculum leads to the degree of Doctor of Veterinary Medicine. The program gives students a broad foundation in biological and physical sciences and practical knowledge in the application of these principles to the prevention, control, and eradication of animal diseases. The college also strives to emphasize the profession's obligation to society.

Veterinary medicine offers an unlimited variety of intellectual and scientific challenges. Most veterinarians engage in specialized animal practice. Many others are involved in public health activities which include controlling and eradicating diseases, assuring the wholesomeness of food products, developing and producing biological products and drugs, and enforcing health regulations for transported animals. Still other veterinarians engage in teaching and research.

Students receive the benefit of an instructional program constantly enriched by the latest advances in veterinary medicine. The first two years are devoted largely to basic veterinary medical subjects; the final two years consist chiefly of instruction in applied clinical subjects such as medicine, surgery, and obstetrics. A major share of fourth-year instruction is in clinic and laboratory areas, enabling students to apply knowledge gained in classroom work to the diagnosis, prevention, treatment, suppression, and eradication of disease.

The college is affiliated with the Agricultural Experiment Station and the Cooperative Extension Service and is a component of the Graduate College. It cooperates with the state Departments of Agriculture, Public Health, and Conservation, and the State Natural History Survey on various projects.

PREPROFESSIONAL COURSE REQUIREMENTS

The preprofessional program must include a minimum 60 semester hours (90 quarter hours) of college-level courses, as specified below, and must be completed at accredited colleges or universities. The courses in biology, chemistry, and physics are to be equivalent in content to those recommended for students majoring in biological sciences. It is strongly recommended that the science courses be taken on a graded basis.

Biological sciences: Two semesters (8 semester hours) or the equivalent of college-level course work in biological sciences with appropriate laboratory experience. These courses should emphasize the cellular, molecular, and genetic aspects, as well as the structure and function, of living organisms.

Chemistry: Four semesters (16 semester hours) or the equivalent of college-level course work in chemistry, including courses in organic chemistry and biochemistry. Laboratory work and familiarity with quantitative techniques are important aspects of this experience.

Physics: Two semesters (8 semester hours) or the equivalent of college-level course work in physics with appropriate laboratory experience. These courses should include heat, light, sound, electricity, and mechanics.

Genetics¹: One semester (3 semester hours) or the equivalent of college-level course work in genetics.

Animal science¹: One semester (3 semester hours) or the equivalent of college-level course work in surveying the livestock and poultry industries with emphasis on the breeding, selection, feeding, and management of food animals.

English: One semester (3 semester hours) or the equivalent of college-level course work in English composition.

Humanities and social sciences: Four semesters (12 semester hours) or the equivalent of college-level course work in the humanities and/or social sciences.

Electives: Optional courses (7 semester hours).

Preprofessional course requirements can be completed at most collegiate institutions. Students wishing to complete preprofessional requirements on the Urbana-Champaign campus of the University of Illinois may do so within a variety of curricula in either the College of Agriculture or the College of Liberal Arts and Sciences. Information regarding admission requirements to preprofessional programs offered on the Urbana-Champaign campus may be obtained by writing the Office of Admissions and Records, University of Illinois at Urbana-Champaign, 10 Administration Building, Urbana, IL 61801.

The Committee on Admission of the College of Veterinary Medicine will consider an application only if the applicant presents a minimum cumulative grade-point average of 3.5 (3.0 = C) at the end of the fall term preceding the desired date of admission. The applicant must also complete the 60 semester hours of preprofessional course requirements by the date of desired admission.

¹ The requirements for courses in biochemistry, genetics, and animal science will become effective for the class admitted in 1980. For successful applicants who take their preprofessional course work at an institution where an acceptable animal science course is not available, this requirement may be satisfied at UIUC during the summer session prior to enrollment in the College of Veterinary Medicine.

ADMISSION

Data

Completion of the minimum academic requirements does not guarantee admission to the professional curriculum. Because of limitations in facilities and the amount of support available to the College of Veterinary Medicine, the number of students who enter the professional curriculum each year must be restricted. In most recent years, there have been approximately 400 qualified applicants seeking the ninety-one spaces which have been funded for those years. The mean grade-point average of the applicants selected has been slightly above the 4.50 (A = 5.00) level, and the mean number of preprofessional hours completed has been near the 120 semester hour level. The number of applicants anticipated for 1980-81 should equal that of most recent years, thus resulting in competition that is at least equivalent to the level cited above.

Application Procedure

Application materials are available from the Office of Admissions and Records, University of Illinois at Urbana-Champaign, 10 Administration Building, Urbana, IL 61801, between September 1 and January 15. No application materials will be mailed after January 1.¹

All items submitted by the applicant (application form, fee, self-evaluation form, courses in progress form) must be received in the Office of Admissions and Records

by 5:00 p.m., January 15. All required supporting credentials (transcripts, letters of recommendation, Veterinary Aptitude Test results, etc.) must be received by February 1 for the application to be complete and the applicant considered for admission. The application must be accompanied by a nonrefundable application fee of \$20, which is used to partially cover the cost of processing the application for presentation to the Committee on Admissions.

Requests for additional information should be directed to the Office of Admissions and Records. You may write to the above address or visit the office at 177 Administration Building from 8:30 a.m. to 4:30 p.m., Monday through Friday. Appointments for such visits are recommended. You may also call at these times by dialing direct (217) 333-0302.

¹ New students will enter the College of Veterinary Medicine in the fall only.

Selection Procedure

I. SELECTION CRITERIA (Subject to Change)

Since the College of Veterinary Medicine is unable to offer admission to all pre-professional students completing the minimum requirements, the preprofessional student is urged to structure his or her program in such a way as to qualify for a bachelor's degree within the normal four-year period. Because of the size and quality of the applicant pool, only a few highly qualified applicants have been admitted with the minimum of 60 hours in recent years.

In addition to submitting transcripts of all collegiate work attempted, each applicant must also provide official scores of his or her performance on the Veterinary Aptitude Test. These scores will be sent to the Office of Admissions and Records from the private organization¹ administering the examination. The examination is offered at various nationwide locations during the late fall and winter of each year. Information on arranging to take the examination is available in the application packet for the College of Veterinary Medicine.

Three letters of recommendation are required from persons who can evaluate the applicant's experience and ability relating to professional and scientific study. Two letters should be from college instructors or academic advisers. A letter from a practicing veterinarian is considered to be highly desirable.

Applicants are expected to demonstrate potential for contribution to and advancement of the profession. An interview may be required by the committee as a means of supplementing information obtained from the materials submitted.

Preference is given to residents of Illinois; a limited number of nonresidents with superior qualifications may be admitted. Nonresidents offered admission will usually be from states that have no veterinary college or contractual agreement with a college of veterinary medicine in another state.

The professional program of the College of Veterinary Medicine is accessible to qualified persons, and such persons will not be denied admission on the basis of handicap. A qualified person who meets the academic and technical standards requisite to admission and participation in the educational program of the college. During their course of study, students, while under the supervision of licensed veterinary practitioners, treat animal patients. Such clinical duties may not be waived as they are an essential part of the educational program. The technical standards of the college (as well as the veterinary medical profession) require that the safety of both patients and veterinary students be protected. The student shall not cause a health or safety hazard to the patients or to these other persons.

¹ The Psychological Corporation, 304 East 45th Street, New York, NY 10017.

II. POINT RANKING SYSTEM (Subject to Change)

Applicants are currently ranked on the basis of a 100-point scale, with allocation of points distributed among the following criteria:

Objective Measures of Academic Performance

Seventy points — from grade-point averages determined from official college transcripts and from Veterinary Aptitude Test (VAT) results. The cumulative grade-point, science grade-point, and total number of graded science hours completed, in addition to the score earned on the VAT, will most likely be used to allocate these points. (The VAT may be taken once or twice during a given application period; if twice, the average of the two scores will be used. Applicants reapplying may reuse previous VAT results which are less than two years old, or the test may be retaken, in which case the new score will be used.)

Subjective Measures — Personal

Thirty points — allocated by College Admission Advisory Committee on the basis of information submitted with application and letters of recommendation indicating the applicant's knowledge of, motivation toward, and experience with the veterinary profession; evidence of leadership, initiative, and responsibility; animal contact and experience; extracurricular factors influencing personal growth.

Bonus Points

Two bonus points will be assigned to veterans who have completed one or more years of active duty.

Up to eight bonus points may be given to applicants for ancillary factors that have influenced academic performance: course loads (more credit for consistently heavy loads); improved trend in academic performance (benefit given for significant improvement following a "poor start"); course or course sequence quality (fulfilling a requirement with courses known for greater difficulty receives more credit).

HONORS PROGRAMS

For information about University Honors and the Dean's List see pages 114 and 115.

Honors at Graduation

Honors are awarded to superior students in the professional curriculum. For graduation with Honors, a student must have a grade-point average of not less than 4.35 (A=5.0) in all courses completed in the College of Veterinary Medicine; for graduation with High Honors, a grade-point average of not less than 4.75 (A=5.0) is required.

Awards

Competitive prizes, scholarships, and miscellaneous awards which are offered to students in the College of Veterinary Medicine are listed below:

Dr. Lester E. Fisher Award. An award is presented annually for proficiency in small animal medicine by Dr. L. E. Fisher, director of Lincoln Park Zoological Gardens in Chicago.

Illinois State Veterinary Medical Association Award. An award is made annually to the fourth-year student with the highest scholastic average for the four-year professional course in veterinary medicine.

Illinois Veterinary Medical Alumni Association Award. This annual award is presented for proficiency in clinical medicine.

Dr. Edward C. Khuen Award. In memory of the late Dr. Edward C. Khuen, the Chicago Veterinary Medical Association established in 1968 an award to be given annually to a fourth-year veterinary medical student proficient in small animal surgery. Dr. Khuen, a Chicago veterinarian and Cook County rabies inspector from 1954 to 1968, was influential in promoting the passage of many Illinois laws which affect veterinary medicine and public health.

Omega Tau Sigma Award. By inscribing his or her name on a plaque which is displayed in the college library, this fraternity annually honors a senior student member who has demonstrated high academic and extracurricular achievement. A gift is also presented to this student.

Charles Pfizer and Company Award. An award is made to help defray expenses of a fourth-year veterinary medical student. Recipient is selected in his or her third year on the basis of merit and financial need.

Dr. Jesse Sampson Award. This award was established in 1965 by the late Dr. Jesse Sampson, emeritus professor of veterinary physiology and pharmacology, to recognize a third-year student for scholarship, achievement, and aptitude in physiology.

Upjohn Company Awards. Two annual awards for proficiency in clinical medicine. Two fourth-year students receive an award each year, one for proficiency in small animal medicine, the other for large animal medicine.

Auxiliary of the American Veterinary Medical Association. An award is presented to the fourth-year student doing the most to advance the standing of the veterinary medical profession on the University of Illinois campus.

Carrie McGreevy Award. Given annually to the fourth-year student with the second highest scholastic average for the professional curriculum in veterinary medicine.

Diamond Service Award. One fourth-year student who has attained academic objectives through persistence, tenacity, and perseverance is selected to receive this service award established by Diamond Laboratories, Inc., Des Moines, Iowa.

Chain O'Lakes Kennel Club. One scholarship given annually for a student in the College of Veterinary Medicine.

Anna M. Gulick. Income from a bequest is available for a student of exemplary habits and character and demonstrated financial need. Amount of award varies.

Lake County Humane Society. One year's income from 100 shares of General Motors Corporation stock is awarded annually to a first- or second-year veterinary medical student selected on the basis of need and scholarship. Preference is given first to residents of Lake County, then to other residents of Illinois. The award was established October 18, 1966, in honor of Ida Himmelreich and Gertrude Glass.

Mattoon Kennel Club Scholarship. One scholarship awarded annually based on financial need and interest in small animal medicine.

Allen Products Company Scholarship. A scholarship is available to a first-year student based on financial need. The scholarship may continue throughout that student's veterinary medical education at the University of Illinois.

Illinois Racing Board Scholarships. Two scholarships are available for third-year veterinary medical students. Awards are based on scholarship as well as interest in and potential aptitude for training and experience in equine medicine and surgery. Recipients work with and observe a number of practitioners who provide veterinary

medical services in the breeding, training, and racing phases of the state's horse industry.

Dr. H. Preston Hoskins Award. This award is given to a fourth-year veterinary medical student who has shown proficiency and expertise in technical writing and/or editorial service for veterinary publications during his or her enrollment in the curriculum in veterinary medicine. The Illinois State Veterinary Medical Association and the Chicago Veterinary Medical Association sponsor this award.

Elanco Products Company Award. A monetary award is available to help defray expenses of a fourth-year veterinary medical student. The recipient is selected in his or her third year on the basis of merit and financial need.

American Animal Hospital Association Award. An engraved plaque is given annually to a fourth-year veterinary student for clinical proficiency in small animal medicine and surgery.

GRADUATION REQUIREMENTS

Students who have fulfilled their general education course requirements and have passed all courses in the first two years of the veterinary medicine curriculum, and who have a cumulative grade-point average of 3.0 (A = 5.0) or better in these courses, are eligible for the degree of Bachelor of Science in Veterinary Medicine.

Students who have passed all courses prescribed in the fourth-year veterinary medicine curriculum and who have a cumulative grade-point average of 3.0 (A = 5.0) or better in these courses are eligible for the degree of Doctor of Veterinary Medicine.

CURRICULUM IN VETERINARY MEDICINE (effective fall 1980 — subject to change)

For the degree of Doctor of Veterinary Medicine

FIRST YEAR ²	CREDIT HOURS	CLOCK HOURS	SECOND SEMESTER	CREDIT HOURS	CLOCK HOURS
FIRST SEMESTER					
V.B. 300 — Gross Anatomy I	4	8	V.B. 302 — Gross Anatomy II	4	8
V.B. 301 — Microscopic Anatomy	6	10	V.B. 305 — Developmental Anatomy	3	3
V.P.H. 331 — Bacteriology ..	4	7	V.B. 316 — Physiology I ..	4	5
An. S. 325 — Nutrition ...	3	3	V.P.H. 332 — Microbiology/Immunology	4	7
V.P.H. 330 — Veterinary Medical History and Orientation	1	1	V.C.M. 362 — Clinical and Laboratory Practice	1	1
Total	18	29	Electives ⁴	1-3	Variable
			Total	17-19	Approx. 30

SECOND YEAR

FIRST SEMESTER

V.P.H. ¹ — Epidemiology ...	1	1
V.B. 315 — Physiology II..	5	8
V.P.H. 334 — General Pathology	4	7
V.B. 318 — Pharmacology I.	2	2
V.P.H. 333 — Parasitology .	5	7
Electives ³	1-3	Variable
Total	18-20	Approx. 28

SECOND SEMESTER

V.B. 320 — Pharmacology II	3	3
V.C.M. 360 — Medicine I..	5	5
V.P.H. 335 — Special Pathology	4	7
V.P.H. 338 — Clinical Pathology	4	4
V.P.H. 341 — Public Health	3	3
V.C.M. 372 — Jurisprudence and Ethics	2	2
Total	21	24

THIRD YEAR

FIRST SEMESTER

V.C.M. 364 — Medicine II . . .	4	4
V.C.M. 361 — Surgery I . . .	3	8
V.C.M. 376 — Veterinary Anesthesiology and Fluid Therapy	2	2
V.B. 304 — Applied Anatomy	2	3
V.P.H. 340 — Avian Diseases	2	2
V.C.M. 375 — Therio- genology	4	6
V.P.H. ¹ — Clinical Pathology Conference	1	1
V.B. 324 — Large Animal Nutrition	2	2
and/or		
V.B. 326 — Small Animal Nutrition	1	1
V.C.M. ¹ — Clinical and Laboratory Practice	2	6
Total	21-23	33-35

SECOND SEMESTER

V.C.M. ¹ — Medicine III . . .	5	5
V.C.M. 367 — Radiology and Radiobiology	3	4
V.P.H. 348 — Clinical Pathology Conference . . .	1	1
V.C.M. 366 — Clinical and Laboratory Practice	2	6
V.C.M. 376 — Veterinary Economics	2	2
V.C.M. 365 — Surgery II . . .	5	10
V.B. 320 — Toxicology	2	2
Total	20	30

FOURTH YEAR

UNIT I (SIX AND ONE-HALF WEEKS)

	CREDIT HOURS	CLOCK HOURS
V.C.M. 369 — Summer Clinics ³	6	40

UNIT II (TWENTY-FOUR WEEKS)⁵

V.C.M. 371 — Clinical and Laboratory Practice ³	18	30
Electives ⁴	5-8	Variable

UNIT III (SIX WEEKS)

	CREDIT HOURS	CLOCK HOURS
V.C.M. 374 — Clinical and Laboratory Practice	4	30
Electives ⁴	1-2	Variable
Total	34-38	Variable

¹ Course numbers to be assigned.

² Only students who have been accepted for admission to the professional curriculum are eligible to begin the first year's work in the College of Veterinary Medicine.

³ Assignments outside of regularly scheduled clinic hours are made and must be adhered to by the students involved.

⁴ A total of 153 credit hours is required for graduation. Elective courses from a list designated by the College of Veterinary Medicine must be followed to supplement required course credits.

⁵ Unit II consists of four eight-week sessions; the student will enroll for three of the four sessions. The other eight weeks may be used for vacation time, for a voluntary externship with a veterinary practitioner, for a research or teaching experience, or for any other use of the student's choice.

The first part of the history is devoted to a description of the country and its inhabitants. The author describes the various tribes and their customs, and the different parts of the country. He also mentions the various wars and battles that have taken place in the country.

The second part of the history is devoted to a description of the government and the laws of the country. The author describes the different forms of government that have been used in the country, and the various laws that have been enacted. He also mentions the different courts and the various officers of the government.

The third part of the history is devoted to a description of the commerce and industry of the country. The author describes the different kinds of trade that are carried on in the country, and the various industries that are pursued. He also mentions the different markets and the various goods that are bought and sold.

The fourth part of the history is devoted to a description of the religion and the customs of the country. The author describes the different religions that are practiced in the country, and the various customs and traditions that are observed. He also mentions the different festivals and the various ceremonies that are performed.

Appendices

Appendix A: Teaching Faculty by College and Department

With following faculty list is composed of teaching faculty members at the University of Illinois at Urbana-Champaign. Professors, associate professors, assistant professors, instructors, lecturers, and departmental affiliates are included. Visiting professors are not included in this two-year catalog listing.

COLLEGE OF AGRICULTURE

Department of Agricultural Economics

Professors

Baker, Chester B.
Barry, Peter J.
Bock, C. Allen
Brinegar, George K.
Claar, John B.
Dovring, Folke
Due, Jean M.
England, George M.
Erickson, Duane E.
Fettig, Lyle P.
Fliegel, Frederick C.
Guither, Harold D.
Halcrow, Harold G.
Herbst, John H.
Hieronymus, Thomas A.
Hill, Lowell D.
Hinton, Royce A.
Kesler, Richard P.
Mueller, Allan G.
Padberg, Daniel I.
Reiss, Franklin J.
Robinson, Jerry W.
Roush, James R.
Schmidt, Stephen C.

Schweitzer, Harvey J.
Scott, John T.
Seitz, Wesley D.
Sims, Fay M.
Smith, Donald G.
Spitze, Robert G. F.
Swanson, Earl R.
Takayama, Takashi
Thompson, William N.
Van Arsdall, Roy N.
van Es, Johannes C.
West, Vincent I.
Wilken, Delmar F.
Williams, Moyle S.
Williams, Sheldon W.

Associate Professors

Bentz, Robert P.
Burdge, Rabel J.
Frey, Thomas L.
Harms, Alfred G.
Kellogg, Earl D.
Kirtley, M. Brice
Leath, Mack N.
Leuthold, Raymond M.
Lins, David A.
Quinn, John A.
Schwart, Robert B.
Sofranko, Andrew J.
Wagner, Melvin M.

Assistant Professors

Conley, Dennis M.
Dixon, Bruce L.
Everett, Hal W.
Garcia, Philip
Good, Darrel L.
Myers, David A.
Nelson, Kenneth E.
Sonka, Steven T.
Uchtmann, Donald L.
Westgren, Randall E.

Department of Agricultural Engineering

Professors

Butler, B. Jack
Curtis, James O.
Day, Donald L.
Drablos, Carroll J. W.
Espenschied, Roland F.
Goering, Carroll E.
Hunt, Donnell R.
Jedele, Donald G.
Jones, Benjamin A., Jr.
Lembke, Walter D.

Muehling, Arthur J.
Olver, Elwood F.
Puckett, Hoyle B.
Rodda, Errol D.
Shove, Gene C.
Siemens, John C.
Wakeland, Howard L.
Yoerger, Roger R.

Associate Professors

Bode, Loren E.
Hoag, Dean L.
Hummel, John W.
Mitchell, J. Kent
Nave, W. Ralph
Vanderholm, Dale H.

Assistant Professors

Paulsen, Marvin R.
Scarborough, James N.
Walker, Paul D.

**Department of
Agronomy**

Professors

Abrams, Raul
Aldrich, Samuel R.
Alexander, D. Eugene
Arntzen, Charles
Beavers, Alvin H.
Bernard, Richard L.
Boyer, John S.
Brown, Charles M.
Burger, Ambrose W.
Carmer, Samuel G.
de Wet, Johannes M. J.
Dudley, John W.
Fehrenbacher, Joe B.
Gerdemann, James W.
Graffis, Don W.
Hadley, Henry H.
Hageman, Richard H.
Hanson, John B.
Harlan, Jack R.
Hesketh, John D.
Hinesly, Thomas D.
Hittle, Carl N.
Hooker, Arthur L.
Howell, Robert W.
Hymowitz, Theodore
Jacobs, Joseph A.
Jones, Robert L.
Knake, Ellery L.
Koeppel, David E.
Kurtz, L. Touby
Lambert, Robert J.
Laughnan, John R.
McGlamery, Marshall D.

McKibben, George E.
Miller, Darrell A.
Ogren, William L.
Peck, Theodore R.
Peters, Doyle B.
Rinne, R. William
Scott, Walter O.
Seif, Robert D.
Slife, Fred W.
Sprague, George F.
Stevenson, Frank J.
Thorne, Marlowe D.
Walker, William M.
Wax, Loyd M.
Welch, L. Frederick
Widholm, Jack M.
Wilson, Curtis M.

Associate Professors

Alexander, John D.
Boast, Charles W.
Camacho, Luis H.
Fullerton, Tom M.
Harper, James E.
Hassett, John J.
Hiltibran, Robert C.
Hoeft, Robert G.
Johnson, Richard R.
Judy, William H.
Kaiser, C. J.
Patterson, Earl B.
Ray, Burton W.
Stoller, Edward W.
Weber, Evelyn J.
Woolley, Joseph T.

Assistant Professors

Banwart, Wayne L.
Beck, Robert
Cole, Michael A.
Faix, James J.
Jansen, Ivan
Meece, John
Nickell, Cecil
Pepper, Gary E.
Pope, Robert A.
Smith, R. Stewart
Stucki, Joseph W.
White, D. G.

**Department of
Animal Science**

Professors

Baker, David H.
Banks, Edwin M.
Becker, Donald E.
Bentley, Orville G.
Bray, Donald J.

Corbin, James E.
Dziuk, Philip J.
Forbes, Richard M.
Garrigus, Upson S.
Harrison, Paul C.
Hinds, Frank C.
Jensen, Aldon H.
Johnson, Hugh S.
Mistry, Sorab P.
Norton, Horace W.
Rasmusen, Ben A.
Ricketts, Gary E.
Ridlen, Samuel F.

Associate Professors

Albert, Waco W.
Buck, D. Homer
Childers, William F.
Curtis, Stanley E.
Hollis, Gilbert R.
Lewis, John M.
Romans, John R.
Schmidt, Glenn R.
Weichenthal, Burt A.

Assistant Professors

Anderson, David B.
Bahr, Janice
Berger, Larry L.
Carr, Tom R.
Cmarik, George F.
Easter, Robert A.
Fahey, George C., Jr.
Garst, John E.
Gianola, Daniel
Kesler, Darrel J.
Russell, James B.
Thompson, Leif H.

Lecturers

Brown, David E.
Parrett, Douglas F.

**Department of
Dairy Science**

Professors

Bryant, Marvin P.
Campbell, John R.
Cragle, Raymond G.
Davis, Carl L.
Harshbarger, Kenneth E.
Hays, Ray L.
Larson, Bruce L.
Lodge, J. Robert

Associate Professors

Clark, Jimmy H.
Graves, Charles N.

Grossman, Michael
Harpestad, Gerhardt W.
Johnson, Ralph V.
Robinson, James L.
Spahr, Sidney L.

Assistant Professors
Baumrucker, Craig R.
Hespell, Robert B.
Rindsig, Russell B.

Department of Food Science

Professors

Bagley, Edward B.
Inglett, George E.
Kummerow, Fred A.
Nishida, Toshiro
Ordal, Z. John
Perkins, Edward G.
Rodda, Errol
Siedler, Arthur J.
Steinberg, Marvin P.
Tobias, Joseph
Visek, Willard J.
Wei, Lun-Shin
Whitney, Robert M.
Witter, Lloyd D.

Associate Professors

Argoudelis, Christos J.
Johnston, Patricia V.

Assistant Professors

Cheryan, Munir
Cho, Byung H.
Endres, Joseph G.
Erdman, John W.
Martin, Scott E.
Milner, John A.
Porter, Vernon L.
Siegel, Alvin
Smith, Robert E.
Spata, James M.
Taranto, Michael

Department of Forestry

Professors

Gerdemann, James W.
Gilmore, Alvan R.
Holland, I. Irving
Koeppel, David E.
Percival, Donald H.
Walters, Charles S.

Associate Professors

Bazzaz, Fakhri A.
Chow, Poo
Guiher, John K.
Jokela, Jalmer J.
Rolfe, Gary L.
Yocom, Theodore R.

Assistant Professors

Curtin, Theodore W.
Dawson, Jeffrey O.

Department of Horticulture

Professors

Carbonneau, Marvin C.
Courter, John W.
Culbert, John R.
Dayton, Daniel F.
Dickinson, David B.
George, William L.
Hopen, Herbert J.
Jaycox, Elbert R.
Mowry, James B.
Nelson, William R., Jr.
Rebeiz, Constantin A.
Simons, Roy K.
Splittstoesser, Walter E.
Titus, John R.
Vandemark, Joseph S.

Associate Professors

Fosler, Gail M.

Giles, Floyd A.
Meador, Daniel B.
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Reiner, Irving

Robinson, Derek S.
Rosenthal, Haskell P.
Rothman, Neal J.
Rotman, Joseph J.
Rubel, Lee A.
Schupp, Paul E.
Scott, Edward J.
Suzuki, Michio
Takeuti, Gaisi
Ting, Tsuan W.
Tondeur, Philippe M.
Uhl, J. Jerry, Jr.
Ullom, Stephen V.
Vaughan, H. E.
Walter, John H.
Weichsel, Paul M.
Wijsman, Robert A.

Associate Professors

Abikoff, William
Alexander, John R., Jr.
Alexander, Stephanie
Babakhanian, Ararat
Benzinger, H. E., Jr.
Bohrer, Robert E.
Brown, John W.
Craggs, Robert F.
Dornhoff, Larry
Evans, E. Graham, Jr.
Ferguson, William A.
Finney, Ross L.
Francis, George K.
Henson, C. Ward
Lotz, Heinrich P.
McCulloh, Leon R.
McLinden, Lynn
Miles, Joseph B.
Moreno, Carlos
Paley, Hiram
Peck, N. Tenney
Porta, Horacio A.
Portnoy, Stephen L.
Sherbert, Donald R.
Stolarsky, Kenneth B.
Stout, William F.
Weinberg, Elliot C.
Wetzel, John E.
Zaring, Wilson M.

Assistant Professors

Bateman, Felice D.
D'Angelo, John P.
Dade, Catherine D.
Fautleroy, Amassa C.
Han, Shih-Ping
Marden, John I.
Monrad, Ditlev
Morley, Thomas D.
Palmore, Julian I.
Phillips, Clarence
Reiner, Irma
Wagstaff, Samuel S., Jr.

Department of Microbiology

Professors

Bryant, Marvin P.
Cronan, John E., Jr.
DeMoss, Ralph D.
Kallio, Reino Emil
Kaplan, Samuel
Meyer, Richard C.
Ordal, Z. John
Reichmann, Manfred E.
Savage, Dwayne C.
Voss, Edward W., Jr.
Woese, Carl R.
Wolfe, Ralph S.

Associate Professors

Gabridge, Michael G.
Konisky, Jordan
Wachsman, Joseph T.
Weber, Michael

Assistant Professors

Gardner, Jeffrey F.
Helm, Alice C.
Kaufman, Stephen J.
Salyers, Abigail A.
Wong, Paul K. Y.

Department of Philosophy

Professors

Alston, William P.
Caton, Charles E.
Diggs, Bernard J.
Shwayder, David S.
Tiebout, Harry M., Jr.
Wallace, James D.

Associate Professors

Chandler, Hugh S.
Melnick, Arthur
Neely, Wright
Schacht, Richard L.

Assistant Professors

Bantz, David A.
Fern, Richard
Mohr, Richard D.
Monk, Robert A.
Scheid, Donald E.
Schroeder, William R.
Wagner, Steven J.
Wengert, Robert G.

Department of Physiology and Biophysics

Professors

Barr, Lloyd
Buetow, Dennis E.
Crofts, Antony R.
DeBrunner, Peter G.
Donchin, Emanuel
Ducoff, Howard S.
Dunn, Floyd
Ebrey, Thomas G.
Frauenfelder, Hans
Govindjee
Heath, James E.
Hertig, Bruce
Ramirez, Victor D.
Satinoff, Evelyn
Sleator, William W.
Twardock, A. Robert
Weber, Gregorio
Willis, John S.

Associate Professors

Connor, John A.
DeVault, Donald
Delcomyn, Fred
Helman, Sandy I.
Jakobsson, Eric
Katzenellenbogen,
Benita S.
Sherwood, O. David
Stolpe, Stanley G.
Sweeney, Daryl C.
Zehr, John E.

Assistant Professors

Bahr, Janice M.
DeVries, Arthur L.
Feng, Albert S.
Gillette, Rhanor
Johns, Bruce L.
Kemper, Byron W.
Rhoten, William B.
Wraight, Colin A.

Department of Political Science

Professors

Davis, Morris
Glad, Betty
Gove, Samuel K.
Kanet, Roger E.
Kolodziej, Edward A.
Merritt, Richard
Monypenny, Phillip

Nagel, Stuart S.
Scott, Robert E.
Seligman, Lester G.
Wirt, Frederick M.
Yu, George T.

Associate Professors

Bock, Peter G.
Carmen, Ira Harris
Carroll, Berenice A.
Cohen, Stephen P.
Douglas, Stephen A.
Fields, A. Belden
Hobbs, Milton
Orfield, Gary A.
Weinbaum, Marvin G.
Weinstein, Martin E.
Weissberg, Robert

Assistant Professors

Hansen, Susan B.
Preston, Michael B.
Rothman, Rozann C.
Seitz, Steven T.

Department of Psychology

Professors

Adams, Jack A.
Anderson, Richard C.
Banks, Edwin M.
Bernstein, Douglas A.
Birch, Joseph David
Campione, Ann B.
Campione, Joseph C.
Clore, Gerald L., Jr.
Cohen, Jozef B.
Cohen, Leslie B.
Costin, Frank
Davis, James H.
Donchin, Emanuel
Dulany, Donelson E., Jr.
Eriksen, Charles W.
Fishbein, Martin
Flexman, Ralph E.
Greenough, William T.
Hake, Harold W.
Hill, Kennedy T.
Hirsch, Jerry
Hopkins, Charles O.
Hulin, Charles L.
Humphreys, Lloyd G.
Kanfer, Frederick H.
Kappauf, William E.
Komorita, Samuel S.
Laughlin, Patrick R.
Linn, Robert L.
McGrath, Joseph E.
Osgood, Charles E.

Parke, Ross D.
 Paul, Gordon L.
 Rappaport, Julian
 Roscoe, Stanley N.
 Satinoff, Evelyn
 Seidman, Edward
 Sprague, Robert L.
 Swarr, Ralph R.
 Tatsuoka, Maurice
 Teitelbaum, Philip
 Triandis, Harry C.
 Tucker, Ledyard
 Wagman, Morton
 Weir, Morton W.
 Wyer, Robert S., Jr.

Associate Professors

Asher, Steven R.
 Birnbaum, Michael H.
 Brewer, William F.
 Coles, Michael G. H.
 Dweck, Carol S.
 Golding, Stephen L.
 Gottman, John M.
 Greenberg, Gordon Z.
 Jones, Lawrence E.
 Lewis, Charles
 Locke, John L.
 Loeb, Jane W.
 Medin, Douglas L.
 Nay, William Robert
 Porges, Carol S.
 Porges, Stephen W.
 Redd, William H.
 Shannon, Donald T.
 Trahiotis, C.
 Williges, Robert C.

Assistant Professors

Baxley, Gladys B.
 Cohen, Jerry L.
 Diener, Edward F.
 Hendersen, Robert W.
 Lamiell, James T.
 Malpeli, Joseph G.
 Mervis, Carolyn B.
 Moore, Thomas L.
 Schneider, Walter
 Shoben, Edward J.
 Wickens, Christopher

**Religious Studies
 Program**

Professors

Schoedel, William R.

Associate Professors

Petersen, David L.
 Robbins, Vernon K.

Assistant Professors

Bisgaard, Daniel J.
 Fern, Richard L.
 Koseki, Aaron K.
 Porton, Gary G.

**Department of Slavic
 Languages
 and Literatures**

Professors

Dawson, Clayton L.
 Friedberg, Maurice
 Klein, Kurt
 Pachmuss, Temira

Associate Professors

Bristol, Evelyn C.
 Dunatov, Rasio
 Gladney, Frank Y.
 Hill, Steven P.

Assistant Professors

Rzhevsky, Nicholas

**Department of
 Sociology**

Professors

Bordua, David J.
 Denzin, Norman K.
 Fliegel, Frederick C.
 Form, William H.
 Gorecki, Jan
 Huber, Joan
 Jacobs, Norman
 Johnson, Harry M.
 Karsh, Bernard
 Land, Kenneth C.
 Lueschen, Guenther
 Robinson, Jerry
 Simon, Rita J.
 Sudman, Seymour
 Van Es, J. C.

Associate Professors

Choldin, Harvey M.
 Felson, Marcus K.
 Jones, Robert A.
 McPhail, Clark
 Schoen, Robert
 Sofranko, Andrew
 Solaun, Mauricio
 Southwood, Kenneth E.
 Spaeth, Joe L.
 Stolzenberg, Ross M.
 Wiley, Norbert F.

Assistant Professors

Cockerham, William C.
 Cohen, Lawrence E.
 Dillingham, Gerald L.
 Kraus, Richard C.
 Vanneman, Reeve D.
 Waite, Linda J.

**Department of
 Spanish, Italian,
 and Portuguese**

Professors

Baldwin, S. W., Jr.
 Blaylock, William C.
 Dutton, Brian
 Lott, Robert E.
 Pasquariello, A. M.
 Porqueras, Alberto
 Preto-Rodas, Richard
 Saltarelli, Mario

Associate Professors

Aiex, Andar
 Cassell, Anthony K.
 Meehan, Thomas C.
 Musumeci, Antonino
 Wanner, Dieter

Assistant Professors

Boylan, Patricia C.
 Carreno, Antonio G.
 Cere, Ronald C.
 Lett, John A., Jr.
 Lewis, Marvin A.

**Department of Speech
 Communication**

Professors

Andersen, Kenneth E.
 Broaderick-Allen, King
 Delia, Jesse G.
 Mueller, Henry L.
 Nebergall, Roger E.

Associate Professors

Clark, Ruth A.
 Kramarae, Cheri R.
 Maclay, Joanna H.
 Swanson, David L.
 Thomas, Stafford H.
 Wenzel, Joseph W.

Assistant Professors

Bartine, David

Fine, Elizabeth C.
Grossberg, Lawrence
McPhee, Robert D.
Patton, John H.
Ritter, Ellen M.
Ritter, Kurt W.
Seibold, David R.

Department of Speech and Hearing Science

Professors

Bilger, Robert C.
Kim, Chin-Woo
O'Neill, John J.
Quigley, Stephen P.
Stark, Earl W.
Zemlin, Willard R.

Associate Professors

Johnson, Frances L.
Locke, John L.
O'Neill, Marlyn

Paden, Elaine P.
Sanders, Lois J.
Simpson, Robert K.
Trahiotis, C.
Yairi, Ehud

Assistant Professors

Arlt, Phyllis B.
Colton, Jan C.
Erickson, Joan G.
Hodson, Barbara W.

Harold Boeschstein
Professor of Political
Economy and Public Policy
Linowes, David F.

GRADUATE SCHOOL OF LIBRARY SCIENCE

Professors

Davis, Charles
Goldhor, Herbert
Krummel, Donald W.
Lancaster, F. Wilfred
Stevens, Rolland E.
Williams, Martha E.

Associate Professors

Allen, Walter Coleman
Divilbiss, James L.
Henderson, Kathryn Luther
Richardson, Selma K.
Thomassen, Cora E.

Assistant Professors

Brown, Robert E.

Miller, Jerome K.
Smith, Linda C.

Lecturers

Heim, Kathleen McEntee

Departmental Affiliates

Atkinson, Hugh
Brichford, Maynard
Gorman, Michael

SCHOOL OF SOCIAL WORK

Professors

Brieland, Donald
Costin, Lela B.
Itzin, Frank
Mech, Edmund
Taber, Merlin A.

Gould, Ketayun H.
Henderson, Charles H.
Leuenberger, Paul L.
Monkman, Marjorie M.
Vattano, Anthony J.
Wattenberg, Shirley H.

Assistant Professors

Borkin, Joyce
Cowger, Charles
Flynn, Marilyn

Gullerud, Ernest N.
Hookey, Peter
Kagle, Jill
Meares, Paula
Shaffer, Gary
Weinberg, Nancy W.
Wilson, Paul

Lecturers

Sattazahn, David

COLLEGE OF VETERINARY MEDICINE

Department of Veterinary Biosciences

Professors

Buck, William B.
Davis, Lloyd E.
Jackson, Gary L.
McQueen, Ralph D.

Safanie, Alvin H.
Twardock, A. Robert
Wagner, William C.

Associate Professors

Bevill, Richard F.
Hansen, Larry G.
Heath, Everett H.

Romack, Frank E.
Smetzer, David L.

Assistant Professors

Devous, Michael D.
Hixon, James E.
Holmes, Kenneth R.
Koritz, Gary D.

Normandin, Diane K.
Pijanowski, Gerald J.
Simon, Mark R.
Theodorakis, Michael C.

Department of Veterinary Clinical Medicine

Professors

Brodie, Bruce O.
Cook, W. Robert
Gustafsson, Borje K.
Helper, Lloyd C.
Schiller, Alvin H.
Small, Erwin
Thurmon, John C.

Associate Professors

Burke, Thomas J.
Kneller, Stephen K.
Manning, John P.
Nelson, Dale R.
Parker, Alan J.
Smith, Charles W.

Assistant Professors

Adams, William M.
Arnold, John S.
Baum, James L.

Benson, Gordon J.
Brightman, Alan H.
Daly, William R.
Jackson, Dennis A.
Lock, Theodore F.
McKiernan, Brendan C.
McPherron, Thomas A.
Musselman, Eugene E.
Stowater, Jonathan L.
Tarvin, Guy B.
Tuttle, Jack
Weller, Richard E.

Instructors

DiPietro, Joseph A.
Filipov, Michael M.
Ott, Randall S.
Scoggins, Ross D.

Department of Veterinary Pathology and Hygiene

Professors

Bryan, Harold S.
Crandell, Robert A.
Dierks, Richard E.
Dorner, Joseph L.
Fitzgerald, Paul R.
Hanson, Lyle E.

Levine, Norman D.
Mansfield, Manfred E.
Meyer, Richard C.
Myers, Walter L.
Pickard, J. Ronald
Ristic, Miodrag
Segre, Diego
Simon, Joseph
Todd, Kenneth
Watrach, Adolf M.
Woods, George T.

Associate Professors

Reynolds, Harry A.
Rhoades, Harry E.
Tompkins, Wayne
Tripathy, Deoki

Assistant Professors

Biehl, LeRoy G.
Cummins, Joseph M.
Ely, Ray W.
Hoffmann, Walter E.
Ivens, Virginia R.
Mesfin, Gebre-Mariam
Mock, Richard E.
Palmer, Jerry L.
Segre, Mariangela
Smith, Arnold R.
Smith, Ronald D.
Thilsted, John P.
Thomson, Bruce H.

Appendix B: Scholarships Administered by the University

This list of scholarships administered by the University is for information only. *Students do not apply for specific scholarships.* For specific information regarding application procedures for financial aid assistance refer to The Application Process on page 91.

The Urbana-Champaign Campus Committee on Financial Aids to Students requires that recipients of most scholarships have superior academic records in addition to demonstrated financial need. The specific criteria are developed each year and are a function of the funds available for University scholarships and the academic performance of students applying for scholarships.

The list of scholarships administered by the Office of Student Financial Aids with a brief description of each and the names of the donors whose generosity has provided the fund is given below. An asterisk by the name indicates funds which are provided by private donors through the University of Illinois Foundation.

GENERAL CASH SCHOLARSHIPS AVAILABLE IN VARIOUS FIELDS OF STUDY

Alpha Delta Phi Alumni Foundation (Illinois Chapter). Four-year scholarship for a male freshman. Criteria: activity, leadership, and academic achievement; some consideration of financial need.

Mary Davis Barnhart.* For undergraduate students; varying amounts. Established by the late Mary Davis Barnhart.

Albert Bellamy. Five or six scholarships; varying amounts.

Katherine H. Blake. For undergraduate students; varying amounts. Established by the late Katherine H. Blake.

F. Stanley Boggs Memorial.* For male students. Criteria: need, academic achievement, and participation in activities. Varying amounts. Established by alumni and friends of Phi Kappa Sigma fraternity.

Henrietta Curtis Hill Braucher Memorial.* Several scholarships; varying amounts. Established by the late Ralph W. Braucher.

Irma and Anton Brust. Several scholarships for Illinois residents; \$500 each. Established by the late Irma Brust.

Grace V. Campbell. For undergraduate students from farm homes. Awards made when funds available. Established by the late Grace V. Campbell.

Bertha L. Compton Memorial. Criteria: good character; preference to students who are not members of a sorority or a fraternity; recipients agree to repay to the fund as soon as they can. Varying amounts. Established by Warren E. Compton in memory of his mother.

H. J. Diffenbaugh Foundation. Several scholarships for needy undergraduate and graduate students who are Missouri residents. May equal out-of-state tuition and fees; not restricted to that use.

Anthony M. Engels Memorial Scholarship.* Established in 1978 in memory of Anthony Engels, former associate director of the Office of Student Financial Aids at Urbana-Champaign.

Equal Opportunity Fund.* For financially needy and culturally deprived students. Number and amounts vary.

FirstMiss, Inc.* For Illinois residents. Criteria: Illinois residency; outstanding performance, leadership, and accomplishment.

Foundation.* Several scholarships supported by gifts to the University of Illinois Foundation. Varying amounts.

Paul V. Galvin Memorial. Varying amounts. Established by gifts of Motorola distributors to honor Paul V. Galvin, founder and president of the company.

Ruth Katz Greenberg.* Scholarship varies in amount.

John M. and Louisa C. Gregory. For students who abstain from tobacco and alcohol. Other criteria: academic achievement; need. \$100 each.

Dunlap Harrington Memorial. For male graduating senior who has been substantially self-supporting; to participate in Commencement Week activities. \$100.

Jeanette E. and Benjamin F. Hunter. For students from farm homes. Other criteria: very high academic achievement; urgent financial need. \$900 per year; usually limited to two years.

Illini Clubs. Maintained by contributions from University of Illinois alumni clubs; supplemented by the University of Illinois Alumni Association. Varying amounts.

* An asterisk indicates funds which are provided by private donors through the University of Illinois Foundation.

Illinois State Federation of Labor and Congress of Industrial Organizations. For children of union members affiliated with the Illinois federation. One recipient from Cook County; one from another county. Not renewable. \$750 each.

FMC Corporation Educational Fund.* Preference to students in engineering or commerce and children of Link-Belt employees. Varying amounts. Established by the late Bert A. Gayman; income provided by a gift of Link-Belt Company stock.

William H. and Isabella A. Kane Memorial.* For needy, promising students of Wellsville high schools of New York; other qualified students in the natural, applied, or social sciences. Varying amounts up to total cost of tuition and fees.

Leo and Hilda Kolb Memorial. For students from Madison County, preferably from Marine Township. Varying amounts.

Mr. and Mrs. C. G. Larned Memorial. For undergraduate students. Awards made when funds available. Established by the late Mary S. Parsons as a memorial to her parents.

John R. and Mabel D. Lotz.* For needy students. One or more scholarships.

Charles E. Merriam. Two \$500 scholarships to University students submitting the best essays on local government; one \$750 scholarship to an outstanding junior majoring in political science for use during the senior year; one \$500 scholarship to an outstanding sophomore to major in political science during the junior year. Established by Charles J. Merriam in honor of his father, former chairman of the Department of Political Science at the University of Chicago.

Wensel Morava. For students between 18 and 22 years of age. Additional criteria: good health; good character; member of church or Sunday school; agreement not to join sorority or fraternity during first two years under the scholarship; agreement to assist another student with University expenses if financially able to do so. Varying amounts; eighteen to twenty awards yearly.

Lucille E. Morf Scholarship. Established by the late Lucille E. Morf. Varying amounts.

Charles H. Mottier Scholarship.* For undergraduate students. Criteria: financial need; academic achievement. Awards made when funds available.

Anna L. Neuber Scholarship.* Several scholarships for needy students.

Mr. and Mrs. Edward North.* For students from North Greene High School, White Hall, Illinois. Varying amounts; several awards.

LaVerne Noyes. For descendants of World War I veterans. Nearly fifty awards. Cover up to full resident or nonresident tuition and fee charges.

John W. Page Foundation. Preference to diligent, male students with financial need who do not meet academic requirements of other scholarship funds. Varying, substantial amounts.

Eric H. and Ruby V. Peterson. Preference to students from Rockford, Illinois. Several scholarships; varying amounts.

Phi Sigma Delta, Alpha Gamma Chapter Scholarship/Grant.* Preference to sons and daughters of Alpha Gamma Chapter, Phi Sigma Delta fraternity. Recipients must work ten hours per week. Varying amounts.

John C. Ruettinger.* For deserving students. Varying amounts.

John T. Rusher Memorial. Preference to students from Peoria and Tazewell counties. Varying amounts. Established by Mr. and Mrs. Floyd E. Rusher as a memorial to their son.

Gretchen Johanna Schilling and Paul Charles Schilling. Scholarships not to exceed \$500 each. Awarded annually.

Emerson F. Schroeder.* One or two awards annually. Varying amounts.

Clara Y. Shaw.* Several scholarships awarded annually. Varying amounts.

Myron K. Silverman Memorial.* Several scholarships, when income is available. Funds provided by University of Illinois Praetorian Alumni.

Amelia Alpiner Stern. For a freshman; one four-year scholarship. Established by the University of Illinois Mothers Association as a tribute to Mrs. Stern, organizer and first president of the Association. Awarded in 1963 and every fourth year thereafter. Tuition and fees.

Ida King Stevens. For a Champaign-Urbana woman who, after an interruption, is pursuing an undergraduate degree. Established by the Champaign-Urbana chapter of the American Association of University Women.

D. Alice Taylor. For needy and worthy students. Several awards; varying amounts. Established by the late D. Alice Taylor.

Linsley F. Ter Bush Memorial. Several awards; varying amounts.

Earl C. and Lawrence L. Voodry. One or more scholarships; varying amounts.

Manierre Barlow Ware. For male students, preferably in the College of Agriculture. Two scholarships; varying amounts. Established as a memorial to Manierre Barlow Ware by his mother, Fannie M. Ware.

Arthur Cutts Willard Memorial.* For senior students with high scholastic achievement, good character, and dependability. One or more awards each year; \$500 each. Established by former students, friends, and admirers of the late Dr. Arthur Cutts Willard, ninth president of the University of Illinois.

Women's League. For women. One or two scholarships each year; varying amounts.

Etta and Laura Beach Wright.* Several scholarships from income derived from a bequest. Varying amounts.

Harry G. and Harriette A. Wright. Preference given to students in agriculture and related fields and to residents of DeKalb, Lee, Randolph, and Whiteside counties in Illinois. Number of awards and amounts vary.

Various Donors — General. Several scholarships awarded to students maintaining a superior scholastic record and who demonstrate financial need. Number of awards and amounts vary.

SCHOLARSHIPS AVAILABLE IN CERTAIN FIELDS OF STUDY

In addition to the various monetary awards described below, numerous agencies, organizations, and businesses outside the University provide funds to students in particular curricula. These outside agencies often contact the individual departments or units for nominations of potentially eligible recipients. Students should contact the departments in which they are enrolled or have been accepted for admission for a more complete description of the types and amounts of financial aid which they may receive.

Agriculture and Home Economics

Agricultural Communications — Various Donors. For students enrolled in the agriculture communications curriculum in the College of Agriculture. Several awards yearly.

Agriculture Alumni Fund.* For agriculture students. One or more awards each year; varying amounts.

James A. Bauling Memorial.* For a junior or senior majoring in agronomy or planning to do advanced work in plant pathology. One award; \$200 to \$250.

Earl Dean Bork Scholarship in Horticulture. For a student from Onarga High

School; subsequent preference to one from Iroquois and adjacent counties. One award yearly.

Miles W. Bryant. For students majoring in ornamental horticulture. One or more awards yearly; \$300 to \$600 each. Funds provided by the Illinois State Nurserymen's Association.

Chicago Farmers. For a junior student in agriculture for use during his or her senior year. One award; \$500.

CIBA Geigy Corporation Scholarship in Agriculture. For minority or female students in the College of Agriculture. Criteria: financial need and scholastic achievement. Several awards.

Continental Grain Foundation. For agriculture students; preference to students in agricultural marketing. Foundation provides \$2,500 for awards of varying amounts.

Crow's Hybrid Corn Agricultural Scholarship. For agriculture students; preference to employees or descendants of employees or dealers of the Crow's Hybrid Corn Company. Criteria: financial need; scholastic achievement. Several awards; \$500 to \$600 each. Provided by a trust from the late A. F. Crow.

K. J. T. Ekblaw.* For a sophomore in the College of Agriculture or in the College of Engineering who is majoring in agricultural engineering. Award made in alternate years; \$300. Established by Alma H. Morehouse to honor her father, K. J. T. Ekblaw, former member of the agricultural engineering faculty.

Farmland Industries (Farmers' Co-op at Lincoln). For state residents whose parents are members of an agricultural cooperative; recipients must be in upper third of their class. One award each to a junior and a senior. \$400 each.

Federal Land Bank Association. For freshmen entering the College of Agriculture. Two awards yearly; \$500 each.

Food Science — Various Donors. For entering freshmen in the food science curriculum; renewable provided the recipient maintains a C or better average each semester. Several awards yearly; \$250 each.

FS Services, Inc. For a junior or senior with a rural background enrolled in the College of Agriculture. Preference to students in the agricultural industries curriculum. Two awards yearly; renewable through the senior year. \$400 each.

Garden Club of Illinois.* For students enrolled in horticulture, ornamental horticulture, conservation, or forestry curricula of the College of Agriculture. Several awards yearly.

David M. Hardy. For a junior, senior, or graduate student interested in employment by a farmers' cooperative marketing, purchasing, or credit association. Recipient must be enrolled in agriculture, business, or agricultural business courses acceptable for credit toward a degree in the field of agriculture or business. One award; \$500.

Fred E. Herndon Agricultural Industries. For juniors or seniors in the agricultural industries curriculum. Two or three awards; varying amounts. Provided by FS Services, Inc.

Ralph O. and Mabel F. Hunter Scholarship. For students in agriculture production fields; approximately one-half to be awarded without regard to financial need. Six or more awards per year; \$400 to \$600 each.

Illinois Bankers' Association.* For agriculture students with good academic records and financial need. Preference to students who are residents of Effingham County. One award per year.

Illinois Homemakers Extension Federation. For students enrolled in the home economics curriculum; preference to students from McLean County. Three awards per year; \$250 each.

Illinois Production Credit Association. For junior or senior students in the College of Agriculture; preference to students who have exhibited an interest in farm credit. Four scholarships each year; \$200 each.

Illinois Society of Professional Farm Managers and Rural Appraisers Memorial.* Preference to students majoring in farm management and/or rural appraisal. Several awards; varying amounts.

Kunkle-Anderson. For entering freshmen in an agricultural curriculum. Several awards each year. Funded through income from a \$25,000 endowment. One-third of annual income to be awarded to one or more students from Marshall or Putnam County, Illinois. Balance may be awarded to other eligible students who are Illinois residents.

Margaret H. Lang Memorial Scholarship. For a junior or senior in agriculture. One scholarship; approximately \$400.

Max Monblatt. For a student enrolled in the horticulture or ornamental horticulture curriculum. One award each year; \$200 to \$300.

Moorman Manufacturing Company. For students in agriculture, preferably animal-related curricula. Four or more awards each year; varying amounts.

Ralston Purina. For a junior or senior in the College of Agriculture who ranks in the upper 25 percent of his or her class. One award each year; \$500.

Bryan Reardon. For students specializing in soil building. Several awards each year; varying amounts.

Mabel Wamsley Roney Scholarship.* For students in any agricultural curriculum from any Illinois county; preference to residents of Coles County. Two or more awards each year.

Seitzinger Memorial.* For a student in agriculture. Award made every fifth year after 1967-68; \$200.

Wood Industries—Various Donors. For freshmen in the wood technology and utilization curriculum. Several awards each year; \$300 to \$500 each.

Applied Life Studies

John Bruce Capel Memorial.* For a sophomore or junior student in leisure studies and park administration. One award each year; varying amounts.

Carita Robertson. For female students who have demonstrated a significant personal and professional involvement in the field of physical education. One or more awards each year; varying amounts.

Commerce and Business Administration

Alcoa Foundation. For a student in accountancy; awarded on the basis of achievement. One award each year; \$750.

Bunker-Ramo Foundation.* For students in the College of Commerce and Business Administration or the College of Engineering (particularly aeronautical or electrical). Preference to students from Cook, DuPage, Lake, or Will counties in Illinois. Several awards.

First Federal Savings and Loan Association of Champaign, Illinois. For a student who is an Illinois resident; preference to residents of Champaign County. One award each year; \$500.

FMC Corporation Educational Fund.* Preference to students in engineering or commerce and children of Link-Belt employees. Varying amounts. Established by the late Bert A. Gayman; income provided by a gift of Link-Belt Company stock.

David M. Hardy. For a junior, senior, or graduate student interested in employment by a farmers' cooperative marketing, purchasing, or credit association. Recipient must be enrolled in agriculture, business, or agricultural business courses acceptable for credit toward a degree in the field of agriculture or business. One award; \$500.

William G. Karnes Scholarship.* For students in the College of Commerce and Business Administration. Several awards each year.

Sam and Rose Krivit Memorial Scholarship.* For undergraduate students enrolled in the College of Commerce and Business Administration. Criteria: good academic standing and financial need. Number and amounts of awards vary.

Marvin N. Nachman Memorial Scholarship.* For a needy student enrolled in the accounting curriculum of the College of Commerce and Business Administration. One award each year; \$200.

Seitzinger Memorial.* For a student in the College of Commerce and Business Administration. One award made every fifth year, beginning in 1973-74.

Max Tepper Memorial. For a sophomore enrolled in the College of Commerce and Business Administration or the College of Engineering; preference to residents of counties in east central Illinois. One award each year; \$500.

Communications

Donald E. Chamberlain. For a journalism student aiming toward a career in newspaper reporting or editing. Awarded annually by the Illinois Legislative Correspondents Association in memory of Mr. Chamberlain. \$500.

Frank E. Gannett Newspaper Foundation, Inc. For a student completing the junior year who has exhibited promise of success in the field of journalism. \$750.

Penta Corporation Scholarship in Advertising.* For a junior student, majoring in advertising, on the basis of academic performance. \$500.

Education

Illinois Congress of Parents and Teachers. For students enrolled in special education curricula. Several awards of varying amounts.

Seitzinger Memorial.* For a student in the College of Education. One award made every fifth year after 1969-70.

Engineering

Alcoa Foundation. Seven awards, for students in chemical engineering, mechanical engineering, metallurgical engineering, and computer science. \$750 each.

Hilda J. Alseth.* For undergraduates in the College of Engineering. Two or three awards of varying amounts. Established by the late Hilda J. Alseth.

A. I. Andrews.* For a student in ceramic engineering. One award.

Armco Foundation. For a freshman entering the metallurgical curriculum. One award.

Ira O. Baker Memorial Scholarship.* For undergraduate and graduate students enrolled in civil engineering. Number and amounts vary.

Bates and Rogers Foundation. For a sophomore, junior, and senior in civil engineering who rank in the top third of their respective classes. Three awards each year; vary from \$300 to \$500.

Frank W. Bauling Memorial.* For a junior or senior enrolled in agricultural engineering in either the College of Agriculture or the College of Engineering. One

award; of varying amounts. Established by Mr. and Mrs. Frank E. Bauling as a memorial to their late son, an honor student at the University.

Bechtel Corporation. For an undergraduate in engineering who has maintained a high scholastic record and who demonstrates financial need. One award each year; \$500.

The Boeing Company. For an Illinois resident enrolled in aeronautical, mechanical, civil, or electrical engineering; preference to juniors or seniors. Four awards each year; \$500.

Bunker-Ramo Foundation.* For students in the College of Commerce and Business Administration or the College of Engineering (particularly aeronautical or electrical). Preference to students from Cook, DuPage, Lake, or Will counties of Illinois.

Caterpillar Tractor Company. For students in metallurgical engineering. Several awards each year; \$500 each.

Ceramic Engineering — Various Donors. Awards of \$500 to students in ceramic engineering; renewable at \$500 a year if the recipient maintains a superior scholastic average.

Champion Spark Plug. For a student in ceramic engineering. One award each year; renewable until graduation.

John Deere. For a student in metallurgical engineering. One award each year; \$350.

Charles E. DeLeuw.* For seniors in civil engineering with special interest in public transportation. One award each year to finance foreign inspection — study trips. Amount varies.

Walter E. Deuchler.* For a beginning graduate student with strong interest in environmental engineering curriculum of civil engineering. One award each year; amount varies up to \$2,000.

Dow Chemical Company. For a student in metallurgical engineering. One award each year; \$500.

Maude E. Eide.* For needy juniors or seniors who have above average scholastic achievement in civil engineering. Amounts vary from \$500 to \$1,000.

K. J. T. Ekblaw.* For a sophomore in the College of Agriculture or in the College of Engineering who is majoring in agricultural engineering. Award made in alternate years; \$300. Established by Alma H. Morehouse to honor her father, K. J. T. Ekblaw, former member of the agricultural engineering faculty.

Fansteel Metallurgical Corporation. For students in ceramic engineering; preference to freshmen. Three awards; \$500 each.

Ferro Corporation. For students in ceramic engineering; preference to transfer students, then to entering freshmen. Two awards; \$300 each.

Ford Motor Company Scholarship. For minority students enrolled in ceramic engineering. Number and amounts vary.

Foundry Educational Foundation. For students interested in the foundry industry. Number and amounts vary.

General Engineering.* For a freshman in general engineering. One award; \$500. Provided by alumni of the department.

FMC Corporation Educational Fund.* Preference to students in engineering or commerce and children of Link-Belt employees. Varying amounts. Established by the late Bert A. Gayman; income provided by a gift of Link-Belt Company stock.

Winfred D. Gerber.* For undergraduate and/or graduate students in civil engineering as a scholarship and/or loan. One award each year; amount varies up to \$600.

Globe-Union Foundation. For a sophomore in ceramic engineering; renewable for the junior and senior years. One award; \$500.

Green Refractories. For a student enrolled in the ceramic engineering curriculum. One award each year.

Walter E. Hanson. For a graduating senior with a high scholastic average who is continuing as a graduate student in structural and geotechnical civil engineering. One award each year; \$500.

Harbison-Walker. For a freshman in ceramic engineering; renewable through the senior year. Awarded every four years; \$500 each year.

Bertha and Beatrice Hight Fund. For undergraduate students intending to pursue careers in engineering or in the physical sciences fields. Number and amounts vary.

Delores Wade Huber. For students in civil engineering. Number and amounts vary. Provided by the late Delores Wade Huber.

Ralph O. and Mabel F. Hunter. For students in agriculture production fields; approximately one-half to be awarded without regard to financial need. Six or more awards each year; \$400 to \$600 each.

Inland Steel Company. For students in metallurgical engineering. Three awards each year; \$500 each.

R. Jaccoud-Franklin.* For deserving students in civil engineering. Awards total \$1,500 annually. Provided by R. Jaccoud-Franklin, a 1937 civil engineering graduate.

Kaiser Aluminum and Chemical Corporation. For students in ceramic engineering. Four awards annually; \$500 each.

Olin Mathieson. One scholarship for a student in metallurgical engineering. \$500.

Metallurgical Education Fund. For students in metallurgical engineering. Awards renewable on the basis of satisfactory academic performance. Up to \$500 per year. Supported by industrial grants.

Minnesota Mining and Manufacturing Company. For upperclass students; preference to students in electrical, mechanical, and chemical engineering. Three awards; \$500 each.

Herman W. Nelson. Two \$500 scholarships, one for a junior and one for a senior in mechanical, electrical, or general engineering.

Calvin Barnes Niccolls Memorial Fund.* For male students at any class level in the field of engineering. Several awards. Established by the late Mary Hall Niccolls.

W. E. O'Neil.* Fellowship for a senior or graduate student specializing in construction management of civil engineering. One award annually up to \$500.

Owens-Corning Fiberglas Corporation. Two scholarships, one for a junior or senior in ceramic engineering; one for a junior or senior in mechanical, electrical, or chemical engineering. \$500 each.

John I. Parcel Trust. Mainly for graduate students in civil engineering. Number and amounts vary.

C. W. Parmelee. A limited number of scholarships in ceramic engineering. Amounts vary.

Pennsylvania Glass Sand Corporation. For a senior student in ceramic engineering who maintained the highest average for the junior year's work. One award; tuition and fees.

Franklin McRae Phillips Memorial.* For a student in any curriculum in the College of Engineering. One scholarship awarded in alternate years; \$300. In honor of Franklin McRae Phillips, class of 1932; established by his family.

Charles S. Pillsbury Memorial.* For students in engineering. Amounts vary. Es-

tablished by the Chicago Bridge and Iron Company in honor of Charles S. Pillsbury.

PPG Industries. At least one scholarship for a minority student and other unrestricted scholarships for needy undergraduate students in ceramic engineering.

Refractories Institute. For sophomores, juniors, or seniors who are U.S. citizens, enrolled in ceramic engineering, and who have potential in the ceramic engineering profession. Preference to students majoring or planning to major in refractories. One award each year.

Theodore R. Schlader Memorial. For students in architecture or architectural engineering; in electrical engineering, or other engineering fields. Number and amounts vary.

Schlumberger. One scholarship in electrical, mechanical, or petroleum engineering or physics or geology for a junior or senior who has included at least 12 hours of course work in electricity in his or her degree program.

Frederick D. Secor Memorial. For electrical engineering students. Number and amounts vary.

Seitzinger Memorial.* For a student in ceramic engineering. One award made every fifth year after 1971-72; \$200.

Shedd-Vawter.* For students in civil engineering. Varying amounts. One or more awards as income from an endowment fund permits.

Grant Warren Spear Memorial. For students in any curriculum in the College of Engineering. Several awards; varying amounts. Established by the late Emily F. Spear in memory of her father, Grant Warren Spear.

Sundstrand Scholarship. For students in mechanical, electrical, aeronautical or general engineering, engineering mechanics, or engineering physics. Four awards yearly; \$750 each.

Standard Oil of California. For a deserving student in civil engineering. One award; \$750.

Max Tepper Memorial. For a sophomore enrolled in the College of Commerce and Business Administration or the College of Engineering. Preference to residents of east central Illinois counties. One award; \$500.

Alex Van Praag, Jr. Scholarship. For a student in civil or sanitary (environmental) engineering. One award.

Earle J. Wheeler.* Scholarships for junior or senior civil engineering students. Varying amounts.

Wyman-Gordon Company. Two scholarships for juniors or seniors in metallurgical engineering. \$500 each.

Leigh F. J. Zerbee. For students enrolled in civil engineering who are also specializing in military science. Number varies; \$500 each.

Fine and Applied Arts

Alcoa Foundation — Architecture. For a student in architecture; based on financial need and scholastic standing. May be used during fifth and sixth years of studies. One award each year.

Alcoa Foundation — Industrial Design. For a student in industrial design; based on financial need and scholastic standing. One award each year.

William Anderson. For talented men or women students registered in the School of Music; competitive auditions required. Several awards; varying amounts.

Lydia E. Parker Bates. For students in architectural engineering, architecture, art, dance, landscape architecture, theatre, and urban and regional planning. Approx-

imately thirty-five awards; up to \$400 for Illinois residents; up to \$600 for non-residents.

Fermor Spencer Cannon and Mary L. Cannon Scholarship.* Award for an Indiana resident enrolled in the Department of Architecture.

Charles F. and Helen Loeb Scholarship Fund. Scholarships for students in vocal music.

Lloyd and Edna Morcy Scholarship.* For students in theatre or drama in the College of Fine and Applied Arts. Recipients must maintain at least a 3.75 cumulative grade-point average and demonstrate financial need.

Theodore Presser Foundation Scholarship. One award each year to a School of Music senior music major as a reward for excellence. \$500 plus a matching sum from the School of Music.

Theodore R. Schlader Memorial. For students in architecture, architectural engineering, other engineering fields. Several awards; up to \$400 each.

Warren H. Schuetz Memorial.* For an outstanding student in music education who has been admitted to advanced standing in teacher education. One award each year; \$100.

Thomas J. Smith. For women Illinois residents registered in the School of Music; competitive auditions required. Four awards each year; tuition.

Undergraduate Viola and String Bass Undergraduate Awards.* Four awards each year up to the amount of in-state tuition and fees.

Edgard Varese Percussion Award.* For a deserving music student whose instrumental emphasis is in the field of percussion.

Liberal Arts and Sciences

Janice I. Ackerman Memorial Fund. For promising female students in chemical engineering.

Air Products and Chemicals. For students in chemical engineering. Several awards; varying amounts.

Alcoa Foundation. For a student in chemical engineering; awarded on the basis of achievement. One award each year; \$750.

AMOCO Foundation Scholarship. For an entering freshman whose major field is geology; renewable through the senior year if recipient maintains a superior academic record. One award; amounts vary.

Elizabeth R. Bennett Scholarship. For a junior or senior in mathematics; recipient must have a cumulative grade-point average of at least 4.5 and have completed some 300-level course work. One to three awards annually.

School of Chemical Sciences. Several awards for outstanding freshmen registered in chemistry. Criteria: scholastic achievement in secondary school; some consideration of personal qualifications; admission to College of Liberal Arts and Sciences. Established in honor of Professor Emeritus Roger Adams; one is a memorial to Professor Ludwig F. Audrieth; several are supported by grants from industrial companies, \$500 each.

Clarence and Pauline Cohn Memorial Fund. Established in 1978 to provide scholarships to outstanding students concentrating in one of the humanities disciplines.

Lois Shepherd Green. For students studying philosophy. Several awards; \$100 to \$400 each.

J. N. Hook Scholarship Award in English Education.* For a deserving, needy student pursuing studies in preparation for the teaching of elementary or secondary school English. One award each year.

Dr. Hartwell C. Howard Memorial. For premedical and pre dental students. Approximately fifteen awards; varying amounts. Established by Dr. Charles P. Howard in memory of his father.

Kodak Scholars Program. For chemistry and chemical engineering students entering the sophomore year; renewable for two additional years. For 75 percent of tuition or \$625, whichever is greater.

Marathon Oil Company — Chemical Engineering. For Illinois residents enrolled in chemical engineering who anticipate industrial careers related to petroleum refining. Criteria: scholastic and extra-curricular achievements; anticipated success in future career activities. Each award \$600.

Charles E. Merriam. Two \$500 scholarships to University students submitting the best essays on local government; one \$750 scholarship to an outstanding junior majoring in political science for use during the senior year; one \$500 scholarship to an outstanding sophomore to major in political science during the junior year. Established by Charles J. Merriam in honor of his father, former chairman of the Department of Political Science at the University of Chicago.

Minnesota Mining and Manufacturing Company. For students in chemical engineering. Several awards; varying amounts.

Monsanto Company. Several awards for students in chemical engineering and chemistry. Varying amounts.

Peter F. Rossiter Memorial.* For students majoring in political science. Several awards; varying amounts. Provided by income from an endowment fund.

Diamond Shamrock Corporation. For students in chemical engineering.

Stauffer Chemical Company. For junior or senior students in chemical engineering; preference to children of Stauffer employees. Two \$500 awards.

Fred Sweitzer.* Preference to students from Washington Community and Pekin high schools; may be extended to students from other high schools of Tazewell County. Two awards; \$500 each.

UOP Foundation. For students in chemical engineering. Several awards; varying amounts.

Veterinary Medicine

Health Professions Grant Program. Grants for full-time, first-year students enrolled or accepted for enrollment in the College of Veterinary Medicine. Must demonstrate exceptional financial need. Awarded for one year only.

Appendix C: University of Illinois Long-Term Loan Funds

This list of University-administered long-term loan funds is for information only. Students do not apply for specific loan funds. For specific information regarding application procedures for financial assistance refer to The Application Process on page 91.

Alpha Phi Omega. Administered under the general rules of the Board of Trustees governing loan funds.

American Society for Metals, Sangamon Valley Chapter. Administered under the

general rules of the Board of Trustees governing loan funds for loans to metallurgy students only.

Elsie Anderson Memorial. Administered in accordance with general policies of the University with preference to students of Chinese origin who are graduate students in the School of Social Work.

Anonymous. Administered according to general University regulations.

Architects Club of Chicago. Established for interest-free loans to fourth- and fifth-year architecture students.

William Bardwell. Established for loans to students in the College of Law.

Max Beberman Memorial. Established for students in education.

Dora E. Biddle Loan Fund for Girls. Established by Mrs. Dora E. Biddle of Macon, Illinois, with preference given to women students most advanced in their University work.

Bloomington-Normal. Established by the Bloomington-Normal Illini Club for loans to students who are (1) residents of Bloomington or Normal, (2) residents of McLean County, and (3) other students at the University.

Joseph Borus. Presented to the University of Illinois for graduate students in the School of Social Work.

Bumstead Loan Fund.* Established by bequest from Arthur P. Bumstead; in memory of James E. Bumstead, Class of 1877; Frank M. Bumstead, Class of 1906; Arthur P. Bumstead, Class of 1908, and Alice A. Bumstead, Class of 1914.

Campus Chest. Established by Campus Chest student organization for loans to seniors only.

Norma E. Carr. Established by relatives of the late Miss Carr, chief clerk in the College of Communications, for loans to undergraduates in the College of Communications.

Carter-Pennell. Established by the late Joseph Carter and his wife, Jane Pennell Carter, for loans to any sophomore student in the Colleges of Engineering or Agriculture, or to any student in the College of Liberal Arts and Sciences who is specializing in science.

Champaign Business and Professional Women's Club. Loans for deserving women students.

Chicago Illinae Club. Established by the Chicago Illinae Club especially for women students of the University.

Alice V. B. Clark. Established by the late Mrs. Alice V. B. Clark, widow of the late Dean Thomas Arkle Clark, for loans to undergraduate students, preferably juniors and seniors. Loans cannot exceed \$300 in any one year and notes must bear interest at 5 percent.

Class of 1907. Administered under the general rules of the Board of Trustees governing loan funds, with no restrictions except that preference be shown to lineal descendants of members of the class.

Class of 1915. Established by alumni of the class of 1915 and administered under general University regulations.

Class of 1933. Administered under the general rules of the Board of Trustees governing loan funds.

Class of 1938. Established by alumni of the class of 1938 and administered by general University regulations.

Commerce. For loans to commerce students.

Consolidated. Fund established by the merger of the Automobile Show Fund, the Class of 1895 Loan Fund, the Graduate Club Loan Fund, the Detroit Illinae Loan Fund, the Kappa Delta Pi Loan Fund, and the Student Friendship Fund.

John S. Crandell. Established by William P. Jones, Jr., in honor of the late Professor John S. Crandell of the College of Engineering. Loans are made to graduates and undergraduates studying civil engineering.

Marcia S. Crelin. Administered under general University policy.

John and Rosalyn Crowley. Administered under general University policy.

Ralph R. and Grace Danielson. A memorial fund established for the purpose of providing loans to deserving and needy students in the College of Liberal Arts and Sciences and the Department of Ceramic Engineering.

Grace Darling Memorial. Founded by Mrs. R. V. Cram, of Minneapolis, and operated under the regulations of the Edward Snyder Fund.

Louis Edward Dawson Memorial. A gift from Mrs. Edward Dawson, as a memorial to her son, Louis Edward Dawson, for worthy students in chemistry.

C. C. DeLong. Administered under general University regulations for assisting students in completing their education.

Denison Memorial. The late Charles A. Denison of Argenta bequeathed this fund for loans to worthy senior students recommended by the president and treasurer of the University.

Detroit Illini. Established by Detroit Illini. Loans are made according to general University regulations.

Harry J. Diffenbaugh. Income from a trust fund established by the late Harry J. Diffenbaugh provides loans to needy residents of Missouri who are students at the University of Illinois.

Dow Chemical. Administered under general University policy.

Beulah Drom. For women physical education students during their senior year.

Du Page County Health Improvement Association. A gift from the Du Page County Health Improvement Association, for loans to students majoring in health education.

Electrical Engineering. Established by the Electrical Engineering Society and maintained by the Student Branch of the American Institute of Electrical Engineers. Available for juniors and seniors in good standing in the curricula in electrical engineering and engineering physics.

Engineering Student. The residual assets of the Real Cooperative Company (formerly the Engineering Cooperative Society) for the benefit of students in the College of Engineering.

Gertrude Escher. Income from an endowment for student loans.

Gilbert C. Finlay Memorial. Established in memory of Mr. Finlay, a former staff member of the College of Education. Administered under the general rules of the Board of Trustees governing loan funds.

Olaf S. Fjelde Memorial. This fund was established May 14, 1964, by family, friends, and fellow faculty members of the late Mr. Fjelde. Loans are available to architecture students with preference given to members of Alpha Chi Rho.

James Wilford Garner Memorial. Presented to the University in 1941, this fund is used for loans to worthy students in political science.

Benjamin Chase Grout Memorial. Established September 18, 1963, by George Vrana in memory of Benjamin Chase Grout. Preference is shown to premedical students in the granting of loans from this fund.

Samuel and Lydia Hare. The late Samuel Hare, of Piper City, bequeathed this fund (accepted by the Board of Trustees in 1937) for loans to students who, by previous study, have demonstrated their worthiness. Loans may not exceed \$500 to any one borrower.

Le Sueur H. Hendrick Memorial. Accepted February 27, 1962, this fund was established by the Capital Chapter of the Illinois Society of Professional Engineers to be made available to deserving juniors or seniors in any branch of engineering.

Norman H. Hill. Established October 1976. Loans to be made to students in accordance with University policy.

Mary Trowbridge Honey. The Board of Trustees accepted a bequest of the late Mary Trowbridge Honey, of Wayne, Nebraska, in 1942, for loans to students in the Department of Classics.

Paul R. and James W. Hosler Fund.* Established by Paul R. and James W. Hosler for loans for undergraduate engineering students; to be used only for cost of tuition and fees; out-of-state students may be considered; funds granted at time of second request; grades are not a determining factor.

Robert R. Hudelson. This donation, accepted in 1957, was established in recognition of Dr. Hudelson's services in agriculture. Preference is given to indigent students in agriculture.

Ina Meredith Hunter. The late Ina Meredith Hunter bequeathed this fund, in 1961, for loans to deserving junior and senior students who won honors in scholarship during their sophomore year.

Illini Club of the Philippines. Fund established October 25, 1966, by the Illini Club of the Philippines for loans to Filipino students at the University.

Illinois Congress of Parents and Teachers. For assisting worthy future teachers.

Margaret Lange James. Established by a gift from University of Illinois President E. J. James which later was increased by the University Senate as a memorial to him. Loans are made to students, preferably women, who have been in residence at least one year, who have attained junior standing, and who expect to graduate.

Edward J. Jones and Martha E. Jones. A bequest of the late Edward J. Jones of Secor, Illinois. Administered under the general rules of the Board of Trustees governing loan funds.

A. F. Kaeser. A gift from Dr. A. F. Kaeser, of Highland, Illinois, for graduates of high schools located in Highland, Illinois. If this fund is not exhausted through loans made to these graduates, loans may be made to graduates of high schools located in the counties of Madison, Bond, and Clinton. Loans made to any one student may not exceed \$200 annually or \$800 for the four-year period.

W. G. Kammlade. Established by friends of the Cooperative Extension Service in agriculture and home economics in the name of Dr. W. G. Kammlade, retired associate director of the Cooperative Extension Service. Prospective borrowers must have a career interest in cooperative extension work. The maximum loan is \$700.

Michael Evans Kandrak. Loans to students in the school of architecture.

Willis Prentice Kimble. A memorial fund established by Mrs. Kimble. Loans may be made to sophomores, juniors, and seniors but not in excess of \$100 to any one individual.

Koppers Company, Incorporated. Established by the Koppers Company for loans to students in architecture.

Franklin C. Kreider. Established by the Collinsville High School Band Parents Association, for loans to Collinsville High School graduates majoring in instrumental band music.

Marcia Lome Kritchevsky. Established in memory of Mrs. Kritchevsky for students in teacher training.

Law School. Established by College of Law alumni. No cosigner or period of residency is required.

League of Choreographers and Composers. Loans are made to students in dance or the related arts.

William E. Levis. Established by a gift from William E. Levis, president of the Owens-Illinois Glass Company. Loans are made (1) to employees or children of employees of the Owens-Illinois companies or subsidiaries, who are students in attendance or prospective students expecting to register immediately at the University; and (2) if funds are available, to students who have been in attendance at the University for at least one year.

Annie Lourie. Administered according to general regulations governing loan funds for undergraduate students.

Royal B. MacDonald. For students in the School of Music.

India Mathis Memorial. Established by the employees of the Student Employment Office in memory of Miss India Mathis, an employee in that office. For working undergraduate students.

David T. May. Established in memory of Mr. May, a member of the class of 1905, for deserving students.

William B. McKinley. Established by the late Senator William B. McKinley for loans to male students who have been in residence at least one year and intend to graduate.

Enid P. McTaggart. Loans to students in Fine and Applied Arts.

Albert Merritt Foundation. Administered under general University policy.

Milwaukee Illini Club. Established by the Milwaukee Illini Club for long-term loans to deserving students from Wisconsin.

J. S. Morris. Established by the late Joseph R. Morris for loans to students who have been in residence at least one semester. Loans may not exceed \$400. Preference is given to advanced students.

National Association of Federal Veterinarians. For loans to students in the College of Veterinary Medicine.

Jesse Smith Noyes Foundation. A gift from the Noyes Foundation. Administered under the general rules of the Board of Trustees governing loan funds.

Overseas Soldiers. Available to soldiers, sailors, and marines with overseas service and to their descendants. Qualifying students in the junior, senior, or post-baccalaureate years in the College of Agriculture are eligible. \$200 maximum loan.

Panhellenic. Established by the Panhellenic Council for sorority women who have completed one semester at the University.

C. W. Parmelee. Established by friends of Professor Cullen W. Parmelee for loans to students in ceramic engineering.

John J. Parry. Non-interest bearing loans for graduate students majoring in English.

Robert Peine. For students in the College of Agriculture who are majoring in agronomy.

Phi Beta Kappa. A gift from the Gamma of Illinois Chapter of Phi Beta Kappa. Loans are available to promising students enrolled at the Urbana-Champaign campus in curricula through which election to membership in Phi Beta Kappa is possible.

Phi Delta Kappa. For students in the College of Education.

Marion K. Piper. For students in home economics.

Lieutenant Jack Plucinski Memorial. Administered under general University policy.

Joseph A. Polson and Betsy C. Polson. Established by a bequest of Mr. and Mrs. Polson and administered in accordance with general University regulations.

Emma Reinhardt. Established for loans to students in accordance with general University regulations.

Alice Rettker. For women, preferably those in advertising or public relations.

Raymond E. Rickbeil. Established by Raymond E. Rickbeil and administered according to general University regulations except that borrowers must have maintained an overall scholastic grade-point average of 4.0 (A=5.0) under the present grading system or its equivalent.

Charles Rikhoff, Jr. Administered under general University policy.

Lawrence W. Rogers. For students in architecture.

William T. Rogers. A bequest of William T. Rogers for loans to deserving students in need of financial assistance.

Marcus Russell. Established by the late Marcus Russell of Los Angeles, California, for loans to worthy and indigent students.

St. Clair County Heart Association. Established by the Midwest Rubber Reclaiming Company and established within the framework of the Burnsides Research Laboratory. Recipients of loans are to be designated by Doctor F. A. Kummerow, or his successor, as head of the laboratory.

St. Louis Illinae Club. Scholarship loan fund.

St. Louis Illini. Established by Illini from the St. Louis area for loans to students from that area.

Sandemac Kennel Club Veterinary. Established by the Sandemac Kennel Club, Inc., of Decatur, Illinois, for loans to students in the College of Veterinary Medicine.

Alta Gwian Saunders. Administered under general University policies.

William Wesley Sayers. A bequest by Mr. Sayers for loans to undergraduates studying engineering and engineering science and research.

Gretchen and Paul Schilling. Administered under general University regulations.

Sears Roebuck Foundation. For College of Agriculture students only.

Sigma Delta Epsilon. Established by Gamma Chapter of Sigma Delta Epsilon, for loans to senior or graduate women in science.

Edward Snyder. Established by the late Edward Snyder, professor of German at the University of Illinois at Urbana-Champaign. For loans to students of junior standing who are in residence and who expect to graduate. Preference is given to those of high rank and advanced standing.

Springfield Illini Club. Established by Springfield, Illinois, Illini for loans only to students from that area.

David B. Steinman. For students in civil engineering.

W. Clement and Jessie Stone Foundation. For College of Law students.

Henry Strong Educational Foundation. The Henry Strong Educational Foundation, established under the will of General Henry Strong, provides loans to students under twenty-five years of age, preferably in the upper classes.

John R. Stubbins. Established by the John Russel Stubbins Foundation for loans only to students who are bona fide residents or citizens of Venezuela and are candidates for the B.S. or master's degree in the College of Engineering. Maximum \$3,000 for each academic year.

Student Senate. For undergraduate students.

Timothy W. Swain Fund.* Established by Timothy W. Swain for loans to students in Law School.

- Harry Roberts Temple.** Established by Mrs. Frieda Block Temple. The regulations of the Edward Snyder Fund apply except that preference is given to students in the Department of Architecture. Applicants must have junior standing.
- Tile Council of America.** For students in architecture.
- M. Umino Fund.** Established for loans to Japanese students who wish to study within the Department of Agricultural Economics. Loans administered in accordance with general University regulations.
- U.S. Steel.** For loans to graduate students in physics and related areas.
- University of Illinois Foundation.** For long-term loans.
- Harley J. Van Cleave Memorial.** For worthy doctoral candidates in zoology.
- Carlos J. Wagner Circus Fund.** Administered under general University policies.
- P. L. Windsor.** Established in memory of Doctor P. L. Windsor for loans to students in the Graduate School of Library Science.
- Sally Wolin Memorial.** Established by the Sally Wolin Memorial Council for loans to students in the School of Social Work.
- Women's League.** Established by the Women's League and administered under the regulations of the Edward Snyder Fund.
- Zoology Department.** Established by the staff and graduate students in the Department of Zoology to honor Majid Al-Radhawy, a graduate student in zoology.

Appendix D: Short-Term and Intermediate Loan Funds Administered by the University

- See Emergency Short-Term and Intermediate Loans on page 98 for application procedures.
- Cora C. Bright Memorial.** A gift from the Illinois Congress of Parents and Teachers.
- Class of 1932.** Fund presented to the University in 1934 through the Alumni Association.
- Gerald S. Cohen.** Fund established in memory of the late Gerald S. Cohen.
- College of Veterinary Medicine.** Established by donations from the Champaign Kennel Club and the Women's Auxiliary of Illinois Veterinary Medical Association.
- Decatur Obedience Training Club, Inc.** Established for short-term loans to students in the College of Veterinary Medicine.
- Verne Hall Detweiler.** Gift from the Illinois Congress of Parents and Teachers.
- Dr. and Mrs. Arthur L. Ennis.** Fund established in 1956.
- Fraternity Alumni.** Established through contributions of fraternity alumni for emergency use by the dean of students.
- Edward C. Heidrich, Jr.** Gift from Edward C. Heidrich, Jr.
- Fred Dilling Kirkpatrick Memorial.** Established by Sidney Kirkpatrick in memory of his father, Fred Dilling Kirkpatrick.
- Lincoln State Cat Club, Inc.** Established for short-term loans to students in the College of Veterinary Medicine.
- Marion Martin.** To provide loans to students in the College of Law.

William McKinley. Donated for worthy and promising students.

Men's Student Aid. Fund established in 1960.

Albert Merritt. To make loans to students attending midwestern institutions of higher education.

Thomas L. Seanor Memorial. Established by Lieutenant Harry F. Seanor as a memorial to his brother, Lieutenant Thomas L. Seanor.

William E. Slanina. Established for short-term loans to students in the College of Commerce and Business Administration.

A. Edson Smith. Memorial loan fund in memory of A. Edson Smith.

Irene Symonds. Gift from the Illinois Congress of Parents and Teachers as a memorial to Irene Symonds.

Tau Delta Tau. Established by the Tau Delta Tau fraternity as a memorial to two of its members, John Donald Danielson and Joel Hubbard Rossiter.

University Faculty Short-Term Loan Fund. Established for short-term loans to students at Urbana-Champaign from a portion of the funds solicited in 1931 by the University Senate Committee on Unemployment and Relief.

Veterinary Medicine: Various Donors. Established to provide loans for veterinary medicine students.

Appendix E: Course Abbreviations Used in Curricular Listings

Accy.	Accountancy	Bioph.	Biophysics
A.H.C.E.	Administration, higher, and continuing education	Bot.	Botany
Adv.	Advertising	Bus.	Business
A.A.E.	Aeronautical and astronautical engineering	B. Adm.	Business administration
Afr. St.	African studies	B. & T.W.	Business and technical writing
Ag. Com.	Agricultural communications	Catal.	Catalan
Ag. Ec.	Agricultural economics	Cer. E.	Ceramic engineering
Ag. E.	Agricultural engineering	Ch. E.	Chemical engineering
Ag. M.	Agricultural mechanization	Chem.	Chemistry
Agr.	Agriculture	Chin.	Chinese
Agron.	Agronomy	C.E.	Civil engineering
A.F.A.S.	Air force aerospace studies	Cl. Arc.	Classical archaeology
An. S.	Animal science	Cl. Civ.	Classical civilization
Anth.	Anthropology	Comm.	Communications
Arab.	Arabic	C. Lit.	Comparative literature
Arch.	Architecture	C.S.	Computer science
Art	Art and design	Cop.	Coptic
As. St.	Asian studies	Czech	Czech
Astr.	Astronomy	D.S.	Dairy science
Atmos.	Atmospheric sciences	Dance	Dance
Avi.	Aviation	E.E.E.	Ecology, ethology, and evolution
Bands	Bands	Econ.	Economics
Bioch.	Biochemistry	Educ.	Education
Bioen.	Bioengineering	Ed. Pr.	Educational practice
Biol.	Biology	Ed. Psy.	Educational psychology

E.E.	Electrical engineering	Mil. S.	Military science
El. Ed.	Elementary education	Min. E.	Mining engineering
Eng.	Engineering	M. Grk.	Modern Greek
Eng. H.	Engineering honors	M. Hbr.	Modern Hebrew
E.P.S.	Educational policy studies	Music	Music
E.S.L.	English as a second language	N.S.	Naval science
Engl.	English literature and American literature	Nuc. E.	Nuclear engineering
Entom.	Entomology	Nur.	Nursing
Env. St.	Environmental studies	Nutr. S.	Nutritional sciences
F.A.C.E.	Family and consumer economics	O.T.	Occupational therapy
Fin.	Finance	Pers.	Persian
F.A.A.	Fine and applied arts	Phil.	Philosophy
F.N.	Foods and nutrition	P.E.	Physical education
F.S.	Food science	Physc.	Physics
For.	Forestry	Physl.	Physiology
Fr.	French	Pl. Pa.	Plant pathology
G.E.	General engineering	Pol.	Polish
Geog.	Geography	Pol. S.	Political science
Geol.	Geology	Port.	Portuguese
Ger.	German	Psych.	Psychology
Gmc.	Germanic	R. TV	Radio and television
Grk.	Greek	Relst.	Religious studies
H. Ed.	Health education	Rhet.	Rhetoric and composition
Hebr.	Hebrew	Ruman.	Rumanian
Hindi	Hindi	R. Soc.	Rural sociology
Hist.	History	Russ.	Russian
Hort.	Horticulture	S. Ed.	Safety education
H.D.F.E.	Human development and family ecology	Sansk.	Sanskrit
Human.	Humanities	Scan.	Scandinavian
H.R.F.S.	Human resources and family studies	Se. Ed.	Secondary education
I.E.	Industrial engineering	S. Cr.	Serbo-Croatian
I.D.	Interior design	Slav.	Slavic
Ital.	Italian	Soc. S.	Social sciences
Japan.	Japanese	Soc. W.	Social work
Journ.	Journalism	Soc.	Sociology
Korea.	Korean	Span.	Spanish
L.I.R.	Labor and industrial relations	Sp. Com.	Speech communication
L.A.	Landscape architecture	Sp. Ed.	Special education
Lat.	Latin	Sp. H.S.	Speech and hearing science
L.A. St.	Latin American studies program	Swkli.	Swahili
Law	Law	T.C.	Textiles and clothing
Law So.	Law and society	Theat.	Theatre
Leist.	Leisure studies	T.A.M.	Theoretical and applied mechanics
L.A.S.	Liberal arts and sciences	Ukr.	Ukrainian
Lib. S.	Library science	U.P.	Urban and regional planning
Ling.	Linguistics	V.B.	Veterinary bioscience
Math.	Mathematics	V.C.M.	Veterinary clinical medicine
M.E.	Mechanical engineering	V.M.S.	Veterinary medical science
Med. S.	Medical sciences	V.M.	Veterinary medicine
Met. E.	Metallurgical engineering	V.P.H.	Veterinary pathology and hygiene
Mcbio.	Microbiology	Vo. Tec.	Vocational and technical education
		Yruba.	Yoruba
		Zool.	Zoology

Appendix F: University of Illinois Regulations Governing the Determination of Residency Status for Admission and Assessment of Student Tuition

January 1977

For the purpose of these regulations an "adult" is considered to be a student eighteen years of age or over; a "minor" student is a student under eighteen years of age. The term "the State" means the State of Illinois. Except for those exceptions clearly indicated in these regulations, in all cases where records establish that the person does not meet the requirements for resident status as defined in these regulations the Nonresident status shall be assigned.

1. Residency Determination

Evidence for determination of residence status of each applicant for admission to the University shall be submitted to the Director of Admissions and Records at the time of application for admission. A student may be reclassified at any time by the University upon the basis of additional or changed information. However, if the student is classified in error as a Resident student, the change in tuition shall be applicable beginning with the term following the reclassification; if the student is classified in error as a Nonresident, the change in tuition shall be applicable to the term in which the reclassification occurs, provided the student has filed a written request for a review in accordance with these regulations.

2. Adult Student

An adult, to be considered a Resident for purposes of admission, must have been a bona fide resident of the State for a period of at least six consecutive months immediately preceding the date of receipt of the application for admission. An adult, to be considered a Resident for purposes of assessment of student tuition, must have been a bona fide resident of the State for a period of at least six consecutive months immediately preceding the beginning of any term for which the adult registers at the University, and must continue to maintain a bona fide residency in the State. An adult whose parents (or one of them if only one parent is living or the parents are separated or divorced) have established and are maintaining a bona fide residence in the State and who resides with them (or the one residing in the State) or elsewhere in the State will be regarded as a Resident applicant or student.

3. Minor Student

The residence of a minor shall be considered to be, and to change with and follow:

- a. That of the parents, if they are living together, or living parent, if one is dead; or
- b. If the parents are separated or divorced, that of the parent to whom the custody of the person has been awarded by court decree or order, or, in the absence of a court decree or order, that of the father unless the person has continuously resided with the mother for a period of at least six consecutive months immediately preceding registration at the University, in which latter event the residence shall be considered to be that of the mother; or
- c. That of the adoptive parents, if the person has been legally adopted and, in the event the adoptive parents become divorced or separated, that of the adoptive parent whose residence would govern under the foregoing rules if that parent had been a natural parent; or
- d. That of the legally appointed guardian of the person; or

- e. That of a "natural" guardian, such as a grandparent, adult brother or adult sister, adult uncle or aunt, or other adult with whom the person has resided and has been supported by for a period of at least six consecutive months immediately preceding registration at the University for any term if the person's parents are dead or the person has been abandoned and if no legal guardian of the person has been appointed and qualified.
4. **Parent or Guardian**
Except as provided in paragraph 10 of these Regulations, no parent or legal or natural guardian will be considered a resident of the State unless that person (a) maintains a bona fide and permanent place of abode within the State, and (b) lives, except when temporarily absent from the State with no intention of changing legal residence to some other state or country, within the State.
 5. **Emancipated Minor**
A minor who has been emancipated, is completely self-supporting, and actually resides in the State shall be considered to be a Resident even though the parents or guardian may reside outside the State. An emancipated minor who is completely self-supporting shall be considered to "actually reside in the State of Illinois" if the minor has maintained a dwelling place within the State uninterrupted for a period of at least six consecutive months immediately preceding the beginning of any term for which the minor registers at the University. Marriage or active military service shall be regarded as effecting the emancipation of minors, whether male or female, for the purposes of this regulation. An emancipated minor whose parents (or one of them if only one parent is living or the parents are separated or divorced) have established and are maintaining a bona fide residence in the State and who resides with them (or the one residing in the State) or elsewhere in the State will be regarded as a Resident student.
 6. **Married Student**
A Nonresident student who is a citizen of the United States of America or who holds permanent resident, "Refugee-Parolee," or "Conditional Entrant" status with the United States Immigration and Naturalization Service, whether male or female, or a minor or adult, who is married to a person who meets and complies with all of the applicable requirements of these regulations to establish Resident status shall be classified as a Resident.
 7. **Persons without United States Citizenship**
A person who is not a citizen of the United States of America, to be considered a Resident must have permanent resident status, or must hold "Refugee-Parolee" or "Conditional Entrant" status, with the United States Immigration and Naturalization Service and must also meet and comply with all of the other applicable requirements of these regulations to establish Resident status.
 8. **Armed Forces Personnel**
A person who is actively serving in one of the Armed Forces of the United States and who is stationed and present in the State in connection with that service and submits evidence of such service and station, and the person's spouse and dependent children, shall receive waiver of the Nonresident portion of tuition as long as the person remains stationed and present in Illinois and the spouse or dependent children also live in the State.
 9. **Minor Children of Parents Transferred outside the United States**
The minor children of persons who have resided in the State for at least six consecutive months immediately prior to a transfer by their employers to some location outside the United States shall be considered Residents. However, this shall apply only when the minor children of such parents enroll in the University within five years from the time their parents are transferred by their employer to some location outside the United States.

10. Staff Members of the University and of Allied Agencies, and Faculties of State-Supported Institutions of Higher Education in Illinois
Staff members of the University and of allied agencies, and faculties of state-supported institutions of higher education in Illinois, holding appointment of at least one-quarter time, and their spouses and dependent children, shall be treated as Residents.
11. Teachers in Private and Public Schools in Illinois
Teachers in the private and public elementary and secondary schools in Illinois shall, if subject to the payment of tuition, be assessed at the Resident rate during the term in which the staff member or teacher holds such an appointment at least one-quarter time. This privilege also extends to the summer session or off-quarter vacation immediately following the term for which such appointment was effective. Any Nonresident student who qualifies for Resident tuition by reason of an appointment described in 10 or 11 above shall become subject to Nonresident tuition for the entire term if the appointment qualifying the student for the Resident benefit is vacated prior to completion of three-fourths of the term in question. Resignation or cancellation of the appointment prior to the close of the spring term also cancels the eligibility for the Resident tuition privilege in the following summer or Off-Quarter Vacation Term.
12. Definition of Terminology
To the extent that the terms "bona fide residence," "independent," "dependent," and "emancipation" are not defined in these regulations, definitions shall be determined by according due consideration to all of the facts pertinent and material to the question and to the applicable laws and court decisions of the State of Illinois.
Voter registration, filing of taxes, proper license and registration for the driving or ownership of a vehicle, and other such transactions may verify intent of residency in a state. Neither length of University attendance nor continued presence in the University community during vacation period shall be construed to be proof of Illinois residence.
The term "staff member" as used in these regulations shall mean a person appointed to an established position for a specific amount of time at a salary commensurate with the percentage of time required, under an appointment requiring service for not less than three-fourths of the term. The term "staff member" as defined herein shall not apply to persons employed on an hourly basis in either an academic or nonacademic capacity, nor to persons on leave without pay. Persons appointed to established Civil Service positions whose rate of pay is determined by negotiation or prevailing rates shall not be considered as being paid on an hourly basis.
13. Procedure for Review of Residency Status and/or Tuition Assessment
A student who takes exception to the residency status assigned and/or tuition assessed shall pay the tuition assessed but may file a claim in writing to the Director of Admissions and Records for a reconsideration of residency status and/or an adjustment of the tuition assessed. For purposes of admission, the written claim must be filed within twenty calendar days from the date of notification of residency status. For purposes of assessment of tuition, the written claim must be filed within twenty days of the date of assessment of tuition or the date designated in the official University calendar as that upon which instruction begins for the academic period for which the tuition is payable, whichever is later. Students who file after the twenty-day period lose all rights to a change of status and/or adjustment of the tuition assessed for the term in question. If the student is dissatisfied with the ruling in response to the written claim made within said period, the student may appeal the ruling to the University Counsel by filing with the director of admissions and records within twenty days of the notice of the ruling a written request. If

such a written request is filed within said period, the question of residency status under the provisions of these regulations and of applicable laws shall be referred by the Director of Admissions and Records through the Campus Legal Counsel to the University Counsel, whose decision shall be final.

These regulations shall remain in full force and effect unless and until subsequently amended or repealed by action of the Board of Trustees.

Further information or clarification may be secured by contacting the director of admissions and records on the campus concerned:

10 Administration Building
University of Illinois at Urbana-Champaign
Urbana, Illinois 61801

1-120 Library
University of Illinois at Chicago Circle
P.O. Box 4348
Chicago, Illinois 60680

204 Administrative Office Building
University of Illinois at the Medical Center
P.O. Box 6998
Chicago, Illinois 60680

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420 Student Services Building, 610 East John Street, Champaign, IL 61820 (217) 333-1420

Motor vehicle and bicycle registration

MOTOR VEHICLE REGISTRATION OFFICE
University of Illinois at Urbana-Champaign
601 East John Street, Champaign, IL 61820 (217) 333-3530

Services for permanently physically handicapped students

DIVISION OF REHABILITATION-EDUCATION SERVICES
University of Illinois at Urbana-Champaign
Oak Street and Stadium Drive, Champaign, IL 61820 (217) 333-4602

Student welfare and campus life

DEAN OF STUDENTS
University of Illinois at Urbana-Champaign
130 Student Services Building, Champaign, IL 61820 (217) 333-4636

Veterans educational benefits

VETERAN EDUCATIONAL BENEFITS
University of Illinois at Urbana-Champaign
130 Student Services Building, 610 East John Street, Champaign, IL 61820 (217) 333-0058

Chicago Circle campus — general information and a catalog

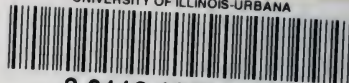
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Medical Center campus — general information and a catalog of the colleges of dentistry, medicine, nursing, and pharmacy

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