

Northern Illinois University Bulletin

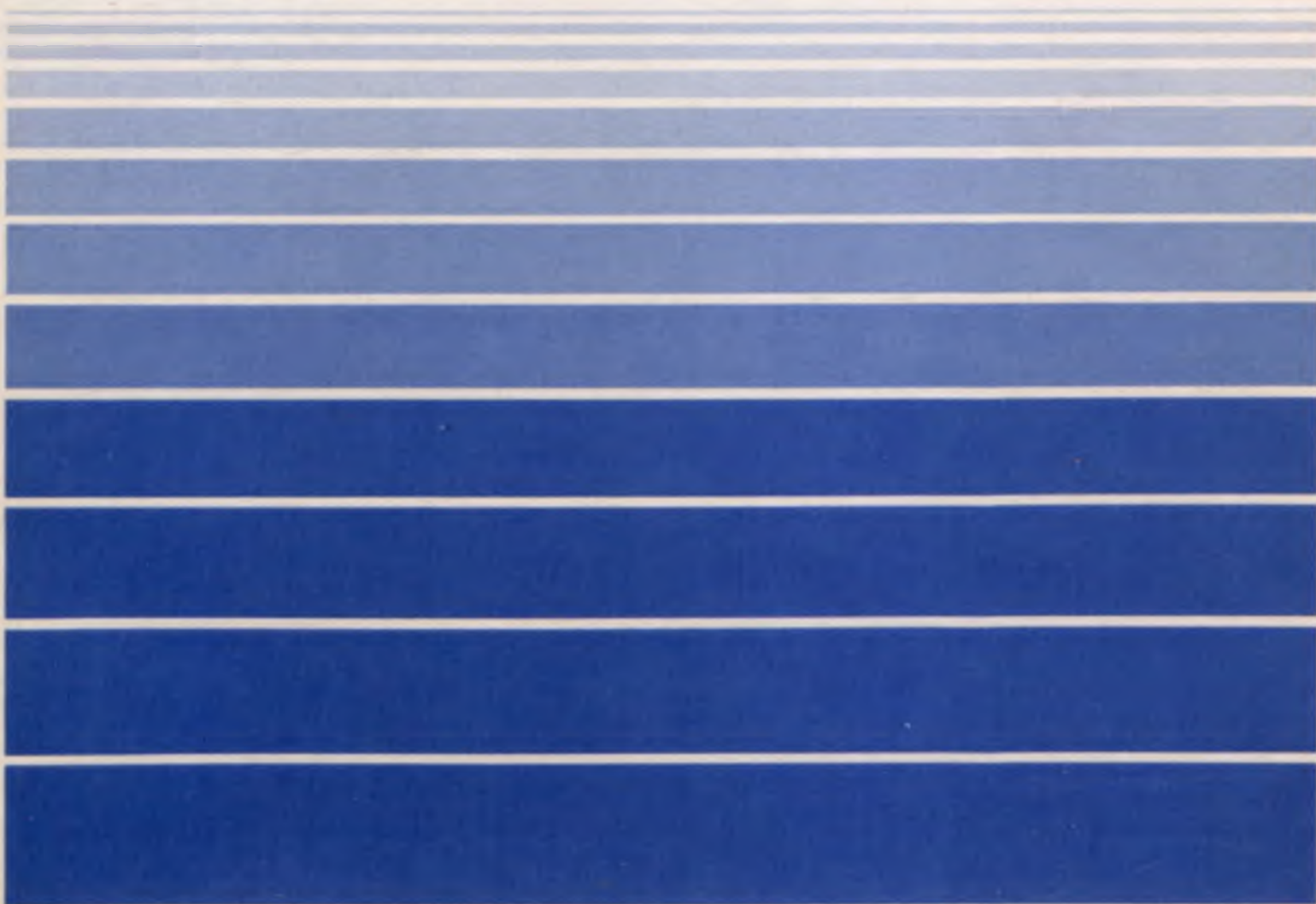
Graduate Catalog



NORTHERN ILLINOIS UNIVERSITY  
ARCHIVES

1972-73

January 1972



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# Northern Illinois University

DeKalb, Illinois

## Graduate Catalog

### The Graduate School

Liberal Arts and Sciences

Fine and Applied Arts

Education

Business

1972-73

Northern Illinois University Bulletin

Volume 3: No. 1, January 1972

Published quarterly by Northern Illinois University, DeKalb,  
Illinois. Second class postage paid at DeKalb, Illinois, 60115.

## **IMPORTANT NOTICE**

Graduate students are expected to become thoroughly familiar with the contents of this catalog and to assume responsibility for complying with the provisions herein outlined which pertain to them.

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Northern Illinois University admits students and awards financial aid to qualified individuals without regard to race, creed, sex, color, or national origin.



The Graduate School offices are housed on the main floor of Adams Hall, which is located on Normal Road east of the University Center. Originally a residence hall for women, the building was completed in 1949; it was remodeled as an office building during the summer of 1967. The distinctive stone structure is named for Karl L. Adams, fourth President of Northern.

# NORTHERN ILLINOIS UNIVERSITY

## HISTORY

### The University

Established in 1895 by an act of the Illinois General Assembly, the Northern Illinois State Normal School opened its doors to students in September, 1899. At this time only a two-year curriculum in teacher education was offered.

Legislative enactment, in July, 1921, gave the institution the name Northern Illinois State Teachers College and empowered it to award the four-year degree Bachelor of Education. By action of the Teachers College Board in 1943, the title of the degree was changed to Bachelor of Science in Education. Eight years later, the Teachers College Board authorized the College to grant the degree Master of Science in Education.

On July 1, 1955, as a result of action by the State Legislature, the College was renamed Northern Illinois State College. Moreover, the Legislature authorized the College to broaden its educational services by offering academic work in areas other than teacher education. The Teachers College Board then granted permission for the College to add curricula leading to the degrees Bachelor of Arts and Bachelor of Science.

By action of the Seventieth General Assembly, Northern Illinois State College became Northern Illinois University on July 1, 1957. Since that time, authority has been granted for the University to offer additional baccalaureate and master's degrees, Certificates of Advanced Study, and doctoral degrees.

In 1965, the Illinois State Teachers College Board became the Board of Governors of State Colleges and Universities; in 1967, Northern Illinois University and Illinois State University were placed under the control of the newly created Board of Regents.

### The Graduate School

Under authority granted by the Illinois State Teachers College Board, Northern Illinois University has offered work leading to the degree Master of Science in Education since 1951. More recently the following additional degrees at the fifth-year level were authorized: Master of Arts, Master of Music, Master of Science, and Master of Science in Community Mental Health. In 1958 sixth-year programs leading to the Certificate of Advanced Study and the degree Master of Fine Arts were authorized, and in 1961, the Teachers College Board approved programs leading to the degrees Doctor of Education and Doctor of Philosophy. In 1965 a two-year program leading to the degree Master of Business Administration was authorized.

Currently graduate study is being offered in the following subjects: Accountancy, Anthropology, Art, Biological Sciences, Business Administration, Business Education, Chemistry, Economics, Education, English, Finance, Foreign Languages, Geography, Geology, History, Home Economics, Industry and Technology, Journalism, Library Science, Management, Marketing, Mathematics, Music, Nursing, Outdoor Teacher Education, Philosophy, Physical Education for Men, Physical Education for Women, Physics, Po-

litical Science, Psychology, Social Sciences, Sociology, Special Education, and Speech. Majors leading to advanced degrees are offered in all these fields except Foreign Languages. Students wishing to study this subject should major in a related field. Area majors which cross departmental lines are offered by certain groups of departments.

## ACCREDITATION AND AFFILIATION

Northern Illinois University is accredited in all its degree programs (baccalaureate through doctorate) by the North Central Association of Colleges and Secondary Schools. The University is also accredited in degree programs leading to bachelor's and master's degrees, the sixth-year Certificate of Advanced Study (C.A.S.), and the doctorate in Education (Ed.D.) by the National Council for Accreditation of Teacher Education.

The University and its colleges have institutional membership or other affiliations in or with the American Association of Colleges for Teacher Education, American Association of University Women, American Council on Education, Association of American Colleges, Association of State Colleges and Universities, Association of Urban Universities, Council of Graduate Schools in the United States, National League for Nursing, and the North Central Association of Colleges and Secondary Schools.

## UNIVERSITY LIBRARIES

The Northern Illinois University Libraries include the Swen Franklin Parson Library, Faraday Library, Map Library—Davis Hall, the Instructional Materials Center at the Lorado Taft Field Campus, and a library in the University School, serving both the elementary and the junior high schools there.

The Swen Franklin Parson Library, the main library, is located directly north of Davis Hall and west of Altgeld Hall. It was opened in 1952 and has two main service floors and a partial third floor. The building is well-lighted, fireproof, and air-conditioned throughout. The Library has been enlarged by three additions. The book capacity is 582,023 volumes and the seating capacity is 2,000. There are 331 carrels for individual study use.

In the Library there are six large reading rooms, Reference North, Reference South, Documents, Periodicals, Educational Materials Center, Reserve; a typing room; a micro-print reading room; Fouser Music room, with record players and a choice selection of records; rooms for the Archives collection, the Southeast Asia collection, and the Special Collections including Rare Books; and an Auditorium.

The Library Science Department is housed in the main library.

Approximately 488,540 catalogued volumes, which include 75,901 bound periodicals, 255,497 government documents, 22,895 pamphlets, 6,392 current periodical titles, 201 current newspaper titles, and 104,177 maps, are available for use. While the direct needs of the various departments are given first consideration, recreational reading has not been neglected.



# THE GRADUATE SCHOOL

## PURPOSE

The University aims at creating an environment that will foster attitudes of self-reliance and self-discipline conducive to professional excellence and intellectual maturity.

The University strives to provide the graduate student with a body of knowledge in his own and related disciplines, to offer the student opportunities to acquire and apply techniques which will aid him in his pursuit of knowledge, and to encourage the student and the faculty to engage in research for the purpose of discovering truths and to establish previously unknown relationships.

## GRADUATE PROGRAMS

### Master of Arts

The student may select a program leading to this degree in any of the following departments:

Anthropology	History	Political Science
Art	Journalism	Psychology
Economics	Library Science	Sociology
English	Philosophy	Speech

### Master of Music

A program leading to this degree is offered by the Department of Music, with a major in performance and pedagogy, music education, history and literature, or theory and composition.

### Master of Science

The student may select a program leading to this degree in any of the following departments:

Biological Sciences	Home Economics	Mathematics
Chemistry	Industry and	Nursing (School of)
Geography	Technology	Physics
Geology		

### Master of Science in Business Administration

The student may select a program leading to the degree Master of Science in Business Administration with specialization in one of the following departments:

Accountancy	Finance	Marketing
	Management	

### Master of Science in Community Mental Health

This degree is multidisciplinary and includes courses in Anthropology, Education, Home Economics, Psychology, and Sociology. Courses in other departments may be included if appropriate.

### Master of Science in Education\*

The student may select a program leading to this degree in any of the following departments:

Anthropology (Area Program)	Industry and
Art	Technology
Biological Sciences	Library Science (Area
Business Education	Program)
Chemistry	Mathematics
Economics (Area	Outdoor Teacher
Program)	Education
Educational	Physical Education
Administration	for Men
and Services	Physical Education
Elementary Education	for Women
Secondary	Physics
Professional	Political Science (Area
Education	Program)
English	Social Sciences
Geography	Sociology
Geology	(Area Program)
History (Area	Special Education
Program)	Speech
Home Economics	

### Area Majors

Area majors leading to the degree Master of Science in Education involve work in two (or occasionally more than two) departments. Usually a student divides his work about equally between two departments. Information about area majors may be obtained from the chairmen or heads of the departments concerned.

Area majors are offered in the following combinations:

Anthropology and any of the following subjects:

Economics, Education, History, Journalism, Political Science, and Sociology

\*The degree M.S.Ed. is conferred only on students who meet Illinois certification requirements for the standard elementary or secondary certificate and have the approval of this institution, except for those completing approved programs in the area of the community college or school business management in the College of Education. A passing score on the Senate Bill 195 examination covering the State constitution is a basic requirement for Illinois certification; this test is administered on campus each semester.



Biological Sciences and any of the following subjects:

Chemistry, Geography, Geology, Physics, Psychology

Geography and either Chemistry or Physics

Geology and either Chemistry or Physics

Economics and any of the following subjects:

Anthropology, Education, History, Political Science, Sociology

Education departments and any one of the following subjects:

Anthropology, Art, Biological Sciences, Business Education, Chemistry, Economics, Geography, Geology, History, Home Economics, Industry and Technology, Journalism, Library Science, Mathematics, Music, Philosophy, Physical Education, Physics, Political Science, Sociology, Special Education, Speech

General Science (Biological Sciences, Chemistry, Earth Sciences, Physics)

History and any one of the following subjects:

Anthropology, Economics, Education, Journalism, Political Science, Sociology

Journalism and any one of the following subjects:

Anthropology, Economics, Education, History, Political Science, Sociology

Mathematics and any one of the following subjects:

Biological Sciences, Chemistry, Geography, Geology, Physics

Political Science and any of the following subjects:

Anthropology, Economics, Education, History, Journalism, Sociology

Social Sciences (Anthropology, Economics, Political Science, Sociology)

Sociology and any of the following subjects:

Anthropology, Economics, Education, History, Journalism, Political Science

Southeast Asian Studies (History and Political Science)

## Master of Business Administration

A two-year program leading to this degree is offered by the College of Business.

## Master of Fine Arts

A two-year program leading to this degree is offered by the Department of Art.

## Certificate of Advanced Study

The student may pursue a sixth-year program leading to the Certificate of Advanced Study in any of the following departments:

Anthropology  
Biological Sciences  
Business Education  
Chemistry  
Economics  
Educational  
Administration  
and Services  
Elementary Education  
Secondary Professional  
Education  
English  
Geography  
Geology

History  
Industry and  
Technology  
Mathematics  
Music  
Physical Education  
for Men  
Physical Education  
for Women  
Physics  
Political Science  
Sociology  
Speech

## Doctor of Education

The Ed.D. degree is offered by the following departments:

Business Education  
Educational Administration  
and Services

Elementary Education  
Secondary Professional  
Education

## Doctor of Philosophy

The Ph.D. degree is offered by the following departments:

Chemistry  
Economics  
English

History  
Political Science  
Psychology

# ADMISSION, MATRICULATION, AND RETENTION

## APPLICATION FOR ADMISSION

To secure an "Application for Admission to the Graduate School," applicants should write to the Dean of the Graduate School. This application, transcripts, required test scores, and letters of recommendation must be received by the Graduate School no later than July 1 for admission to the autumn semester, December 1 for the spring semester, and May 1 for the summer session. (Foreign students see deadlines indicated below.)

Assistantships are normally awarded to begin in the autumn semester. A prospective student wishing to be considered for an assistantship is urged to apply for admission and submit the "Application for Assistantship" form well in advance of the July 1 deadline, preferably prior to February 15. The applicant assumes all responsibility for the completion of his admission file by the above dates; the Graduate School assumes no obligation to inform him about erroneous or missing credentials. A non-refundable fee of \$15 (check or money order, not cash) must accompany the application unless the applicant is a graduate of Northern Illinois University; the fee is waived for Northern graduates. Checks should be made payable to Northern Illinois University.

A student who holds a baccalaureate degree from a college or university other than Northern Illinois University, or who has pursued graduate study elsewhere, should request each institution which he has attended to send one copy of his transcript directly to the Dean of the Graduate School.

A student who wishes to take course work but not pursue a degree program should refer to the section on Student-at-Large, page 9.

## FOREIGN STUDENTS

The application for admission, application fee (international bank draft or postal money order for \$15 U.S. currency), letters of recommendation, diplomas, mark sheets, test scores, and proof of adequate financial support must be received by the Graduate School no later than May 1 for admission to the autumn semester and October 1 for the spring semester. Normally foreign students will not be admitted to begin a degree program in the summer session.

All applicants from foreign countries where English is not the native language must submit their scores from the *Test of English as a Foreign Language* (TOEFL) as part of their application for admission to graduate study. Students who are found to have a marginal command of English for purposes of graduate study will be required to take special instruction in English until this deficiency is removed.

The *TOEFL Bulletin of Information* and Registration Form can be obtained in a number of cities outside the United States. They often are available at American embassies and consulates, or at offices of the United States Information Service (USIS). Students who cannot obtain a TOEFL bulletin and registration form locally should write well in advance for them to: Test of English as a Foreign Language, Box 899, Princeton, New Jersey 08540, U.S.A.

A foreign student must register for a minimum of 9 hours of credit each semester, including any undergraduate deficiencies in his discipline and special instruction in English.

## GENERAL REQUIREMENTS FOR ADMISSION TO THE GRADUATE SCHOOL

To be admitted as a graduate student, an applicant must have obtained a bachelor's degree from a four-year accredited college or university, must have the approval of the department in which he plans to major, and must have a 2.50 grade-point average (based on a 4-point system) for the last two years of his undergraduate work. To be admitted to a program beyond the master's degree, a student must have at least a 3.20 average in his graduate work at the master's level. An applicant whose grade-point average is below the required level may, at the discretion of the major department, be admitted if he satisfies one of the following criteria:

1. Demonstrated ability to carry graduate work at an accredited institution, or
2. Evidence of exceptional performance on required graduate-level admission tests (GRE, ATGSB, or others) or other evidence acceptable to the department, including portfolio in art and audition in music.

The departmental sections of this catalog should be consulted for any special admission requirements.

## PHYSICAL EXAMINATION

All entering students enrolled for more than 6 semester hours must have a physical examination. This should be given by the family physician and is to be reported on a health chart furnished by the University. A tuberculin test or chest X-ray done during the past six months is also required; the report of it should be attached to the medical record. If the tuberculin test is positive, it should be followed by a chest X-ray. The report of the physical examination should be returned to the University Health Service at least one week preceding the beginning of the semester in which the student plans to enroll. Registration is not complete until the completed health chart is on file at the University Health Service.

## EXAMINATIONS REQUIRED FOR ADMISSION

Required examinations may be taken at Northern Illinois University, Office of Testing Services, or at other testing locations. For testing dates at this University and other locations, write to Educational Testing Service, Princeton, New Jersey 08540.

### Graduate Record Examinations (GRE)

Prior to admission to the Graduate School, all applicants, other than those to the College of Business, must have filed their scores on the Aptitude Test of the Graduate Record Examinations with the Graduate School.

In addition, the scores on the appropriate Advanced Test of the Graduate Record Examinations are required as an admission credential for applicants to the major areas listed below:

DEPARTMENT	ADVANCED TEST
Biological Sciences	Biology
English	Literature in English
Geology	Geology

### Admission Test for Graduate Study in Business (ATGSB)

Prior to admission, applicants for graduate study in business must have filed scores on the Admission Test for Graduate Study in Business with the Graduate School. Applicants to the College of Business are not required to take the aptitude test of the GRE.

GRE and other entrance examination scores more than five years old will not be accepted by the Graduate School unless such scores are accepted by departmental waiver in specific cases.

## STUDENT-AT-LARGE

A student who has not been admitted, who has not applied for admission, or who has been denied admission to the Graduate School may be permitted to register as a student-at-large providing:

1. He holds a baccalaureate or higher degree from a college or university whose requirements for the highest degree he holds are essentially equivalent to those of this University.
2. He has been admitted and granted permission to register as a student-at-large by the College of Continuing Education.

A student-at-large may register for undergraduate or graduate courses; however, registration for graduate courses *in no way implies admission to the Graduate School*. Should such a student apply to and be admitted to the Graduate School at a later date, the hours accumulated as a student-at-large will not necessarily be counted toward an advanced degree at this University. If a student-at-large intends to apply for admission to the Graduate School, he should not accumulate more than 12 graduate credit hours; *under no circumstances will more than 12 graduate credits earned as a student-at-large be counted toward an advanced degree*. The hours earned as a student-at-large may not be used in fulfillment of the residence requirements for the doctorate. Permission to register as a student-at-large will be validated by the College of Continuing Education on a semester-to-semester basis.

## PLANNING A PROGRAM

When the student is planning a program, he is advised to consult the departmental section of this catalog devoted to requirements for admission to the Graduate School and requirements for the specific program he wishes to pursue.

Specific courses or their equivalents which are prerequisites to advanced courses shall be looked upon as deficiencies to be made up before the student takes such advanced courses. Prior to registration, a student is urged to consult with his adviser to determine the nature of any such deficiencies.

## MATRICULATION

A graduate student must register for course work in the semester or summer session for which he is accepted. At the discretion of the Graduate Dean, matriculation may be deferred up to but not beyond the same term in the succeeding year. If a student does not request a deferment in matriculation, his admission to the Graduate School is cancelled.

Graduate students are expected to register during the regular registration period at the beginning of each semester. (See Calendar.) Those who register within the dates specified for late registration are required to pay an additional fee of \$10.

Social security numbers are required for registration purposes. Students who do not have a number should obtain one from a social security office in advance of registration.

Prior to registration every graduate student should consult with the faculty member designated as his adviser by the Dean of the Graduate School. (The adviser is named in the letter of admission.) Before registration each semester the student's schedule of courses must be approved and signed by his adviser.

## CONTINUOUS REGISTRATION

Most students, full and part time, prefer to pursue an advanced degree without interruption in time. Those students who interrupt their studies should especially note the maximum time period allowed to fulfill all requirements for the degree sought. (See the appropriate section entitled Limitation of Time elsewhere in this catalog.) Students who interrupt their graduate studies should also take note of the deadline dates to inform the Graduate School in writing of their intention to resume graduate studies. (See Calendar.)

Any student availing himself of the services of the academic staff or the facilities of the University in any way which directly or indirectly relates to fulfilling degree requirements must be registered.

## ADMISSION TO TEACHER EDUCATION

Graduate students who wish to be certified for public school assignments must make application for admission to teacher education by completing and submitting an application form obtained from the Dean of the Graduate School. Admission to teacher education is a selective process because the institution must recommend for certification those who prepare successfully for teaching.

To be admitted to teacher education the student:

1. Must have a major in a subject matter area for which student teaching assignments and teaching positions exist.
2. Must have the approval of the head of the major department involved and the Director of Student Teaching.
3. Must not have been rejected for teaching preparation previously by this institution or any other institution.
4. Must be of sufficiently high academic ability (with a grade-point average of 2.50 for the last two years of undergraduate work; 3.00 for graduate work) and possess personal qualifications that will contribute to success in the profession.

The degree Master of Science in Education is conferred only on students who meet Illinois certification requirements for the standard elementary or secondary certificate and have the approval of this institution, except for those completing approved programs in the areas of community college or school business management in the College of Education.

## MAXIMUM LOADS FOR GRADUATE STUDENTS

A graduate student may enroll for a maximum of 18 semester

hours, including audit hours, during a regular semester and for 9 semester hours in the eight-week summer session or 12 semester hours in the eleven-week summer session.

Graduate students holding a full-time or three-quarter-time assistantship during a regular semester are limited to 9 semester hours and those holding a half-time assistantship to 12 semester hours. Full-time and three-quarter-time assistants during the eight-week summer session may enroll for 6 semester hours; half-time assistants may enroll for 8 semester hours. An assistant is expected to carry the maximum academic load permitted unless permission for a reduction is granted by the chairman or head of the department in which the student is majoring.

Registration for course loads in excess of those prescribed above must have prior written approval of the student's academic adviser and the Dean of the Graduate School.

It is recommended that a graduate student who is employed full time not enroll for more than 6 hours each semester.

## AUDITORS

Any full-time graduate student may be permitted to audit, without added fees, one or more additional courses, either undergraduate or graduate, provided approval is first obtained from the student's adviser, the instructor of the course, and the Dean of the Graduate School. A student who enrolls as an auditor in a course may not take the examinations in the course and will not receive credit.

Part-time students may be permitted to audit additional courses on the same basis as regular students upon the payment of an added fee of \$30.00 per semester hour, with the provision that the total amount of fees paid will not exceed \$284.00 per semester for residents of Illinois.

## GRADING SYSTEM

Grades and their honor-point values are as follows:

		<i>Honor Points Per Semester Hour</i>
Grade		
A	.....	4.0
B	.....	3.0
C	.....	2.0
D	.....	1.0
F	.....	0.0
I (Incomplete)	.....	—
W (Passing at time of withdrawal from the University or from a course)	.....	—
S (Satisfactory)	.....	—
U (Unsatisfactory)	.....	—
O (Auditor, no grade and no credit)	....	—

A course in which a grade lower than "C" has been received may be repeated once with departmental approval. If a course is repeated, both grades are computed in the honor-point average. Incompletes may be given to graduate students at the discretion of the instructor.

Regulations governing incompletes are as follows:

1. Incompletes recorded for regular course work, directed research, and independent study must be removed within the first month of the next semester in which the student is enrolled.
2. Incompletes in thesis or dissertation work must be removed in accordance with the "Limitation of Time" specified for each degree program.

An incomplete not removed within the time allotted may be recorded by the department as a withdrawal or a failure; however, any incomplete changed to an "F" must be approved by the Dean of the Graduate School.

A graduate student who wishes to withdraw from the University must write a letter of notification to the Dean of the Graduate School within the time limits stated in the Graduate School Calendar. For all courses in which a student is doing passing work ("C" or better) at the time of drop or withdrawal, he will receive "W." For any course in which a student is not doing passing work, he will receive "F." A student who fails to notify the Dean of the Graduate School in writing of his intent to withdraw from the University, or who drops a course or withdraws from the University after the deadline has expired, will receive "F." (See the Graduate School Calendar for the dates by which notification of intent to drop a course or to withdraw from the University must be filed in the Graduate School Office.)

## ACADEMIC STANDING

Graduate credit is given only in those courses in which a grade of "C" or better is earned. A student who receives 12 semester hours of graduate credit below "B" or 6 semester hours below "C" will be given an academic dismissal.

The grade average of all graduate students is computed on a cumulative basis. The honor-point average at any time is the quotient obtained by dividing the total number of honor

points by the total number of properly weighted credit courses which the student has taken up to that time. Graduate work transferred to Northern Illinois University from other institutions will not be included in the computation of the grade-point average. A student who is not granted admission to candidacy as required by Graduate School regulations will be given an academic dismissal.

## STUDENT RESPONSIBILITY

It is the responsibility of the student to know and observe all regulations and procedures relating to the program he is pursuing. In no case will a regulation be waived or an exception granted because a student pleads ignorance of, or contends that he was not informed of, the regulations or procedures. A student planning to graduate should familiarize himself with the dates relating to application for graduation and other pertinent deadlines. (See Calendar.)

A student must satisfy the requirements of the catalog in force at the time he is admitted to, and begins course work in, a degree program; or he may, with the consent of his adviser, graduate under a subsequent catalog provided he complies with all requirements of the later catalog.

## PROCESS FOR PETITION

Students who wish to request any exceptions to the admission, matriculation, and retention regulations and practices must submit a written petition to the Dean of the Graduate School.

## GRADUATE SCHOOL PUBLICATIONS

The following publications are available from the Graduate School:

- Graduate School Calendar
- Graduate School Catalog
- Handbook for Graduate Students
- Information for Prospective Graduate Students from Other Countries
- Theses and Dissertations: Some Basic Requirements



# REQUIREMENTS FOR GRADUATE DEGREES

## REQUIREMENTS FOR MASTER'S DEGREE PROGRAMS

**MASTER OF ARTS**

**MASTER OF MUSIC**

**MASTER OF SCIENCE**

**MASTER OF SCIENCE IN COMMUNITY  
MENTAL HEALTH**

**MASTER OF SCIENCE IN EDUCATION**

The following regulations apply to candidates for the degrees Master of Arts, Master of Music, Master of Science, Master of Science in Community Mental Health, and Master of Science in Education. Detailed requirements for specific degrees appear in the departmental sections of this catalog.

### Admission

The Graduate School Admission requirements for all of the above-listed master's degrees except for those in the College of Business are indicated in the section on General Requirements for Admission to the Graduate School. For admission to a master's program in the College of Business, a student must have graduated from a four-year accredited college or university with a grade-point average of 2.50 or above for all undergraduate work or have attained a score of 450 or above on the Admission Test for Graduate Study in Business. The departmental section of this catalog should be consulted for special admission requirements for a master's program in a particular major.

### Credit Requirements

A candidate for a master's degree must earn a minimum of 30 semester hours of graduate credit with a minimum grade-point average of 3.00. This average must be earned in the major field as well as in the total program. Area majors must earn a 3.00 average in each field. The minimum number of required semester hours in residence is 21.

A candidate for the Master of Science in Education is normally expected to earn not less than 9 semester hours in courses outside his major field. In an exceptional case and with the approval of the academic adviser, this requirement may be waived by the Dean of the Graduate School. The degree Master of Science in Education is conferred only on a student who, at the conclusion of his academic program, satisfies Illinois Teacher Certification requirements. Exception to this requirement may be made in the College of Education for a student completing an approved program in the area of the community college or school business management.

### Credits Transferable

Subject to the approval of the Dean of the Graduate School, a student will be allowed to transfer a maximum of 6 semester hours of graduate credit from another institution, none of which shall be in extension or correspondence work. The combined total of transfer credit and Northern Illinois University extension credit may not exceed 9 semester hours. To receive consideration for work done elsewhere, the student must submit a petition to the Dean and have on file in the Office of the Graduate School an official transcript of the work to be considered for transfer. No official transfer of credit will be made until the student has been admitted to candidacy.

Students in the College of Business should refer to the College and departmental sections of this catalog regarding transfer credit acceptable toward a degree program in the College of Business.

### Credit for Extension Work

With the approval of the major department, a student will be permitted to offer for credit a maximum of 9 semester hours in extension work taken from this institution. The combined total credit hours in extension and transfer work may not exceed the limits stipulated in the previous section. A list of centers approved for graduate extension work may be obtained from the Director of Extension, College of Continuing Education.

Students in the College of Business should refer to the College and departmental sections of this catalog regarding NIU extension credit acceptable toward a degree program in the College of Business.

### Advisory System

Each student is assigned an adviser or advisory committee whose purpose is to guide his program and recommend him for the degree when he is properly qualified.

The program of courses should be formulated by the student in conference with his adviser or advisory committee during the first semester of graduate work. Forms for submitting a program of courses may be obtained from the Office of the Graduate School and must be filed with the Graduate School before a student is admitted to candidacy.

*If any changes are made in the program of courses, it is the responsibility of the student to see that his adviser submits such changes to the Graduate School on the appropriate forms.*

### Courses for Which Credit Is Allowed

Only courses which are numbered 400-499, 500-599, and 600-699

carry credit toward the master's degree. Not more than 50 per cent of the credit counted toward a master's degree may be earned in courses numbered 400-499.

Some courses numbered in the 400's carry only undergraduate credit. Graduate students registering for 400-level courses are responsible for ascertaining whether these courses have been approved for graduate credit.

### Limitation of Time

The student must fulfill all requirements toward the degree within a period of six consecutive years. The date of entry into the first course of a student's graduate program, including work for which transfer credit is allowed, is viewed as the starting point of the six-year period.

If a course taken to complete the requirements for the master's degree does not fall within the six-year period allowed for the degree, the course, with departmental approval, may be retaken for credit.

### Admission to Candidacy

When a student has completed a minimum of 9 and a maximum of 15 semester hours of graduate work at Northern Illinois University (exclusive of work taken as a student-at-large), the record of his completed graduate work will be reviewed to determine if he is eligible for admission to candidacy. To be admitted to candidacy at the completion of 9-15 hours of graduate work, the student must: (1) have a minimum graduate grade-point average of 3.00 for all courses taken in the Graduate School at Northern Illinois University (this average must have been earned in the major field as well as in the total program); (2) have on file in the Graduate School and be following a program of courses approved by an adviser; and (3) have removed all deficiencies. In accordance with these conditions, a student who fails to be admitted to candidacy will be given an academic dismissal.

### Thesis

Any student availing himself of the services of the academic staff or the facilities of the University must be registered for the period during which the facilities are used or the services are rendered.

A candidate following a thesis program shall submit an original and two copies of his thesis and five abstracts thereof, all of which must be approved by a departmental committee. The original, the two copies, and the abstracts must be submitted

according to the instructions in *Theses and Dissertations: Some Basic Requirements*, available from the Graduate School.

Once a student has formally begun the thesis or its equivalent, he is expected to continue to register in course number 599 or its equivalent in each subsequent semester (summer sessions excluded), until the thesis is submitted to and accepted by the Graduate School. Registration for this purpose may be in absentia. If circumstances prohibit continuing registration, a graduate student may request a leave of absence from the Dean of the Graduate School. Any student interrupting his registration without obtaining a leave of absence will be withdrawn from his degree program.

The Graduate School policy is that published manuscripts are not accepted to fulfill the thesis requirement for the master's degree. An exception may be made if the manuscript was prepared under the supervision of an approved thesis adviser on a subject approved by the department as appropriate for the degree program and permission was obtained from the Graduate School for its publication.

### Examinations

Final comprehensive examinations are required of all candidates for the master's degree; they may be either written or oral, or both, at the option of the department. These examinations are given by the major department or departments. Any student planning to take a comprehensive examination must file a letter of intent with the appropriate department chairman or head. (See Calendar).

Departments will post notices of the date and place for each examination at least two weeks before it is to be administered.

## MASTER OF BUSINESS ADMINISTRATION

The Master of Business Administration program is intended to prepare students for responsible careers in business enterprises, governmental organizations, and nonprofit institutions. The program is designed for those with undergraduate preparation in areas such as liberal arts, science, or engineering. It also serves the needs of individuals whose undergraduate preparation is in one of the business areas.

### Admission

For admission to the Master of Business Administration program, a student must have graduated from a four-year accredited college or university with a grade-point average of 2.50 for all undergraduate work (based on a 4-point system) or have attained



## REQUIREMENTS FOR GRADUATE DEGREES

a score of 450 or above on the Admission Test for Graduate Study in Business. Further, he must have demonstrated growth, maturity, and motivation as evidenced by trends and patterns in college, employment, and civic experiences.

### Credit Requirements

For those without prior preparation in the business area, the Master of Business Administration may be a two-year program requiring a maximum of 60 semester hours. However, individual programs may require fewer hours depending upon the student's previous education in business and economics.

The Master of Business Administration program is divided into two distinct phases. Phase One of the program, consisting of not more than 30 semester hours of course work, is required of students who have little or no previous formal education in business administration. Phase Two consists of a core of seven required courses totaling 21 semester hours plus 9 semester hours of electives. A minimum grade-point average of 3.00 must be maintained in all course work completed at Northern Illinois University.

For detailed information concerning this program see pages 00 to 00.

### Credits Transferable

Subject to the approval of the Dean of the Graduate School, a student will be allowed to transfer a maximum of 6 semester hours of graduate credit from another institution to apply to Phase Two of the Master of Business Administration. No transfer credit from another institution shall be in extension or correspondence work. The combined transfer credit and Northern Illinois University extension credit allowed toward Phase Two may not exceed 9 semester hours. Refer to the College section of this catalog regarding transfer credit acceptable toward Phase One of the M.B.A.

### Credit for Extension Work

With the approval of the student's adviser a maximum of 9 semester hours of graduate credit in extension work taken from this institution may be applied to Phase Two. The combined total of credit hours in extension and transfer work applied to Phase Two may not exceed the limits stipulated in the previous section. A list of centers approved for graduate extension work may be obtained from the Director of Extension, College of Continuing Education.

Refer to the College section of this catalog regarding NIU extension work applicable toward Phase One of the M.B.A.

### Advisory System

Each student is assigned an adviser or advisory committee whose purpose it is to guide his selection of courses and recommend him for the degree when he is properly qualified.

The program of courses should be formulated by the student in conference with his adviser or advisory committee during the first semester of graduate work. Forms for submitting a program of courses may be obtained from the Office of the Graduate School and must be filed with the Graduate School before a student is admitted to candidacy.

*If any changes are made in the program of courses, it is the responsibility of the student to see that his adviser submits such changes to the Graduate School on the appropriate forms.*

### Courses for Which Credit Is Allowed

Only courses which are numbered 400-499, 500-599, and 600-699 carry credit toward the master's degree. No more than 6 semester hours of credit earned in courses numbered 400-499 may be applied to Phase Two of the Master of Business Administration. Some courses numbered in the 400's carry only undergraduate credit. Graduate students registering for 400-level courses are responsible for ascertaining whether these courses have been approved for graduate credit.

### Residence Requirement

In Phase One there is no specific requirement for the number of graduate credits to be earned in residence. However, in Phase Two, 21 semester hours must be earned in residence at Northern Illinois University.

### Limitation of Time

A student required to complete more than 45 semester hours of graduate work at Northern Illinois University in the program leading to the degree Master of Business Administration must complete all of the work, including that for which transfer credit is allowed, within a period of seven consecutive years. A student required to complete 45 semester hours or less of graduate credit at Northern Illinois University must complete all of the work, including that for which transfer credit is allowed, within a period of six consecutive years.

If a course taken to complete the requirements for a Master of Business Administration degree does not fall within the time limitation indicated in the preceding paragraph, the course, with departmental approval, may be retaken for credit.

## Admission to Candidacy

When a student has completed a minimum of 9 and a maximum of 15 semester hours of graduate work at Northern Illinois University (exclusive of work taken as a student-at-large), the record of his completed graduate work will be reviewed to determine if he is eligible for admission to candidacy. To be admitted to candidacy at the completion of 9-15 hours of graduate work, the student must: (1) have a minimum graduate grade-point average of 3.00 for all courses taken in the Graduate School at Northern Illinois University (this average must have been earned in the major field as well as in the total program); (2) have on file in the Graduate School and be following a program of courses approved by an adviser; and (3) have removed all deficiencies. In accordance with these conditions, a student who fails to be admitted to candidacy will be given an academic dismissal.

## Thesis

The writing of a thesis is optional. The Graduate School policy is that published manuscripts are not accepted to fulfill the thesis requirement for the master's degree. An exception may be made if the manuscript was prepared under the supervision of an approved thesis adviser on a subject approved by the department as appropriate for the degree program and permission was obtained from the Graduate School for its publication.

## Examinations

Final comprehensive examinations are required of all candidates for the Master of Business Administration.

## MASTER OF FINE ARTS

The Master of Fine Arts degree is designed primarily for those students who plan to prepare themselves for college teaching in one of the studio areas or for a profession in the field of fine or commercial arts.

## Admission

The basic requirements for admission after the completion of the bachelor's degree are those indicated in the section on General Requirements for Admission to the Graduate School. Students having the degree Master of Arts and wishing to continue in a Master of Fine Arts program must have a minimum grade-point average of 3.20 in graduate work to be admitted.

Students of Northern Illinois University who have completed admission files in the Graduate School Office for another master's program must reapply to pursue work leading to the degree Master of Fine Arts. New students must apply for admission as specified under the section on Application for Admission.

## General Requirements and Procedures

Requirements and procedures in general are the same as for the Certificate of Advanced Study, as listed under the following headings: Credit Transferable, Credit for Extension Work, Advisory System, Courses for Which Credit Is Allowed, Qualifying Examination, Admission to Candidacy, and Final Examination.

## Credit Requirements

A candidate for the Master of Fine Arts degree must earn 60 semester hours beyond a bachelor's degree with at least a 3.00 average, exclusive of work taken to remove deficiencies.

For detailed information concerning this program see pages 00 to 00.

## One-Man Show

The student's work must culminate in a one-man show. Three copies of a pictorial documentation of the one-man show must be submitted to the Graduate School as the equivalent of a thesis. Instructions for documentation of the one-man show are available from the Department of Art.

## Limitation of Time

All work for the degree Master of Fine Arts, including work transferred from other institutions, must be completed within a period of seven consecutive years.

If a course taken to complete the requirements for a Master of Fine Arts degree does not fall within the seven-year period permitted for the accumulation of the total semester-hour credits required for the degree, the course, with departmental approval, may be retaken for credit.

## REQUIREMENTS FOR CERTIFICATE OF ADVANCED STUDY PROGRAMS

The purpose of the sixth-year programs leading to the Certificate

## REQUIREMENTS FOR GRADUATE DEGREES

of Advanced Study is to permit students to attain greater mastery of their chosen fields than they can attain in five years of formal study.

### Admission

For admission to a Certificate of Advanced Study program (as distinct from admission to the Graduate School) an applicant must: (1) hold a master's degree or equivalent from an approved institution whose requirements for the degree are substantially equivalent to those of Northern Illinois University, or (2) be in the last semester of work leading to the master's degree at Northern Illinois University. To be admitted the student must have a minimum average of 3.20 in his graduate work at the master's level.

Students of Northern Illinois University who have completed admission files in the Graduate School Office must reapply (without additional fee) to pursue work leading to the completion of the sixth-year program. New students must apply for admission as specified in the section on Application for Admission.

### Credit Requirements

A candidate for the Certificate of Advanced Study must earn a minimum of 30 semester hours beyond the master's degree or its equivalent with at least a 3.00 average, exclusive of work taken to remove deficiencies. All credit may be concentrated in one major area or distributed in such fashion that a maximum of 10 semester hours is earned in fields related to the major area. At least 21 semester hours of credit must be earned in courses given on the campus of Northern Illinois University. Refer to departmental sections of this catalog for other requirements.

### Credits Transferable

Subject to the approval of the Dean of the Graduate School, a student will be allowed to transfer a maximum of 9 semester hours of graduate credit from another institution, none of which shall be in extension or correspondence work. The combined total of transfer credit and Northern Illinois University extension credit may not exceed 9 semester hours. To receive consideration for work done elsewhere, the student must file a petition with the Dean and have on file in the Office of the Graduate School an official transcript of the work to be considered for transfer. No official transfer of credit will be made until the student has been admitted to candidacy.

### Credit for Extension Work

With the approval of the major department, a student will be permitted to offer for credit a maximum of 9 semester hours in extension work taken from this institution. The combined total of credit hours in extension and transfer work may not exceed the limits stipulated in the previous section. A list of centers approved for graduate extension work may be obtained from the Director of Extension, College of Continuing Education.

### Advisory System

Each student is assigned an adviser or advisory committee whose purpose it is to guide his selection of courses and recommend him for the degree when he is properly qualified.

The program of courses should be formulated by the student in conference with his adviser or advisory committee during his first semester in the program. Forms for submitting a program of courses may be obtained from the Office of the Dean of the Graduate School and must be filed with the Graduate School before a student is admitted to candidacy.

*If any changes are made in the program of courses, it is the responsibility of the student to see that his adviser submits such changes to the Graduate School on the appropriate forms.*

### Courses for Which Credit Is Allowed

Only courses which are numbered 400-499, 500-599, and 600-699 carry graduate credit. Some courses numbered in the 400's carry only undergraduate credit. Graduate students registering for 400-level courses are responsible for ascertaining whether these courses have been approved for graduate credit.

Not more than 9 semester hours of the credit counted toward the Certificate of Advanced Study may be earned in courses numbered 400-499. Credit for at least 21 semester hours must be earned in courses numbered 500-699.

### Limitation of Time

The student must fulfill all requirements toward the certificate within a period of six consecutive years. The date of entry into the first course of a student's sixth-year graduate program, including work for which transfer credit is allowed, is viewed as the starting point of the six-year period.

If a course taken to complete the requirements for the Certificate of Advanced Study does not fall within the six-year period allowed for the certificate, the course, with departmental approval, may be retaken for credit.

## Qualifying Examination

During the first term of his work in the sixth-year program, a student shall take, at the option of the major department, a qualifying examination. Unsatisfactory performance on the examination will result in dismissal from the program.

## Admission to Candidacy

Admission to the sixth-year program does not imply that a student is a candidate for the Certificate of Advanced Study.

When a student has completed a minimum of 9 and a maximum of 15 semester hours of graduate work at Northern Illinois University (exclusive of work taken as a student-at-large), the record of his completed graduate work will be reviewed to determine if he is eligible for admission to candidacy. To be admitted to candidacy at the completion of 9-15 hours of graduate work, the student must: (1) have a minimum graduate grade-point average of 3.00 for all courses taken in the Graduate School at Northern Illinois University (this average must have been earned in the major field as well as in the total program); (2) have on file in the Graduate School and be following a program of courses approved by an adviser; and (3) have removed all deficiencies. In accordance with these conditions, a student who fails to be admitted to candidacy will be given an academic dismissal.

## Thesis

Any student availing himself of the services of the academic staff or the facilities of the University must be registered for the period during which the facilities are used or the services are rendered.

The writing of a thesis is optional in some departments; refer to the departmental section for details. A candidate following a thesis program shall submit an original and two copies of a significant research study, field study, or thesis, together with five abstracts thereof, all of which must be approved by a departmental committee. The original, the two copies, and the abstracts must be submitted according to the instructions in *Theses and Dissertations: Some Basic Requirements*.

Once a student has formally begun the thesis or its equivalent he is expected to continue to register in course number 599B or its equivalent in each subsequent semester (summer sessions excluded), until the thesis is submitted to and accepted by the Graduate School. Registration for this purpose may be in absentia. If circumstances prohibit continuing registration, a graduate student may request a leave of absence from the Dean of the Graduate School. Any student interrupting his registration without obtaining a leave of absence will be withdrawn from his program.

The Graduate School policy is that published manuscripts are not accepted to fulfill the thesis requirement for the Certificate of Advanced Study. An exception may be made if the manuscript was prepared under the supervision of an approved thesis adviser on a subject approved by the department as appropriate for the degree program and permission was obtained from the Graduate School for its publication.

## Final Examination

The final examination of each candidate is administered by the department responsible for the candidate's major area. Comprehensive in nature, the examination may be written or oral, or both, at the option of the department. Any student planning to take a comprehensive examination must file a letter of intent with the appropriate department chairman or head. (See Calendar.)

## REQUIREMENTS FOR DOCTORAL PROGRAMS

### DOCTOR OF EDUCATION

### DOCTOR OF PHILOSOPHY

The doctorate is the highest degree granted by the University and is conferred only for work of distinction in which the student displays powers of original scholarship.

## Admission

Normally a student will be expected to have bachelor's and master's degrees from accredited institutions whose requirements are substantially equivalent to those of Northern. No student will be admitted to doctoral work unless his undergraduate and graduate record (including test scores) indicates his ability to do work of high quality in his chosen field.

For admission to a doctoral program, a student must have at least a 3.20 grade-point average in graduate work at the master's level and approval of the department in which he plans to major.

Official transcripts of all undergraduate and graduate work should be sent directly to the Dean of the Graduate School by the institution at which the work was completed. At least four letters of recommendation are required from persons who can write analytically about the applicant's academic qualifications and ability to do graduate work.

Admission to doctoral work in a specific department may also require passing whatever entrance tests, screening devices, or interviews are required by the individual department.



### Credit Requirements

Graduate students working for a doctor's degree will be expected to complete at least three academic years of work beyond the bachelor's degree. This will include formal course work, independent study, research, and the dissertation. When translated into credits, this will be approximately 90 semester hours. Retention in doctoral work will depend upon a student's maintaining the minimum (3.0) honor-point average required by the Graduate School. Transfer credit will be allowed at the discretion of the department concerned and the Dean of the Graduate School. Not more than 24 semester hours subsequent to the bachelor's degree shall be in graduate courses numbered 400-499. Although most of the work will be in the student's major field or area of concentration, at the discretion of the student's major department some course work may be taken in related fields. Refer to departmental sections of this catalog for other requirements.

### Language and Research-Tool Requirements

For specific research-tool and/or language requirements the student should refer to the regulations governing the doctoral program in his major department.

The Graduate School requirement for proficiency in foreign language(s) and/or other research tool for the doctoral degrees may be met by one of the following options:

1. Two foreign languages, average reading proficiency
2. One foreign language, high level of proficiency
3. One foreign language with average reading proficiency and one research tool with average proficiency
4. Two research tools, average proficiency
5. One research tool, high level of proficiency

Students taking language examinations in French, German, Spanish, or Russian will be required to take the Graduate School Foreign Language Tests of the Educational Testing Service. Examinations in other foreign languages will be arranged by the Department of Foreign Languages of Northern Illinois University and the University Testing Services.

### Residence Requirement

Students pursuing a doctorate must be enrolled for a minimum of 12 semester hours in each of two consecutive semesters. A summer session in which a student earns 12 semester hours immediately following or preceding a semester in which a student earns 12 semester hours will be regarded as the equivalent of one academic year of two consecutive semesters, except in the College of Education and the Department of Business Education.

The residence requirement for the doctorate may be fulfilled by a doctoral candidate holding a full-time assistantship or a half-time instructorship if he carries 6 semester hours of academic work each semester.

The residence requirement for doctoral programs may not be satisfied during the period a student is pursuing the master's degree.

### Credits Transferable

The applicant's major department will assess all work done at other institutions and will grant transfer credit for any work deemed acceptable by the chairman of his committee and subsequently approved by the Dean of the Graduate School.

### Credit for Extension Work

No extension credits beyond those accepted for a master's degree or for a Certificate of Advanced Study will be allowed toward the Ph.D. or Ed.D.

### Limitation of Time

A student pursuing a doctoral program must be admitted to candidacy within the following time limits based on the highest degree held at the time of admission to the program:

1. Baccalaureate degree—within seven consecutive years from the time of the first enrollment in course work applicable to the doctorate.
2. Master's degree—within six consecutive years from the time of the first enrollment in course work applicable to the doctorate.
3. Certificate of Advanced Study—within five consecutive years from the time of the first enrollment in course work applicable to the doctorate.

Students must complete all requirements for the doctorate within three consecutive years after being admitted to candidacy. (See also Residence Requirement.)

### Qualifying Examination

After 12-15 semester hours of work beyond the master's degree, the student may be required, at the discretion of his major department, to take a qualifying examination. This may be written or oral, or both, testing the competence of the student in his major and related fields. A student who fails this examination may, with the permission of his major department, repeat

it after the lapse of at least one semester. A student who fails this examination a second time will not be permitted to continue work toward the doctorate.

### **Candidacy Examination and Oral Defense of Dissertation**

When a student has completed most or all of his course work, and not later than eight months before the granting of the doctor's degree, he will take a written candidacy examination. Departments may also require an oral examination. These examinations will cover work in the student's major department and related fields. A student who fails a candidacy examination may, with the permission of his examining committee, repeat it after the lapse of at least one semester. A student who fails the examination a second time will not be permitted to continue work toward the doctorate.

After completing all other requirements for the doctorate (including the dissertation), the student will present an oral defense of his doctoral dissertation before an examining committee.

Committees to conduct the candidacy and the oral defense of the dissertation will be nominated by the head of the student's major department and appointed by the Dean of the Graduate School. Membership of candidacy and dissertation examining committees will be composed of professorial representatives of major and minor fields. The number of members on the committees will normally be three to five. If a student has taken all his graduate work in one department, at least one faculty member from a related department will be nominated to the committee to conduct the final oral defense of the doctoral dissertation.

### **Admission to Candidacy**

The student is admitted to candidacy by the Graduate School upon the recommendation of his advisory committee when he has satisfactorily completed most or all of the course work prescribed in the program, the language and/or research-tool

requirements, the candidacy examination, and the filing of an approved dissertation topic.

### **Dissertation Requirement**

The dissertation will be a substantial contribution to knowledge in which the student exhibits original scholarship. Its subject must be approved by the student's adviser or advisory committee. Credit-hour requirements for the dissertation and research are determined by the major department. The dissertation is to be submitted in accordance with the Graduate School regulations found in *Theses and Dissertations: Some Basic Requirements*; it will be microfilmed following the student's graduation.

The Graduate School policy is that published manuscripts are not accepted to fulfill the dissertation requirement for the doctoral degree. An exception may be made if the manuscript was prepared under the supervision of an approved dissertation adviser on a subject approved by the department as appropriate for the degree program and permission was obtained from the Graduate School for its publication.

Once admitted to candidacy in any doctoral program the student must continue registration in course number 699 (Doctoral Dissertation) in each subsequent semester, with the exception of summer sessions, until all requirements for the degree are completed. Registration for this purpose may be in absentia. Official approval of a dissertation adviser must be effected by the conclusion of the semester in which a student first registers for 699. A student who fails to complete this procedure will have all accumulated hours in the dissertation course converted to audit (no credit).

If circumstances prohibit continuing registration as stipulated above, a graduate student must request a leave of absence from the Dean of the Graduate School. Any student interrupting his registration without obtaining a leave of absence will be withdrawn from his degree program. Any student requesting reinstatement in a degree program must direct such a request in writing to the Dean of the Graduate School.

Any student availing himself of the services of the academic staff or the facilities of the University must be registered for the period during which the facilities are used or the services are rendered.

# FEES\*

The average total expenses for room, board, books, and supplies are approximately \$2,000 to \$2,100 for the academic year. The fees for graduate students are as follows:

## FULL-TIME STUDENTS—PER SEMESTER

### In-State

Registration fee .....	\$202.00
Activity fee .....	18.00
Student bus fee .....	7.00
Athletic fee .....	14.00
Bond revenue fee .....	33.00
Hospital-surgical-medical insurance .....	10.00**
	<hr/>
	\$284.00

### Out-of-State

Registration fee .....	\$532.50
Activity fee .....	18.00
Student bus fee .....	7.00
Athletic fee .....	14.00
Bond revenue fee .....	33.00
Hospital-surgical-medical insurance .....	10.00**
	<hr/>
	\$614.50

## PART-TIME STUDENTS—SIX SEMESTER HOURS OR LESS

### In-State

Registration fee per semester hour .....	\$ 30.00
Minimum fee .....	60.00

### Out-of-State

Registration fee per semester hour .....	\$ 80.00
Minimum fee .....	160.00

## FULL-TIME STUDENTS—SUMMER SESSION (EIGHT WEEKS)

### In-State

Registration fee .....	\$101.00
Activity fee .....	9.00
Bond revenue fee .....	16.50
Hospital-surgical-medical insurance .....	7.25**†
	<hr/>
	\$133.75

### Out-of-State

Registration fee .....	\$266.25
Activity fee .....	9.00
Bond revenue fee .....	16.50
Hospital-surgical-medical insurance .....	7.25**†
	<hr/>
	\$299.00

## PART-TIME STUDENTS—SUMMER SESSION—LESS THAN FIVE SEMESTER HOURS

### In-State

Registration fee per semester hour .....	\$ 30.00
Minimum fee .....	60.00

### Out-of-State

Registration fee per semester hour .....	\$ 80.00
Minimum fee .....	160.00

## EXTENSION STUDENTS

Per semester hour for residents and nonresidents of Illinois .....	\$ 30.00
Minimum fee .....	60.00

\*Fees are subject to change at any time.

\*\*The hospital-surgical-medical insurance fee is payable by all full-time students at the time of registration. This fee may be refunded to any student who can submit satisfactory proof within 10 days following the last day of registration that he already has equal or better medical coverage.

†Includes coverage from beginning of summer until the first official registration day of the fall semester.



## SPECIAL FEES

Graduation fee (nonrefundable) .....	\$ 15.00
(A student, upon written request to the Graduate School not later than four weeks before commencement, may withdraw his application. The fee may then apply to only <i>one subsequent</i> application for graduation.)	
Late registration fee charged after scheduled registration .....	10.00
Duplicate transcript of record (after the first is issued) .....	1.00
Duplicate identification card (after the first is issued) ..	3.00
Doctoral dissertation fee .....	25.00
Examination fees (nonrefundable)***	
Aptitude Test of the Graduate Record Examinations ..	8.00
Advanced Test of the Graduate Record Examinations ..	9.00
Admission Test for Graduate Study in Business ....	10.00
Graduate School Foreign Language Tests (French, German, Spanish, Russian) .....	6.00
Special Foreign Language Tests .....	15.00

The athletic and activities fees cover the following services and privileges: registration; library; health service; gymnasium; admission to athletic events, concerts, dramatic productions, lectures, speech events; and subscription to the University newspaper, annual, and magazine.

Class material fees where applicable will be billed as part of the registration billing.

A veteran who entered service as a resident of the State of Illinois may receive assistance under the Veterans State Scholar-

\*\*\*All graduate students who are working for an advanced degree or certificate are required to take the Aptitude Test of the Graduate Record Examinations.

ship. For full-time students this amounts to \$220.00; for part-time students (6 semester hours or less) during the regular session it will pay the entire registration fee.

Upon written request, the Office of the Registrar will issue transcripts of a student's record; a fee of \$1.00 is charged for each copy. Transcripts are not issued to persons who are under financial obligation to the University or the University Loan fund.

## APPLICATION FEE FOR ADMISSION

All students except graduates of Northern Illinois University applying for admission to the Graduate School must pay an application fee of \$15.00. This fee is due at the time of submission of the application and is nonrefundable.

## DATES FOR REFUNDS

Fees are due at the time of registration. When a student officially withdraws from the University on or before the tenth class day of the autumn or the spring semesters or the fifth class day of the summer session, his registration fee only will be refunded. The activity fee, student bus fee, athletic fee, bond revenue fee, and hospital-surgical-medical fee are not included as part of the registration fee and are not refundable.

## HOLDS AND ENCUMBRANCES

A student must clear any obligations to the University before beginning registration.

# ASSISTANTSHIPS, FELLOWSHIPS, AND LOANS

## ASSISTANTSHIPS

Teaching Assistantships, Research Assistantships, and Staff Assistantships with stipends up to \$3420 for the academic year are available to qualified students. For those with unusually high qualifications a higher stipend may be awarded. Assistantships may be extended through the summer session with additional remuneration. Application forms may be obtained from the Graduate School Office.

Assistantships are normally awarded to begin in the autumn semester. A prospective student wishing to be considered for an assistantship is urged to apply for admission and submit the "Application for Assistantship" form well in advance of the July 1 deadline, preferably prior to February 15.

The registration and out-of-state fees are waived for holders of assistantships.

## FELLOWSHIPS AND TRAINEESHIPS

There are no application blanks for fellowships and traineeships. A student seeking nomination for one of these appointments should contact the chairman or head of his major department.

**Graduate School Fellowships**, with stipends up to \$3000 for the academic year, are available to a limited number of outstanding students. Registration and out-of-state fees are waived for recipients. Selection is based upon academic achievement and departmental recommendation—not financial need. Recipients must enroll as full-time (12 semester hours each semester) students. Students at any level of graduate work may be appointed.

**National Defense Education Act Title IV Graduate Fellowships**, with stipends of \$2400 plus \$500 per eligible dependent for the calendar year, are available to qualified students majoring in one of the following departments: Business Education, Chemistry, Education (Administration and Services, Elementary, and Secondary Professional), English, History, Political Science, and Psychology. Recipients must enroll as full-time (12 semester hours each semester) students. Most fees are waived for NDEA Fellowship holders.

**National Science Foundation Graduate Traineeships**, with stipends of \$2400 plus \$500 per eligible dependent for the calendar year, are available to qualified students majoring in one of the following departments: Anthropology, Biological Sciences, Chemistry, Economics, Geography, Geology, Mathematics, Physics, Political Science, Psychology, and Sociology. Recipients

must enroll as full-time (12 semester hours each semester) students. Most fees are waived for holders of NSF Traineeships.

**Research Fellowships** with varying stipends are also available for work on funded projects. The registration and out-of-state fees are waived.

**The Leslie A. Holmes Graduate Fellowship**, named in honor of Northern's fifth President, was established in 1967. The fellowship is granted each year to an outstanding student enrolled in the Graduate School. The stipend is \$2600. Application is made through the Graduate School. The recipient is chosen by the Scholarship Selection Committee of the NIU Alumni Association, on the basis of recommendations from the Dean of the Graduate School.

**The Earl W. Hayter Graduate Fellowship**, which is sponsored by the NIU Parents' Association, was originated in 1969 in honor of the retired history professor for his many years of service to NIU. The Fellowship, in the amount of \$2900, is awarded annually to an outstanding graduate student, usually in history, who is selected by the Graduate Fellowship Committee.

## LOANS

### The National Defense Student Loan Program

Northern Illinois University is participating in the Student Loan Program of the National Defense Act of 1958. Graduate students or prospective graduate students who are in need of financial assistance to commence or continue their college education may be able to borrow up to \$2500 a year through this loan program.

The law requires that each borrower be at least a half-time graduate student, that he be in need of the amount of his loan to pursue his course of study, and that he be, in the opinion of the University, capable of maintaining good standing in his chosen course of study. It is further provided in the law that special consideration in the selection of loan recipients be given to (a) students with a superior academic background who express a desire to teach in elementary or secondary schools and (b) students whose academic background indicates superior capacity or preparation in science, mathematics, engineering, or a modern foreign language.

The borrower must sign a note for the loan. Repayment of the loan begins one year after the borrower ceases to be at least a half-time student, with payment being completed within ten years. No interest on the student loan may accrue prior to the

beginning of the repayment period, and interest thereafter is to be paid at the rate of 3 percent a year.

The National Defense Education Act contains a provision that up to 50 percent of a loan (plus interest) may be canceled in the event the borrower becomes a full-time teacher in a public or nonprofit elementary or secondary school or institution of higher education. Such cancellation is to be at the rate of 10 percent a year up to five years. A borrower may cancel his loan in full at the rate of 15 percent a year if teaching in a low-income area or if teaching handicapped children.

All students applying for a National Defense Student Loan must submit a Parent's Confidential Statement before May 1 prior to the academic year financial aid is needed; it must be submitted to College Scholarship Service, Box 881, Evanston, Illinois. The American College Testing Program's Family Financial Statement, submitted to American College Testing Program, P.O. Box 767, Iowa City, Iowa, is also acceptable.

In addition to submitting the Parent's Confidential Statement, applicants must submit the Application for Financial Aid to Northern Illinois University.

These forms are available from the Student Financial Aids Office.

## Illinois Guaranteed Loan Program

The Illinois General Assembly has authorized a loan program to guarantee student loans made by commercial lenders. It is hoped that no qualified student will be denied an opportunity to pursue a program of higher education because of financial reasons.

An eligible student may borrow from \$300 to \$1500.

A student applicant must be:

1. A citizen of the United States,
2. A bona fide resident of the State of Illinois,
3. A person of integrity, capable of recognizing and accepting the responsibility of ultimate repayment of any loan indebtedness, and
4. A full-time student. (Note: Application may be made after acceptance for enrollment, but loan funds will not be received until actual enrollment.)

Repayment of loan:

**Principal**—Payments at a minimum of \$30.00 monthly will begin nine months after graduation or cessation of full-time study.

In no event can the repayment period extend beyond six years from the date the borrower ceases to be a full-time student.

**Interest**—The maximum interest rate permitted by law is 7 percent simple interest, which begins on the date of the loan. If the family's annual adjusted income is less than \$15,000, the Federal Government will pay all of the interest while the student is in college. A student not qualified for federal interest subsidy will be required to pay his own interest on a semi-annual basis while he is in school.

## Other Loan Funds

**Northern Illinois University Foundation.** The Foundation administers five funds from which deserving students may borrow, at a low rate of interest, on personal notes: The Student Loan Fund, the Bertha Bennett Sawyer Loan Fund, the Lewis V. Morgan Loan Fund, the Emil A. Anderson Loan Fund, and the Janet Lynn Mary Rams Loan Fund. Loans are not made to entering students. Applications may be obtained in the Office of the Coordinator of Student Financial Aids.

**Northern Illinois Men's Loan Fund.** A loan fund is available to male students in good standing who have earned a cumulative grade average of at least "B" at Northern Illinois University. Small emergency loans may be obtained from this fund in amounts up to approximately \$100. All loans are repayable during the semester in which they are secured. Applications and further information may be secured from the Coordinator of Student Financial Aids.

**John S. Clark Memorial Loan Fund.** The elementary teachers of Waukegan, Illinois, have presented to the University a sum of money to be used as a loan fund for students facing emergency situations. The fund serves as a memorial to the late John S. Clark, who served as Superintendent of the Waukegan Elementary Schools for many years. Information concerning the procurement of a loan from this source may be secured from the Coordinator of Student Financial Aids.

**Robert A. Gardiner Memorial Loan Fund.** This loan fund was established by the Kappa Chapter of Professional Bookmen of America and the Illinois Bookmen's Association. It is available to students in amounts up to \$100.

**Associated Women Students' Loan Fund.** This organization, to which all undergraduate women belong, has funds available for short-term loans (not exceeding \$100) to any graduate woman maintaining at least a "B" average at Northern Illinois University. Applications may be obtained in the Office of the Coordinator of Student Financial Aids.

## GRANTS-IN-AID

Graduate students may apply for all Grants-in-Aid. Grants will be made on the basis of scholastic competence, character, special ability, and need. Grants vary in amount, depending upon the financial need of the applicant. The Grants-in-Aid Com-

mittee administers Northern's Grants-in-Aid program. Students wishing consideration for a grant may obtain further information and application forms in the Student Financial Aids Office.

Northern Illinois University will not discriminate on the ground of race, creed, color, or national origin of any applicant for an assistantship or fellowship or for financial aid.

# SERVICES AND FACILITIES

## STUDENT HOUSING

### University Residence Halls

Northern Illinois University has no residence halls or floors of residence halls occupied exclusively by graduate students. Upon acceptance by the Graduate School, a student may apply for an assignment to a University residence hall. All University residence hall contracts are for the full academic year (September-June), and the fee includes both room and board. Graduate students wishing to apply for an assignment to a University residence hall should contact the Office of Student Housing Services. Application should be made as soon as the notification of acceptance from the Graduate School has been received.

### The University Apartments

The University has 80 units (40 efficiency units and 40 one-bedroom units) of permanent-type two-story apartments for married students. These units are completely furnished and rentals cover all utilities including electric heat but not telephones. Applications for the waiting list for the apartments and further information may be obtained from the Office of Student Housing Services.

### Off-Campus Housing for Graduate Students

The Office of Student Housing Services keeps listings of rooms, apartments, and houses which are available in the DeKalb area for occupancy by graduate students. Since listings are maintained in card form and change rapidly, they are not mailed but may be used in the Office of Student Housing Services. This office is located in Room 100, Williston Hall, and is open from 8:00 a.m. to noon and 1:00 to 5:00 p.m. Monday through Friday.

## HEALTH SERVICE

The University Health Service is located on Wirtz Drive West. The regular clinic hours are from 8:00 a.m. to 11:45 a.m. and from 1:00 to 4:45 p.m., Monday through Friday, and Saturday morning from 8:00 to 11:30. At all other times, nurses are on duty, and a doctor is on call, for the care of emergency cases. A 52-bed hospital occupies the upper two floors of the new building and is used for the short-term care of ill students. All students who are taking 6½ semester hours or more during the fall and spring semesters or at least 5 semester hours during the summer session and who have paid the student activity fee

for the semester are entitled to receive medical care at the University Health Service.

## MAJOR MEDICAL COVERAGE

All students, undergraduate or graduate, who are assessed the Major Medical Fee (full-time students except those students enrolled in extramural, evening, and Saturday classes only) are provided the Major Medical Coverage, which includes benefits for medical treatment for accidents or illnesses.

All eligible students are required to pay the fee for the period for which they register unless evidence of equal or better coverage and a Petition for Refund are presented to the Coordinator of Insurance within the first 10 days of each semester or session.

Eligible dependents of insured students, including spouse and unmarried children over 14 days old, who are not self-supporting and reside with the insured student, may also be insured by the application of the student at the Office of the Coordinator of Insurance within the first 10 days of each semester or session.

Students who are insured for the second semester and who desire summer coverage but do not intend to enroll in the summer session may obtain coverage by making application and paying the requested premium prior to the last day of the second semester.

Information concerning the Major Medical Coverage may be obtained from the Office of the Coordinator of Insurance.

## UNIVERSITY COUNSELING CENTER

The University Counseling Center has been established as an integral part of the University's total program. The major function of the Counseling Center is to assist graduate and undergraduate students in their selection and progression toward appropriate educational and vocational objectives and in considering matters of personal development.

A staff of counselors is available to discuss with students any matter of concern to them, be it educational, personal, or vocational. Through use of individual and group counseling sessions, tests, and other materials students may clarify their interests, strengths, and weaknesses; identify their potentials and possibilities; and plan and implement a program aimed at resolving their concern.

Counseling is normally made available through regularly scheduled appointments, but should a student feel the need to see a counselor immediately, a counselor may at most times be seen without an appointment. A library of materials on occupations is available in the Counseling Center for students who



## SERVICES AND FACILITIES

wish to inform themselves about vocational opportunities.

A reading improvement and study skills program is conducted by counseling center personnel. The program is conducted individually, in small groups, and in classes to meet the needs of students at various levels of competency and proficiency.

All graduate students enrolled in the University, either full or part-time, are invited to utilize any of the services provided by the Center.

## STUDENT TEACHING

Since student teaching is required for certification in Illinois, facilities for student teaching will be made available to graduate students who have been admitted to the teacher education program under the conditions described on pages 10 and 143. For complete descriptions of student teaching see the current Undergraduate Catalog.

## SPEECH AND HEARING CLINIC

The Division of Speech Pathology and Audiology of the Department of Speech operates a speech and hearing clinic as an integral part of its training program. Services in speech and/or hearing rehabilitation are available without cost to graduate students, undergraduate students, faculty, and members of the immediate families of the three groups. A nominal fee is charged for other clients. The Division also operates a vocational evaluation and training program for young adults with hearing and speech handicaps. All programs provide practicum and observational opportunities in addition to their primary goals.

## PLACEMENT BUREAU

The University seeks to help its graduates and alumni to secure permanent employment through the services of its Placement Bureau. The Placement Bureau is a unified service in that it provides placement assistance to all departments of the university.

Services to the candidate and the employer include dissemination of confidential credentials which deal primarily with (1) personal information, (2) educational background, (3) experience, and (4) evaluation of the candidate.

Other services include: (1) counseling with candidates and employers; (2) staffing seminars, orientation sessions, and classroom groups to discuss placement procedures and purposes; (3) maintenance of files of credentials and vacancies; (4) dissemination of related information in terms of the annual report and occasional special reports.

The Placement Bureau affords assistance to candidates during their professional lifetime. The Placement Bureau conceives its primary task to consist of communication about placement matters to employers, candidates, and any other concerned individuals. Final decisions and ultimate responsibility for placement are vested in the employer and the potential employee.

## RECREATIONAL FACILITIES

The University sponsors an extensive recreation and intramural athletic program each semester. Regular tournaments are held in touch football, basketball, volleyball, water polo, and softball. Individual and dual sports tournaments include tennis, gymnastics, swimming, handball, wrestling, badminton, track, golf, weight lifting, basketball free throw, cross country, and paddleball. Graduate students who pay activity fees are eligible to compete in the above tournaments.

Part of a fifty-acre area has been improved for intramural recreation, physical education classes, and athletic practice. In addition to Anderson Hall and the Field House, recreation facilities are available in the football stadium. These include three gymnasiums and four handball courts. Outdoor facilities include Grass-tex tennis courts, softball and touch football fields, indoor and outdoor volleyball courts, and ice skating on the campus lagoon.

Swimming is available to male students at the University School pool and to female students at the pool in Anderson Hall. Co-rec swimming is open on Friday nights at Anderson Hall, and on Monday nights at the University School pool. The University Center has bowling and billiards facilities.

In general, graduate students are invited to participate in undergraduate activities, including band, orchestra, and chorus, which do not involve intercollegiate competition. Information regarding specific organizations may be obtained at the Office of the Dean of the Graduate School.

## STUDENT OPERATION OF MOTOR VEHICLES

Campus parking facilities are limited and it is therefore necessary that the facilities be controlled. Full-time and part-time students who are permitted to use university parking facilities are required to register their vehicles with the Office of Security and Safety. The publication entitled *University Motor Vehicle and Parking Regulations*, available in the Office of Security and Safety, defines eligibility for the use of campus parking facilities and provides other information necessary for the proper use of these facilities.

## EMPLOYMENT FOR WIVES OF STUDENTS

The University encourages wives of students interested in full-time or part-time employment to contact the Personnel Office, 615 Lincoln Terrace. The University employs approximately 2000 non-teaching employees in a variety of over 400 different professional, clerical-secretarial, and service jobs. Northern Illinois University is an *Equal Opportunity Employer*.

## VETERANS' EDUCATIONAL BENEFITS

The Office of the Coordinator of Student Financial Aids provides the liaison between student veterans, the dependents of deceased veterans, and the Veterans Administration regarding their educational benefits. The office assists the veteran in the processing of his application, subsequent eligibility, and certification of his enrollment. Assistance is also provided when difficulties arise concerning receipt of the benefits for which the student is eligible. The Office of the Coordinator of Student Financial Aids is also the authorizing agent for certifying a veteran's eligibility for receipt of the Illinois Veterans State Scholarship. Widows and minor dependents of deceased veterans may also process some educational benefits through this office. Inquiries con-

cerning educational benefits for veterans should be directed to the Coordinator of Student Financial Aids.

## SELECTIVE SERVICE INFORMATION

Information about student deferments is available in the Office of Admissions and Records.

## ALUMNI RELATIONS

The Office of Alumni Relations is a function of the University and is located on the sixth floor of the University Center. The office maintains current information and addresses on graduates and former students.

The office is also a source of contact after campus days for general information about the University's academic, social, athletic, and continuing education events. This office coordinates alumni activities with the University administration, faculty, staff, students, and other alumni.

Graduate students are eligible for membership in the Student Alumni Association, which is a liaison group between present students and alumni.





Paul S. Burtness, Ph.D., Dean  
Larry R. Sill, Ph.D., Associate Dean  
Rodney Angotti, Ph.D., Assistant Dean

# College of Liberal Arts and Sciences

Anthropology  
Biological Sciences  
Center for Southeast  
Asian Studies  
Chemistry  
Earth Sciences  
Economics  
English  
Foreign Languages  
Geography  
Geology  
History  
Journalism  
Library Science  
Mathematics  
Philosophy  
Physics  
Political Science  
Psychology  
Social Sciences  
Sociology  
Speech

# Department of Anthropology

**GRADUATE FACULTY:** Lange, Department Chairman. Andrews, Bartell, Brown, Gravel, D. Gunnerson, J. Gunnerson, Hanifi, Hart, Honea, Holtzman, Otten, Salovesh, F. Trager, G. Trager.

The Department of Anthropology offers graduate courses and research opportunities leading to the degree Master of Arts and to the Certificate of Advanced Study. The department also cooperates with other departments in offering an area major leading to the degree Master of Science in Education.

Graduate work in this field is designed to prepare students for teaching or research in Anthropology, and for further advanced study.

Students desiring to pursue the graduate curriculum in Anthropology are required to consult with the departmental graduate adviser before being admitted to courses. Unclassified students who wish to be admitted to the graduate curriculum in Anthropology are urged to consult with the departmental graduate adviser in order to insure that the requirements of the department will be met by the program of courses they elect.

## MASTER OF ARTS

A student who elects the master's program in Anthropology must have had at least 15 undergraduate semester hours in Anthropology and a course in statistics. A student lacking these prerequisites will be required to take compensatory work during his graduate program.

Candidates for the master's degree with a major in Anthropology are required to complete one course in anthropological theory (Anth. 430 or 520), two graduate seminars (Anth. 620A or B, and C or D), and a thesis (Anth. 599A). The remaining work for the degree (a minimum of 5 semester hours) may be elected from any of the Anthropology courses offered for graduate credit or, with the consent of the department chairman, 6 of these hours may be elected from related fields (e.g., English 514T; Philosophy 422, 462; Biological Sciences 408, 418, 442; Sociology 461, 553; History 420). A written preliminary thesis proposal must be approved prior to registration for Thesis (Anth. 599A). Minimum total for the degree: 30 semester hours.

Candidates for the master's degree in Anthropology are required to take a final written examination, based on a reading list prepared by the department staff and available at the department office. An oral examination may be required at the option of the department.

## CERTIFICATE OF ADVANCED STUDY

Prerequisite: Master's degree. Candidates working toward the

Certificate of Advanced Study in Anthropology, in consultation with an adviser from the department, plan a course of study designed especially to meet their needs. The course of study is presented to the student's advisory committee for its approval. The program may be concentrated entirely in Anthropology, although a minor of 9 semester hours in a closely related field may be included. A comprehensive examination, either written or oral, or both, and a thesis (Anth. 599B) are required. Total for the certificate: 30 semester hours.

## Course Offerings

### 401. Peoples and Cultures of South and East Asia (3)

A descriptive and analytical examination of representative societies of India, China, Japan, and Southeast Asia, dealing with their cultural histories, economic, social, political, and religious institutions. Related problems of cultural and social change will also be considered. Prerequisite: Anth. 220.

### 402. Indians of South America (3)

Description and analysis of representative aboriginal cultures of South and Meso-America in the ethnographic present. Archaeological background and recent acculturation will be considered. Prerequisite: Anth. 220.

### 403. Peoples and Cultures of Africa South of the Sahara (3)

A descriptive and analytic examination of representative African societies dealing with their culture histories, economic, political, and social organization, as well as religion and arts. Contemporary problems of culture change and social transformation within the context of decolonization. Prerequisite: Anth. 220.

### 404. Peoples of the Caribbean (3)

Description, analysis, historical development, and change of several Caribbean cultures; emphasis on social, economic, religious, and esthetic elements. Prerequisite: Anth. 220.

### 405. Peoples of Meso-America (3)

Cultural background of Meso-American ethnic groups; historical and contemporary socio-cultural systems of Indian, Negro, and Mestizo groups in rural and urban areas. Attention to the processes of acculturation, urbanization, and current cultural modifications influenced by contemporary society. Prerequisite: Anth. 220.

### 406. Indians of North America (3)

A description and analysis of the cultures of nonliterate peoples of North America. Social, economic, and religious life; languages and arts of representative North American Indian groups. Prerequisite: Anth. 220.

**407. Peoples and Cultures of the Pacific (3)**

Culture history and description of the economic, political, religious, and social organizations of the peoples of Melanesia, Micronesia, Polynesia, and Australia. Prerequisite: Anth. 220 or consent of instructor.

**408. Peoples and Cultures of Central Asia (3)**

Survey of the cultures and societies of Central Asia. Examination of the cultural-historical factors which distinguish the various cultural groups in this region.

**409. Peoples and Cultures of Southwest Asia (3)**

Survey of the cultures of Southwest Asia. Examination of major cultural groupings in this area. Analysis of relevant socio-cultural and ethnological issues. Prerequisite: Anth. 220 or consent of instructor.

**411. Survey of Old World Prehistory (3)**

A descriptive and analytical survey of the origins, development, and diversification of the prehistoric cultures of Africa, Europe, and Asia, to the beginnings of written history. Prerequisite: Anth. 210.

**412. Archaeology of North America (3)**

A detailed analysis of culture sequences in various archaeological areas of North America. Interrelationships between areas will be stressed. Prerequisite: Anth. 210.

**413. Archaeology of South America (3)**

The major cultures of South America from its earliest occupation to the fall of the Inca State, with emphasis on the Central Andes. Prerequisite: Anth. 210.

**414. Archaeology of Meso-America (3)**

A descriptive and analytical examination of Pre-Columbian cultures of Mexico and Central America. Prerequisite: Anth. 210.

**417. Diachronic Linguistics (3)**

Theory and practice of reconstruction in the history of unwritten languages and establishing time depth, by employing the special techniques and interpretations developed by anthropologists. Prerequisite: Eng. 432 or Anth. 230.

**418. Synchronic Linguistics (3)**

Study and application of major contemporary linguistics models as related to anthropological studies of unwritten languages and the cultures associated with them. Prerequisite: Eng. 432 or Anth. 230.

**419. Field Linguistics (3)**

Approaches to field work in linguistics; methods and techniques for collecting and analyzing data. Prerequisite: Anth. 418.

**420. Culture Process (3)**

A historical and critical examination of various theories of culture process and their applications. Attention will be given to invention, diffusion, evolution, and acculturation. Similarities between biologic and culture processes will be considered. Prerequisites: Anth. 210 and 220.

**421. Kinship and Social Structure (3)**

Description of primitive social systems with emphasis upon kinship systems and how they articulate with other institutions and activities within each social system. Functional requisites of various kinship systems and their development. Prerequisite: Anth. 220.

**422. History of Anthropology (3)**

An overview of the historical development of principal anthropological concepts through primary sources. Attention is focused upon major schools of thought and associated figures in social anthropology; also considered are areas within cultural anthropology such as linguistics, archaeology, and ethnology, along with physical anthropology. Prerequisite: Anth. 220 or consent of instructor.

**423. Current Problems in Anthropology (3)**

Selected topics of current interest in anthropology, especially those dealing with very recent developments. Prerequisite: Consent of department chairman. May be repeated with consent of department chairman.

**425. Proseminar in Anthropology (3)**

An intensive study of selected topics in anthropology. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of department chairman.

**426. Primitive Political Systems (3)**

Political activities and how they articulate with other institutions, particularly the legal system. Presentation of the various interpretations and theories that have been applied to the data. Prerequisite: Anth. 220 or consent of instructor.

**427. Comparative Economy of Primitive Peoples (3)**

Economic activities in primitive societies and how they articulate with other institutions. Presentation of the various interpretations and theories that have been applied to the data. Prerequisite: Anth. 220 or consent of instructor.

**428. Peasant Societies (3)**

Definition, description, comparison, classification, and analysis of peasant societies and the various theories that have been applied to the "folk-urban" dichotomy. Prerequisite: Anth. 220 or consent of instructor.

## ANTHROPOLOGY

### 429. Primitive Religions (3)

Description of religious and ritual activities and how they articulate with other institutions. Presentation of the various interpretations and theories that have been applied to the data. Prerequisite: Anth. 220 or consent of instructor.

### 430. Fundamentals of Anthropological Theory (3)

A course in the prerequisites of systematic analysis and synthesis of anthropological data. Prerequisite: Anth. 220.

### 433. Material Culture of Primitive Peoples (3)

A cross-cultural study of the manufacture and use of utilitarian objects and the production and processing of food and raw material. The relationship of material culture to other aspects of culture and to physical environment will be examined. Prerequisites: Anth. 210 and 220.

### 434. Museum Methods (3)

Lectures and practical experience in various aspects of museum work: acquiring, accessioning, cataloging, preservation, and storage of collections; designing and constructing exhibits; museum administration. Prerequisite: Anth. 433.

### 435. Ethnohistory (3)

Approaches to locating, evaluating, and utilizing ethnographic information contained in such courses as native oral traditions and the recorded observations of travelers, explorers, missionaries, and government officials. Prerequisite: Anth. 220.

### 436. Research Methods in Anthropology (3)

Lectures and laboratory exercises to familiarize students with basic research methods and techniques used by ethnologists, archaeologists, and physical anthropologists. Prerequisite: Consent of instructor.

### 437. Anthropology Field Study (1-6)

Field study of selected archaeological sites, ethnic communities, and anthropological museums. May be repeated to a maximum of 8 semester hours. The length of the trip and credit hours earned will depend on the area visited. Prerequisite: Consent of instructor.

### 438. Source Materials for Anthropological Research (3)

Research methods utilizing non-field sources of anthropological data. Emphasis on anthropological literature, government documents, other published information, archival materials, old maps, museum collections, and guides to these source materials. Prerequisite: 9 semester hours of anthropology.

### 439. Anthropological Research Training (3-6)

- A. Archaeology
- B. Ethnology
- C. Physical Anthropology

### D. Ethnohistory

### E. Linguistics

Training and experience in field and/or laboratory research. Students will participate, under supervision, in basic research projects. Prerequisite: Consent of instructor.

### 441. Fossil Man (3)

A descriptive survey of the evolutionary development of man, from the earliest hominid forms to modern *Homo sapiens*. Theories and recent interpretations pertaining to the origins, diversity, and continuing biological trends of man will be considered. Prerequisite: Anth. 240 or consent of instructor.

### 442. Cultural Factors in Human Evolution (3)

A descriptive and analytical survey of the cultural and ecological factors which have influenced human biological evolution, including the effects of natural selection, nutrition, tool-making, disease, urbanization, etc. Prerequisite: Anth. 240 or consent of instructor.

### 443. Race and Race Formation (3)

History of the concept of race and changing racial criteria. Race as speciation, adaptation, and evolutionary process. Prerequisite: Anth. 240 or consent of instructor.

### 444. Primate Ethology (3)

Comparative studies of living non-human primates (taxonomy, ecology, growth patterns, and behavior), with application to understanding origins and present-day behavior of man.

### 520. Culture Theory (3)

Organizing principles and theories currently used in anthropology: culture areas, culture patterns; themes and models. Prerequisites: Anth. 220 and 422 or 420 or 430 or consent of instructor.

### 523. Cultural Ecology (3)

Exploration of the methods and findings of the ecological perspective in the study of man in nature; emphasis upon cultural mechanisms of adaptation to geographical and political imperatives for survival. Prerequisite: Consent of instructor.

### 530. Independent Study in Anthropology (1-3)

- A. Cultural Anthropology
- B. Ethnology
- C. Archaeology
- D. Physical Anthropology
- E. Ethnohistory
- G. Linguistics

Supervised readings or research in specialized areas, topics, or problems in anthropology. Any one course may be repeated to a maximum of 6 semester hours with a combined maximum

of 12 semester hours. Prerequisite: Written permission of the department chairman.

**539. Archaeological Interpretations (3)**

A detailed examination of theories and methods basic to cultural, temporal, and environmental interpretation of data recovered by archaeologists. Contributions of other sciences will be stressed. Prerequisites: Anth. 210 and 420 or 430 and one archaeology area course or consent of instructor.

**599. Thesis**

**A. Master's Degree (1-6)**

**B. Certificate of Advanced Study (1-6)**

May be repeated to a maximum of 6 semester hours.

**620. Seminar in Anthropology (3)**

**A. Cultural Anthropology**

**B. Ethnology**

**C. Archaeology**

**D. Physical Anthropology**

**E. Ethnohistory**

**G. Linguistics**

Intensive study of some specific area, topic, or problem of the indicated sub-discipline. Any one course may be repeated to a maximum of 9 hours. Prerequisite: Consent of instructor.



# Department of Biological Sciences

**GRADUATE FACULTY:** McCleary, Department Chairman. Abdel-Hameed, Bennett, Briles, Brower, Bullington, Copeland, Feyerherm, Frampton, Fry, Garthe, Grahn, Gray, Greenfield, Grosklags, Hall, Hampel, Hanzely, Hardman, Harmet, Jaroslow, Jollie, Kubitschek, Lynch, McIlrath, Mathers, Mittler, Norstog, Peraino, Prah-lad, Rahmar, Rohde, Schjeide, Schlenk, Sinclair, Skok, Sorensen, Southern, Starzyk, Thomson, von Zellen, Voth, Webb, Zar.

The Department of Biological Sciences offers graduate programs leading to the degrees Master of Science in Education and Master of Science and, at the sixth-year level, to the Certificate of Advanced Study. The Departments of Biological Sciences, Chemistry, Geography, Geology, and Physics offer an area major in General Science leading to the degree Master of Science in Education.

Each student should understand that while one academic year is the minimum time for work leading to the degree Master of Science or Master of Science in Education, most students find that an additional semester or summer session is necessary. If the student has deficiencies, the total number of hours required may exceed 30.

The minimal requirements for admission to the M.S. or M.S.Ed. degree program consist of a baccalaureate degree with a major in some area of the biological sciences or in some closely related field such as biochemistry or biophysics. This degree should include courses in biological sciences, chemistry, mathematics and physics equivalent to those required for the B.S. degree (or the B.S. Ed. degree, for those pursuing the M.S. Ed. degree) in Biological Sciences at Northern Illinois University. Such courses not completed before admission to the Graduate School, as well as other undergraduate courses deemed appropriate for the pursuit of the Master's degree in a particular specialty in biological sciences, will be recorded as deficiencies and must be taken early in the student's program.

## MASTER OF SCIENCE IN EDUCATION

### Major in Biological Sciences

The student may pursue either a thesis or a non-thesis program, subject to departmental approval.

#### Non-thesis program

- a. Each student is required to complete successfully at least one 400 or 500 level course in each of the following five fields: ecology, evolution, genetics and developmental biology, microbiology, and physiology. Courses taken for the baccalaureate degree may satisfy any or all of these re-

quirements provided that a grade of "B" or better was earned; but these courses cannot then be applied as credit toward the 30 hours required for the M.S.Ed. degree. The student may be required by his advisory committee to complete other courses in the Department of Biological Sciences or in other departments.

- b. The student must qualify himself for secondary teaching certification in the State of Illinois.
- c. The student must enroll in B.Sci. 661, Seminar, each semester.

#### Thesis program

The requirements for the thesis program are the same as those for the non-thesis program, with the following additions:

- a. The student must complete successfully the following courses, in addition to those listed in a above:
  - B.Sci. 570, Introduction to Biostatistics
  - B.Sci. 599A, Thesis, and B.Sci. 670, Research, with no more than 12 hours of thesis and research credit being applied as credit toward the M.S.Ed. degree.
- b. The student is required to complete an acceptable thesis based on original research or a scholarly analysis of published literature.

## Major in General Science

Students who elect an area major in General Science leading to the degree Master of Science in Education must have completed an undergraduate major or equivalent in Biological Sciences, Chemistry, Geography, Geology, or Physics, or have completed an undergraduate General Science major. In those science fields where no undergraduate credit was earned, the student may be required to take courses as deficiencies, with no graduate credit being earned. The student is advised to choose not more than three of the five fields mentioned above. His program will be determined in cooperation with his adviser. Consultations with the various departments may be necessary.

## MASTER OF SCIENCE

### Major in Biological Sciences

1. Each student is required to complete successfully the follow-



ing courses, or their equivalents:

B.Sci. 570, Introduction to Biostatistics

B.Sci. 470X, Biological Chemistry

B.Sci. 661, Seminar (to be taken each semester, at least once for credit)

B.Sci. 599A, Thesis, and B.Sci. 670, Research, with no more than 12 hours of thesis and research being applied toward the M.S. degree.

Other courses as required by the student's advisory committee.

2. The student is required to complete an acceptable thesis based on original research.

## CERTIFICATE OF ADVANCED STUDY

Students working for the Certificate of Advanced Study in the Biological Sciences must consult with the chairman of the department before planning a program. The requirements will be flexible, with the candidate's background and interests being the determining factors. There will be a program of supervised research culminating in a thesis.

## Course Offerings

### 400. Teaching Methods in Biology (3)

Emphasis on methods and materials for teaching modern biology in the secondary school. Field trips and practice teaching experience. Prerequisite: Major or concentration in Biological Sciences with a minimum of two biology courses at N.I.U.

### 405. American Ecosystems (6-8)

A laboratory and field analysis of environments. Lecture and laboratory on campus with minimum of three weeks in field. Students pay field expenses. Prerequisite: B.Sci. 316.

### 406. Biological Conservation (3)

Ecological bases for conservation of biological resources and relationship of conservation practices to human welfare. Field trips required. Prerequisites: Two courses in biology.

### 408. Genetics and Cytogenetics (3)

Principles of heredity. Primarily for the Biological Sciences major or minor. Prerequisite: B.Sci. 300.

### 409. Cytogenetics Laboratory (2)

Cell nuclei and the behavior of chromosomes in plants and animals. Prerequisites: B.Sci. 300 and credit or registration in B.Sci. 408.

### 410. Plant Anatomy (3)

Structure of vascular plants, primarily flowering plants. Prerequisite: B.Sci. 211.

### 412. Mycology (4)

Culture, morphology, and economic significance of the fungi. Prerequisite: B.Sci. 211.

### 413. Microbial Physiology (3)

Physical and chemical aspects of the functions of bacteria and other microorganisms. Four periods a week. Prerequisites: B.Sci. 313 and organic chemistry.

### 414. Fresh-Water Algae (3)

Identification, economic importance, and limnological relations of the algae. Prerequisite: B.Sci. 211.

### 415. Applied Microbiology (3)

Designed to acquaint the student with the various microbial processes and problems encountered in the community, industry, and government. Prerequisites: B.Sci. 313 and a course in organic chemistry.

### 418. Human Heredity (2)

Human heredity in individuals and populations. Does not carry graduate credit for Biological Sciences majors. Prerequisite: A course in biology.

### 420. Plant Pathology (3)

Specific causal agents of plant diseases, their identification, and control measures. Parasitism and the economy of crop diseases. Prerequisite: B.Sci. 412 or equivalent.

### 422X. Edaphology (4)

#### (Geography 422)

Chemical and physical interactions of soils affecting the distribution and development of higher plants. Field trips required involving additional fees. Prerequisites: Geog. 400, Chem. 110 or 210.

### 430. Plant Taxonomy (3)

Identification and classification of higher plants with emphasis on the local flora. Prerequisite: B.Sci. 211 or consent of instructor.

### 431X. Physiological Psychology (4)

#### (Psychology 431)

An understanding of the physiological functioning of the body as it affects behavior. Emphasis is given to the neurological factors involved. Lecture and laboratory. Prerequisite: B.Sci. 200 or equivalent, or consent of instructor.

### 440. Immunobiology (3)

The biological and development significance of antigens, anti-

bodies, and their interactions. Lecture and laboratory. Prerequisite: B.Sci. 300.

**442. Evolution (3)**

Theories of evolution; development of concepts of evolution; factors in organic evolution. Prerequisite: B.Sci. 408.

**445. Histology (3)**

Animal cells and tissues including their ultrastructure. Cellular structure in relationship to tissue and organ systems. Prerequisite: B.Sci. 300.

**450. Animal Parasitology (4)**

Introductory study of animal parasitism. Laboratory fee of \$2.50. Prerequisite: B.Sci. 251 or equivalent.

**451. Protozoology (3)**

Systematic examination of the protozoa. Prerequisite: B.Sci. 251 or equivalent.

**452. Ornithology (4)**

Avian taxonomy, anatomy, and behavior. Several field trips taken to appropriate areas. Prerequisite: One year of zoology.

**453. Entomology (3)**

Insect anatomy and taxonomy, including general ecology and economic importance. Other arthropod groups are broadly considered in relation to insects. Prerequisite: B.Sci. 251 or equivalent.

**453X. Radioisotope Techniques (1)**

(Chemistry 453)

Intended to prepare and instruct students in the safe handling and use of radioisotopes. Topics include basic principles and criteria of radiation measurement, principles and practices of radiation safety, and applications of radioisotopes to chemistry and related sciences. One four-hour laboratory a week. Prerequisites: Chem. 320, Chem. 332 and consent of instructor.

**455. Comparative Physiology (3)**

Mechanisms responsible for maintaining the functional integrity of invertebrates and lower vertebrates. Prerequisites: One year of zoology and one year of chemistry.

**456. Ichthyology (4)**

Taxonomy, ecology, and general biology of fish. Prerequisite: B.Sci. 251.

**457. Mammalogy (3)**

Evolution, ecology, and adaptations of mammals of the world. Taxonomic emphasis on North American forms. Prerequisite: B.Sci. 316.

**458. Optical and Instrumental Methods in Biology (2)**

(1) Optical equipment, especially the microscope; (2) measuring instruments; (3) homeostasis devices (incubators, water baths, etc.). Three periods a week. Prerequisites: A course in college physics and consent of instructor.

**459. Comparative Vertebrate Ethology (4)**

Determination of the function, biological significance, causation, and evolution of species' typical behavior. Prerequisite: 12 semester hours of zoology.

**460. Wildlife Ecology (3)**

Fundamental mechanisms of wildlife populations as related to management of game species. Prerequisite: B.Sci. 316.

**461. Endocrinology (3)**

Ductless glands and their functions. Prerequisites: B.Sci. 355 and consent of instructor.

**462. Insect Physiology (3)**

Physical and chemical aspects of the functions of insects and other arthropods. Prerequisites: B.Sci. 251, Chem. 231 or 331. B.Sci. 453 and Phys. 251 recommended.

**463. Invertebrate Zoology (4)**

Structure, behavior, and classification of major invertebrate types. Prerequisite: B.Sci. 251 or equivalent.

**464. Comparative Reproductive Physiology (3)**

An introductory comparative study of the anatomical aspects of reproduction and the physiological contributions to animal fertility. Prerequisite: One of the following: B.Sci. 355, 356, 257, or 455.

**465. Cellular Physiology (3)**

Principles underlying cellular activity. Topics include the biochemistry of cells, cell organelles, cell environment, membranes, and energy conversions. Four periods a week. Prerequisites: B.Sci. 310 or 355 and 300.

**469X. Invertebrate Paleontology (3)**

(Geology 470)

The principal invertebrate fossil forms of the geologic record, treated from the standpoint of their evolution, and the identification of fossil specimens. Two lectures, one two-hour laboratory. Several field trips required. Prerequisite: Geol. 121.

**470X. Biological Chemistry (3)**

(Chemistry 470)

Structure and properties of biologically important compounds. Properties of enzymes. Metabolism of carbohydrates, lipids, and some nitrogenous compounds. Three lectures a week. Prerequisite: Chem. 331.

**471. Introduction to Scientific Literature (2)**

Use of the biological literature.

**471X. Biological Chemistry Laboratory (2)**

(Chemistry 471)

Experiments in isolation and separation using chromatographic and electrophoretic techniques. Enzyme properties and purification. Metabolism experiments. Two three-hour laboratory periods a week. Prerequisite: Chem. 332. Co-requisite: B.Sci. 470X.

**473X. Advanced Biological Chemistry (3)**

(Chemistry 473)

Detailed study of the intermediary metabolism of certain classes of biologically important compounds including bioenergetics and metabolic regulation. Three lecture periods a week. Prerequisite: B.Sci. 470X.

**474X. Advanced Biochemical Techniques (3)**

(Chemistry 474)

Theory and practice in the use of current biochemical techniques, such as microbiological assays, chromatographic techniques, use of radioisotopes in biological systems. One lecture and two three-hour laboratory periods a week. Prerequisite: B.Sci. 471X.

**475X. Paleontology I (3)**

(Geology 475)

The morphology, paleoecology, and stratigraphic distribution of the lower invertebrates (Foraminifera through Brachiopoda). Principles of evolution are stressed in the investigation of fossil populations. Two lectures, one two-hour laboratory. Several field trips. Prerequisites: Geol. 211 and 1 year of biology.

**476X. Paleontology II (3)**

(Geology 476)

Continuation of B.Sci. 475X, with detailed investigation of the higher invertebrates (Mollusca through Arthropoda). Analysis of animals of problematic affinities. Study of selected suites of fossil plants and vertebrate fossils. Two lectures, one two-hour laboratory. Several field trips. Prerequisite: B.Sci. 475X or consent of instructor.

**480. Genetics Laboratory (2)**

Laboratory demonstration of the principles of heredity. Prerequisite: Credit or registration in B. Sci. 408.

**480X. Comparative Psychology (3)**

(Psychology 480)

A critical examination of experimental studies using animals as subjects. A comparison of the behavior of the various species. Lecture and laboratory. Prerequisites: Psych. 102 and an additional course in Psychology.

**490X. Introductory Physical Biochemistry (3)**

(Chemistry 475)

Principles involved in the application of physical chemistry to biological problems. Intended for students with no previous course in physical chemistry. Three lecture periods a week. Prerequisite: B.Sci. 470X or consent of instructor.

**491. History of Biology (2)**

Origin and development of major ideas and syntheses in biology. Relation between conditions of the other sciences and society and advances in biological knowledge. Prerequisite: 8 semester hours of biology.

**500A. Science Problems of Elementary Grades (2)**

Development of constructive attitudes toward modern science in relation to problems in the elementary school. Does not carry graduate credit for Biological Sciences majors. Prerequisite: B.Sci. 305 or consent of instructor.

**500B. Methods and Materials for High School Biology (2)**

Problems of teaching biology in high school. Current research in this area. Carries credit toward M.S.Ed. only. Prerequisite: B.Sci. 400.

**505. Institute of Science for High School Teachers of Biology and General Science (4)**

New information in the field and the interrelationships among the biological sciences usable in the secondary school. Field trips, lectures by visiting scientists, and individual student projects. May be repeated to a maximum of 12 semester hours, 8 of which count toward the master's degree. Carries credit toward M.S.Ed. only.

**510. Physiology of Plant Growth and Development (3)**

Endogenous and exogenous regulations of growth and development processes in plants. Prerequisites: B.Sci. 310 and two years of chemistry or consent of instructor.

**511. Plant Nutrition (3)**

Inorganic nutrition of plants. Roles of the essential elements and techniques of investigation in plant nutrition. Prerequisites: B.Sci. 310 and two years of chemistry or consent of instructor.

**514. Plant Systematics (3)**

Fundamental principles of classification of higher plants. Ecological distribution. Prerequisite: Beginning course in taxonomy.

**516. Plant Ecology (3)**

Influences of environmental factors upon plant associations evaluated. Representative communities analyzed in detail. Research techniques used in field and laboratory. Prerequisites: B.Sci. 316 and 430.

**518. Soil Microbiology (3)**

The major groups of soil microorganisms; their significance and reactions. Prerequisites: B.Sci. 313, one semester of chemistry, and consent of instructor.

**520. Plant Morphogenesis (3)**

Cultures of plant cells, tissues, and organs in relation to problems of differentiation and development. Prerequisites: B.Sci. 410 and consent of instructor.

**525. Electron Microscopy (2)**

Preparative techniques for electron microscopy of biological specimens. Basic theory and operation of electron microscopes, including electron-micrography. Interpretation of the ultrastructure of cells and cell constituents. Prerequisite: Permission of instructor.

**530. Radiation Biology (3)**

The effects of radiation upon cells and organisms. Prerequisites: B.Sci. 355, 408, or equivalent, and one year of chemistry.

**530X. Neurochemical Bases of Behavior (3)  
(Psychology 530)**

Biochemistry of the nervous system; chemical composition, metabolism, and chemistry of neurons and glia; chemical bases of learning, motivation, and other categories of behavior. Prerequisites: Graduate standing, Psych. 529, or consent of instructor.

**547X. Oceanography (3)  
(Geology 547)**

The chemical and physical nature of the world's oceans. Prerequisite: One year of laboratory science.

**550X. Plant Geography (3)  
(Geography 550)**

Plant formations and plant associations. Relations to the environment. Effects of disturbances and pollution. Field trips required involving additional fees. Prerequisite: Consent of instructor; B.Sci. 422X recommended.

**562. Aquatic Biology (3)**

Aquatic environments—physiographic, physical, and chemical—and aquatic life. Collecting, preserving, identifying, and recognizing native animals and plants. Prerequisites: B.Sci. 211 and 251.

**565. Physiological Ecology (3)**

Physiological adaptations of animals to terrestrial and aquatic habitats: temperature responses, energy requirements, water balance, respiratory adaptations, and physiological rhythms. Prerequisites: B.Sci. 316 and one of the following courses in physiology: B.Sci. 355, 455, 462, and 465.

**570. Introduction to Biostatistics (3)**

Lectures and conferences on statistical treatment of biological research data. Prerequisite: Math. 155 or equivalent.

**575. Population Ecology (3)**

The structure and dynamics of animal populations and communities. Prerequisites: B.Sci. 316 and Math. 229.

**586. Biosystematics (3)**

An introduction to principles and techniques of biosystematics, including evolutionary and ecological mechanisms as they relate to the species concept, taxonomic procedures, and nomenclature. Prerequisite: B.Sci. 442 or permission of instructor.

**599. Thesis**

**A. Master's Degree (1-6)**

**B. Certificate of Advanced Study (1-6)**

The student is eligible to register for this course after his research problem is approved. May be repeated to a maximum of 6 semester hours of credit. Prerequisite: Consent of research supervisor.

**600. Special Topics in Biology**

**A. Physiology (1-9)**

**B. Development and Morphogenesis (1-9)**

**C. Genetics (1-9)**

**D. Microbiology (1-9)**

**E. Environmental Biology (1-9)**

**G. Systematics and Evolution (1-9)**

Lectures, discussions, and reports on topics of special interest in a particular field of biology. One to 9 semester hours as scheduled; courses may be repeated in one or more fields of biology. The maximum number of semester hours is to be 9 in any field. Prerequisite: Consent of instructor.

**661. Seminar (0-1)**

Special topics in biology. May be repeated to a maximum of 4 semester hours.

**670. Research (1-9)**

Independent study of problems under the supervision of an adviser in the department. May be repeated to a maximum of 12 semester hours toward one degree. Prerequisite: Consent of a research supervisor.

**689. Seminar in College Teaching in Biology (3)**

Discussion and conferences on problems, techniques, and actual practice in college teaching. Prerequisite: Permission of department.

# Center for Southeast Asian Studies

**GRADUATE FACULTY:** Hart, Director. Battye, Beaudry, Cooler, Dellinger, de Queljoe, Dutton, Maryanov, Neher, Rubin, H. Smith, Thomas.

The Center is charged with coordinating academic courses dealing with Southeast Asia and with developing and administering other programs at the University which are concerned with the area. These programs include: sponsoring conferences and lectures involving visiting scholars and public officials; providing consultation services for schools in Illinois; obtaining and administering funds for scholarships and for faculty research grants; engaging in research projects; and operating a limited publications program and promoting publication of sponsored research on Southeast Asia.

Since the Center is not a degree-offering unit, all graduate degrees are obtained through the departments, whose special requirements must be met. A student earning a graduate degree may, with the consent of his departmental adviser, also take a graduate concentration of courses in Southeast Asian Studies; completion of the special requirements will be noted on the student's transcript of credits.

At the M.A. level, the graduate student must meet the following concentration requirements: He must successfully complete four graduate courses (excluding thesis credit) dealing with Southeast Asia, at least two of which must be offered by departments other than that in which the student is earning his degree; he must demonstrate competency in a Southeast Asian language (equivalent to one year's course work); if required by his department to write a thesis, or a special paper in lieu thereof, he must write on a Southeast Asian topic.

At the Ph.D. level, the concentration requirements which must be met by the graduate student are as follows: He must successfully complete six graduate courses (excluding dissertation credit) dealing with Southeast Asia, at least three of which must be offered by departments other than that in which the student is earning his degree; he must demonstrate proficiency in a Southeast Asian language (equivalent to two years' course work); he must write his doctoral dissertation on a Southeast Asian topic.

The specific Southeast Asian courses which the graduate student is permitted to take as part of the concentration requirements are dependent upon his departmental adviser and the Center. Moreover, satisfying the language requirement for the Center does not necessarily fulfill the language requirement, if any, of the student's major department. If an advanced degree program requires the demonstration of proficiency in one or more foreign languages, the student must meet the requirements of his major department and the Graduate School.

Participating departments are: Anthropology, Art, Economics, Foreign Languages, Geography, History, Political Science, and Sociology.

Southeast Asia courses are listed below:

## ANTHROPOLOGY

- 401. Peoples and Cultures of South and East Asia\*
- 425. Proseminar in Anthropology\*

## ART

- 487. Southeast Asian Art
- 598. Studies in Oriental Art\*

## FOREIGN LANGUAGES\*\*

- 429. Advanced Indonesian
- 444. Reading Malay
- 448. Introduction to Indonesian Literature
- 498. Independent Study (Indonesian, Malay, and Thai)

## GEOGRAPHY

- 452. Geography of Southeast Asia
- 601C. Seminar in Regional Geography (Asia)\*

## HISTORY

- 439. Summer Institute in Asian Civilizations\*
- 448T. History of Burma and Thailand
- 449. History of Malaysia and Indonesia
- 541. Seminar in Southeast Asian History
- 519G. Reading Seminar (Asian History)\*
- 636G. Independent Study (Asian History)\*

## POLITICAL SCIENCE

- 451. Southeast Asian Political Thought\*
- 461T. Politics of Developing Areas\*
- 570. Reading Seminar in Southeast Asian Politics
- 587. Southeast Asia and International Politics
- 596. Independent Study in Political Science\*
- 635. Seminar in Governmental and Administrative Problems of Underdeveloped Countries\*
- 670. Research Seminar in Southeast Asian Politics
- 698. Foreign Study and Internship\*

## SOCIOLOGY

- 493. Sociology of Selected Developing Societies\*
- 495. Proseminar in Sociology\*
- 558. Social Dynamics of Non-Western Societies\*
- 559. Development: Modernization and Social Structure\*
- 658. Seminar in Comparative Analysis of Societies\*
- 659. Seminar in Selected Societies\*

\*Courses may meet the concentration requirements when they include substantial treatment of Southeast Asia

\*\*Foreign Languages 344-345 (Beginning Indonesian), 328-329 (Beginning Thai), 368-369 (Intermediate Thai) may be audited but not taken for graduate credit.



# Department of Chemistry

**GRADUATE FACULTY:** Miller, Department Chairman. Bower, Bowers, Cunico, Erman, J. Graham, L. Graham, Hampel, Kevill, Kresheck, Lindbeck, Marshall, Mason, Pesek, Piatak, Reynolds, Rolf, Russell, Schilt, Spangler, Vaughn, Wilson.

The Department of Chemistry offers programs leading to the Master of Science, the Master of Science in Education, the Certificate of Advanced Study, and the Doctor of Philosophy degree. The Departments of Biological Sciences, Chemistry, Geography, Geology, and Physics cooperate to offer an area major in General Science leading to the degree Master of Science in Education. Bulletins describing graduate programs in Chemistry are available from the department chairman.

## MASTER OF SCIENCE

A candidate seeking to qualify for the degree Master of Science with a major in Chemistry shall satisfy the following departmental requirements in addition to satisfying Graduate School requirements.

1. The candidate shall meet the chemistry, physics, and mathematics requirements for the B.S. degree in Chemistry at Northern Illinois University.
2. The student is required to take background examinations in the fields of analytical, inorganic, organic, and physical chemistry prior to registration. These examinations are usually given a week before registration for the purpose of aiding the adviser in the preparation of a course of study for the candidate and in counseling the candidate as to the advisability of continuing in the program for the M.S. degree.
3. A minimum of 30 semester hours of graduate work is required, of which a minimum of 15 semester hours may be in research.
4. The student must successfully complete Chem. 446, 541, or 542 and three of the following courses: Chem. 463, 522, 532, and 575. In addition to these four required courses, at least two other courses in any area of Chemistry or in closely related fields must be completed satisfactorily.

## MASTER OF SCIENCE IN EDUCATION

### Major in Chemistry

Students who elect a graduate major in Chemistry leading to the degree Master of Science in Education must take a minimum of 11 semester hours from the graduate catalog offerings of the Department of Chemistry.

### Area Major in General Science

Students who elect an area major in General Science will find the requirements listed under Biological Sciences on page 34.

## CERTIFICATE OF ADVANCED STUDY

The Certificate of Advanced Study may be awarded to students pursuing programs in Chemistry beyond the master's degree. This certificate is given in accordance with the general requirements of the Graduate School to those students following a sequence of courses approved by the department chairmen or by the assigned adviser. The program of courses to be taken will be constructed with consideration given to the student's interests and background.

## DOCTOR OF PHILOSOPHY

An applicant seeking admission to an advanced degree in Chemistry must meet Graduate School requirements and shall have completed the chemistry, physics, and mathematics requirements for the B.S. degree in Chemistry at Northern Illinois University.

The prospective candidate for the degree Doctor of Philosophy in Chemistry may select for advanced study and research any of the following areas: analytical, biological, inorganic, organic, or physical chemistry. Departmental requirements for the degree Doctor of Philosophy are as follows.

### Course requirements

Every candidate for the Ph.D. is required to:

- a. Successfully complete Chem. 446, 541, or 542, and any three of the following four courses: Chem. 463, 522, 532, and 575.
- b. Participate in Seminar (Chem. 515) each semester.
- c. Successfully complete, in addition to courses mentioned above, at least 18 semester hours in courses numbered between 500 and 600 and/or approved courses numbered between 400 and 500. These courses are selected from any area of chemistry and, at the discretion of the candidate's advisory committee, related fields.
- d. Enroll in the doctoral research course (Chem. 699) as soon as possible after passing the two qualifying examinations, and continue such enrollment each semester until graduate work terminates.

### Examinations

For admission to candidacy for the Ph.D. in Chemistry, the following examinations must be satisfactorily completed:

- a. Background examinations are required of all entering graduate students (described above in the requirements for the M.S. degree).
- b. Qualifying examinations are given each semester in the following five areas: analytical, biological, inorganic, organic, and physical chemistry. A doctoral student is required to pass two qualifying examinations, one in the area of his major interest and one in any one of the other four. To be eligible to take the examinations, a student must have successfully completed Chem. 446, 541, or 542, and three of the following four courses: Chem. 463, 522, 532, and 575. A student who fails to pass the specified examinations may, with the permission of the department, retake them after the lapse of at least one semester. Failure on the second attempt will terminate further work toward the doctorate but not the master's degree.
- c. Cumulative examinations are given four times each in the fall and spring semesters and twice in the summer session. The dates are announced only one week in advance to discourage long periods of intensive review. Doctoral candidates take cumulative examinations only in the area of their major interest. Beginning with the first semester, after passing qualifying examinations, a student must take at least 3 of the 4 offered each semester until 6 have been passed before failing 10. Thus, if 10 cumulative examinations are failed before 6 are passed, further work toward the doctorate is terminated.
- d. Language examinations must be passed in one of the following combinations:
  1. Two foreign languages, average reading proficiency (German and either French or Russian).
  2. One foreign language with average reading proficiency (German) and one research tool with average proficiency (computer language).  
Foreign students are permitted to substitute their native language (if other than German or English) in place of the French or Russian requirement.
- e. An oral examination consisting of the presentation and defense of an original research proposal is taken soon after 6 cumulative examinations are passed. The research proposition cannot be the same problem as the student's doctoral dissertation work nor one too closely related to it; it may, however, be an extension or new aspect of the dissertation research. The oral examination is conducted by the candidate's doctoral committee.

#### Dissertation

The candidate must complete an approved research problem and incorporate the results in a dissertation. The dissertation

will be a substantial contribution to knowledge in which original scholarship is demonstrated. An oral defense of the dissertation before the candidate's doctoral committee is required for its final approval.

A doctoral committee for each student is nominated by the chairman of the department and appointed by the Dean of the Graduate School. The size of the committee normally will be three to five with the professor supervising the doctoral research acting as chairman. The doctoral committee will conduct the research proposition oral and the dissertation oral examinations.

## Course Offerings

### 405. Chemical Instrumentation (3)

Electrical measurements and basic electronic circuits. Applications of amplifiers, comparison measurements, servo systems, operational amplifiers, timers, and counters to chemical operations. One lecture and six hours of laboratory a week. Prerequisite: Chem. 440. Corequisite: Math. 234.

### 407. History of Chemistry (2)

Historical development of the important theories of chemistry, covering the origins, critical periods of development, and the personalities of famous chemists who contributed. Prerequisite: At least one year of college chemistry.

### 408. Chemical Literature (2)

The use of chemical literature. Two lecture periods a week. Prerequisites: Chem. 331 and one year of college German or equivalent.

### 409. Science Institute for In-Service Elementary Teachers (1-8) (Cross-listed as Physics 409X)

Subject matter in biological sciences, chemistry, earth sciences, and physics necessary for effective science teaching in the lower grades. Prerequisite: Acceptance by the director of the institute.

### 421. Analytical Chemistry (3)

More detailed treatment of the principles and systematic methods of chemical analysis. Two lectures and one 3-hour laboratory period a week. Prerequisites: Chem. 320 and 440.

### 425. Instrumental Methods of Analysis (3)

Fundamentals of physico-chemical techniques of chemical analysis. Interpretations and application of electrical, optical, thermal, and magnetic measurements in chemical analysis. Two lectures and one 4-hour laboratory period a week. Not offered for graduate credit for the M.S. (Chemistry). Prerequisite: Chem. 440 or consent of instructor.

**432. Qualitative Organic Analysis (3)**

Identification of organic compounds and mixtures (after separation) by characteristic organic group reactions and instrumental means. One lecture and two 3-hour laboratory periods a week. Prerequisite: Chem. 333 or equivalent.

**440. Physical Chemistry I (3)**

Study of the gaseous, liquid, and solid states; thermodynamics; chemical equilibrium; kinetic theory. Four lecture periods a week. Prerequisite: Chem. 320 or concurrent registration in either Math. 233 or Phys. 251. Not offered for graduate credit for the M.S. (Chemistry).

**441. Physical Chemistry II (3)**

Atomic and molecular structure, spectroscopy, kinetics, chemical statistics. Four lecture periods a week. Prerequisites: Chem. 440, and Math. 234 or concurrent registration. Not offered for graduate credit for the M.S. (Chemistry).

**446. Theoretical Chemistry (3)**

Continuation of Chem. 440 and 441. Atomic structure, chemical bonding, and introduction to elementary quantum mechanics. Three lectures a week. Prerequisite: Chem. 441.

**447. Physical Chemistry Laboratory I (1)**

One 4-hour laboratory a week. Prerequisite: Chem. 440.

**448. Physical Chemistry Laboratory II (1)**

One 4-hour laboratory a week. Prerequisite: Concurrent or previous enrollment in Chem. 441.

**451. Nuclear Chemistry (3)**

Principles of radioactive decay. Elementary properties of nuclei and nuclear structure. Research techniques and instrumentation. Applications to the study of nuclei and chemical systems. Three lectures a week. Prerequisite: Chem. 441.

**453. Radioisotope Techniques (1)**

(Cross-listed as Biological Sciences 453X)

Intended to prepare and instruct students in the safe handling and use of radioisotopes. Topics include basic principles and criteria of radiation measure, principles and practices of radiation safety, and applications of radioisotopes to chemistry and related sciences. One 4-hour laboratory a week. Prerequisites: Chem. 320 or Chem. 332 and consent of instructor.

**455. Advanced Laboratory Techniques (3)**

Synthesis of representative compounds by methods not found in the standard laboratory sequence. Emphasis on modern preparative techniques.

**460. Inorganic Chemistry I (3)**

Introduction to atomic structure, ionic and covalent bonding

theories essential to modern inorganic chemistry. Correlation of structure and properties of inorganic compounds. Brief introduction to symmetry elements and point groups. Topics of coordination chemistry including structure, stereochemistry, and reaction mechanism as well as study of selected nontransition elements. Three lecture periods a week. Prerequisite: Chem. 441 or consent of instructor. Not offered for graduate credit for the M.S. (Chemistry).

**463. Inorganic Chemistry II (3)**

Chemical applications of symmetry. Bonding and structure of metal complexes involving pi acceptor ligands and organometallic complexes. Descriptive chemistry of the first row transition elements including structures, spectra, and magnetic properties. Selected topics from the chemistry of the heavy transition elements, the lanthanides, and actinides. Three lecture periods a week. Prerequisite: Chem. 460 or equivalent.

**470. Biological Chemistry (3)**

(Cross-listed as Biological Sciences 470X)

Structure and properties of biologically important compounds. Properties of enzymes. Metabolism of carbohydrates, lipids, and some nitrogenous compounds. Three lectures a week. Prerequisite: Chem. 331.

**471. Biological Chemistry Laboratory (2)**

(Cross-listed as Biological Sciences 471X)

Experiments in isolation and separation using chromatographic and electrophoretic techniques. Enzyme properties and purification. Metabolism experiments. Two 3-hour laboratory periods a week. Prerequisite: Chem. 332. Corequisite: Chem. 470.

**473. Advanced Biological Chemistry (3)**

(Cross-listed as Biological Sciences 473X)

Detailed study of the intermediary metabolism of certain classes of biologically important compounds including bioenergetics and metabolic regulation. Three lecture periods a week. Prerequisite: Chem. 470.

**474. Advanced Biochemical Techniques (3)**

(Cross-listed as Biological Sciences 474X)

Theory and practice in the use of current biochemical techniques, such as micro-biological assays, chromatographic techniques, use of radioisotopes in biological systems. One lecture and two 3-hour laboratory periods a week. Prerequisite: Chem. 471.

**475. Introductory Physical Biochemistry (3)**

(Cross-listed as Biological Sciences 490X)

Principles involved in the application of physical chemistry to biological problems. Intended for students with no previous

course in physical chemistry. Three lecture periods a week. Not for graduate credit for Chemistry majors. Prerequisite: Chem. 470 or consent of instructor.

**495. Teaching of Physical Sciences (2)**  
(Cross-listed as Physics 495X)

Instructional problems confronting the secondary school teacher in classroom and laboratory. Examination and analysis of modern curricula such as PSSC, CHEMS, CBA, and IPS. Four hours a week for nine weeks. Prerequisite: Physics, Chemistry, or General Science major or minor.

**500. Advanced Principles of Chemistry (4)**

Fundamental particles, atomic structure, electronic configurations, periodic system, chemical bond, elementary organic and biochemistry. For secondary teachers. Not open to Chemistry majors for credit. Prerequisite: One year of college chemistry.

**501. Advanced Principles of Chemistry (4)**

Energy relations in chemistry, chemical equilibrium, oxidation-reduction, acids and bases, complex ions. Methods of chemical separation and measurement. For secondary teachers. Prerequisite: One year of college chemistry.

**505. Institute for Science Teachers (1-8)**

Lectures, demonstration, laboratory work, and field trips, designed for the science teacher. Subject matter from chemistry, physics, biology, and earth sciences. May be repeated to a maximum of 16 semester hours. Invitation by institute director is required.

**510. Theoretical Inorganic Chemistry (3)**

Lectures on ligand field theory and molecular orbital theory as applied to electronic spectra. Three lecture periods a week. Prerequisite: Chem. 463 or equivalent.

**511. Advanced Inorganic Chemistry (3)**

Continuation of Chem. 510 with emphasis on periodic properties, acids and bases, and nonaqueous solvents. Prerequisite: Chem. 510.

**515. Chemistry Seminar (1)**

Discussion of selected topics in chemistry under staff supervision. May be repeated to a maximum of 4 semester hours. Prerequisite: Consent of instructor.

**522. Advanced Analytical Chemistry (3)**

Fundamental principles of chemical separations and measurements with emphasis on noninstrumental methods. New reagents and techniques are surveyed. Prerequisite: Chem. 441 or equivalent.

**524. Optical Methods in Analytical Chemistry (3)**

Theoretical and practical applications of spectral measurements to research and chemical analysis, with emphasis on emission and absorption spectrometry in the principal regions of the electromagnetic spectrum. Prerequisite: Chem. 425 or consent of instructor.

**531. Organic Reactions (3)**

Analysis and classification of organic reactions using modern organic chemical theory. Prerequisite: Chem. 331 or equivalent.

**532. Theoretical Organic Chemistry (3)**

Mechanism and structure in organic chemistry including structural theory, stereochemistry, and the study of the reactive intermediates of organic chemistry. Prerequisites: Chem. 331 and 441.

**533. Theoretical Organic Chemistry (3)**

Physical factors affecting the course of organic reactions; quantitative structure-reactivity relationships; applications of modern theory. Prerequisite: Chem. 532 or equivalent.

**535. Physical Methods in Organic Chemistry (3)**

Identification of organic compounds by physical methods including mass spectroscopy and paramagnetic resonance spectroscopy, configurational and conformational assignment techniques, and other physical methods. Prerequisites: Chem. 425 and 441 or equivalent.

**541. Chemical Thermodynamics (3)**

Fundamental laws of thermodynamics and applications to chemical problems. Calculation of thermodynamic quantities. Prerequisite: Chem. 441.

**542. Kinetics (3)**

Theories and applications of rates of chemical reactions including reactions in the gas phase and in solution. Applications of kinetics in the determination of reaction mechanisms. Prerequisite: Chem. 441.

**543. Quantum Chemistry I (3)**

Postulatory basis of quantum theory. The time-independent Schrödinger equation and its applications. Operator techniques are emphasized. Prerequisites: Chem. 446 and Math. 234 or 420T or equivalent.

**547. Quantum Chemistry II (3)**

Introduction to matrix mechanics and the elements of group theory. The applications of group theory in crystal field theory, molecular vibrations, and LCAO-MO calculations. Introduction to quantum statistics. Prerequisite: Chem. 543.

## EARTH SCIENCES

### 550. Statistical Thermodynamics (3)

Principles of statistical mechanics and application to the calculation of thermodynamic properties. Prerequisite: Chem. 541 or equivalent.

### 555. Electroanalytical Chemistry (3)

Theory, practice, and applicability of electrical measurements in analysis and research. Polarography, potentiometry, and conductometry are the major electrometric methods emphasized. Prerequisite: Chem. 425 or consent of instructor.

### 570. Enzymes (3)

Basic principles of the concepts of enzyme kinetics, theory and design of experimental methods, and of interpretation of enzyme mechanisms. Three lectures a week. Prerequisite: Chem. 470. Chem. 542 is recommended.

### 575. Physical Chemistry of Macromolecules (3)

Comprehensive introduction to the use of physical chemistry in the study of macromolecules. Three lecture periods a week. Prerequisite: Chem. 441.

### 599. Research (1-15)

#### A. Master's Thesis

#### B. Certificate of Advanced Study

The individual investigation of a special problem under the supervision of an adviser. This work normally culminates in

the writing of the thesis. May be repeated to a maximum of 15 semester hours towards the M.S. degree. For the M.S.Ed., a maximum of 6 semester hours may be earned for a nonlaboratory investigation. An additional 15 semester hours may be earned towards the Certificate of Advanced Study. Prerequisite: Consent of instructor.

### 600. Special Topics in Chemistry

#### A. Inorganic (1-9)

#### B. Analytical (1-9)

#### C. Organic (1-9)

#### D. Physical (1-9)

#### E. Biological (1-9)

Lectures, discussions, and reports on topics of special interest in a particular field of chemistry. One to 9 semester hours as scheduled; course may be repeated in one or more fields of chemistry. The maximum number of semester hours is to be 9 in any field of chemistry. Prerequisite: Consent of instructor.

### 630. Heterocyclic Chemistry (3)

A systematic survey of the chemical behavior of heterocyclic compounds as a function of ring size and heteroatom. Mechanistic aspects will be emphasized. Heteroatoms to be considered include nitrogen, oxygen, and sulfur. Prerequisites: Chem. 531 and 532.

### 699. Doctoral Research and Dissertation (credit arranged)

## Earth Sciences

Although the curriculum leading to a Master of Science in Education, with a major in Earth Sciences, is administered jointly by the Departments of Geography and Geology, an individual seeking the degree must, at the time he submits his applica-

tion for admission, declare his preference for affiliation with either the Department of Geography or the Department of Geology. See listings of either department for requirements and course descriptions.



# Department of Economics

## CERTIFICATE OF ADVANCED STUDY

Students who wish to pursue the sixth-year program leading to the Certificate of Advanced Study with a major in Economics should consult with the chairman of the Department of Economics.

## DEPARTMENTAL AND INTERDISCIPLINARY CONCENTRATIONS

The Department of Economics, in cooperation with other departments, offers a number of areas of concentration. Candidates for either the Master of Arts or the Certificate of Advanced Study are eligible to participate. These concentrations are Southeast Asian Studies, Comparative Economics, Economics of Development, Government and Industry, International Economics, and Metropolitan Problems.

Industrial Relations and Manpower Studies, an additional area of concentration, can be pursued by the selection of an interdisciplinary group of courses from certain departments including Economics, History, Management, and Sociology. Students desiring additional information on Industrial Relations and Manpower Studies should contact one of the departments listed above.

## DOCTOR OF PHILOSOPHY

Traditionally the degree Doctor of Philosophy in Economics has been sought almost exclusively by persons planning a career in college or university teaching. In recent years, however, junior colleges, governmental agencies, and private industry have employed increasing numbers of persons holding the doctorate in Economics. While it is agreed that every candidate for a doctorate in Economics ought to have a broad and general knowledge of his discipline, at the same time the interests and career objectives of individual students would seem to call for some degree of concentration in their programs of study. This program has been designed with a sufficient degree of flexibility to insure that programs for individual students with specific career objectives in mind can be accommodated.

**Admission Policy.** Same as Graduate School requirements with the following addition: The Department of Economics requires that students who wish to begin studies at the doctoral level rank within the top one-third of Northern Illinois University graduate students on the Graduate Record Examinations. The Department may waive this requirement on the basis of the student's previous performance in graduate work.

**GRADUATE FACULTY:** Mauer, Department Chairman. Bechdolt, Gherity, Graeser, Horton, Kim, Kittrell, Kymn, Kwon, Laumas, Levy, Lloyd, Martellaro, McMeekin, Mohabbat, Newman, Nielsen, Reiling, Renshaw, Scaperlanda, Skeels, Taylor, Van Buer, Weeks.

The Department of Economics offers graduate programs leading to the Master of Arts degree, the Certificate of Advanced Study, and the Doctor of Philosophy degree. The department also cooperates with other departments in offering an area major leading to the degree Master of Science in Education.

Students who plan to pursue the graduate curriculum in Economics should consult the departmental graduate adviser before enrolling in course work. A student whose background in Economics is, in the judgment of the department's Graduate Committee, deficient may be required to take additional work at the undergraduate level.

## MASTER OF ARTS

A student pursuing the Master of Arts program in Economics may choose, with the consent of his departmental graduate adviser, either of the following options:

- Option A: A program consisting of a minimum of 24 semester hours of course work and a thesis.
- Option B: A program consisting of a minimum of 30 semester hours of course work.

A student selecting Option B will normally be expected to enroll in a course in research methods.

Regardless of which option is chosen, the student will select, in conjunction with his graduate adviser, a program of study which will include a minimum of 24 semester hours in Economics. The departmental Graduate Committee will consider a petition to accept as Economics credits three additional semester hours of credit in a closely related field.

Each student will be required to complete a course in statistical methods (Econ. 490) and a one-year sequence in economic theory (Econ. 560T and 561). If the departmental Graduate Committee finds justification in the student's previous background, one or more of the above requirements may be waived.

**Comprehensive Examination.** Comprehensive examinations will be taken by each candidate for the master's degree within one semester from the expected completion of his course work. The Department of Economics will offer these examinations each semester and during the summer, at dates announced in advance.

**Course Requirements:** Same as Graduate School requirements with the following addition: Successful completion of Econ. 490 (Economic Statistics and Econometrics), and Econ. 560T-561, in micro- and macro-economic analysis theory, or the equivalents will be required of all students working for the doctorate. The Department of Economics requires that each student working for the doctorate in Economics will prepare himself to be examined in four fields, one of which will be economic theory. One minor field may, with the permission of the graduate adviser, be taken outside of the department. Fields offered within the department are:

- Comparative Economics
- Economic Growth and Development
- Economic Theory (Micro and Macro)
- Government and Business
- History of Economic Thought
- International Economics
- Labor and Manpower Economics
- Mathematical and Quantitative Economics
- Monetary Economics
- Public Finance

A major field is defined as a concentration in which the student has 15 or more semester hours; a minor field consists of 9 or more semester hours. A candidate desiring to be examined in a major or minor area for which he does not have the requisite number of semester hours may petition the Department of Economics for permission to be examined in that area. The candidate in all cases assumes responsibility for an area of knowledge and will be examined accordingly.

**Dissertation Requirement:** Same as Graduate School requirement.

**Language and Research Skills Requirements:** Before being admitted to candidacy for the Ph.D. in Economics, a student must demonstrate:

- a. Average proficiency in reading one foreign language and in using one research tool;
- b. Average proficiency in two research tools; or
- c. A high level of proficiency in one research tool.

(See p. for information regarding foreign language examinations.) The substitution of a research tool for a foreign language must be approved by the student's adviser. Proficiency may be demonstrated by the successful completion of such courses as are designated by the Department of Economics or by special examination.

**Qualifying Examination:** Same as Graduate School requirement.

**Candidacy Examinations:** When a student has completed most or all of his course work, and not later than eight months

before the granting of the doctor's degree, he will take a written comprehensive examination covering each of the fields specified above. A student who successfully completes these examinations will be admitted to candidacy for the doctorate. A student who fails any of these examinations may, with the permission of his examining committee and, after the lapse of at least one semester, repeat those portions failed. A student who fails any of the examinations a second time will not be permitted to continue work toward the doctorate.

**Oral Examination:** Same as Graduate School requirement.

## Course Offerings

**NOTE:** A "T" after a course number indicates that an old number is being re-used for a new or retitled course.

### 402. Comparative Labor Relations (3)

Patterns of industrial relations systems in European and selected emerging economies. Scope of collective bargaining and social welfare legislation. Cooperation between the various national labor movements. Prerequisite: Econ. 300.

### 403. Economics of Manpower (3)

Analysis of factors affecting demand for and supply of labor. Impact of technology and development of manpower policy and proposals. Prerequisite: Econ. 261 or consent of instructor.

### 420. Antitrust Economics (3)

Detailed analysis of monopoly, near monopoly, and various business practices. Examines legal and economic foundations of current and past public policies toward monopoly. Prerequisite: Econ. 261.

### 423. Public Utilities (3)

General economic characteristics of and governmental policy toward public utilities. Such problems as pricing; finance; private, cooperative, and public ownership. Prerequisite: Econ. 261.

### 425. Economic Education (3)

A refresher course for teachers-in-service emphasizing contemporary economic issues. The Task Force Report of the Joint Council on Economic Education is the reference for improvement of economic literacy. For summer and extension offering.

### 443. Economic Development (3)

Treatment of major problems and issues of a theoretical and a policy nature concerning the conversion from undeveloped to developed economies. Prerequisite: Econ. 260.

**444. Economics of Technology (3)**

Analysis of development, accumulation, and dissemination of technology within and between economies.

**450. Public Finance (3)**

Analysis of the structure and effects of the national, state, and local revenue and outlay systems. Prerequisite: Econ. 261 or consent of instructor.

**451. Economics of Social Accounts (3)**

The study of how accounting concepts are and can be used as part of the tools of economic analysis. Development and use of national income and product, flow of funds, balance of payments, and regional accounts, and the input-output tables. Prerequisite: Econ. 261 or consent of instructor.

**452T. Fiscal Policy (3)**

An examination of the role of the federal budget in fiscal policy. Public expenditures, taxes, and debt management are evaluated as tools of economic stabilization, since World War II. Prerequisite: Econ. 261 or consent of instructor.

**453T. Economics of Planning (3)**

An analysis of planning concepts in the public and private sectors and the functional relationships between them. Prerequisite: Econ. 261.

**454T. State and Local Finance (3)**

Analysis of the expenditure-revenue process in state and local governments. The effect of intergovernmental grants and the future of fiscal federalism. Prerequisite: Econ. 261.

**462. Business Cycles (3)**

The history of business fluctuations, techniques and theories of analysis, and countercyclical monetary and fiscal policies.

**470T. History of Economic Thought (3)**

The ideas of economies as they have developed through the centuries, and how these ideas are related to the economic conditions of the times. Main emphasis on classical and early Marxist thought. Prerequisite: Econ. 261.

**471. Modern Economic Thought (3)**

The evolution of neoclassical and modern theories of value, distribution, money, and income. Prerequisite: Econ. 470T or consent of instructor.

**474. Economic History of the United States (3)**

The evolution and expansion of American economic institutions and processes from colonial times to the 20th century. Both traditional historical method and the contemporary economic approach to these topics will be developed and applied in the study of this subject.

**483. The Cooperative Movement (3)**

Theory of cooperative enterprise; the practice of cooperative techniques in the United States and abroad. Prerequisite: Econ. 360.

**485. Topics in Urban Economics (3)**

Study of economic aspects of selected urban problems and issues using theoretical concepts and models in urban economics and a reading familiarity with various quantitative methods. Prerequisites: Econ. 385 and Math. 301, or consent of instructor.

**490. Economic Statistics and Econometrics (3)**

Topics include descriptive statistics, probability, estimation, hypothesis testing, correlation, and regression analysis, as applied to economic models. Prerequisites: Econ. 261 and Math. 301.

**490X. Materials and Problems of High School Instruction in the Social Sciences (3)  
(Political Science 490)**

Offered in conjunction with the Departments of Anthropology, Economics, and Sociology.

**491. Introduction to Mathematical Economics (3)**

Applications of elements of calculus, matrices, determinants, and systems of equations to economics. Areas of application include static and dynamic economic models. Prerequisites: Econ. 261 and either Econ. 360 or Math. 211 or equivalent.

**493. Seminar in Political Economy (3)**

(Cross-listed as Political Science 493X)

- A. Decision-Making in the Public Sector
- B. International Relations
- C. Metropolitan Studies
- D. Manpower Policy

Selected topics in political economy, offered jointly by the Departments of Political Science and Economics. Topics will be listed by semester. May be repeated once as topics change. Prerequisite: Consent of instructors.

**495. Seminar in Current Problems (2-4)**

Issues and policies in government, politics, and economics in their historical and sociological perspectives.

**496. Agricultural Economic Policy (3)**

Alternative methods of solving farm problems and analysis of consequences for farmer, consumer, and taxpayer. Prerequisite: Econ. 261.

**497. Independent Study in Economics (3)**

Individually arranged study within the various fields of economics. Not open to Economics graduate students. Prerequisites: Econ. 360 and 361.

**498. Research Methods in Economics (3)**

An introduction to research techniques applicable to economics.

**500T. Labor Market Analysis (3)**

Employment and human resources theory. A study of occupational choice, employment, unemployment, labor market operation, and related public and private programs. Prerequisite: Consent of instructor.

**501T. Economics of Collective Bargaining (3)**

Collective bargaining and wage theory. The economic impact of unions. Prerequisite: Consent of instructor.

**502T. Seminar in Economic and Social Security (3)**

Defines the dynamic forces that now create insecurity and examines public and private measures designed to lessen insecurity.

**510. Seminar in Comparative Central Banking (3)**

Comparative institutions, problems, and developments in the operation of the central banks. Current problems in monetary policy throughout the world. Prerequisite: 3 semester hours in money and banking.

**511. The Theory and Organization of Financial Institutions (3)**

Financial system of the United States; its effects upon resource allocation and levels of resource use. Prerequisite: Consent of instructor.

**512. Monetary Theory (3)**

Theoretical and empirical analysis of supply of and demand for money, the interrelationships between money and interest, prices, and output, with particular attention on monetary aspects of macroeconomic theory. Prerequisite: Consent of instructor.

**513. Monetary Policy (3)**

Objectives and instruments of monetary policy and the supply of money, alternative monetary models, and the effectiveness and incidence of monetary policy. Prerequisite: Consent of instructor.

**520. Industrial Organization I (3)**

Analysis and measurement of monopoly and near monopoly. Stresses the causes of monopoly and the relative performance of monopolized industries in terms of profits, research and development, and income distribution. Prerequisites: Econ. 490 and Econ. 560T or consent of instructor.

**521. Industrial Organization II (3)**

Current issues and problems in the public control of monopoly. Prerequisites: Econ. 520 and consent of instructor.

**523. Transportation Economics (3)**

Discussion of economic and social issues in transportation. Prerequisite: Consent of instructor.

**524. Economics of Public Utilities (3)**

Deals with economic problems and policies connected with public utilities including urban mass transit. Prerequisite: Consent of instructor.

**530. International Economic Theory I (3)**

Prerequisite: Consent of instructor.

**531. International Economic Theory II (3)**

Prerequisites: Econ. 530 or equivalent and consent of instructor.

**532. International Monetary Systems (3)**

The contemporary international monetary system and its development.

**540. Theories of Economic Development (3)**

Analytical approach to problems and obstacles to economic development in emerging societies: population problems, capital formation, investment criteria, structural and technical change, sectoral analysis, foreign trade, and others. Prerequisite: Econ. 443 or consent of instructor.

**550T. Economics of the Public Sector (3)**

The economic nature of government services, public sector decision making, welfare and efficiency criteria in financing these services, and interrelationships of the public and private sectors. Prerequisite: Econ. 450 or 452T or equivalent.

**551. Financing Government Activities (3)**

Budgetary policy, evaluation of different forms of taxation, pricing of government services, public borrowing and debt management, and programs of tax reform. Prerequisite: Econ. 450 or 452T or equivalent.

**554. Seminar in Education and Economic Growth (3)**

Research in the economics of education; concepts and measurement of human capital; investment in education and economic growth; taxation and expenditure on public education. Prerequisite: Consent of instructor.

**560T. Micro-Economic Analysis I (3)**

Domestic and international price systems with regard to resource allocation, welfare, and income distribution. A brief introduction to the concepts involved in input-output analysis and linear programming. Prerequisite: Econ. 360 or equivalent.

**561. Macro-Economic Analysis I (3)**

Factors determining levels of aggregate income, employment, and prices. Prerequisite: Econ. 361 or equivalent.



**562T. Micro-Economic Analysis II (3)**

A continuation of Economics 560T, including new and advanced topics. Prerequisites: Econ. 560T and consent of instructor.

**563T. Macro-Economic Analysis II (3)**

A continuation of Economics 561, including new and advanced topics. Prerequisites: Econ. 561 and consent of instructor.

**564T. Survey of Market Economics (3)**

Prices, output, distribution, and industrial efficiency in alternative input and output markets; structural maladjustments, employment, and inflation; government-business relations and government-labor relations; international prices; alternative economic systems. Open only to non-Economics graduate students who have not taken more than 6 semester hours of Economics.

**565T. Survey of Income Economics (3)**

Income, employment, prices and their determinants, theories of consumption, investment, taxation, fiscal, monetary and financial institutions and practices. Government debt, exchange rates, and balance of payments as influences on levels of economic activity. Open only to non-Economics graduate students.

**566T. Business Cycles (3)**

The cyclical behavior of economic magnitudes and economic forecasting. Prerequisite: Consent of instructor.

**570. History of Economic Analysis I (3)**

A detailed treatment of the development of tools and concepts of theoretical economics up to the decline of the Classical School. Prerequisite: Consent of instructor.

**571. History of Economic Analysis II (3)**

A continuation of Economics 570 beyond the Classical School to the analytics of the late 19th and early 20th centuries. Prerequisites: Econ. 570 and consent of instructor.

**574. History of Economic Growth and Development (3)**

An extensive study of the historical record of the growth and development of various societies with the use of tools of economic analysis. Prerequisite: Consent of instructor.

**580. Seminar in Modern Economic Systems (3)**

The economic systems of the United States, Great Britain, the Soviet Union, Fascist Italy, and Nazi Germany. Stresses the actual operation of the respective economies. Prerequisite: Econ. 380T.

**581. Economics of Socialism (3)**

Analysis of Marxian and socialist economic theory of planning, pricing, and welfare. Prerequisite: Econ. 580 and consent of instructor.

**585. Spatial Economic Theory (3)**

Spatial economic theories of the location and spatial organization of economic activities and land use patterns. Prerequisite: Econ. 360.

**586. Urban and Regional Economics (3)**

Urban and regional spatial structure, income analysis, economic stability, factor mobility, economic growth and development, problems, and policies. Prerequisite: Econ. 585 or consent of instructor.

**590. Econometrics I (3)**

Specification and estimation of economic models with emphasis on single equation models. Prerequisites: Econ. 360, 361, and 490 or its equivalent.

**591. Mathematical Economics I (3)**

Application of mathematical techniques to static and comparative-static economic behavior: the theory of the firm, consumer behavior, factor market, commodity market, and macroeconomic concepts. Prerequisites: Econ. 560T, Math. 211, or consent of instructor.

**592. Economics of Decision Making (3)**

Meaning and use of advanced tools in economic and business decision making; game theory, input-output, linear programming, projection, and decision theory. Prerequisite: Econ. 560T.

**595. Special Topics in Economics**

- A. Current Issues in Economic Theory (1-9)
- B. Current Issues in Economic Policy (1-9)
- C. Regional Economics (1-9)
- D. Alternative Economic Systems (1-9)
- E. Labor and Manpower Studies (1-9)

One to 9 semester hours as scheduled. Course may be repeated in one or more fields of economics. The maximum number of semester hours is to be 9 in any field of economics. Prerequisites: Graduate standing and consent of instructor.

**598. Independent Study in Economics (3)**

Individually arranged readings within the various fields of economics. May be repeated at the post-master's level of study to a maximum of 12 semester hours. Prerequisites: Econ. 560T and Econ. 561.

**599. Thesis**

- A. Master's Degree (1-6)
- B. Certificate of Advanced Study (1-6)

**600T. Seminar in Labor Economics and Labor Relations (3)**

The economics of labor and of labor-management relations.



## ECONOMICS

Emphasis upon individual research. With the consent of instructor, may be repeated once for credit. Prerequisite: Consent of instructor.

### **611. Economics of Moneyflows (3)**

History, measurement, and analysis of moneyflows. Emphasis upon movement of money and near money in the economy and the effect of such movement upon the stability and growth of the economy and subsections thereof.

### **612. Money and Value Theory (3)**

The monetary mechanism and its interaction with real economic activity: the integration of monetary and value theory. Prerequisite: Consent of instructor.

### **613. Seminar in Monetary Economics (3)**

Selected topics in Monetary Economics. May be repeated once for additional credit at the post-master's level of study. Prerequisite: Consent of instructor.

### **630. Seminar in International Economic Problems (3)**

Selected contemporary problems of the international economy. With the consent of the instructor, may be repeated once for credit. Prerequisite: Consent of instructor.

### **642. Seminar in Economic Growth and Development (3)**

May be repeated once for credit with consent of instructor. Prerequisite: Econ. 540 or consent of instructor.

### **650T. Seminar in Public Finance (3)**

Theory and institutional aspects of public finance. Emphasis is on microeconomic problems as they relate to public finance. With the consent of instructor, may be repeated once for credit. Prerequisite: Consent of instructor.

### **651T. Seminar in Fiscal Policy (3)**

The theory of fiscal policy and current problems and issues in the use of fiscal policy to promote stabilization and economic growth. With the consent of instructor, may be repeated once for credit. Prerequisite: Consent of instructor.

### **660. Seminar in Economic Theory (3)**

Individual research in those areas of economic theory that meet the needs of the students. With the consent of instructor, may be repeated once for credit. Prerequisite: Consent of instructor.

### **661. Topics and Issues in Post-Keynesian Economics (3)**

Development in economic thought since the time of John Maynard Keynes. Prerequisite: Consent of instructor.

### **673. Seminar in the History of Economic Thought (3)**

Studies in the development of economic ideas using original source materials. May be repeated once for additional credit. Prerequisite: Consent of instructor.

### **674T. American Economic Thought (3)**

The history of American economic thought from colonial times to the 20th century. Prerequisite: Consent of instructor.

### **680. Seminar in Alternative Economic Systems (3)**

The private enterprise, socialistic, and communistic economic models contrasted with the economic institutions and practices of the United States, Europe, the Soviet Union, and China. With the consent of instructor, may be repeated once for credit. Prerequisite: Econ. 380T.

### **685. Seminar in Spatial, Urban, and Regional Economics (3)**

Theoretical and empirical topics in spatial, urban, and regional economics with emphasis on individual research that meets the needs of students. Prerequisite: Econ. 586 or consent of the instructor.

### **690T. Econometrics II (3)**

Specification and estimation of simultaneous economic models. Prerequisite: Econ. 590 and consent of instructor.

### **691. Mathematical Economics II (3)**

Application of mathematical techniques to economic dynamics. Economic models of growth and fluctuation, dynamics of market price, inventory models, and dynamic input-output models. Linear programming, activity analysis, and the theory of games are also covered. Prerequisite: Econ. 591.

### **693. Seminar in Quantitative Economics (3)**

Application of mathematical and statistical techniques to the analysis of economic problems. May be repeated once for additional credit. Prerequisite: Consent of instructor.

### **695. Internship in Economics (2-15)**

May be repeated to a maximum of 15 semester hours. Prerequisite: Written consent of departmental Graduate Committee.

### **698. Current Research Colloquium (3-6)**

Faculty and graduate student discussion of problems in their current research. May be repeated once with consent of adviser. Prerequisite: 42 semester hours of graduate credit.

### **699. Doctoral Research and Dissertation (2-15)**

May be repeated to a maximum of 32 semester hours.

# Department of English

**GRADUATE FACULTY:** Hagelman, Department Chairman. Baker, Burtness, Cantrall, Carrington, Caruthers, Farmer, Fox, Garab, Grady, Harris, Herbert, James, Kallich, Mellard, Miller, Milosh, Mosher, Murray, Pennel, Roscelli, Schriber, Seat, Soudek, Stryk, Van Cromphout, Williams.

The Department of English offers graduate programs leading to degrees at both the master's and doctoral levels. The scores on the Aptitude Test of the Graduate Record Examinations and those on the Advanced Test of the Graduate Record Examinations are required as admission credentials. Well-prepared students with baccalaureate degrees may begin work immediately to fulfill the requirements for the doctorate. Bibliography and Methods of Research (Eng. 501) is required of all graduate students in English, and should be taken early in a student's program of studies.

Two master's degrees are awarded by the Department of English. The Master of Arts degree serves those interested in continuing graduate work at the doctoral level and those undertaking the graduate study of English as one of the humanities. This program emphasizes competency in the use of foreign languages; critical, scholarly habits leading to independent study and research; course work in those fields omitted from or slighted in the undergraduate major. The Master of Science in Education degree, which requires no foreign language, serves those interested in the graduate study of English as additional preparation for high school teaching.

All candidates for a master's degree with a major in English will be required to pass a written comprehensive examination based on a list of literary works selected by the graduate faculty of the Department of English. This list is made available to students at the beginning of the academic year; examinations during the year are based on that list. Students are responsible for using the list effectively to prepare for their examinations. During his last semester of course work, the student must secure the approval of the Director of Graduate Studies in English to take the regularly scheduled examination in that semester.

## MASTER OF ARTS

The candidate for the degree Master of Arts must earn a minimum of 30 semester hours of graduate credit with a grade-point average of 3.0. The student and his graduate adviser plan a schedule of courses designed to extend the student's knowledge of the discipline. The candidate for the Master of Arts degree must pass a language proficiency examination in one of the following languages: French, German, Spanish, Italian, Russian, Latin, or Greek. The student's graduate adviser

may grant permission for limited study in fields closely related to English; he may also approve the substitution of additional course work for the thesis.

### Linguistics Option

A linguistics concentration is provided within the context of the Master of Arts degree: 15 semester hours from graduate courses in language; 15 semester hours from graduate courses in literature.

## CERTIFICATE OF ADVANCED STUDY

A student who wishes to pursue the sixth-year program leading to the Certificate of Advanced Study should consult with the chairman of the Department of English.

## DOCTOR OF PHILOSOPHY

The Doctor of Philosophy represents the highest level of academic achievement formally recognized in the humanities. The degree is a symbol of distinguished standards of excellence in scholarship, as well as mastery of advanced techniques in a discipline.

The Ph.D. degree in English at Northern Illinois University is flexible. It is designed for the scholar-teacher who wishes to devote himself to work at the advanced undergraduate level or at the graduate level; optionally, by the inclusion of an additional linguistics requirement and a teaching internship or its equivalent, the program can be adapted to meet the needs of the prospective junior college or undergraduate teacher. Details of this option may be obtained from the Director of Graduate Studies of the English Department. Generous fellowships and teaching assistantships are available for qualified applicants.

The department utilizes all of its resources to assist the candidate in his progress. After careful analysis of the applicant's background and training, a graduate faculty member counsels the student in planning an appropriate program. Small graduate seminars conducted by active scholars enable the student to develop the critical and investigative skills and insights necessary to successful scholarship and teaching.

Carefully selected students who hold only a baccalaureate degree may enroll immediately in the Ph.D. program. Qualified full-time students should be able to complete all the requirements for the Ph.D. degree in four years beyond the baccalaureate degree or three years beyond the master's.

The Ph.D. degree in English is granted not on the basis

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of successful completion of a definite number of prescribed courses but chiefly in recognition of the candidate's high attainments and ability as shown, first, by passing the required examinations on his general and special fields (as detailed below), and second, by the preparation of a dissertation. Departmental requirements for the doctoral are as follows.

### Admission to the program

For admission to the program leading to the degree of Doctor of Philosophy in English, the student must:

- a. Show evidence of his capability of pursuing doctoral work.
- b. Secure departmental approval of a program of study. All students seeking the Ph.D. shall have in either their undergraduate or their graduate records individual author courses in Chaucer, Shakespeare, and Milton. Students in the Ph.D. program must have English 511 (or another graduate level course in Old English Language or Middle English Language). The Ph.D. program shall include at least four seminars at the 600 level and three graduate courses (500 or 600 level) in each of the following areas:

English Literature before 1660

English Literature after 1660

American Literature

The student shall have the option of electing a minor field consisting of a program of not more than 12 semester hours of closely related courses in any one of the following fields or in some other field approved by the department.

American Studies  
Anthropology  
Comparative Literature  
Drama  
Foreign Languages  
History

Linguistics  
Philosophy  
Political Science  
Psychology  
Sociology

### Admission to candidacy

For admission to candidacy for the Ph.D. in English, the student must:

- a. Demonstrate a knowledge of:
  - (1) Two foreign languages, average reading proficiency;
  - (2) One foreign language, high level of proficiency; or
  - (3) One foreign language with average reading proficiency and one research tool with average proficiency.

The choice of languages shall be subject to departmental approval. The language examinations must be passed in the first two semesters of a student's residence in the doctoral program.

- b. Secure departmental approval of a dissertation topic and prospectus.
- c. Qualify for the Ph.D. program, when he has successfully completed 30 hours of graduate work, by passing the Master's Comprehensive Examination or its equivalent.
- d. Write an examination on three fields of study which he will elect from the following ten:
  - (1) Linguistics or philology
  - (2) Medieval literature (Old English literature and Middle English literature)
  - (3) Renaissance
  - (4) 17th century (through Restoration)
  - (5) 18th century
  - (6) 19th century
  - (7) 20th century
  - (8) American literature to 1865
  - (9) American literature since 1865
  - (10) A special field as determined by the examination committee and student in consultationAt least one of his three options shall be in English literature. The student may request permission of the Director of Graduate Studies in English to write the examination when he has successfully completed 20 hours of course work after qualifying for the Ph.D. program.

### Dissertation requirements

The candidate must write a dissertation which will contribute to literary or linguistic scholarship. The candidate will present an oral defense of his dissertation before his dissertation committee for its final approval. This committee shall consist of three or more members of the graduate faculty of the department especially qualified in the area of the dissertation, one of whom shall be the dissertation director; it may include members from related fields.

## Course Offerings

**NOTE:** Seminars may be repeated for credit when the subject varies.

## GENERAL

### 500. The College Teaching of English (3)

For teaching interns only. May be repeated for a maximum

of 6 semester hours. Only 3 semester hours of English 500 may be applied toward a master's or doctor's degree in English.

**501. Bibliography and Methods of Research (3)**

Introduction to the philosophy and methods of literary research. Required of all graduate students.

**502. Interpretation of Literary Texts (3)**

The techniques of close reading. Intensive analysis, interpretation, and assessment of critical and imaginative works. Recommended for first-year graduate students.

**505. Literary Criticism to 1800 (3)**

**506. Literary Criticism since 1800 (3)**

**507. Topics in Literature (3)**

Course devoted to the study of special topic and periods of literature. May be repeated up to 9 semester hours.

**599. Master's Thesis (1-6)**

**602. Seminar: Textual Studies (3)**

Advanced study of analytical bibliography, either descriptive or textual. Prerequisite: English 501.

**607. Seminar: Topics in Literature (3)**

Seminar devoted to advanced study of special topics and periods of literature.

**699. Doctoral Dissertation (credit arranged)**

May be repeated to 30 semester hours.

## LANGUAGE

**511. History of the English Language (3)**

**512. Old English (3)**

**513. Middle English (3)**

**514. Principles of Linguistics (3)**

Recommended as a preliminary course for students with little linguistic background.

**515. Descriptive English Linguistics (3)**

**516. Grammars of Modern English (3)**

**517. Phonology (3)**

**518. Advanced Morphology and Syntax (3)**

**519. Dialectology (3)**

**614. Seminar: English Linguistics (3)**

## ENGLISH LITERATURE BEFORE 1660

**536. Beowulf (3)**

**537. Chaucer (3)**

**538. 16th Century Prose and Poetry (3)**

English prose and poetry, 1485-1603.

**539. English Drama to 1600 (3)**

**540. English Drama 1600-1660 (3)**

**541. Shakespeare (3)**

**542. 17th Century Prose and Poetry (3)**

**543. Spenser (3)**

**544. Milton (3)**

**636. Seminar: Medieval Literature (3)**

**637. Seminar: Chaucer (3)**

**638. Seminar: 16th Century English Literature (3)**

**641. Seminar: Shakespeare (3)**

**642. Seminar: 17th Century English Literature (3)**

**644. Seminar: Milton (3)**

## ENGLISH LITERATURE AFTER 1660

**556. Restoration and Early 18th Century Literature (3)**

**557. Later 18th Century English Literature (3)**

**558. English Drama 1660-1800 (3)**

**559. 18th Century English Novel (3)**

**560. English Romantic Period (3)**

**561. Victorian Poetry 1830-1880 (3)**

**562. 19th Century English Prose (3)**

**563. 19th Century English Novel (3)**

**564. English Literature 1880-1920 (3)**

A survey of representative writers and literary movements

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during the transitional period between Victorian and modern literature.

**565. English Literature since 1900 (3)**  
A survey of the major forces defining the modern tradition. Representative works from all genres.

**566. 20th Century English Poetry (3)**

**567. 20th Century Drama (3)**  
This course in the drama as an international genre is also listed under American Literature.

**568. 20th Century English Fiction (3)**

**656. Seminar: Restoration and 18th Century English Literature (3)**

**662. Seminar: 19th Century English Literature (3)**

**664. Seminar: English Literature 1880-1920 (3)**

**665. Seminar: 20th Century English Literature (3)**

AMERICAN LITERATURE

**567. 20th Century Drama (3)**  
This course in the drama as an international genre is also listed under English Literature since 1660.

**576. American Literature to 1830 (3)**

**577. American Literature 1830-1865 (3)**

**578. American Literature 1865-1900 (3)**

**579. 19th Century American Novel (3)**

**583. American Literature since 1900 (3)**

**584. 20th Century American Poetry (3)**

**585. 20th Century American Fiction (3)**

**595. Black American Writers (3)**

**676. Seminar: American Literature to 1830 (3)**

**677. Seminar: 19th Century American Literature (3)**

**683. Seminar: 20th Century American Literature (3)**



# Department of Foreign Languages

**GRADUATE FACULTY:** Schindler, Department Chairman. Allen, de Queljoe, Harrison, Heilbronn, Horner, Jegers, Mahmoud, Mocega, Morgenroth, Murray, Reissner, Schoenbohm, Schreiner, Suhadolc, Van Lente, Velinsky, Weiner, Young.

Though a graduate major in Foreign Languages is not offered, properly qualified students may carry the following courses for graduate credit. It is advisable, however, for the student to consult with the department before enrollment.

## Course Offerings

### FRENCH

**400F. Advanced Composition in French (3)**

Prerequisite: F.Lan. 303 or equivalent.

**401F. French Literature I (3)**

A general survey of French literature of the 19th and 20th centuries. Prerequisite: F.Lan. 301.

**402F. French Literature II (3)**

A general survey of French literature of the 17th and 18th centuries. Prerequisite: F.Lan. 401F.

**405F. French Phonetics and Phonemics (3)**

Prerequisite: F.Lan. 400F or equivalent.

**407F. French Civilization (3)**

Prerequisite: F.Lan. 301.

**411. 19th Century French Literature: Romanticism (3)**

Prerequisite: F.Lan. 401F.

**412. 19th Century French Literature: Realism and Naturalism (3)**

Prerequisite: F.Lan. 401F.

**413. 19th Century French Literature: Symbolism and the Modern Movement (3)**

Prerequisite: F.Lan. 401F.

**414. Medieval French Literature (3)**

A general treatment of literary expression in France, from the beginnings to the end of the 15th century, with emphasis on the 12th and 13th centuries. Prerequisite: F.Lan. 402F.

**421. French Literature of the Renaissance (3)**

Prerequisite: F.Lan. 402F.

**422. Moliere (3)**

Prerequisite: F.Lan. 402F.

**423. 18th Century French Literature I (3)**

Prerequisite: F.Lan. 402F.

**424. 18th Century French Literature II (3)**

Prerequisite: F.Lan. 402F.

**425. 20th Century French Literature I (3)**

Prerequisite: F.Lan. 401F.

**426. 20th Century French Literature II (3)**

Prerequisite: F.Lan. 401F.

**445. 17th Century French Literature I (3)**

Prerequisite: F.Lan. 402F.

**446. 17th Century French Literature II (3)**

Prerequisite: F.Lan. 402F.

### GERMAN

**400G. Advanced Composition in German (3)**

Prerequisite: F. Lan. 353 or equivalent.

**401G. German Literature I (3)**

A general survey of German literature from the 18th century to the present. Prerequisite: F. Lan. 351.

**405G. The Structure of German (3)**

An analysis of German phonology and syntax with emphasis on the structural differences between German and English. Prerequisite: F.Lan. 400G or equivalent.

**407G. German Civilization (3)**

Prerequisite: F.Lan. 351.

**441. 19th Century German Romanticism (3)**

Prerequisite: F.Lan. 401G.

**442. 19th Century German Realism (3)**

Prerequisite: F.Lan. 401G.

**443. 19th Century German Naturalism and Symbolism (3)**

Prerequisite: F.Lan. 401G.

**453. Early German Literature (3)**

Prerequisite: F.Lan. 401G.

**454. The Age of Baroque (3)**

Prerequisite: F.Lan. 401G.

**455. German Literature of the Classical Age I (3)**

Prerequisite: F.Lan. 401G.

**456. German Literature of the Classical Age II (3)**

Prerequisite: F.Lan. 401G.

## FOREIGN LANGUAGES

### **457. 20th Century German Literature I (3)**

Prerequisite: F.Lan. 401G.

### **458. 20th Century German Literature II (3)**

Prerequisite: F.Lan. 401G.

### **491. Goethe (3)**

Prerequisite: F.Lan. 401G.

## ITALIAN

### **439. Italian for Advanced Students (3)**

A complete treatment of Italian designed to prepare the advanced student for further study of the language and literature of Italy, or for research. Prerequisite: An undergraduate minor in another Romance language or Latin or equivalent. This course is open to specially qualified undergraduates with permission of the instructor.

### **450. Masterpieces of Italian Literature (3)**

Prerequisite: F.Lan. 439.

### **451. Advanced Composition in Italian (3)**

Prerequisite: F.Lan. 450 or consent of department.

## LATIN

### **431. Tacitus (3)**

Several Books of the Histories of the Annals in their entirety. Prerequisite: F.Lan. 333 or equivalent.

### **433. Cicero (4)**

Prerequisite: F.Lan. 232 or equivalent.

### **434. Roman Poets (4)**

Prerequisite: F.Lan. 232 or equivalent.

### **435. Roman Playwrights (4)**

Prerequisite: F.Lan. 232 or equivalent.

### **436. Selected Readings in Latin (4)**

Medieval and modern Latin authors (e.g., Einhard, St. Thomas Aquinas, Grotius). Prerequisite: F.Lan. 232 or equivalent.

### **437. Medieval Latin for Romanists (3)**

The etymological basis and the beginnings of syntax in Romance languages. Prerequisite: Two years of a Romance language or the consent of the department.

## PORTUGUESE

### **470. Masterpieces of Portuguese and Brazilian Literature (3)**

Prerequisite: F.Lan. 371.

### **496. Brazilian Civilization (3)**

(Cross-listed as History 496X)

A course which stresses the contributions of the African and Indian to the history and literature of Brazil. Classes will be conducted in English with English and Portuguese bibliography. Prerequisite for Foreign Language majors: F.Lan. 376 or equivalent.

## RUSSIAN

### **407R. Slavic Civilizations (3)**

Prerequisite: F.Lan. 383.

### **481. Pushkin and His Time I (3)**

Prerequisite: F.Lan. 382, 384.

### **482. Pushkin and His Time II (3)**

Prerequisite: F.Lan. 382, 384.

### **483. 19th Century Russian Literature I (3)**

Prerequisite: F.Lan. 382, 384.

### **484. 19th Century Russian Literature II (3)**

Prerequisite: F.Lan. 382, 384.

### **485. 20th Century Russian Literature I (3)**

Prerequisite: F.Lan. 382, 384.

### **486. 20th Century Russian Literature II (3)**

Prerequisite: F.Lan. 382, 384.

### **487. Chekhov (3)**

Prerequisite: F.Lan. 382, 384.

### **488. Russian Poetry (3)**

Prerequisite: F.Lan. 382, 384.

### **489. Russian Drama (3)**

Prerequisite: F.Lan. 382, 384.

## SPANISH

### **400S. Advanced Composition in Spanish (3)**

Prerequisite: F.Lan. 365 or equivalent.

### **401S. Spanish Literature I (3)**

A general survey of Spanish Peninsular Literature from the 18th century to the present. Prerequisite: F.Lan. 361.

### **402S. Spanish Literature II (3)**

A survey of Spanish Peninsular Literature from the early period through the 17th century. Prerequisite: F.Lan. 401S.

### **403. Spanish American Literature I (3)**

Prerequisite: F.Lan. 401S.

**405S. Spanish Phonetics and Phonemics (3)**

Prerequisite: F.Lan. 400S or equivalent.

**407S. Hispanic Civilizations (3)**

Prerequisite: F.Lan. 361.

**408. Spanish American Civilization (3)**

The evolution of the Spanish American pattern of civilization from the pre-Hispanic period to the present. Prerequisite: F.Lan. 361.

**461. Classical Spanish Drama (3)**

Prerequisite: F.Lan. 402S.

**463. Cervantes: The Quixote (3)**

Prerequisite: F.Lan. 402S.

**464. Literature of the Andean Republics (3)**

A general treatment of the literature of Peru, Ecuador, and Bolivia with emphasis upon the 20th century. Prerequisite: F.Lan. 403.

**465. Literature of the Caribbean (3)**

A general treatment of the literature of Columbia, Venezuela, Central America, and the Spanish-speaking West Indies with emphasis upon the 19th and 20th centuries. Prerequisite: F.Lan. 403.

**466. Literature of Uruguay, Argentina, and Chile (3)**

A general treatment of the regional literature of the River Plate Republics and Chile, with emphasis on the period since 1914. Prerequisite: F.Lan. 403.

**467. Old Spanish Literature (3)**

From the beginnings through the 13th century. Prerequisite: F.Lan. 402S.

**468. Later Medieval Spanish Literature (3)**

The 14th and 15th centuries: including La Celestina. Prerequisite: F.Lan. 402S.

**471. Spanish Romanticism (3)**

Prerequisite: F.Lan. 401S.

**472. 19th Century Spanish Realism (3)**

Prerequisite: F.Lan. 401S.

**473. The Generation of 1898 (3)**

Prerequisite: F.Lan. 401S.

**474. Contemporary Spanish Literature (3)**

Prerequisite: F.Lan. 401S.

**477. Mexican Literature (3)**

A general treatment of Mexican literature, with emphasis on the 20th century. Prerequisite: F.Lan. 403.

**564. Spanish Poetry (3)**

Intensive study of Peninsular poetry. The course may be organized as a survey, or with particular emphasis on a period or school, or as a combination of the above. May be repeated under a different instructor. Prerequisite: F.Lan. 402S.

**565. Classical Spanish Prose (3)**

Intensive study of Golden Age prose, with special emphasis on the picaresque novel. Prerequisite: F.Lan. 402S.

**578. Spanish American Literature II (3)**

A survey of the Colonial and Independence periods in all genres. Prerequisite: F.Lan. 403.

**ASIAN LANGUAGES****429. Advanced Indonesian (3)**

A review of the structure of the language, together with work in composition and conversation, with a view to language mastery. Designed to prepare the advanced student for further study of the language and literature of Indonesia, for research. Prerequisite: F.Lan. 345 or equivalent.

**444. Reading Malay (2)**

Prerequisite: F.Lan. 429, or equivalent.

**448. Introduction to Indonesian Literature (3)**

Prerequisite: F.Lan. 429.

**GENERAL****498. Independent Study in a Foreign Language (1-3)**

Individually arranged programs designed to meet special needs. May be repeated to a maximum of 6 semester hours. Prior consent of department required.

**590. Reading Skills in a Foreign Language (0)**

A preparation for the Graduate Reading Exam in a foreign language.

# Department of Geography

**GRADUATE FACULTY:** Dahlberg, Department Chairman. Black, Cole, Dillman, Guest, Kouba, Loeser, McConnell, Maxfield, Messenger, Moultrie, Reinemann, Reitan, Staver, Stevens, Villmow.

The Department of Geography offers graduate programs leading to the degrees Master of Science in Education with a major in Earth Sciences or in Geography, Master of Science with a major in Geography, and (at the sixth-year level) the Certificate of Advanced Study. The Departments of Biological Sciences, Chemistry, Geography, Geology, and Physics offer an area major in General Science leading to the degree Master of Science in Education.

## MASTER OF SCIENCE IN EDUCATION

### Major in Earth Sciences

A student seeking the M.S.Ed. in Earth Sciences must satisfy the following requirements:

1. Undergraduate preparation: The student must hold a Bachelor of Science in Education degree in Earth Sciences as listed in the undergraduate catalog, or its equivalent in related fields. Students not meeting the requirements for the B.S.Ed. in Earth Sciences shall have their deficiencies reviewed by the Earth Sciences Council. Deficiencies in 100 and 200 numbered courses may be removed by taking Geol. 520, Earth Science for Public School Teachers. Additional deficiencies must be removed by taking appropriate undergraduate courses, for which no graduate credit is granted.
2. Requirements for the M.S.Ed. in Earth Sciences: The student shall acquire either 30 semester hours of graduate credit in Geography, Geology, and related courses, including the writing of a thesis, or 33 semester hours without thesis. A maximum of 12 semester hours of formal course work is allowed in any one of the areas of geography, geology, and related fields of meteorology and earth science. Geol. 429, Field Geology for Earth Science Teachers, will be required of all students in the M.S.Ed. program.

### Major in General Science

Students who elect an area major in General Science will find the requirements listed under Biological Sciences on page 34.

### Major in Geography

A student who elects a major in Geography leading to the Master of Science in Education degree is required to consult with a committee selected by his adviser before arranging a program of courses. A student may choose, with the consent of his departmental graduate adviser, either of the following options:

- Option A: A program consisting of 30 semester hours, including a minimum of 24 semester hours of course work and a thesis. A program will normally consist of at least 20 semester hours in Geography courses, including the thesis. Nine semester hours of course work must be taken outside of the department.
- Option B: A program consisting of a minimum of 30 semester hours of course work. A program will normally consist of at least 20 semester hours in Geography courses. Nine semester hours of course work must be taken outside of the department.

Additional requirements:

1. Successful completion of a course in History of Geographic Thought (Geog. 568).
2. Satisfactory performance on a written comprehensive examination.

## MASTER OF SCIENCE

### Major in Geography

A student who elects a major in Geography leading to the Master of Science degree is required to consult with a committee selected by his adviser before arranging a program of courses. A student may choose, with the consent of his departmental graduate adviser, either of the following options:

- Option A: A program consisting of 30 semester hours, including 24 semester hours of course work and a thesis. A program will normally include at least 20 semester hours in Geography courses.
- Option B: A program consisting of a minimum of 30 semester hours, including 3 semester hours in Geog. 571, Research. A program will normally include at least 20 semester hours in Geography courses.

Additional requirements:

1. Satisfactory performance on a reading-knowledge examination in an appropriate modern foreign language or satis-

factory completion of a course in Advanced Quantitative Methods for Geographic Research (Geog. 561).

2. Successful completion of a course in History of Geographic Thought (Geog. 568).
3. Satisfactory performance on a comprehensive written examination.

## CERTIFICATE OF ADVANCED STUDY

Candidates for the Certificate of Advanced Study in the area of Geography or Earth Sciences should consult with the chairman of the department.

## Course Offerings

### 400. Fundamentals of Soil Science (4)

Fundamental properties, classification, origin, and use of soils. Prerequisite: Geog. 201, or equivalent.

### 402. Pedology (4)

Soil, genesis and distribution. Emphasis on soils of the U.S. Additional fees will be charged for required field trips. Prerequisite: Geog. 400 or consent of instructor.

### 413. Forest Ecology and Management (3)

Forest ecosystems, problems of management, and assessment of conflicting social or economic demands. Field trips involving extra fees are required. Prerequisites: Geog. 353 and B.Sci. 200.

### 422. Edaphology

(Cross-listed as Biological Sciences 422X)

Chemical and physical interactions of soils affecting the distribution and development of higher plants. Field trips required involving additional fees. Prerequisites: Geog. 400, Chem. 110 or 210.

### 430. Geography of the U.S. and Canada (3)

Analysis of natural resources and patterns of settlement, population, and economic activity. Prerequisite: Three hours in geography or consent of instructor.

### 431. Geography of Europe (3)

Spatial analysis of the physical features, resources, people, land utilization, and economic development of Europe excluding the Soviet Union. Prerequisite: Three hours in geography or consent of instructor.

### 432. Geography of South America (3)

Spatial analysis of the cultural landscapes of South America

emphasizing Brazil. Prerequisite: Three hours in geography or consent of instructor.

### 433. Geography of Africa (3)

Spatial analysis of the human and physical patterns of Africa. Prerequisite: Three hours in geography or consent of instructor.

### 434. Agricultural Geography (3)

Characteristics, spatial relationships, and patterns of commercial forestry, fishing, and crop and livestock farming systems. Prerequisite: Geog. 204 or Econ. 260 or consent of instructor.

### 435. Geography of the Far East (3)

Spatial analysis of the physical features, resources, peoples, land utilization, and economic development of East Asia with emphasis on Japan, China, and India. Prerequisite: Three hours in geography or consent of instructor.

### 436. Geography of Middle America (3)

Spatial analysis of the cultural landscapes of Mexico, Central America, and the West Indies. Prerequisite: Three hours in geography or consent of instructor.

### 437. Industrial and Commercial Geography (3)

Characteristics, spatial relationships, and patterns of commercial mining, manufacturing, and trade. Prerequisite: Geog. 204 or Econ. 260 or consent of instructor.

### 438. Geography of Transportation (3)

Development of transportation systems; their spatial structure and commodity flows; inter-regional relationships. Prerequisite: Geog. 204 or consent of instructor.

### 442X. Geomorphology (3) (Geology 442)

The origin and development of landforms. Prerequisite: Geog. 201 or Geol. 120 or consent of instructor.

### 443. Regional Geomorphology of the U.S. (3)

Regional analysis of landforms of the U.S.; emphasis on geomorphic process. Field trips involving extra fees are required. Prerequisite: Geol. 120 or Geog. 201; Geog. 442X recommended.

### 448. Weather and Climate for Teachers (3)

Basic principles of meteorology and climatology; procedures for presentation of concepts; the use of the local environment as a laboratory to illustrate principles. Prerequisite: Phys. 251.

### 450. Geography of Illinois (2)

Spatial analysis of the natural environment, population, urban systems, and economic activities. Prerequisite: Three hours in geography or consent of instructor.



**451. Political Geography (3)**

Patterns of power and conflict among nation-states, regional blocs, strategic areas, disputed zones, impact of technology. Prerequisite: Three hours in geography or consent of instructor.

**452. Geography of Southeast Asia (3)**

Spatial analysis of the physical features, resources, peoples, land utilization, and economic development of peninsular and insular Southeast Asia. Prerequisite: Three hours in geography or consent of instructor.

**453. Problems and Alternative Strategies in Environmental Management (3)**

Prerequisite: Geog. 353 or consent of instructor.

**454. Settlement Geography (3)**

Spatial analysis of rural settlement types, forms, and processes throughout the world. Prerequisite: Geog. 204 or consent of instructor.

**456. Thematic Cartography (3)**

Nature and function of thematic maps. Emphasis on design for effective communication; mapping numerical data. Prerequisite: Geog. 356 or consent of instructor.

**457. Population Geography (3)**

Geographic and demographic analysis of the population explosion; population and food supply; population policy and family planning. Case studies of selected countries and areas.

**458. Geography of the Soviet Union (3)**

Introduction to the physical, economic, and political geography of the Soviet Union. Analysis of the industrial and agricultural resource base in relation to regional economic development. Prerequisite: Three hours in geography or consent of instructor.

**461. Quantitative Methods for Geographic Research (3)**

Probability, statistical inference techniques, matrix algebra, and computer use in geographic research. Prerequisites: Graduate standing in geography or consent of instructor, Math. 210; Math. 301 or equivalent recommended.

**462. Urban Geography (3)**

Urban systems and their spatial properties; development, functional specialization, taxonomy, and internal land-use patterns. Prerequisite: Geog. 204 or consent of instructor.

**463. Internal Spatial Structure of Urban Areas (3)**

Review of models of urban growth and internal functional specialization. Analysis of selected urban problems. Field trips required. Prerequisite: Geog. 462 or consent of instructor.

**466. Advanced Remote Sensing of the Environment (3)**

Comparative merits of a variety of imagery as informative sources for environmental problem solving. Field trips involving extra fees are required. Prerequisite: Geog. 365 or consent of instructor.

**468. Physical Climatology (3)**

Comparison of the mean values and variance of the meteorological parameters at various latitudes; spatial distribution of solar and terrestrial radiation, albedo, emissivity and heat budget elements; water balance. Prerequisite: Geog. 200 or 275.

**469. Education Methods and Materials in Geography (3)**

Strategies of presenting geographic concepts in secondary schools. Evaluation of techniques and materials. Prerequisites: Graduate standing and Educ. 302. Recommended: Concurrent registration in Educ. 486.

**470. Regional Climatology (3)**

Principles of climatic classification; types and groups derived from a synthesis of the climatic elements; major anomalies. Prerequisite: Geog. 275 or 468.

**471. Quantitative Methods in Climatology (2)**

Analysis of climatic elements; curve fitting, smoothing of series; harmonic analysis, spatial comparison of climatic elements. Prerequisite: Geog. 275 or 468.

**473. Applied Meteorology (3)**

Micro- and mesoscale meteorology, applications to air pollution, waves and water movement, aviation, forest fires, urban environment, and agriculture. Prerequisites and co-requisite: Geog. 376 and 480 or 468 and 470.

**474. Micro-climatology (3)**

The climate of the atmosphere-earth interface; small scale spatial and temporal variations. Prerequisite: Geog. 200 or 275 or 468.

**475. Numerical Analysis and Forecasting (3)**

Techniques of synoptic and mesoscale numerical analysis and forecasting; review of local forecast studies; student preparation of computer-based local forecast studies. Prerequisites: Geog. 376 and 493 and concurrent registration in Geog. 481.

**480. Introduction to Dynamic Meteorology (3)**

Meteorological thermodynamics, equations of motion, vorticity equations, continuity equation, etc. Prerequisites: Math. 230, Phys. 250 and 251.

**481. Dynamic Meteorology (3)**

Continuation of Geog. 480. Prerequisites: Geog. 480, Math. 231.

**485. Physical Meteorology (3)**

Atmospheric refraction, optical scattering and diffraction by suspensions; atmospheric thermodynamics with application to the physics of clouds and hydrometeors. Prerequisites: Math. 230, Phys. 251.

**492. Hydrology (3)**

Quantitative examination of interaction of precipitation, stream discharge, and ground water flow. Utilization of water resources. Prerequisites: Geol. 120 or Geog. 201; Math. 210; Geog. 442X or 275 recommended.

**493. Computer Methods and Modelling (3)**

Advanced FORTRAN IV programming techniques; algorithms for programming of geographic research problems; introduction to computer graphics; simulation techniques. Prerequisites: Math. 305A or 305B or equivalent; Geog. 361 or 461.

**498. Seminar in Current Problems (2-3)**

- A. Geography
- B. Hydrology
- C. Climatology and Meteorology
- D. Soil Science

Selected topics, stressing literature. May be repeated to a maximum of 6 semester hours. Prerequisites: Graduate standing and consent of instructor.

**502. Geography of Underdeveloped Areas (3)**

A geographic appraisal of resource problems and development potentials of the developing nations. Analysis of foreign aid programs of the industrial nations and international agencies.

**503. Geography of Water Resources (3)**

Structure and spatial variations of the world's water budget; problem of water use and allocation; evaluation of policy alternatives. Prerequisites: Geog. 103, 200, 201, or equivalent.

**504. Historical Geography (3)**

Objectives and methods in studying historical geography with an emphasis upon North America—selected studies in the changing geography of the continent.

**506. Geography Institute for Teachers (1-8)**

Development of substantive knowledge of systematic or regional geography, understanding of geographical methodology and exploration of means of articulating advanced work into field and classroom instruction. Prerequisite: Consent of institute director.

**522. Soil Geography (3)**

Major soil regions of the world; problems of utilization and management. Prerequisites: Geog. 402 and 422 or consent of instructor.

**534. Landform Analysis (3)**

Proseminar: models of landscape development and general systems theory, survey of modern literature and research design, measures of morphometry, quantitative methods. Prerequisite: Geog. 442X; Geog. 492 recommended.

**537. Location Analysis in Geography (3)**

Spatial properties of economic and social systems; emphasis on location theory of economic activity. Prerequisite: Geog. 434 or 437 or 438 or consent of instructor.

**541. Fluvial Morphology and Landscape Systems (3)**

Survey of research in quantitative fluvial geomorphology; application of computer techniques to fluvially-dissected landscapes; methodological bases of current research. Prerequisites: Geog. 442X, Math. 305A or equivalent, and Geog. 461.

**543. Advanced Synoptic Climatology (3)**

Intensive synoptic study of the climates of selected regions. Prerequisite: Geog. 470 or consent of instructor.

**550. Plant Geography (3)**

(Cross-listed as Biological Science 550X)

Plant formations and plant associations. Relations to the environment. Effects of disturbances and pollution. Field trips required involving additional fees. Prerequisite: Consent of instructor; Geog. 422 recommended.

**551. Advanced Political Geography (3)**

Origins and present viability of selected nation-states; degrees of internal coherence; regional blocs and spheres of influence; sensitive frontiers; comparative evaluation of national power. Prerequisite: Geog. 451 or equivalent.

**555. Advanced Cartography (3)**

Conceptual structure of cartography. Emphasis on the map-model cycle, encoding models, and computer applications. Prerequisites: Geog. 361, 456, or consent of instructor.

**558. Readings in Geography (1-3)**

Independent study directed toward those phases of geographic literature needed by the student to strengthen background knowledge. May be repeated to a maximum of 6 semester hours.

**559. Geographic Aspects of Regional Planning and Development (3)**

A geographical analysis of functional and comprehensive planning at various levels. Case studies, with emphasis upon the U.S. and the relationships between planning and economic development.

**561. Advanced Quantitative Methods for Geographic Research (3)**

Analysis of covariance, polynomial and curvilinear regression, discriminant functions, principal components analysis, spatial statistics, Markov chains, linear programming and other topics in geographic research. Prerequisite: Geog. 461 or equivalent.

**562. Problems in Land Utilization (3)**

Types and patterns of land use; problems, goals, and alternatives. Prerequisite: Geog. 434 or 437 or 462 or consent of instructor.

**563. Geographic Research Procedures (3)**

Geography in the sciences; logical inquiry; paradigms and models; geographic research strategies.

**565. Advanced Field Methods (3-6)**

Field investigation of spatial processes and patterns. Research design, sampling methods, and mapping techniques. Choice of area and topics dependent upon needs and interests of the student. May be repeated to a total of 6 semester hours. Prerequisite: Consent of instructor.

**568. History of Geographic Thought (3)**

The evolution of concepts pertaining to the nature, scope, and methodology of geography since classical times; major emphasis on the modern period. Prerequisite: Consent of instructor.

**571. Research in Geography (1-3)**

- A. Natural Environmental Systems
- B. Methodology and Techniques
- C. Human Spatial Systems
- D. Area Studies

Independent research under the supervision of adviser. May be repeated to a maximum of 9 semester hours.

**599. Thesis**

- A. Master's Degree (1-6)
- B. Certificate of Advanced Study (1-6)

May be repeated to a maximum of 6 semester hours.

**600. Seminar in Systematic Geography**

- A. Landforms (1-9)
- B. Climatology (1-9)
- C. Natural Resources (1-9)
- D. Economic (1-9)
- E. Cultural (1-9)
- G. Urban Geography (1-9)
- H. Political (1-9)

Lectures, discussions, and reports on topics of special interest in a particular field of systematic geography. One to 9 semester hours as scheduled; course may be repeated in one or more fields of geography. The maximum number of semester hours is to be 9 in any field of systematic geography. Prerequisite: Consent of instructor.

**601. Seminar in Regional Geography**

- A. Africa (1-9)
- B. Anglo-American (1-9)
- C. Asia (1-9)
- D. Europe (1-9)
- E. Latin America (1-9)

Lectures, discussions, and reports on topics of special interest in a particular field of regional geography. One to 9 semester hours as scheduled; course may be repeated in any field of regional geography. Prerequisite: Consent of instructor.

**602. Seminar in Geographic Methodology and Techniques (1-9)**

- A. Cartography
- B. Remote Sensing
- C. Quantitative Methods

May be repeated to a total of 9 semester hours.

**668. Seminar in Current Geographic Thought (3)**

**671. Independent Research in Geography (1-9)**

Individual investigation of special problems in the field of geography under supervision of one or more staff members. May be repeated to a maximum of 9 semester hours.

# Department of Geology

## MASTER OF SCIENCE

### Major in Geology

A student who elects a program leading to the degree of Master of Science with a major in Geology must satisfy the following departmental requirements in addition to satisfying Graduate School requirements.

1. The student is normally expected to meet the geology, chemistry, physics, and mathematics requirements for the B.S. degree in Geology at Northern Illinois University.
2. A minimum of 30 semester hours of graduate work is required; this will normally include at least 24 semester hours in Geology.
3. The student must pass a comprehensive examination and write a thesis.

## CERTIFICATE OF ADVANCED STUDY

Students who wish to pursue the Certificate of Advanced Study in the area of Geology or Earth Sciences should consult with the chairman of the department.

### Course Offerings

#### 410. Structural and Determinative Mineralogy (3)

Crystal structures and the chemical and physical factors that govern them. Mineralogical methods such as X-ray, DTA, and Atomic Absorption are emphasized in the laboratory. Prerequisites: Geol. 210 and Chem. 211.

#### 411. Optical Petrography (3)

The application of the polarizing microscope to the identification of mineral fragments by the immersion technique and the systematic investigation of thin sections of igneous, metamorphic, and sedimentary rocks. Prerequisite: Geol. 210.

#### 420. Geochemistry (3)

Application of basic chemical concepts to important problems in geology. Prerequisite: Chem. 211 or consent of instructor.

#### 429. Field Geology for Earth Science Teachers (3)

Field and library survey of the salient geological features and landforms of northern Illinois and southern Wisconsin. May not be included in major programs in Geology. Prerequisite: Introductory course in physical and historical geology.

**GRADUATE FACULTY:** Weiss, Department Chairman. Buscombe, Caldwell (Emeritus), Casella, Flemal, Frost, Goldich, Keighin, McGinnis, Morris, Odom, Richards, Rubel, Wong.

The Department of Geology offers graduate programs leading to the degree Master of Science in Education with a major in Earth Sciences; Master of Science with a major in Geology; and at the sixth-year level, the Certificate of Advanced Study. The Departments of Biological Sciences, Chemistry, Geography, Geology, and Physics offer an area major in General Science leading to the degree Master of Science in Education.

## MASTER OF SCIENCE IN EDUCATION

### Major in Earth Sciences

A student seeking the M.S.Ed. in Earth Sciences must satisfy the following requirements:

1. Undergraduate preparation: The student must hold a Bachelor of Science in Education degree in Earth Sciences as listed in the undergraduate catalog, or its equivalent in related fields. Students not meeting the requirements for the B.S.Ed. in Earth Sciences shall have their deficiencies reviewed by the Earth Sciences Council. Deficiencies in 100 and 200 numbered courses may be removed by taking Geol. 520, Earth Science for Public School Teachers. Additional deficiencies must be removed by taking appropriate undergraduate courses, for which no graduate credit is granted.
2. Requirements for the M.S.Ed. in Earth Sciences: The student shall acquire either 30 semester hours of graduate credit in Geography, Geology, and related courses, including the writing of a thesis, or 33 semester hours without thesis. A maximum of 12 semester hours of formal course work is allowed in any one of the areas of geography, geology, and related fields of meteorology and earth science. Geol. 429, Field Geology for Earth Science Teachers, will be required of all students in the M.S.Ed. program.

### Major in General Science

Students who elect an area major in General Science will find the requirements listed under Biological Sciences on page 34.

## **430. Advanced Geology for Teachers I (4)**

Composition, structure, and history of the earth. Geologic processes. Larger earth problems such as origin of the solar system, evolution of the crust, hydrosphere, and atmosphere. Lectures, laboratory, field trips, and term paper. Prerequisite: Geol. 211 or equivalent by examination. Not open to Geology majors in non-teaching programs.

## **431. Advanced Geology for Teachers II (4)**

Continuation of Geol. 430. Lectures, laboratory, field trips, and term paper. Prerequisite: Geol. 430. Not open to Geology majors in non-teaching programs.

## **442. Geomorphology (3)**

(Cross-listed as Geography 442X)

The origin and development of landforms. Prerequisite: Geol. 120 or Geog. 201 or consent of instructor.

## **444. Economic Geology (4)**

Nature, origin, and economic development and utilization of selected mineral resources of the world. Three lectures, one 2-hour laboratory, field trips. Prerequisite: Consent of instructor.

## **447. Quantitative Techniques in Geology (3)**

Methods and practice of quantifying, collecting, analyzing, and summarizing geologic data. Prerequisite: Math. 155 or equivalent.

## **449. Teaching Geology in Public Schools (3)**

Materials, methods, and projects suited to teaching geology or earth science in public schools. Prerequisites: Educ. 302 and major or minor in field. Pre- or co-requisite: Educ. 486.

## **470. Invertebrate Paleontology (3)**

(Cross-listed as Biological Sciences 469X)

The principal invertebrate fossil forms of the geologic record, treated from the standpoint of their evolution, and the identification of fossil specimens. Two lectures, one 2-hour laboratory. Several field trips required. Prerequisite: Geol. 121.

## **475. Paleontology I (3)**

(Cross-listed as Biological Sciences 475X)

The morphology, paleoecology, and stratigraphic distribution of the lower invertebrates (Foraminifera through Brachiopoda). Principles of evolution are stressed in the investigation of fossil populations. Two lectures, one 2-hour laboratory. Several field trips. Prerequisites: Geol. 211 and one year of biology.

## **476. Paleontology II (3)**

(Cross-listed as Biological Sciences 476X)

Continuation of Geol. 475, with detailed investigation of the

higher invertebrates (Mollusca through Arthropoda). Analysis of animals of problematic affinities. Study of selected suites of fossil plants and vertebrate fossils. Two lectures, one 2-hour laboratory. Several field trips. Prerequisite: Geol. 475 or consent of instructor.

## **477. Paleocology (3)**

Analysis and interpretation of ancient ecologic systems, including ecologic parameters of depositional environments, and paleoautecology and paleosynecology of marine and terrestrial organisms. Prerequisite: Geol. 470 or Geol. 476.

## **480. Igneous and Metamorphic Petrology (3)**

Origin of igneous and metamorphic rocks with emphasis on silicate melt equilibria, mineralogical phase rule, rock associations, petrography, and field relations. Two lectures, one recitation, two labs. Prerequisite: Geol. 411.

## **481. Sedimentary Petrology (3)**

The sources of sedimentary rocks; the important textures, structures, and compositions; diagenesis; a comparison of rocks with modern sediments; petrography and classification of sedimentary rocks. Two lectures and one lab. Prerequisite: Geol. 411.

## **490. Hydrogeology (3)**

Ground water resources, sources, and occurrence. Factors governing its movement through aquifers. Physical and chemical changes produced during the hydrologic cycle. An analysis of procedures for measuring a water resource. Prerequisite: Consent of instructor.

## **496. Geophysics (3)**

A description and analysis of the seismic, gravitational, magnetic, electrical, and thermal properties of the earth.

## **497. Regional Field Geology (2)**

Extended field trips to regions of broad geologic interest. Emphasis will be placed on understanding the region as a whole, as well as its relationships to adjacent areas. May be repeated to a maximum of 4 semester hours. Special fee will be assessed. Prerequisite: Consent of instructor.

## **500. Clay Mineralogy (3)**

The structure, properties, and origin of clay minerals and the mineralogy and diagenesis of argillaceous sediments. Prerequisite: Geol. 410 or equivalent.

## **505. Institute of Earth Sciences for Teachers (1-8)**

New information in the fields and the interrelationships between the earth sciences usable in the public school. Field trips, lectures by visiting scientists, and individual student projects. Prerequisite: Teaching experience in science.



**520. Earth Science for Public School Teachers (3)**

The subject matter principles and concepts of the earth sciences which are usable in the public school science curriculum. Will prepare students for courses in the Earth Science M.S.Ed. degree program. Prerequisite: A major or minor in a natural science.

**525. Isotope Geology (3)**

Radioactive decay schemes useful for determining the age of rocks and minerals. Application of radioactive and stable isotopes to the study of geologic processes, as for example, metamorphic and magmatic activity, ore deposition, and crustal evolution. Prerequisite: Geol. 311 or consent of instructor.

**540. Mineralogy of the Principal Silicates (4)**

Application of crystal chemistry to structural and compositional variations of important silicate minerals; theory and application of powder and some single-crystal techniques in structural analysis. Prerequisites: Geol. 410 or equivalent and Math. 239.

**544. Glacial Geology (3)**

Prerequisite: Geol. 210.

**545. Galactic and Extragalactic Astronomy (4)**

A descriptive introduction to stellar systems, interstellar matter, the structure of our galaxy and the wider universe, based on the evidence of cosmic radio, infrared, visible, ultra-violet and X-ray radiation, which make possible the interpretations of cosmology. Three lectures plus a weekly 2-hour laboratory of telescopic observations and numerical exercises. Prerequisite: Geol. 344 or equivalent.

**547. Oceanography (3)**

(Cross-listed as Biological Sciences 547X)

The chemical and physical nature of the world's oceans. Prerequisite: One year of laboratory science.

**548. Stratigraphy (3)**

A systematic study of selected aspects of the North American stratigraphic record with emphasis on broad sedimentary patterns and tectonic development. Offered in alternate years. Prerequisite: Geol. 470, or concurrent registration.

**549. Advanced Structural Geology I (3)**

The origin and the mechanics involved in the formation of various structural features occurring in nature. Prerequisite: Geol. 311.

**552. Petrology of Clastic Sediments and Rocks (4)**

The origin of terrigenous clastic sediments, and their occurrence in modern environments. Texture, composition, and sedimentary structures of sediments and rocks by megascopic and microscopic methods, including thin sections, emphasized in the laboratory. Prerequisite: Geol. 411.

**553. Petrology of Precipitated Sediments and Rocks (4)**

Biogenic and inorganically precipitated modern sediments and their ancient rock analogs: origins, environments, mineralogy, textures, and methods of study, including thin sections. Lectures and laboratory. Prerequisite: Geol. 411.

**554. Exploration Geophysics (3)**

The theory and application of basic geophysical methods. Emphasis will be placed on methods pertaining to ground-water and engineering investigations. Prerequisites: Phys. 250 and 251 and Math. 231 or 233, or consent of instructor.

**556. Advanced Structural Geology II (3)**

The application of mechanical principles to the problems of the evolution of the North American Continent. Prerequisite: Geol. 549.

**557. Survey of Literature in the Earth Sciences (1-3)**

Individual reading directed to those phases of literature which are needed for critical thinking in earth sciences. May be repeated to a maximum of 6 semester hours.

**560. Procedures and Techniques in Reporting of Research in the Earth Sciences (2)**

The procedures and techniques for reporting the results of original investigations. Prerequisite: Eligibility to do graduate research in the Department of Geology.

**570. Special Problems in Earth Sciences (1-3)**

Independent study under supervision of an adviser. May be repeated to a maximum of 9 semester hours.

**575. Igneous Petrology (4)**

Origin of igneous rocks with emphasis on silicate melt equilibria, rock associations, petrography, and field relations. Two lecture periods; two lab periods. Prerequisite: Geol. 411.

**580. Metamorphic Petrology (3)**

The chemical and structural adjustments of mineral assemblages to metamorphic conditions. The methods of structural petrology will be emphasized. Prerequisite: Geol. 411.

**591. Micropaleontology (3)**

Microscopic fossils useful in solving stratigraphic problems. Prerequisite: Consent of instructor.

**599. Thesis****A. Master's Degree (1-6)****B. Certificate of Advanced Study (1-6)**

May be repeated to a maximum of 6 semester hours.

**620. Departmental Seminar (1)**

Weekly reports by graduate students, staff, and guests. May be repeated to a maximum of 4 semester hours.

## GEOLOGY

### 646. Geology Seminar (1-9)

- A. Mineralogy
- B. Petrology
- C. Stratigraphy and Sedimentation
- D. Geomorphology and Quaternary Geology
- E. Geophysics
- F. Geochemistry and Isotope Geology
- G. Paleobiology
- H. Structural Geology

### I. Hydrology

### J. Mineral Deposits

One to 9 semester hours may be earned in each subdivision.

### 670. Independent Research in Geology (1-3)

Individual investigation of special problems in the field of geology under supervision of one or more staff members. May be repeated to a maximum of 6 semester hours. Prerequisite: 22 semester hours of graduate work in the earth sciences.

# Department of History

**GRADUATE FACULTY:** Evans, Department Chairman. White, Assistant Chairman. Aikins, Beik, Blomquist, Bowen, Burchfield, Carter, Ely, Foster, C. George, M. George, Gross, Haliczzer, Hoptner, Israel, Jones, Keen, Kinser, Kleppner, Lincoln, Logue, Moody, Olsen, Parrini, Price, Resis, Rockwell, Rosen, Schneider, Schwarz, Shirley, E. Spencer, G. Spencer, Wagner, Wilson, Young.

The Department of History offers three degrees and a certificate at the graduate level: the Master of Arts degree, the Master of Science in Education degree, the Certificate of Advanced Study, and the Doctor of Philosophy degree. These may be sought by persons wishing to enlarge their knowledge and understanding of human experience, past and present. This goal may be attained by historical research and investigation as well as by study in advanced history courses. Graduate work in History is appropriate for persons desiring to improve their competence or to enter upon careers in teaching or educational administration, branches of state and federal government, the arts, literature, journalism, or law.

Individuals with a general grade-point average of 2.75 or better in the last two years of undergraduate work and a 3.00 grade-point average or better in undergraduate History courses may apply for graduate study as outlined below. The student who has not had adequate previous work in History may be required to enroll in one or more undergraduate courses on a deficiency basis.

Graduate courses in History are principally of three types: advanced lecture-discussion courses; reading seminars designed to acquaint the student with the literature and problems of a selected field; and research seminars in which the student engages in intensive research on a particular historical topic and in the process gains experience in historical methodology and the use of primary and secondary source materials.

Students admitted to graduate study in History must submit their proposed program of study to the appropriate departmental graduate adviser for approval. Students are advised to write or telephone for an appointment before coming to campus. Final examinations are required for each of the degrees described below. Students are responsible for ascertaining the applicable dates set by the Graduate School for filing notice of intent to take final comprehensive examinations, for submission of completed theses and dissertations, and for filing applications for degree candidacy.

## MASTER OF ARTS

The Department offers two programs leading to the Master of Arts degree. The "A" program is intended primarily for the student who wishes to obtain experience in historical

scholarship. Provided he meets other requirements for admission to the Ph.D. program, the student who elects this option may be permitted to pursue the Ph.D. degree in History at Northern Illinois University. Those wishing ultimately to pursue a career in college or university teaching and research are advised to pursue this program. The "B" option is intended primarily for those who wish to acquire a broad background in several fields of History.

In both programs, students are expected to complete not less than 24 semester hours in History courses. The remaining hours necessary to fulfill the 30 semester hours required for the degree may be taken in History or in some related subject. Students in either the "A" or the "B" program must satisfactorily complete Hist. 626, History of Historical Thought and Writing, or its equivalent.

### Option A

Of the 24 semester hours required in History, not less than 12 nor more than 18 semester hours may be concentrated in one of the following fields of History: Ancient, Medieval, Early Modern European, Modern European, Russian, Asian, British, United States, or Latin American. Two research seminars and one reading seminar are required.

A thesis is required. It is usually written in the field of concentration; 3 semester hours earned for the thesis may be counted as part of the 12-18 semester hours in the major field. In preparing the thesis, the student will be expected to demonstrate his ability to do research in original source material, to organize and evaluate the materials with which he is working, and to present his findings in a satisfactory literary form.

The student will be required to demonstrate his reading proficiency in one foreign language, usually French, German, Spanish, or Russian. Another language may be substituted, if appropriate to thesis research and approved by the Department.

### Option B

Of the 24 semester hours required in History, not less than 9 semester hours must be concentrated in each of two of the following fields of History: Ancient, Medieval, Early Modern European, Modern European, Russian, Asian, British, United States, or Latin American. Two research seminars are required. A foreign language proficiency and a thesis are not required. The "B" option is normally considered a terminal degree program.

## CERTIFICATE OF ADVANCED STUDY

The Certificate of Advanced Study in History is designed primarily for secondary and community college teachers who wish

## HISTORY

to broaden their historical perspective. Students who hold the master's degree and who have a graduate grade-point average of 3.20 or better may apply for admission. Applicants must be recommended for admission by appropriate references and must present aptitude scores on the Graduate Record Examination as prescribed by the Graduate School.

Of the 30 semester hours required for the Certificate, not less than 20 hours must be in History courses, divided approximately equally between any two of the following fields of History: Ancient, Medieval, Modern European, Russian, Asian, British, United States, and Latin American. If the student has the master's degree in History, at least one of the fields pursued for the Certificate must be different from those studied for the master's degree.

A thesis is required and must be submitted in the manner prescribed by the department and the Graduate School. The thesis will be written in one of the two fields of concentration. Three semester hours of credit are allowed for the thesis, through enrollment in Hist. 599B. A comprehensive oral examination must be successfully completed. This is normally taken as the student nears completion of the 30 semester hours required for the Certificate.

No foreign language proficiency is required for the C.A.S. in History, but lack of such proficiency will likely limit the fields in which the student elects to do his thesis.

Students enrolled in the C.A.S. program are responsible for meeting various Graduate School regulations pertaining to this degree. These regulations are outlined elsewhere in the Graduate School catalog and should be followed carefully by the student pursuing the C.A.S. program.

## DOCTOR OF PHILOSOPHY

The Ph.D. degree is the highest mark of intellectual achievement in the United States in the humanities and social sciences. It is primarily a research degree and is awarded only to those who have met rigorous standards, including the demonstration of excellence in scholarship. The Ph.D. degree is generally regarded as the indispensable qualification for college and university teachers. The members of the History Department are concerned that the ideal of academic excellence associated with the degree be maintained at Northern Illinois University. Departmental requirements for the Ph.D. are as follows.

### Fields of concentration

Each student shall complete approximately 30 semester hours in one major field and approximately 15 semester hours in each of two minor fields, exclusive of credit allowed for the

dissertation. If applicable and approved by the History Department, hours earned in completing the master's degree may be counted in computing the semester-hour requirement for the Ph.D. Major and minor fields will be selected in consultation with the department's adviser of Ph.D. candidates. For further details see *The History Graduate Student's Manual*.

### Major and minor fields:

Ancient History  
Medieval History  
Early Modern European History  
Modern European History  
Russian History  
Asian History  
British History  
United States History  
Latin American History

### Course requirements

- a. Hist. 626, History of Historical Thought and Writing, or its equivalent.
- b. A minimum of 12 semester hours in History seminars.

### Language proficiency

The student must pass examinations in:

- a. Two foreign languages, with average reading proficiency in each, or
- b. One foreign language with average reading proficiency and one research tool with average proficiency. (The latter may be attained through successful completion of a specified quantitative methods course in history and Math. 301, in that sequence; substitution for Math. 301 is permitted under certain circumstances.)

In meeting this requirement the student will ordinarily choose languages from among French, German, Spanish, and Russian. With the approval of the department, another modern or ancient foreign language may be substituted for one of these. One of the language proficiency examinations must be passed before the student sits for the qualifying examination. The second must be passed before he sits for the candidacy examination. See also *The History Graduate Student's Manual*.

### Dissertation

- a. After a student has satisfactorily completed the candidacy examination, the department will appoint a dissertation committee, which will receive and pass upon the formal dissertation proposal of the Ph.D. candidate.
- b. Every candidate for the doctorate must present an acceptable dissertation in his major field. It must be in a form suitable for publication. This study must be based on primary sources, and it must present a substantial

contribution to knowledge. The candidate must make a satisfactory defense of his dissertation before an examining board appointed by the Dean of the Graduate School.

### Examinations

- a. Qualifying examination: No later than the third semester of Ph.D.-level work, every student must pass a qualifying examination designed to ascertain his ability to pursue further graduate study in History. The student will be examined on (1) his capacity for critical reading, and (2) his knowledge of significant historical problems and of bibliography. The student may be questioned broadly upon a variety of topics related to the literature of his proposed major field, and questioned more closely regarding topics to which he has given special attention. This will be an oral examination conducted by at least two members of the graduate faculty designated by the department. Students who have taken the M.A. degree ("A" program) from this institution may be exempted from the qualifying examination; but this exemption will be granted only upon the formal recommendation of the student's M.A. comprehensive committee and the approval of the chairman of the department.
- b. Candidacy examination of subjects: Subsequent to taking the qualifying examination but prior to submitting the dissertation, every Ph.D. student must pass an oral candidacy examination designed to test his knowledge of subject matter in major and minor fields. The candidacy examination will be conducted by a five-member board appointed by the Dean of the Graduate School. The dissertation adviser is normally the chairman of the examining board. A candidate who fails the examination may, with the consent of his committee, take the examination a second time after the lapse of at least six months; a second failure shall be final.

## FOREIGN STUDY IN HISTORY

Since 1956 the History Department has offered study-abroad programs at regular intervals, usually in cooperation with a British university. The purpose is to afford students of history and allied disciplines an opportunity to study at first hand the historical developments and traditions of other peoples and their cultures and also to provide personal contact with the locales of important historical events and with the artifacts of man's past. Course content, duration of the program, and foreign countries included will vary. The course carries either undergraduate or graduate credit. Interested students should

consult with the department chairman or the Office of Foreign Study Programs for relevant details of forthcoming programs. See Foreign Study Programs.

## Course Offerings

**NOTE:** A "T" after a course number indicates that an old number is being re-used for a new or retitled course.

### GENERAL

#### 420. Historiography (2-3)

The art and craft of history, the development of historical interpretations, and the great historians in their intellectual milieu from the dawn of history through the mid-20th century.

#### 501. Quantitative Methods for Historical Social Analysis (3)

An introduction to the concepts, methods, and techniques involved in the quantitative-behavioral analysis of societal development, including the potentialities and the limitations of data processing and computerized statistical analysis for historians. Prerequisite: Math. 208 or equivalent.

#### 519. Reading Seminar (3)

- A. Ancient History
- B. Medieval History
- C. Early Modern European History
- D. Modern European History
- E. Russian History
- G. Asian History
- I. British History
- J. United States History
- K. Latin American History

Intensive reading and discussion over a selected field in History designed to acquaint the student with the literature and problems of the field. Specified areas to be announced in the schedule. Any one course may be repeated to a maximum of 12 semester hours. Prerequisite: Consent of graduate adviser in History.

#### 599. Thesis

##### A. Master's Degree (1-3)

Open only to students engaged in writing a thesis under the Master of Arts "A" program. The student enrolls with the faculty member directing the thesis. Prerequisite: Consent of graduate adviser in History.

##### B. Certificate of Advanced Study (1-3)

Open only to students engaged in writing a thesis under



## HISTORY

the Certificate of Advanced Study program. The student enrolls with the faculty member directing the thesis. Prerequisite: Consent of graduate adviser in History.

### **624. Philosophies of History (3)**

An introduction to the problems of the discipline of history through an examination of the major philosophical issues involved in historical thought. May be substituted for Hist. 626 with consent of the graduate adviser in History. Prerequisite: Consent of graduate adviser in History.

### **625. Teaching History at the College Level (2)**

Lectures and discussions of the problems of university instruction in history.

### **626. History of Historical Thought and Writing (3)**

An introduction to the problems of the discipline of history through an examination of the major works of the great historians of the world. Prerequisite: Consent of graduate adviser in History.

### **636. Independent Study (3)**

- A. Ancient History
- B. Medieval History
- C. Early Modern European History
- D. Modern European History
- E. Russian History
- G. Asian History
- I. British History
- J. United States History
- K. Latin American History

Open to qualified students who wish to undertake work in any of these fields. Consent of the faculty member with whom the student wishes to study is necessary. May be repeated to a maximum of 12 semester hours. Prerequisite: Consent of graduate adviser in History.

### **699. Doctoral Research and Dissertation (2-15)**

May be repeated for additional credit. Prerequisite: Consent of graduate adviser in History.

## ASIAN HISTORY

### **439. Summer Institute in Asian Civilizations (6)**

Lectures, readings, addresses by guest speakers, films, and exhibits designed to acquaint public school teachers and other persons in public life who received little or no formal training in Asian subjects in their university careers with the basic history, the religious and cultural foundations, and the contemporary problems of the major civilizations of Asia. Time will also be devoted to the use of bibliographic and other materials useful to secondary school teachers.

### **440. History of India to 1740 (3)**

Introduction to traditional India; the coming of Islam; the Mughal Empire; the era of European rivalries and the beginnings of British hegemony.

### **441. History of India since 1740 (3)**

The British challenge to traditional Indian society and the Indian response; the Mutiny; the emergence of Indian nationalism; devolution of power and partition.

### **445. The Chinese Revolution (3)**

Intellectual and social backgrounds of the Nationalist revolutionary movement; political history of the revolutionary period to the present.

### **448T. History of Burma and Thailand (3)**

The history and culture of Burma and Thailand from the 10th century to the present with appropriate emphasis also on the relations of these countries with Laos and Cambodia.

### **449. History of Malaysia and Indonesia (3)**

The political and cultural history of the Malaysian and Indonesian peoples from the 8th century A.D. through the mid-20th century. Emphasis is placed on the indigenous values and institutions and the ways in which these have been modified or displaced by experience with imperialism and modernization.

### **452T. Feudalism in Japan (3)**

Japan from the 12th to the 17th century. Emphasis on the transformation of political and social institutions under three military governments; problems of unification and creation of a political ideology. Prerequisite: One survey course in Asian or Japanese history, or consent of instructor.

### **453. Modernization of Japan (3)**

A detailed examination of the elements of Japan's modernization; the development of Japanese intellectual elites; the formation of the civil and military bureaucracies; the origin and growth of political parties. Prerequisite: One survey course in Asian or Japanese history or consent of instructor.

### **495. America and Asia (3)**

A history of trans-Pacific contacts from the search for a passage to India to the Indo-China War. Special attention given to symbol and myth in history, special interest groups and the development of America's relations with industrially modernizing and traditional agrarian societies.

### **539. Seminar in Chinese History (3)**

Selected problems in the history of China. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**541. Seminar in Southeast Asian History (3)**

Study of selected problems in Southeast Asian history with emphasis usually placed upon Malaysia, Indonesia, and the Philippines. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**542. Seminar in Indian History (3)**

Selected problems in the history of India, with emphasis upon the economic, social, and political development of modern India. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**543. Seminar in Japanese History (3)**

Selected problems in the history of Japan. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**BRITISH HISTORY****414. The English Revolution, 1640-1660 (3)**

The focus will be more on the battleground of ideas and ideologies than on Cromwell's military exploits. Attention will be given to "the peculiarities of the English" as well as to the classic interpretations of traditional economic historians and Marxists.

**466. British Constitutional History (3)**

British political and legal institutions from Anglo-Saxon times to the mid-20th century.

**467. History of the Empire and Commonwealth (3)**

The British Empire and the Commonwealth of Nations from the 16th century to the present.

**468. Tudor and Stuart England (3)**

The constitutional and legal foundations of bourgeois England; Elizabethan and Jacobean culture; the origins of capitalism.

**475. The Foundations of Modern England, 1714-1815 (3)**

The agricultural and industrial revolutions and their impact upon the social, political, economic, and intellectual life of Great Britain during the 18th century.

**476. Dominance and Decline: English History, 1815-1914 (3)**

Great Britain during its period of world power and prestige. Emphasis is placed on capitalism and its impact upon the social, political, economic, and intellectual life. Prerequisite: Hist. 336 or consent of instructor.

**477. Britain, 1914 to the Present (3)**

A continuation of Hist. 476. The social transformation effected by the First World War; decline of the Liberal Party; the

General Strike, Depression, foundations and background of the Welfare State. Prerequisite: Hist. 336.

**492. British Labor Movement, 18th Century to the Present (3)**

A course in labor history focusing on the beginnings of modern trade unionism, working class political organizations, radicalism during the 19th century, the antecedents of the Labor Party, and the ideological dilemma of the present-day Labor Party.

**533. Seminar in Tudor and Stuart History (3)**

Selected problems in the history of early modern Britain. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**537. Seminar in Modern British History (3)**

Selected problems in the political, economic, and social history of modern Britain. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**EUROPEAN HISTORY****402. The Greek City State (3)**

Greek political ideas and practice. The problem of government in the major philosophers, historians, and dramatists. Special attention is given to the Athenian democracy of Pericles. Prerequisite: Hist. 331 or consent of instructor.

**403. The Roman Revolution (3)**

A source-based study of the end of the Roman Republic, 146-29 B.C.; development of the Roman constitution and Roman views of the state; analysis of the failure of democracy in the ancient world.

**404. The Later Graeco-Roman World (3)**

The decline of classical civilization and the foundations of the Middle Ages from Marcus Aurelius to the end of the 6th century.

**408. Economic and Social History of Medieval Europe (3)**

Examines the economic and social changes underlying the formation of Medieval civilization. Special attention will be given to demographic change, urbanization, and social movements. Prerequisite: History 348 or 349 or consent of instructor.

**409. Economic and Social History of Early Modern Europe (3)**

An analysis of European society between the Renaissance and the French Revolution with reference to social stratification and mobility, urban development, the nature and implications of an agrarian economy, the problems of economic growth, and the applicability of social theories to historical data.

## **410. Economic History of Modern Europe (3)**

An analysis of European economic growth and development since the Industrial Revolution, including a comparison of agrarian and industrial economies.

## **411. Social History of Modern Europe (3)**

An analysis of European society since the Industrial Revolution with reference to the social impact of industrialization and urbanization and changing patterns of social stratification, mobility, and class conflict in the 19th and 20th centuries.

## **430. The Renaissance (3)**

The social, political, and ideological breakdown of Medieval Europe with consideration of the reaction of the new class of artists and intellectuals to the special problems of their age.

## **431. The Reformation (3)**

A survey examination of the varieties of religious revolutions and counter-revolutions which led Western Europe to the threshold of modernity.

## **432. History of Ideas to 500 A.D. (3)**

Definition and limitation of the field of intellectual history and its relationship to other fields such as science and philosophy. The big questions about which man has always speculated and an explanation of the effect of ideas on people in the periods of the primitive and Near Eastern Origins, the Classical and Hellenistic Greeks, the Hebrews, the Romans, and the Early Christians.

## **433. History of Ideas, 500-1600 A.D. (3)**

A continuation of Hist. 432. The Medieval fusion of Classical, Teutonic, Christian, Islamic, Celtic cultures; education, philosophy, science, religion, government, law, art, literature as they reflect the fusion. The transition to modern culture in the Renaissance and Reformation.

## **434. The French Revolution (3)**

The emergence of democratic and socialist ideas from the 18th-century Enlightenment; the radical social reorganization brought about by the Revolution between 1789 and 1794; the continuing conflict between popular and conservative forces; the consolidation and diffusion of the Revolution under Napoleon; the growth of a revolutionary tradition.

## **435. 20th Century Europe (3)**

European and world affairs in this century. Origins of the two World Wars, the Great Depression, rise of totalitarian governments, retreat of Europe from Asia and Africa, attempts at international organization.

## **436. Revolutionary Movements in the West to 1789 (3)**

An analysis of the origins of revolutionary politics and thought in the West from Hus to Paine.

## **437. Modern Europe, 1815-1870 (3)**

Selected topics in the political, social, economic, and intellectual history of Europe from the fall of Napoleon to the unification of Germany.

## **438. Modern Europe, 1870-1914 (3)**

Selected topics in the political, social, economic, and intellectual history of Europe in the pre-World War I era.

## **444. History of Marxist Thought and Writing (3)**

An analytically oriented course elucidating the historical corpus of Marx and the historiography which has developed from it.

## **446. Europe in the 17th Century (3)**

Europe in an age of crisis and consolidation; the Thirty Years' War and social unrest; institutional difficulties and mercantilism; baroque civilization; the hegemony of Louis XIV.

## **460. Diplomatic History of Modern Europe, 1815-1890 (3)**

The impact of national, industrial, and social problems on the international scene. The development of the balance of power and the unification of Italy and Germany, followed by the new imperialism. The Age of Bismarck.

## **461. Diplomatic History of Modern Europe, 1890-1945 (3)**

The decline of Europe as the center of world affairs. The causes of two World Wars and the consequences. The end of colonialism and the efforts at international cooperation. The search for peace and the policy of appeasement.

## **462. European Thought in the 17th Century (3)**

European and British thought of the 17th century; the rise of modern science; baroque and classical art and literature.

## **463. The Age of Enlightenment (3)**

The Intellectual Revolution that preceded the American and French Revolutions is considered in its various main aspects, including the growth of secularism and rationalism; the rise of scientific thought; the formulation of political liberalism and radicalism; and the enrichment of the humanist tradition.

## **465. European Thought in the Romantic Age (3)**

The Romantic Revolt against the 18th Century; theories of revolution and counter-revolution; "utopian" and "scientific" socialism; Hegel and the rise of historical thought; liberal nationalism; the religious revival.

## **469. European Intellectual History, 1850 to the Present (3)**

The rise of Realism and positivism; Darwinism and scientism;

theories of race; imperialism; the new science; Freud; the anti-rationalist revolt; existentialism.

**473T. The Scientific Revolution (3)**

The development of scientific ideas from Copernicus to Lavoisier. Emphasis is placed on the spread of the new world view from Copernicus to Newton, but also included are Newtonianism in the Enlightenment, the organization of science, and the development of anatomy, physiology, geology, and chemistry in the 17th and 18th centuries.

**480. Early Modern France (3)**

A history of French society from the medieval background to the Age of Enlightenment. Emphasis is placed on the interaction of culture, institutions, and social structure as a case study in the development of an early modern state.

**481. France since 1815 (3)**

French society, government, and culture from the fall of Napoleon I to the present, emphasizing the Revolutionary heritage, the coming of industrialism and democracy, the rise and fall of the French colonial empire; the ordeal of France in the 20th century.

**483. History of Spain, 1391-1815 (3)**

Development of Spain into one of the foremost states of Early Modern Europe and the reasons for her decline. An effort will be made to relate developments in Spain to developments in the Spanish Empire.

**484. History of Spain since 1815 (3)**

The struggle for liberalization with a discussion of the Spanish Civil War and its political, social, and economic aftermath.

**487. Revolutionary Movements since 1789 (3)**

A comparative and sociological analysis of the revolutions of the modern era with emphasis on the continuities of politics and thought, from France in the 1790's to contemporary European and non-European socialist movements.

**488. Germany and Central Europe to 1815 (3)**

The Medieval heritage; the Renaissance and Reformation; the rise of Austrian hegemony; the Thirty Years' War; Brandenburg Prussia; the impact of the Enlightenment; the French Revolution and Napoleon; the aftermath of the Congress of Vienna.

**489. Germany and Central Europe since 1815 (3)**

Against the background of the age of absolutism and of revolution, the course surveys the Napoleonic era, the rise of Prussia, nationalism and unification, power politics, imperialism, two World Wars, National Socialism and its aftermath.

**530. Seminar in Ancient History (3)**

Selected problems of European history during the ancient period to 500 A.D. May be repeated to a maximum of 12 semester hours. Prerequisite: Consent of graduate adviser in History.

**531. Seminar in Medieval History (3)**

Selected problems of European history during the Medieval period, 500-1500 A.D. May be repeated to a maximum of 12 semester hours. Prerequisite: Consent of graduate adviser in History.

**532. Seminar in Early Modern Europe (3)**

Selected problems of European history from the Renaissance to the French Revolution. May be repeated to a maximum of 12 semester hours. Prerequisite: Consent of graduate adviser in History.

**534. Seminar in Modern European History (3)**

Selected problems of European history from the late 18th century to the present. May be repeated to a maximum of 12 semester hours. Prerequisite: Consent of graduate adviser in History.

**631. Seminar in Modern European Economic History (3)**

Studies in the development of economic institutions and ideas. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**632. Seminar in European Intellectual History (3)**

Selected topics inviting the student to describe and analyze interesting patterns of thought and feeling which have shaped the lives of Europeans from the decay of the Catholic imagination through the new consciousness of Enlightenment, Romanticism, Scientism, and secular social and political ideologies. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

## UNITED STATES HISTORY

**415. Colonial America to 1763 (3)**

A survey of Colonial America emphasizing the role of the colonies in the British Empire and the social, economic, intellectual, and political factors which influenced later American history.

**416. The American Revolution, 1763-1789 (3)**

An examination of the period 1763-1789 in which stress is placed on the causes of the American Revolution, the character of this revolution, and its results as seen in the Confederation Period and the Constitution.



## HISTORY

### **417. United States, 1789-1815 (3)**

The foundations of the nation in the Presidencies of George Washington, John Adams, Thomas Jefferson, and James Madison. Analysis of the Hamiltonian financial system, the principles of American foreign policy, the origins of political parties, and the social-political philosophies of major figures.

### **418. Civil War and Reconstruction, 1850-1877 (3)**

The sectional crisis of the 1850's, the Civil War, and the period of political reconstruction; special attention to cultural and social factors involved in the sectional conflict and the war's lasting effects upon national and regional life.

### **419. Industrial America, 1877-1901 (3)**

The impact of industry and the city upon vital aspects of American life and society, with particular emphasis upon the response of farmers, workers, politicians, and intellectuals to the problems of an emerging urban-industrial society.

### **421. Recent American History, 1901-1933 (3)**

American development from the turn of the century to the age of the Great Depression; special emphasis on the development of Progressivism, the diplomacy of imperialism, World War I and its aftermath, the triumph of "normalcy," and the causes and consequences of the Great Depression.

### **422. Recent American History, 1933 to the Present (3)**

American development from the New Deal to the present; consideration of both domestic and foreign policy, especially the emergence of the welfare state, entrance into World War II, and America's internal and diplomatic affairs during the postwar years.

### **423. American Intellectual History to 1865 (3)**

America's intellectual heritage from Western civilization, and the change in that heritage which entered into the development of an American ideology. Prerequisite: Hist. 220.

### **424. American Intellectual History since 1865 (3)**

Traditional American ideas and concepts in relation to the intellectual challenge arising from America's transition to a secular, urban-industrial society during the past century. Prerequisite: Hist. 221.

### **428. The Middle Period of American History, 1815-1850 (3)**

The United States from the Era of Good Feeling through the Jacksonian democratic movement and the age of Manifest Destiny.

### **429. History of American Labor from 1787 (3)**

Role of the working class in American history from the Early National Period to the present, with emphasis upon the growth

of organized labor, labor problems, and labor's relation to other segments of American society during the 20th century.

### **442. Illinois and the Old Northwest (3)**

Settlement of the Northwest Territory and its regional history, with primary attention to the history of Illinois.

### **450. Diplomatic History of the United States to 1898 (3)**

American diplomacy, the theory and conduct of foreign affairs, and America's world role from colonial backgrounds to the Spanish-American War.

### **451. Diplomatic History of the United States since 1898 (3)**

The theory and practice of American foreign relations, the United States' emergence as a world power, and the conduct of diplomatic affairs from the Spanish-American War to the Cold War.

### **455. American Social and Cultural History to 1865 (3)**

The development of the American character in relation to social institutions, economic life, and cultural changes.

### **456. American Social and Cultural History, 1865 to the Present (3)**

Continuation of Hist. 455. Special emphasis on economic abundance, the frontier, the American college and university, immigration, industrialism, and religious denominationalism.

### **457. History of Religion in America to 1865 (3)**

The transplanting of European denominations to the New World; their transformation under American conditions; the rise of indigenous faiths; relations between the churches and society, and between church and state.

### **458. History of Religion in America since 1865 (3)**

The impact of science upon traditional beliefs; the rise of social concern; religious pluralism in America, and forces making for unity; theological trends. Denominations both "mainstream" and otherwise.

### **459. Problems in the History of the African-American (3)**

Selected problems of interpretation relating to the history of people of African descent in the Americas. Particular emphasis is placed upon the black population of the United States and some attention is given to the problem of race relations.

### **478. American Constitutional History to 1865 (3)**

American constitutional development, including English backgrounds, the Colonial and Revolutionary eras, and the evolution of the Federal Constitution to 1865, with consideration of the economic, political, and intellectual factors which have contributed to its growth. Prerequisite: Hist. 220.



**479. American Constitutional History since 1865 (3)**  
American constitutional development since 1865, including Reconstruction, the impact of the Industrial Revolution, and such significant 20th century constitutional issues as civil liberties, segregation, and the government's role in the economy. Prerequisite: Hist. 221.

**493. The Structure of Traditional American Society (3)**  
The course makes use of sociological concepts, especially those derived from studies of developing nations, to describe and analyze the beginnings of the transitions from a local, agrarian society to the cosmopolitan, urban society. Particular attention is paid to the social, economic, political, demographic, and religious relationships among social groups, to the changes in these sets of relationships, and to the progressive breakdown of a sense of community.

**494. The Structure of Urban American Society (3)**  
The course focuses on the processes of urbanization and modernization, and their impact on human relationships and life styles. Included among the subjects treated are: the increasing levels of geographic and psychological mobility, changes in the spatial and structural organization of the city, the emergence of large-scale bureaucratic organizations, changes in political and religious relationships, and the social bases of alienation in an increasingly complex society.

**518. Seminar in American Diplomatic History (3)**  
Selected problems in American foreign relations. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**520. Seminar in Early American History (3)**  
Selected problems in the colonial, revolutionary, or early national periods of American history. The emphasis will vary with the instructor. May be repeated to a maximum of 9 semester hours. Prerequisite: Consent of graduate adviser in History.

**521. Seminar in 19th Century American History (3)**  
Selected problems of American history in the 19th century. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**522. Seminar in 20th Century American History (3)**  
Selected problems of American history in the 20th century. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**524. Seminar in American Frontier History (3)**  
Frontier historiography and selected research problems in American frontier studies. May be repeated to a maximum

of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**525. Seminar in American Economic History (3)**  
Studies in the development of institutions and ideas. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of graduate adviser in History.

**623. Seminar in American Intellectual and Social History (3)**  
An intensive examination of ideas and preconceptions in American thought on both the popular and scholarly levels during various periods. Prerequisite: Consent of graduate adviser in History.

## LATIN AMERICAN HISTORY

**425. Ancient America (3)**  
The pre-history of the Americas, from the coming of the Indians to the arrival of the Europeans. The cultural, social, and political achievements of the high civilizations of ancient America and the problems connected with their development.

**426. The History of Mexico since 1810 (3)**  
The quest for independence — political, economic, and cultural — with particular attention to the Revolution of 1910-1920. Prerequisites: Hist. 325, 326, or consent of instructor.

**427. Problems in the Recent History of Latin America (3)**  
A broad study of factors underlying Latin American unrest since World War II. Prerequisites: Hist. 325, 326, or consent of instructor.

**482. Colonial Brazil, 1500-1822 (3)**  
The social, political, and cultural development of Portugal's New World colony from discovery to independence.

**485. Brazil from Empire to Republic (3)**  
The early emergence of Brazil as a major force in the Western Hemisphere and its potential as a world power, the evolution of Brazil's political institutions, economy, social structure, and culture.

**486. Republic of the Rio de la Plata (3)**  
A comparative study of Argentina and the buffer states of Paraguay and Uruguay since 1810; their quest for national identity and varied efforts to overcome such problems as political instability, foreign intervention, colonial economies, and social unrest, with emphasis on issues and trends in the 20th century.

## HISTORY

### **496X. Brazilian Civilization (3)** **(Foreign Languages 496)**

A course which stresses the contributions of the African and Indian to the history and literature of Brazil. Classes will be conducted in English with English and Portuguese bibliography. Prerequisite for History majors: F. Lan. 376 or any Latin American history course at the college level. (History majors are not required to read Portuguese.)

### **523. Seminar in Latin-American History (3)**

Selected problems in Latin-American history. May be repeated to a maximum of 12 semester hours. Prerequisite: Consent of graduate adviser in History.

## **RUSSIAN HISTORY**

### **443. Russian Thought and Culture before 1917 (3)**

Pre-Soviet social, cultural, and intellectual life. Emphasis on the period since Peter the Great.

### **454. Soviet Thought and Culture since 1917 (3)**

Soviet social, cultural, and intellectual life, 1917 to the present. The on-going revolution in Soviet culture—the formation of the “new Soviet man” and a “Socialist Culture.”

### **464. The Society and Institutions of Imperial Russia (3)**

The development of the society and institutions in Russia from 1689-1917. Special emphasis will be placed on the changing character of Russian society and the attempts to create an effective state organization in Russia.

### **472. Soviet Foreign Policy from 1917 to the Present (3)**

Soviet foreign policy from the birth of the Soviet State to its emergence as a world power. Goals and methods of Soviet conduct in world affairs are analyzed with special attention to the conventional and ideological elements, the constant and variable factors, and the domestic and Communist-bloc politics that shape Soviet foreign policy.

### **540. Seminar in Russian History (3)**

Selected problems in Russian history. May be repeated to a maximum of 12 semester hours. Prerequisite: Consent of graduate adviser in History.

# Department of Journalism

**GRADUATE FACULTY:** Grubb, Department Chairman. Bass, Brod, DeMott, Hamilton, Price, Walker, Wilson.

Two master's degrees are open to students in Journalism: Master of Arts and Master of Science in Education.

## MASTER OF ARTS

A student pursuing a Master of Arts degree with a major in Journalism should have had at least 9-12 undergraduate semester hours in Journalism or professional experience equivalent to these semester hours. A student may be required to make up deficiencies by passing courses or passing proficiency examinations in reporting, editing, photography, press history, or other areas as prescribed by departmental advisers; no graduate credit will be received for courses taken to satisfy deficiency requirements.

The student must plan a degree program of at least 30 semester hours of graduate credit, with at least 21 semester hours in Journalism at the graduate level, including Mass Communications Research Methods (Journ. 581). Specific requirements for the M.A. in Journalism are as follows:

1. A reading knowledge of one foreign language is required.
2. The student is required to write a thesis for 3-6 semester hours of credit, or to complete an equivalent number of semester hours in or outside the department. If the thesis is not written, a candidate must submit copies of three acceptable research papers prepared for graduate courses.
3. A written comprehensive examination is required upon completion of course work, or during the last semester of study (prior to approval of a thesis topic if the thesis option is selected). A final oral examination also may be required.

## MASTER OF SCIENCE IN EDUCATION

The Journalism Department cooperates with other departments, particularly with the Departments of Anthropology, Education, Home Economics, Industry and Technology, Philosophy, Political Science, Psychology, Speech, and Sociology, and the College of Business to devise area programs leading to the degree Master of Science in Education.

The division of work between departments is determined by the student and his graduate program advisers, but usually a minimum of 15 semester hours, including Mass Communica-

tions Research Methods (Journ. 581), is required in Journalism. A candidate must submit either a thesis or three research papers in Journalism.

## Course Offerings

### 415. Advanced Photojournalism (3)

Advanced techniques of photography with emphasis on written-visual communication as employed in contemporary mass media. Students write and photograph stories. Preparation of color photographs, work experience with area publications, and picture editing. Lab fee. Prerequisites: Journ. 315 and consent of instructor.

### 416. Photograph Editing (3)

Editing and layout of photographs in the mass media. Includes selection and preparation of photographs for use as singles, spreads, stories, and essays. Prerequisite: Consent of instructor.

### 435. Advanced Public Relations (3)

Analysis of public relations problems and procedures. Practice in solving public relations problems; preparation of public relations materials. Prerequisite: Journ. 335 or consent of instructor.

### 454X. International Broadcasting (3) (Speech 454)

A study of the development, structure, functions, and control of international broadcast systems and activities as they affect world relations.

### 457. The Newsfilm Documentary (3)

In-depth reporting on location of some aspect of the contemporary scene. Students investigate, prepare scripts, film and edit documentaries to be used on television. Some traveling required. Lab fee. Prerequisite: Journ. 357 or consent of instructor.

### 459X. History of Broadcasting (3) (Speech 459)

The history of radio and television broadcasting in the United States from its inception to the present.

### 461. The Industrial Press (3)

Practical work in planning, editing, and producing specialized publications, including reporting, copywriting, picture editing, advertising layout, and business management.

### 471. Teaching Journalism (3)

Teaching methods of journalism in secondary schools and jun-

ior colleges; courses of study, organization, bibliography; use of journalism courses for school publication production.

### **472. School Publications (3)**

For high school and junior college journalism teachers and school publications directors. Instruction in technical skills, staff organization, and production problems for newspaper and yearbook advisers.

### **480. Law of the Press (3)**

Legal regulations, libel laws, and restrictions on the press, publishing, radio, and television.

### **481. History of Journalism (3)**

Development of newspapers and periodicals from their beginnings in Europe through the emergence of modern journalism. Current world news-gathering agencies.

### **482. International News Communications (3)**

A survey of the mass media and international affairs; foreign correspondence and coverage; international news agencies; country-by-country historical-societal study of foreign journalism.

### **483. Mass Media in Modern Society (3)**

The concept and role of mass communications; rights, restrictions, and responsibilities of the mass media; interactions of mass communications and society.

### **502. Reporting of Public Affairs (3)**

An advanced study and application of investigative, interpretive, and in-depth reporting of public affairs. Emphasis is placed on social, political, and economic news as it is developed and reported at the local, state, and federal levels. Course combines practical reporting experiences with seminar discussions and research investigations.

### **516. Photojournalism Seminar (3)**

Prerequisite: Consent of instructor.

### **521. Special Topics in Advertising (3)**

Prerequisite: Consent of instructor.

### **535. Public Relations Cases, Concepts, and Campaigns (3)**

Practice in planning and conducting campaigns to achieve specific goals, anticipate and solve specific public relations problems, including pre- and post-testing to measure results. Case method approach.

### **540. The Press in Suburbia (3)**

Evolution of media in metropolitan suburbs; special aims that determine news, editorial, and business policy; content problems; group publication and its effect on staffing, editing, mechanical, and business operation; research and future development. Prerequisite: Consent of instructor.

### **552. Seminar in Broadcast News (3)**

Development, structure, and future of radio-television journalism and its role in society; consideration of contemporary problems, practices, and research.

### **580. Readings in Journalism (3)**

A selected review of journalism literature, including books, research studies, periodicals.

### **581. Mass Communications Research Methods (3)**

Procedures; sources of information; introduction to and use of mass communications research tools; application of research techniques to restricted problems.

### **582. The Press and World Affairs (3)**

Communication problems of the press in international affairs; a detailed study of international news agencies and services; investigation of the foreign press by countries with emphasis on the press under fascism, communism, and democracy; and world censorship.

### **583. Seminar in Press Problems (3)**

Selected problems in press freedom, federal-local censorship, press privileges, display and suppression of news, and the public's right to know. Also selected problems in influences of the press on social, economic, and political affairs; public opinion; and the formation of thought processes. Course may be repeated once.

### **590. Independent Study (2-4)**

Open to qualified students who wish to do individual advanced work in Journalism or mass communications. Prerequisite: Consent of instructor.

### **599. Thesis (1-6)**

The student is eligible to register for this course after he has completed Journ. 581 and has been accepted as a candidate for the master's degree. May be repeated to a maximum of 6 semester hours.



# Department of Library Science

**GRADUATE FACULTY:** Walther, Department Chairman. Broadus, Schormann, Spargo, White.

The Department of Library Science offers graduate programs leading to the degrees Master of Arts and Master of Science in Education.

## MASTER OF ARTS

In addition to the general admission requirements listed in the graduate catalog, candidates for the M.A. in Library Science must complete the following undergraduate courses with at least a "B" average:

Lib.S. 311, Introduction to Selection of Library Materials (3)

Lib.S. 312, Introduction to Reference Materials (3)

Lib.S. 412, Cataloging and Classification (3)

The courses should be taken during the summer session or first semester of residence concurrently with graduate courses. Students who have completed comparable courses or have had experience in libraries may satisfy this requirement by passing an examination prior to admission. Students may be required to complete additional undergraduate courses outside the department to satisfy deficiencies.

## Graduate Course Requirements

Three of the following four courses are required of all students:

Lib.S. 521, Bibliography of the Humanities (3)

Lib.S. 522, Bibliography of the Social Sciences (3)

Lib.S. 523, Advanced Reference and Bibliography (2)

Lib.S. 524, Bibliography of the Sciences (3)

The student must have a reading knowledge of one foreign language. Demonstration of reading competence may be satisfied in either of two ways: by transcript evidence of two years of college work or its equivalent in a language; or by a foreign-language reading examination given by the University Testing Services.

The student must take a minimum of 30 semester hours, 9 of which may be in courses outside the department and 6 of which may be thesis credits. The student must take a comprehensive examination not later than seven weeks prior to graduation.

## MASTER OF SCIENCE IN EDUCATION

Students who elect an area major in Library Science and Education leading to the degree Master of Science in Education

will be expected to do approximately half of their graduate work in courses prescribed by the Department of Library Science. The nature and scope of the courses prescribed will be determined by an examination of the individual student's undergraduate academic record and his general background.

## Course Offerings

### 415. Library Work with Children and Young People (3)

The objectives and services of library work with children and young people.

### 418. Reading Interests of Adolescents (3)

Intensive study of principles of selection of materials for the secondary school and for the young people's division of the public library, with emphasis on literature and biography; study of the reading interests of young people; methods of stimulating and guiding reading.

### 434. The Public Library as a Service Organization (3)

The role of the public library in adult education and as information center of the community. Special emphasis on problems of public support, public relations, and community development. Administrative principles and techniques: library surveys and wider areas of service.

### 500. Workshop (1-3)

Intensive study of problems of the school or public library in the areas of selection, reference, and cataloging. May be repeated to a maximum of 6 semester hours.

### 505. Library Materials for Children (3)

Evaluation and use of books, magazines, films, filmstrips, records, tapes, radio and television broadcasts, and other sources of information for children.

### 506. Analysis of Adult Reading (2)

The critical evaluation and analysis of books and other library materials suited to adults; appraisal of reading interests, habits, and needs of adults; various mass media as sources of information.

### 512. Advanced Cataloging and Classification (3)

Special problems in the organization of library materials with considerable attention to Library of Congress classification.

### 513. History of Books and Libraries (2)

The role of books and libraries in Western culture. The invention of printing and the rise of the idea of literary property. Development of the great world libraries to 1840. Open to all students.



**514. The American Library Movement (2)**

The rise of the American public and school library as part of the 19th century growth of popular education. The continued development in the 20th century of the library: school, public, local, and regional.

**515. College and University Libraries (3)**

A survey of problems in the field: administration, personnel, purposes. Special emphasis on cooperation, buildings, and service to research workers.

**516. Special Libraries (2)**

Intensive study of the techniques of selection, cataloging, preparation, and service of materials in specialized libraries. A field trip to the Chicago area will be part of the course.

**517. Library Administration and Management (3)**

Administrative theory and principles and their implication and application to managerial activity in all types of libraries and scientific and technical information centers; motivation and training of personnel; work evaluation.

**518. Technical Processes (3)**

Theory and practice of technical and managerial aspects of acquisition, organization, and distribution of library materials. Emphasis on systems and coordination.

**521. Bibliography of the Humanities (3)**

Intensive study of reference materials in this area of knowledge. Refinement of selection principles and techniques. Evaluation of collections.

**522. Bibliography of the Social Sciences (3)**

Intensive study of reference materials and the formation of working collections in this field of knowledge. Special emphasis on sources of education and of business information.

**523. Advanced Reference and Bibliography (2)**

Systematic bibliography, including national and trade bibliographies, document catalogs; current status of bibliographic control and cooperation on the regional, national, and international level.

**524. Bibliography of the Sciences (3)**

Intensive study of reference materials and periodicals, as well as popular reading in the pure sciences and technology.

**525. Foundations of Librarianship (3)**

The development of libraries. Current issues, library legislation, professional materials, professional associations, library education, and library leaders.

**526. Bibliography of Business Sources (2)**

Survey and analysis of books, periodicals, and document sources of information in business, business law, finance, and marketing with emphasis on problem solving.

**530. Special Problems in Librarianship (1-6)**

Research in the field of librarianship. Class will meet one day a week, and students will prepare a research paper for varying credit, dependent upon subject and scope.

**533. Administration of Learning Centers (3)**

Principles and philosophy of learning centers; special emphasis on technical procedures, selection and evaluation of various teaching media and equipment; designing, planning, and servicing of multi-media materials; financing.

**534. Library Systems (3)**

Current patterns of regional library development; problems associated with library systems; significance of state and federal programs and national information networks.

**550. Graduate Seminar in Librarianship (1)**

Designed to round out the student's professional preparation by giving attention to special topics, problems, or trends by means of visits, lectures (both from the University faculty and outside), topical reports, and discussion. May be repeated once for credit.

**552. Seminar in Information Retrieval (2)**

Analysis of new methods of indexing, cataloging, and bibliographic organization, with some attention to mechanical and electronic devices.

**558. Seminar in Current Library Building Problems (2)**

Space requirements for all types of libraries. Automated library services. Human engineering, selection of all forms of mass media, specification writing, layout of equipment for information retrieval services.

**559. Directed Individual Project (1-3)**

Field work or special study. Prerequisites: Approval of instructor and adviser.

**599. Thesis (1-6)**

Open to students writing a thesis under the M.A. program.

# Department of Mathematics

**GRADUATE FACULTY:** Ostberg, Department Chairman. Trail, Assistant Chairman. Angotti, Beach, Beachy, Behr, Blair, Blau, Bright, Cavanaugh, Christiano, Connett, Dwyer, Flora, C. Gupta, Hardgrove, Hsu, Kambayashi, Klasa, Kuller, Lawes, Leonard, Lindsey, Lusk, McAlister, E. McCharen, J. McCharen, McFadden, D. Miller, H. Miller, R. Miller, Munson, Musser, Nakai, O'Carroll, Overbeek, Powers, Ristroph, Ridenhour, Rodine, Selfridge, Shapiro, Singletary, Sons, Sowder, Williams, Wilson, Wunderlich, Zettl.

The Department of Mathematics offers graduate programs leading to the Master of Science degree and to the Certificate of Advanced Study. Details concerning these programs can be obtained from the Department of Mathematics.

## MASTER OF SCIENCE

The Department of Mathematics offers five programs leading to the degree Master of Science; specifically, emphases are available in Pure Mathematics, Applied Mathematics, Computer Science, Probability and Statistics, and Mathematics Education. Applicants for admission to these programs are expected to have completed the equivalent of the requirements for the degree Bachelor of Science with a major in Mathematics at Northern Illinois University. The requirement of a major in Mathematics may be waived for applicants with promising undergraduate records. Students planning to continue to the Ph.D. in Mathematics will normally elect the emphasis in Pure Mathematics. In addition to the requirements established by the Graduate School and the specific course requirements listed below, all candidates seeking to qualify for the degree of Master of Science in Mathematics shall:

1. Complete at least 30 semester hours of graduate work, of which 24 must be in Mathematics, with at least 15 of these in Mathematics courses numbered 500 or above, and
2. Pass a comprehensive examination in Mathematics.

Courses outside the Department of Mathematics may be included in the candidate's program only with approval of the department.

Normally, students pursuing full-time graduate study will take the comprehensive examination within two academic years of admission to the Graduate School. Only under exceptional circumstances will a student be allowed to defer this examination beyond the semester in which he earns 30 semester hours of graduate credit. A student who fails the comprehensive examination may, with permission of the department, repeat

it after a lapse of at least one semester and not more than two semesters (excluding summer sessions). A student who fails the comprehensive examination a second time will not be permitted to continue work toward a degree in Mathematics at Northern Illinois University.

## Emphasis in Pure Mathematics

Course requirements:

- Math. 520T, Algebraic Structures I (3)
- Math. 530, Real Analysis I (3)
- Math. 532, Complex Analysis I (3)
- Math. 550T, Topology I (3)

At least 3 semester hours in Mathematics courses numbered between 520T and 589, or numbered above 619.

## Emphasis in Applied Mathematics

Course requirements:

- Math. 530, Real Analysis I (3)
- Math. 532, Complex Analysis I (3)

At least two of the following:

- Math. 534T, Numerical Analysis (3)
- Math. 536, Ordinary Differential Equations I (3)
- Math. 540, Applied Mathematics I (3)
- Math. 541, Applied Mathematics II (3)

At least one of the following:

- Math. 560T, Automata Theory (3)
- Math. 570, Stochastic Processes I (3)
- Math. 584, Combinatorial Mathematics I (3)
- Math. 670, Probability Theory I (3)

## Emphasis in Computer Science

Course requirements:

- Math. 520T, Algebraic Structures I (3)
- Math. 530, Real Analysis I (3)

At least two of the following:

- Math. 464, Data Structures (3)
- Math. 466, Programming Languages (3)
- Math. 468, Computer Organization (3)

At least two of the following:

- Math. 534T, Numerical Analysis (3)
- Math. 560T, Automata Theory (3)
- Math. 584, Combinatorial Mathematics I (3)
- Math. 586, Mathematical Logic (3)

## Emphasis in Probability and Statistics

Course requirements:

- Math. 530, Real Analysis I (3)
- Math. 532, Complex Analysis I (3)

At least two of the following:

- Math. 570, Stochastic Processes I (3)
- Math. 571, Stochastic Processes II (3)
- Math. 572, Linear Models (3)
- Math. 574, Statistical Inference (3)
- Math. 670, Probability Theory I (3)

At least one of the following:

- Math. 520T, Algebraic Structures I (3)
- Math. 550T, Topology I (3)
- Math. 584, Combinatorial Mathematics I (3)

## Emphasis in Mathematics Education

Course requirements:

- Math. 510T, Topics in Mathematics Education I (3)
- Math. 511, Topics in Mathematics Education II (3)
- Math. 431, Advanced Calculus II (3)

At least one of the following:

- Math. 421, Algebra II (3)
- Math. 423T, Linear and Multilinear Algebra (3)

At least two of the following:

- Math. 454T, Topics in Geometry (3)
- Math. 456, Linear Geometry I (3)
- Math. 460T, Computers and Programming (3)
- Math. 472, Introduction to Mathematical Statistics (3)
- Math. 480, Number Theory (3)

In addition, students will be required to meet the Illinois certification requirements for the standard secondary certificate.

## CERTIFICATE OF ADVANCED STUDY

The requirements for the Certificate of Advanced Study vary. Each program must be approved by the Department of Mathematics.

## Course Offerings

**NOTE:** A "T" after a course number indicates that an old number is being re-used for a new or retitled course.

### 402. Curriculum and Instruction in Elementary School Mathematics (3) (Cross-listed as Education 402X)

The aims and organization of materials for the mathematics programs for the elementary school. Primarily for Elementary Education majors. Not open for credit toward the major or minor in Mathematics. Prerequisite: Math. 201 or equivalent.

### 410. Curriculum and Instruction in Junior High School Mathematics (3)

The aims and organization of materials for the mathematics programs of the junior high school. Accepted as mathematics credit only for those preparing to teach. Prerequisites: Math. 353 and Educ. 302 or 375.

### 412. Curriculum and Instruction in Secondary School Mathematics (3)

The aims and organization of materials for the mathematics programs of the secondary school. Accepted as mathematics credit only for those preparing to teach. Prerequisites: Math. 353 and Educ. 302.

### 420T. Algebra I (3)

Elements of group theory up to the fundamental homomorphism theorem; basic theory of commutative rings and fields. Additional topics may include polynomial rings, vector spaces, Galois theory, and elementary homology theory. Prerequisite: Math. 231, or Math. 233, or Math. 239, or equivalent.

### 421. Algebra II (3)

A continuation of Math. 420T. Prerequisite: Math. 420T.

### 423T. Linear and Multilinear Algebra (3)

The general theory of vector spaces, linear transformations, and matrices. Topics will include determinants, tensor products, canonical forms, and bilinear and quadratic forms. Prerequisite: Math. 420T or equivalent.

### 430. Advanced Calculus I (3)

A rigorous re-examination of the calculus and an introduction to the theory of real variables. Prerequisite: Math. 232 or Math. 234, or equivalent.

### 431. Advanced Calculus II (3)

Continuation of Math. 430. Prerequisite: Math. 430 or equivalent.

### 434T. Numerical Mathematics I (3)

The theory of numerical methods. Topics will include error analysis, numerical differentiation and integration, numerical matrix operations, and applications. Prerequisites: Math. 305A, and either Math. 231 or Math. 233, or equivalent.

**435. Numerical Mathematics II (3)**

A continuation of Math. 434T. Prerequisite: Math. 434T.

**436. Differential Equations (3)**

Elements of ordinary differential equations. Techniques of solutions. Applications to problems in geometry and science. This course is not open to students who have received credit for Math. 233 or Math. 234. Prerequisite: Math. 231 or equivalent.

**437. Boundary Value Problems (3)**

Euclidean spaces, boundary value problems, orthogonal series expansions, and applications to partial differential equations. This course is not open to students who have received credit for Math. 234. Prerequisite: Math. 436 or equivalent.

**440. Complex Variable Theory (3)**

Functions of a complex variable, integration, power series, and residues. Prerequisite: Math. 232 or Math. 234 or equivalent.

**441. Transform Methods in Applied Mathematics (3)**

The Laplace equation and potential theory. Fourier and Laplace transforms. Asymptotic expansions. Prerequisites: Math. 436 and Math. 440 or equivalent.

**444. Linear Programming, Matrix Games, and Applications (3)**

An introduction to linear programming and matrix games and their applications to problems in the social sciences and operations research. Prerequisite: Math. 231 or Math. 233 or Math. 239 or equivalent.

**450. Point Set Topology (3)**

Introduction to the study of metric and topological spaces, the notions of separation, continuity, connectedness, and compactness. Prerequisite: Math. 232 or Math. 234, or equivalent.

**451. Introduction to Algebraic Topology (3)**

Introduction to the study of algebraic topology. Topics will include the classification of 2-manifolds, the fundamental group, and elementary homology theory. Prerequisites: Math. 420T and Math. 450 or equivalent.

**454T. Topics in Geometry (3)**

The definition and study of manifolds using topological methods. Prerequisite: Math. 450 or equivalent.

**456. Linear Geometry I (3)**

A treatment of affine and related geometries using the techniques of linear algebra. Prerequisite: Math. 231 or Math. 233 or Math. 239, or equivalent.

**457. Linear Geometry II (3)**

A continuation of Math. 456. Prerequisite: Math. 456.

**460T. Computers and Programming (3)**

A study of the structure, organization, and components of a third generation digital computer. Programming assignments will be done in the assembly language of the particular computer used. Prerequisite: Math. 305A or equivalent.

**462. Introduction to Discrete Structures (3)**

A study of finite mathematical structures including Boolean algebra and graph theory. Applications will be made to various areas of computer science. Prerequisites: Math. 231 and Math. 305A, or equivalent.

**464. Data Structures (3)**

A comprehensive study of the theory and the programming techniques related to the storage and management of various forms of structural data. Prerequisites: Math. 460T and Math. 462, or equivalent.

**466. Programming Languages (3)**

A systematic presentation of the theory of programming languages. Prerequisites: Math. 460T and Math. 462, or equivalent.

**468. Computer Organization (3)**

The analysis of a third generation computer; its digital circuitry and logical organization. Prerequisites: Math. 460T and Math. 462, or equivalent.

**470. Introduction to Probability Theory (3)**

The mathematical study of probability including probability spaces, random variables, probability distributions, special distributions, laws of large numbers, and limiting distributions. Prerequisite: Math. 232 or 234 or equivalent.

**472. Introduction to Mathematical Statistics (3)**

An introductory study of mathematical statistics including distributions of functions of random variables, interval estimation, sufficiency, completeness, point estimation, statistical hypotheses, analysis of variance, and the multivariate normal distribution. Prerequisite: Math. 470.

**476. Methods of Experimental Statistics (3)**

Basic experimental statistics including methods of estimation and hypothesis testing, analysis of variance procedures, principles of experimental design, completely randomized and randomized complete block designs, factorial arrangements of treatments, linear regression and correlation analysis, covariance analysis and distribution-free methods. Prerequisite: Math. 350 or both Math. 211 and Math. 301, or equivalent.

**480. Number Theory (3)**

Divisibility, primes, congruences, quadratic reciprocity, Diophantine equations, continued fractions, and selected topics. Prerequisite: Math. 231 or Math. 233; or co-requisite: Math. 239.



**486. Logic and Recursive Function Theory I (3)**

The theory of proof, models, and recursion. Prerequisite: Math. 231 or Math. 233 or Math. 239, or equivalent.

**487. Logic and Recursive Function Theory II (3)**

A continuation of Math. 486. Prerequisite: Math. 486 or equivalent.

**510T. Topics in Mathematics Education I (3)**

A survey and study of recent developments in mathematics education. Primarily intended for students seeking the M.S. degree with an emphasis in Mathematics Education. Prerequisite: Consent of department.

**511. Topics in Mathematics Education II (3)**

Continuation of Math. 510T. Prerequisite: Math. 510T or equivalent.

**520T. Algebraic Structures I (3)**

A detailed study of the explicit structure and morphisms of postulationally defined systems. Math. 521 is a continuation of this course. Prerequisite: Math. 421 or equivalent.

**521. Algebraic Structures II (3)**

Continuation of Math. 520T. Prerequisite: Math. 520T or equivalent.

**524. Category Theory (3)**

The theory of categories and functors. Prerequisite: Math. 421 or equivalent.

**530. Real Analysis I (3)**

A study of the theory of functions of a real variable. Prerequisite: Math. 431 or equivalent.

**531. Real Analysis II (3)**

Continuation of Math. 530. Prerequisites: Math. 450 and Math. 530, or equivalent.

**532. Complex Analysis I (3)**

A study of the theory of functions of a complex variable. Prerequisite: Math. 431 or equivalent.

**533. Complex Analysis II (3)**

Continuation of Math. 532. Prerequisite: Math. 532 or equivalent.

**534T. Numerical Analysis (3)**

Selected topics in numerical methods. Prerequisite: Consent of department.

**536. Ordinary Differential Equations I (3)**

Existence and uniqueness theory for solutions of ordinary differential equations. Prerequisites: Math. 431 and Math. 436 or equivalent.

**537. Ordinary Differential Equations II (3)**

Continuation of Math. 536. Prerequisite: Math. 536 or equivalent.

**540. Applied Mathematics I (3)**

Selected topics in applied mathematics. Prerequisites: Math. 431 and Math. 436 or equivalent.

**541. Applied Mathematics II (3)**

Continuation of Math. 540. Prerequisite: Math. 540 or equivalent.

**550T. Topology I (3)**

A detailed study of metric and topological spaces. Prerequisite: Math. 450 or equivalent.

**551T. Topology II (3)**

Continuation of Math. 550T. Prerequisite: Math. 550T or equivalent.

**552T. Convexity (3)**

The theory of convex sets and functions. Prerequisites: Math. 421, Math. 431, and Math. 450, or equivalent.

**560T. Automata Theory (3)**

An introduction to the algebraic theory of automata. Prerequisite: Math. 421 or equivalent.

**562. Computer Methods (3)**

An intensive laboratory course in computer usage including programming in FORTRAN IV and PL/I and the use of terminals in teleprocessing.

**570. Stochastic Processes I (3)**

An introduction to the theory of stochastic processes and applications. Prerequisites: Math. 431 and Math. 470 or equivalent.

**571. Stochastic Processes II (3)**

Continuation of Math. 570. Prerequisite: Math. 570 or equivalent.

**572. Linear Models (3)**

The theory of linear models and experimental design models. Prerequisite: Math. 472 or equivalent.

**574. Statistical Inference (3)**

Structure of statistical decision problems, optimal decision rules, Bayes decision rules, invariance, hypothesis testing, and estimation. Prerequisite: Math. 472 or equivalent.

**576. Design and Analysis of Experiments (3)**

General two-way schemes, confounding, fractional replications,



incomplete blocks and related designs, multiple comparisons.  
Prerequisite: Math. 476 or equivalent.

**580. Number Theory I (3)**  
Selected topics from analytic and algebraic number theory.  
Prerequisites: Math. 421 and Math. 480 or equivalent.

**581. Number Theory II (3)**  
Continuation of Math. 580. Prerequisite: Math. 580 or equivalent.

**584. Combinatorial Mathematics I (3)**  
Topics from the theory of enumeration and choice, and the existence and construction of designs. Prerequisite: Math. 421 or equivalent.

**585. Combinatorial Mathematics II (3)**  
Continuation of Math. 584. Prerequisite: Math. 584 or equivalent.

**586. Mathematical Logic (3)**  
A study of axiomatic set theory and formal logic. Prerequisite: Consent of department.

**590. Internship in Mathematics Education (1-3)**  
Supervised teaching or research in mathematics education. Primarily intended for students seeking an M.S. degree with an emphasis in mathematics education. May be repeated to a maximum of 6 semester hours. Prerequisites: Graduate standing and consent of department.

**592. Internship in Mathematics (2-6)**  
Supervised teaching of undergraduate mathematics. Not open for credit toward the M.S. degree. May be repeated to a maximum of 12 semester hours. Prerequisites: Graduate standing and consent of department.

**596. Topics in Contemporary Mathematics Education (1-9)**  
Intensive study of special topics in mathematics and mathematics education selected to meet the needs of teachers of mathematics at the precollege level. May be repeated to a maximum of 18 semester hours. Prerequisite: Consent of department.

**597. Graduate Reading in Mathematics (1-9)**  
Individual reading in mathematics. May be repeated to a maximum of 12 semester hours. Prerequisites: Graduate standing and consent of department.

**598. Topics in Contemporary Mathematics (1-6)**  
Faculty and student discussion of selected topics in contemporary mathematics. May be repeated to a maximum of 12 semester hours. Prerequisite: Consent of department.

**620. Theory of Semigroups I (3)**  
A detailed study of the structure theory of semigroups. Prerequisite: Math. 521 or consent of instructor.

**621. Theory of Semigroups II (3)**  
Continuation of Math. 620. Prerequisite: Math. 620 or consent of instructor.

**622. Theory of Finite Groups I (3)**  
Selected topics from the structure and representation theory of finite groups. Prerequisite: Math. 521 or equivalent.

**623. Theory of Finite Groups II (3)**  
Continuation of Math. 622. Prerequisite: Math. 622 or consent of instructor.

**624. Rings and Homology I (3)**  
A first course in homological algebra and its applications to the structure theory of rings, modules, and algebras. Prerequisite: Math. 521 or consent of instructor.

**625. Rings and Homology II (3)**  
Continuation of Math. 624. Prerequisite: Math. 624 or consent of instructor.

**626. Algebraic Geometry I (3)**  
A detailed study of modern algebraic geometry. Prerequisite: Math. 521 or equivalent.

**627. Algebraic Geometry II (3)**  
Continuation of Math. 626. Prerequisite: Math. 626 or consent of instructor.

**630. Functional Analysis I (3)**  
Selected topics in functional analysis. Prerequisites: Math. 531 and Math. 550T or consent of instructor.

**631. Functional Analysis II (3)**  
Continuation of Math. 630. Prerequisite: Math. 630 or consent of instructor.

**636. Partial Differential Equations (3)**  
A first course in the theory of partial differential equations. Prerequisites: Math. 531 and Math. 537 or consent of instructor.

**650. Algebraic Topology I (3)**  
Selected topics in algebraic and differential topology. Prerequisites: Math. 520T and Math. 550T or consent of instructor.

**651. Algebraic Topology II (3)**  
Continuation of Math. 650. Prerequisite: Math. 650 or consent of instructor.

## MATHEMATICS

### **652. Topological Groups (3)**

An introduction to the theory of topological groups and its applications in analysis. Prerequisites: Math. 520T, Math. 530, and Math. 550T, or consent of instructor.

### **654. Differential Geometry I (3)**

Selected topics in modern differential geometry. Prerequisites: Math. 520T and Math. 550T or consent of instructor.

### **655. Differential Geometry II (3)**

Continuation of Math. 654. Prerequisite: Math. 654 or consent of instructor.

### **670. Probability Theory I (3)**

Advanced probability theory. Prerequisites: Math. 470 and Math. 530 or consent of instructor.

### **671. Probability Theory II (3)**

Continuation of Math. 670. Prerequisite: Math. 670 or consent of instructor.

### **690. Seminar in Mathematics (1-9)**

- A. Algebra**
- B. Analysis**
- C. Applied Mathematics**
- D. Foundations of Mathematics**
- E. Geometry**
- G. Probability and Statistics**
- H. Topology**

Lectures and discussions on topics in advanced mathematics. One to 9 semester hours as scheduled. May be repeated to a maximum of 24 semester hours, not more than 15 of which may be selected in a single area. Prerequisite: Consent of instructor.

**GRADUATE FACULTY:** Stanage, Department Chairman. Beanblossom, Brown, Carney, Dye, Gelven, Gotesky, King, Kisiel, Leslie, Livingston, Myers, Stormer, van Steenburgh, Walton.

## MASTER OF ARTS

All students studying for the degree Master of Arts in Philosophy are required to complete a minimum of 30 semester hours of graduate study and pass a comprehensive examination. In completing these 30 semester hours a candidate may: (1) complete the minimum of 30 semester hours in Philosophy, or (2) complete a minimum of 24 semester hours in Philosophy and receive an additional 6 semester hours for writing a thesis (Phil. 599), or (3) complete a minimum of 24 semester hours in Philosophy and receive up to 6 semester hours of credit for courses taken outside the field of Philosophy, or (4) complete a minimum of 18 hours in Philosophy, receive an additional 6 semester hours for writing a thesis (Phil. 599), and receive up to 6 semester hours' credit for courses taken outside the field of Philosophy. All graduate students in Philosophy are required to take Methods and Procedures of Professional Philosophy (Phil. 590) within the first year of their residency.

All courses are to be chosen with the approval of the student's adviser, thereby insuring adequate coverage of the various fields of Philosophy represented on the comprehensive examination. Each student will be allowed only two opportunities to pass the comprehensive examination.

## Course Offerings

### 401. Advanced Symbolic Logic (3)

Topics vary, but will be selected from characteristic issues: for example, foundations of quantification theory, including Herbrand's theorem, Lowenheim-Skolem theorem, Gödel's completeness theorem; basic proof theory, including Gödel's incompleteness theorem; elements of recursive function theory and undecidability theorems; and axiomatic set theory. The relevance of symbolic logic to the analysis of philosophical problems will be considered. Prerequisite: Phil. 302 or consent of instructor.

### 402. Philosophy of Logic (3)

A consideration of the various definitions of logic and theories of its role in mathematics, natural science, and philosophy. Texts will be selected from such philosophers as Aristotle, Hegel, Mill, Peirce, Bradley, Dewey, and Strawson. Prerequisite: 9 semester hours of Philosophy including Phil. 100 or Phil. 302, or consent of instructor.

# Department of Philosophy

### 411. Theories and Problems of Knowledge (3)

A study of various contemporary views of knowledge. Consideration of such problems as the conditions of meaning, the nature of truth, the relationship between sensation, perception, and intuition, the difference between knowing and believing, methods of verification, and types of judgment. Analysis of the works of such philosophers as Meinong, Husserl, Brentano, Russell, Lewis, Wittgenstein, and Austin. Emphasis is placed on either analyzing several theories of knowledge or tracing a problem through the thought of several philosophers. Prerequisite: 9 semester hours of Philosophy.

### 419. Medieval Philosophy (3)

Prerequisite: 12 semester hours of Philosophy.

### 421. Plato (3)

Prerequisite: 12 semester hours of Philosophy.

### 422. Aristotle (3)

Prerequisite: 12 semester hours of Philosophy.

### 423. 17th and 18th Century Rationalist Philosophies (3)

A critical exegesis of selected writings by such philosophers as Descartes, Malebranche, Spinoza, Leibniz, and Wolff. Prerequisite: 12 semester hours of Philosophy.

### 424. 17th and 18th Century Empiricist Philosophies (3)

A critical exegesis of selected writings by such philosophers as Hobbes, Locke, Berkeley, Hume, and Reid. Prerequisite: 12 semester hours of Philosophy.

### 425. Kant (3)

Prerequisite: 12 semester hours of Philosophy.

### 426. 20th Century Systematic and Phenomenological Philosophies (3)

A critical exegesis of selected writings by such philosophers as Dewey, Husserl, Bergson, Whitehead, Heidegger, and Merleau-Ponty. Prerequisite: 12 semester hours of Philosophy.

### 427. 19th Century Idealist Philosophies (3)

A critical exegesis of selected writings by such philosophers as Fichte, Schelling, Hegel, Schopenhauer, Nietzsche, and Bradley. Prerequisite: 12 semester hours of Philosophy.

### 428. 20th Century Analytic Philosophies (3)

A critical exegesis of selected writings by such philosophers as Moore, Russell, Wittgenstein, Carnap, C. I. Lewis, Ryle, and Austin. Prerequisite: 12 semester hours of Philosophy.

### 429. 19th Century Empirical Philosophies (3)

A critical exegesis of selected writings by such philosophers as Comte, Marx, Mill, Mach, and Peirce. Prerequisite: 12 semester hours of Philosophy.

**431. Contemporary Ethical Theory (3)**

A study of the major problems and theories under discussion by specialists in ethical theory. Emphasis will be placed on meta-ethical problems and the analysis of ethical concepts. Readings will be selected from such philosophers as Toulmin, Nowell-Smith, Baier, Hare, and Rawls. Prerequisite: 9 semester hours of Philosophy, including 3 semester hours in ethics, or consent of instructor.

**442. Theories of Value (3)**

A study of the major theories of value experience, evaluation, and the language of value. The works of major theorists such as Dewey, Croce, C. I. Lewis, Perry, and Stevenson, as well as recent articles in the field, will be analyzed. Prerequisite: 12 semester hours of Philosophy, including 3 semester hours in ethics or aesthetics, or consent of instructor.

**452. Contemporary Philosophy of Science (3)**

An analysis of the recent literature dealing with the structure and methods of science. Issues centering around topics such as induction, description, concept formation, and verification will be discussed in terms of the works of such philosophers as Hanson, Margenau, Hempel, Nagel, and Toulmin. Prerequisite: 9 semester hours of Philosophy, including 3 semester hours in philosophy of science, or consent of instructor.

**462. Philosophy of Culture (3)**

Various philosophical theories of man's culture and the areas of man's cultural life such as myth, religions, language, art, history, and sciences. Consideration of the works of such philosophers as Collingwood, Cassirer, Dewey, Whitehead, and Ortega y Gasset. Emphasis is placed on the relevance of an analysis of culture for the philosophical understanding of man. Designed to be of interest to advanced students in the humanities. Prerequisite: 9 semester hours of Philosophy or consent of instructor.

**471. Classical Theories in the Philosophy of Religion (3)**

An analysis of some of the views which have achieved major importance in this field. Texts will be selected from such key works as Hume's *Dialogues Concerning Natural Religion*, Kant's *Religion within the Limits of Reason Alone*, Schleiermacher's *On Religion*, and Feuerbach's *Essence of Christianity*. Prerequisite: 12 semester hours of Philosophy.

**482. Classical American Philosophers (3)**

An analysis of some of the major figures in American thought from the Colonial Period through the 20th century. Selections from the works of such philosophers as Edwards, Emerson, Royce, Pierce, Dewey, Santayana, and Cohen will be studied. Prerequisite: 9 semester hours of Philosophy or consent of instructor.

**490. Seminar in Philosophy (3)**

An intensive study of one major figure, problem, or position in historical or contemporary philosophy. May be repeated to a maximum of 9 semester hours provided no repetition of subject matter occurs. Prerequisite: 9 semester hours in Philosophy or consent of instructor.

**491. Directed Readings (1-4)**

Enrollment is contingent upon a student's proposed course of study and the approval of it by the faculty member selected to supervise his reading. Prerequisite: Consent of department.

**500. Advanced Logic (3)**

A more intensive study of special problems in logical semantics, modal logics, pragmatics, or special logics which do not fit into any accepted pattern of modern logical analysis. A single problem such as partial or complete formalization or several logical problems related to each other may be studied. Prerequisites: Phil. 100 and 302 or consent of instructor.

**502. Seminar in Advanced Logic and Theory of Signs (3)**

Advanced topics in mathematical logic, modal logic, semantics, pragmatics, and various philosophical issues related to logical theory. May be repeated for additional credit, providing no repetition of subject matter occurs. Prerequisite: Phil. 302 or consent of instructor.

**503. Seminar in Philosophy of Language (3)**

**510. Seminar in Advanced Metaphysics and Epistemology (3)**

Advanced topics in metaphysics and epistemology. May be repeated for additional credit providing no repetition of subject matter occurs. Prerequisite: Phil. 311 or 411, or consent of instructor.

**511. Seminar in Epistemology (3)**

**512. Seminar in Metaphysics (3)**

**520. Seminar in the History of Philosophy (3)**

Advanced topics in ancient, medieval, and modern history of philosophy. May be repeated for additional credit, providing no repetition of subject matter occurs. Prerequisites: Phil. 321 and 322, or consent of instructor.

**531. Seminar in Advanced Ethical Theory (3)**

Special topics in advanced ethical theory. May be repeated for additional credit providing no repetition of subject matter occurs. Prerequisite: Phil. 431 or consent of instructor.

**532. Seminar in Advanced Value Theory (3)**

**540. Philosophy of Mind (3)**

Some recent developments in philosophy having a bearing on

such concepts as perception, thought, intentionality, and belief, and the role of these concepts in such philosophical problems as the relation of mind and body, the veridicality of perception, and the nature of personal identity. Prerequisites: Two courses in Philosophy or consent of instructor.

**550. Contemporary Political and Social Philosophy (3)**

A critical study of selected political and social concepts such as justice, equality, freedom, and related issues with reference to the views of representative contemporary thinkers. Prerequisites: Two courses in Philosophy or consent of instructor.

**552. Seminar in the Philosophy of Science (3)**

**570. Seminar in the Philosophy of Religion (3)**

Detailed analysis of one or more key issues in contemporary analytic philosophy of religion, or in important recent theories of the nature and function of religion. Prerequisite: Phil. 491, or consent of instructor.

**590. Methods and Procedures of Professional Philosophy (3)**

An introduction to philosophy as a profession. Study of the methods of research, procedures of publication, bibliographic resources, form and style of philosophical writing, and other topics related to philosophical scholarship. Intended to provide the candidate for an advanced degree in Philosophy with

first-hand experience in the activities distinctive to professional philosophy. Required of all graduate students in Philosophy during their first year of graduate study. Prerequisite: Consent of department.

**591. Special Topics in Recent Philosophy (3)**

Intensive studies of selected topics in recent philosophical literature. Extensive use will be made of journal articles and books that are of importance in current philosophical thought. May be repeated for additional credit, providing no repetition of subject matter occurs. Prerequisites: Phil. 321 and 322 or consent of instructor.

**595. Special Studies and Research (1-4)**

Guided research for students wishing to do special studies of an advanced nature. Students will be expected to write a number of short papers and will select their research topics in consultation with the instructor. May be repeated for additional credit, providing no repetition of subject matter occurs. Prerequisite: Consent of instructor.

**599. Thesis (1-3)**

Guidance in the writing of the master's thesis. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of department.



# Department of Physics

**GRADUATE FACULTY:** Rossing, Department Chairman. Albright, Bushnell, Fedro, Feeny, Hasan, Hoeve, Kimball, Krause, Meyer, Shaffer, Sill, Tsao, von Ehrenstein, Uretsky, Weaver, Wood.

The Department of Physics offers programs leading to the degrees Master of Science in Education and Master of Science and, at the sixth-year level, to the Certificate of Advanced Study. The Departments of Biological Sciences, Chemistry, Geography, Geology, and Physics cooperate in offering an area major in General Science leading to the degree Master of Science in Education.

## MASTER OF SCIENCE IN EDUCATION

### Major in Physics

Students who elect a graduate major in Physics toward the degree Master of Science in Education may elect either a thesis or a non-thesis option. In either case, a minimum of 30 semester hours' credit is required for the degree.

#### Thesis option

The student must successfully complete a minimum of 15 semester hours in Physics chosen from 400-600 level offerings of the department and including up to 6 semester hours in Phys. 599, Research. The choice of courses must be approved by the student's advisory committee. The thesis is to be based on original research or a scholarly analysis of published literature.

#### Non-thesis option

The student must successfully complete a minimum of 15 semester hours of courses from the 400-600 level offerings of the department. The choice of courses must be approved by the student's advisory committee.

### Area Major in General Science

Students who elect an area major in General Science will find the requirements listed under Biological Science on page 34.

## MASTER OF SCIENCE

A candidate seeking to qualify for the degree Master of Science with a major in Physics shall satisfy the following departmental requirements:

1. A minimum of 24 semester hours is required in Physics,

of which not more than 12 semester hours may be at the 400 level. The remaining hours required to satisfy the minimum of 30 semester hours for the graduate degree are to be chosen from courses in Physics or closely related fields after consultation with the student's adviser. In addition, all graduate students are required to register for Seminar (Phys. 698) each semester. Not more than 6 semester hours of credit in Phys. 599, Research, may be applied toward the required 30 semester hours. The choice of courses must be approved by the student's advisory committee.

2. A proficiency examination will be administered for the purpose of aiding the adviser in the preparation of a course of study for the candidate and/or counseling the candidate as to the advisability of continuing in the program for the M.S. degree. A student will not be admitted to candidacy until he has passed this examination.
3. A thesis and a final oral examination will be required.

## CERTIFICATE OF ADVANCED STUDY

The Certificate of Advanced Study may be awarded to students pursuing programs in Physics beyond the master's degree. This certificate is given, in accordance with the general requirements of the Graduate School, to those students following a sequence of courses approved by the department chairman and the assigned adviser. The program of courses to be taken will be drawn up with consideration given to the student's interests and background.

## Course Offerings

**NOTE:** A "T" after a course number indicates that an old number is being re-used for a new or retitled course.

### 400. Analytical Mechanics II (3)

Tensors, variational principles, introduction to Lagrangian and Hamiltonian formulation, dynamics of rigid bodies, introduction to relativistic dynamics, oscillating systems. Co-requisite: Phys. 385.

### 409X. Science Institute for In-Service Elementary Teachers (1-8) (Chemistry 409)

Subject matter in biological sciences, chemistry, earth sciences, and physics necessary for effective science teaching in the lower grades. Prerequisite: Acceptance by the director of the institute.

**450. Advanced General Physics (2-4)**

Topics selected to furnish thorough background for teaching. Not open to Physics majors. Two to six periods a week. Prerequisites: Phys. 250-251.

**451. Advanced General Physics (2-4)**

Continuation of Phys. 450. Not open to Physics majors. Two to six periods a week. Prerequisite: Phys. 450 or equivalent.

**460. Quantum Mechanics I (3)**

Schrödinger wave equation, eigen-values and eigen-functions, methods of approximation, and simple applications. Prerequisite: Phys. 400.

**463. Thermodynamics, Kinetic Theory, and Statistical Mechanics (3)**

The thermodynamics section will review such topics as the laws of thermodynamics, the entropy concept and thermodynamic potentials. Probability, distribution functions and transport phenomena are treated in the kinetic theory portion. An introductory treatment of classical and quantum-mechanical statistical mechanics will be given. The course will stress applications to areas of modern physics. Corequisite: Phys. 320 or consent of instructor.

**470. Electricity and Magnetism II (3)**

Electromagnetism, magnetic properties of matter, A-C circuit theory, Maxwell's equations and applications. Prerequisite: Phys. 370. Co-requisite: Phys. 371.

**472. Physical Measurements (2)**

Special laboratory problems. Prerequisite: Phys. 371.

**475. Advanced Electronics (3)**

Fundamentals of digital instruments and their application to measurements. Servomechanisms and operational amplifiers; analog into digital converters. Noise rejection and synchronous detection. This course is primarily intended for students in the experimental sciences. Two lectures and a two-hour laboratory period per week. Prerequisite: Phys. 375.

**477. Introduction to Astro-Physics (3)**

Kepler's laws and solar system, analysis of solar radiations, nuclear reactions in the sun, and other selected topics. Prerequisite: Phys. 300.

**483. Modern Physics II (3)**

Scattering theory, radioactive decay, nuclear reactions, models of the atomic nucleus; properties and structure of solids; cosmic rays and elementary particles. Prerequisite: Phys. 460.

**485. Methods of Mathematical Physics II (3)**

Tensor analysis. Functions of complex variables, residue cal-

culus, partial differential equations of mathematical physics, and Green's function. Prerequisite: Phys. 385 or consent of department.

**490. Science Teaching in the Elementary and Junior High School—Grades K-9 (3)**

Instructional methods and materials for teaching science in elementary and junior high schools. Analysis of modern curricula and practice in the use of associated laboratory materials developed for use at all levels from grades K through 9. Course designed for the classroom teacher and pre-teacher, but open to science supervisors and administrators. Not open to Physics majors or minors. Prerequisite: A general physical science course or equivalent, or consent of the instructor.

**491. Introduction to Research (1-3)**

Research under staff supervision. Enrollment by consent of the department.

**495X. Teaching of Physical Sciences (2)  
(Chemistry 495)**

Instructional problems confronting the secondary school teacher in classroom and laboratory. Examination and analysis of modern curricula such as PSSC, CHEMS, CBA, and IPS. Four hours a week for nine weeks. Prerequisite: Physics, Chemistry, or General Science major or minor.

**500. Classical Mechanics (3)**

Hamiltonian formulation, canonical transformations, Hamilton-Jacobi theory, special relativity, continuous media and fields. Prerequisite: Phys. 400.

**505. Institute for Science Teachers (1-8)**

Lectures, demonstrations, laboratory work, and field trips, designed for the science teacher. Subject matter from the fields of chemistry, physics, biology, and earth sciences. May be repeated to a maximum of 16 semester hours. On application to institute director and by invitation only.

**550. Topics in Nuclear and Solid State Physics (3)**

Designed to present to high school teachers of physics and other sciences a selection of topics in contemporary physics. Not open to candidates for the M.S. or C.A.S. in Physics.

**551. Topics in Relativity and Spectroscopy (3)**

Designed to present to high school teachers of physics and other sciences a selection of topics in contemporary physics. Not open to candidates for the M.S. or C.A.S. in Physics.

**559. Special Problems in Physics (1-10)**

Special problems in physics under supervision of staff. Problems may be technical in nature or concerned with teaching

procedure. May be repeated to a maximum of 10 semester hours. Prerequisite: Consent of instructor.

**560. Quantum Mechanics II (3)**

Perturbation theory, semi-classical treatment of radiation, systems of identical particles, scattering theory, Dirac theory of the electron. Prerequisite: Phys. 460.

**563. Statistical Physics I (3)**

Review of thermodynamics, kinetic theory and the Boltzmann transport equation, classic ensemble theory, the H theorem, elementary quantum statistics. Corequisite: Phys. 460.

**564. Statistical Physics II (3)**

Density matrix, fluctuations and irreversible thermodynamics, general transport theory, introduction to the many-body problem. Prerequisite: Phys. 563. Corequisite: Phys. 560.

**566. Solid State Physics I (3)**

Crystal structure, lattice vibrations, thermal and transport properties, free electron and band theories, Brillouin zones, Fermi surfaces, semi-conductors. Prerequisite: Phys. 460.

**567. Solid State Physics II (3)**

Symmetry and crystal field theory, magnetic properties, lattice vacancies, diffusion, optical properties, superconductivity. Prerequisite: Phys. 566.

**570. Electromagnetic Theory I (3)**

Maxwell's equation, plane waves in isotropic and anisotropic dielectrics, conducting media, wave guides and plasmas, dipole radiation and diffraction. Prerequisite: Phys. 470.

**571. Electromagnetic Theory II (3)**

Radiation from moving charges, relativistic formulation of electrodynamics, collisions and scattering, multipole radiation, radiation damping and self forces. Prerequisite: Phys. 570.

**580. Atomic and Molecular Physics (3)**

Atomic spectra, Zeeman effect, Stark effect, hyperfine structure. Prerequisite: Phys. 483.

**582. Nuclear Physics I (3)**

Nuclear properties, the deuteron problem, nucleon-nucleon scattering, nuclear decay, radiation detection, structure and models of the nucleus. Prerequisite: Phys. 483 or equivalent. Corequisite: Phys. 460.

**583. Nuclear Physics Laboratory (2)**

The properties of particles from natural and artificial disintegration of nuclei; the corresponding measuring instruments. Prerequisite: Phys. 582.

**584. Nuclear Physics II (3)**

Particle accelerators, nuclear reactions, nuclear models, nuclear energy, elementary particles. Prerequisite: Phys. 582 or consent of instructor.

**585. Methods of Theoretical Physics I (3)**

Calculus of variation, integral equations, integral transforms, approximation methods. Prerequisite: Phys. 485.

**586. Methods of Theoretical Physics II (3)**

Applications of group theory to physics, introduction to Hilbert space. Diagrammatic techniques, correlation functions. Prerequisites: Phys. 560 and 585.

**599. Research (1-6)**

**A. Master's Thesis**

**B. Certificate of Advanced Study**

The individual investigation of a problem under the supervision of an adviser in the department. Prerequisites: Consent of research supervisor and the department.

**651. Relativity (3)**

Lorentz transformations and kinematics of special relativity; relativistic dynamics and manifestly covariant electrodynamics; general relativity as a theory of gravitation. Prerequisites: Phys. 500 and 570.

**660. Quantum Mechanics III (3)**

Symmetry and invariance in quantum mechanics, field quantization, introductory quantum field theory. Prerequisite: Phys. 560.

**661. Field Theory (3)**

Field quantization, interacting fields, and Feynman-Dyson perturbation theory; renormalization program in quantum electrodynamics. Prerequisite: Phys. 660.

**668. Quantum Theory of Solids I (3)**

Space groups, lattice vibrational and electronic spectra of solids; elementary theory of the electron gas; effective mass theory, impurity states in metals and semiconductors. Prerequisite: Phys. 567.

**669. Quantum Theory of Solids II (3)**

Electrical conductivity and other transport coefficients, optical properties of metals and semiconductors, Fermiology, magnetic properties, and superconductivity. Prerequisite: Phys. 668.

**676. High Energy Physics I (3)**

Classification of particles into baryons, mesons, and leptons and their fundamental properties; symmetries and conservation laws. Prerequisite: Phys. 660.

**677. High Energy Physics II (3)**

Phenomenological study of the strong, electromagnetic, and weak interactions. Prerequisite: Phys. 676.

**682T. Theoretical Nuclear Physics I (3)**

Nuclear forces, nuclear moments and shapes, binding energies, nuclear models, collective nuclear motions. Prerequisite: Phys. 582.

**684. Theoretical Nuclear Physics II (3)**

Electromagnetic properties of nuclei, particle emission; scattering theory, optical model, direct reactions. Prerequisite: Phys. 682T.

**686. Fundamental Particle Theory I (3)**

S-matrix theory; analyticity properties of propagators, vertex functions, and scattering amplitudes; single-variable dispersion theory. Prerequisite: Phys. 660.

**687. Fundamental Particle Theory II (3)**

Mandelstam representation and partial-wave dispersion relations; Regge pole theory; unitary symmetry and current algebra. Prerequisite: Phys. 686.

**690. Special Topics in Physics (1-6)****A. Solid State Physics****B. Nuclear Physics****C. Elementary Particle Physics**

Lectures and discussions on topics in various fields of Physics at the graduate level. One to 6 semester hours as scheduled; course may be repeated in one or more fields of Physics. Six semester hours is the maximum in any one area; not more than 15 semester hours will count toward a master's degree. Prerequisite: Consent of department.

**698. Physics Seminar (0)**

Discussion of current problems in Physics under guidance of staff.

# Department of Political Science

**GRADUATE FACULTY:** Fusaro, Acting Department Chairman. Agranoff, Banovetz, Burnam, Czudnowski, Diamond, Dionisopoulos, Dubin, Ducat, Esseks, Flango, Frisch, Glenn, Groves, Kent, Krauss, Little, McKeough, Maryanov, Neher, Nicholson, Rehfuess, Russell, Scott, Sherbenou, Smith, Thomas, Wenner, Wiegele, Wilson, Wiste, Wit.

The Department of Political Science offers graduate programs leading to the degrees Master of Arts and Master of Science in Education, the Certificate of Advanced Study, and Doctor of Philosophy.

Six fields of concentration are available in Political Science: American Government and Politics, International Relations, Comparative Politics, Political Theory, Empirical Theory and Behavior, and Public Administration. Graduate study may lead to careers in government service (federal, state, and local), community group work, teaching, and professional writing and research. The Public Administration program offers professional preparation leading to internship opportunities in government agencies as part of course work toward a graduate degree; active efforts are made to place students in career government positions upon completion of their studies. Foreign study and overseas internship opportunities also exist. All programs are related to the student's career objectives by his departmental adviser.

## MASTER OF ARTS

Students interested in pursuing a Master of Arts degree with a major in Political Science normally should have at least 9 undergraduate semester hours in Political Science or its equivalent. When this is lacking, a student may be required to make up deficiencies by enrolling in and successfully completing designated courses, by auditing designated courses, or by engaging in supervised reading without graduate credit.

Of the minimum 30 semester hours of graduate credit required for the degree, at least 24 semester hours are to be taken in Political Science at the graduate level including:

1. Pol.S. 590, Scope and Method of Political Science (3).
2. 12 semester hours in one and 9 semester hours in another of the fields of concentration listed above.

The student may apply the additional 6 semester hours to the writing of a thesis, or may take 6 semester hours of elective courses within or outside the department. If a thesis is to be written the candidate must register for Pol.S. 599, Thesis (6). Candidates not writing a thesis must submit copies of one acceptable research paper (star paper) prepared for each of two graduate courses in Political Science.

No more than 9 semester credits in 400-level graduate courses may be included in the student's program of 30 hours.

Normally a candidate will be required to take the core courses in his chosen fields of study. These are:

- Pol.S. 535, Administration Research and Analysis (3)
- Pol.S. 540T, Major Modes of Empirical Theory (3)
- Pol.S. 545T, The Roots of Political Behavior (3)
- Pol.S. 550T, Basic Problems in Political Philosophy (3)
- Pol.S. 560T, Seminar in Comparative Political Analysis (3)
- Pol.S. 581, Theory and International Politics (3)

A written comprehensive examination is required upon completion of course work, or during the last semester of study (prior to approval of a thesis topic if the thesis option is selected). A final oral examination may also be required.

While students may elect to take Public Administration as a primary or secondary field of study for the M.A. degree, the department also offers a special degree concentration for those students contemplating professional administrative careers in government service. Students selecting this option will be required to:

1. Complete a 15-semester-hour Public Administration core consisting of Pol.S. 530T, Public Policy Processes; Pol.S. 531T and 532, Organization Science I and II; Pol.S. 535, Administration Research and Analysis; and Pol.S. 630, Seminar in Public Policy Analysis.
2. Complete 9 semester hours in a second field of Political Science, plus 6 hours of related coursework from other disciplines.

Candidates not writing a thesis must submit copies of one acceptable research paper (star paper) prepared for each of two graduate courses in Political Science.

Students in this concentration may also be required to complete an internship in a government agency for which up to 6 semester hours of credit may be granted, but such credit may not be counted toward meeting the 30-hour minimum required for the degree.

## CERTIFICATE OF ADVANCED STUDY

Any student with a master's degree who meets the admission requirements of the Graduate School, has an acceptable background in Political Science, and has a good graduate record may be permitted to pursue the Certificate. Of the 30 semester hours required, not less than 21 semester hours must be in Political Science, divided approximately equally between any two of six fields: American Government and Politics, International Relations, Comparative Politics, Political Theory, Em-



pirical Theory and Behavior, and Public Administration. A thesis is required.

Reading knowledge of a foreign language as well as a qualifying examination prior to admission to candidacy also may be required. A final comprehensive examination, written, oral, or both, is required.

## Certificate of Advanced Study

### (Area Programs)

The Department of Political Science cooperates with other departments to devise area programs leading to the Certificate. Students in such area programs shall select one department for major concentration and a second for minor concentration, the exact distribution of courses to produce the required 30 semester hours being determined in consultation with departmental faculty advisers. A thesis and a final comprehensive examination are required.

## Doctor of Philosophy

While traditionally the degree Doctor of Philosophy in Political Science has been the badge of distinction of college and university teachers, doctoral programs in Political Science are also designed with other career objectives in mind: professional research, public service, and college administration. The Department of Political Science is conscious of these several career objectives.

**Admission Policy:** Same as Graduate School requirements with the following addition: The Department of Political Science will take into consideration the student's previous performance in graduate work, here or elsewhere, and will require that, subject to special exception for persons with outstanding records, all students who wish to begin studies at the doctoral level should fall within the top one-third of Northern Illinois University graduate students on the Graduate Record Examinations.

**Course Requirements:** Same as Graduate School requirements with the following addition: The Department of Political Science requires that each graduate student at the doctoral level be examined in four fields. Three of these fields must be in Political Science. The fourth field may be in Political Science or in a related discipline other than Political Science, or may consist of related courses in more than one discipline. The fields offered by the department are: (1) American Government and Politics; (2) International Relations; (3) Comparative Politics; (4) Political Theory; (5) Empirical Theory and Be-

havior; and (6) Public Administration.

The student will be expected to consult initially with his interim adviser, and subsequently with members of his advisory committee, once these have been appointed, regarding his program of studies. Such consultation will help to insure that the student's doctoral work is related to his career and professional interests, and to Graduate School and departmental requirements. Registering for courses without the adviser's approval might lead to the accumulation of graduate credits in Political Science and related disciplines, but provides no assurance that the department will support an application for admission to candidacy for the Ph.D.

**Dissertation Requirement:** Same as Graduate School requirement.

**Language and Research Skills Requirements:** The student working toward a Ph.D. in Political Science must demonstrate an ability to make use of research tools. He will do this by showing proficiency in using language or other research skills (for example, statistics and computer applications). The choice of research tools will be made in consultation with the members of the student's advisory committee, and will relate to his fields of specialization. Proficiency is normally demonstrated by passing a special written examination. Any one of the following options will satisfy the language and research skills requirement:

1. Two foreign languages, average reading proficiency;
2. One foreign language, high level of proficiency; or
3. One foreign language with average reading proficiency, and a research tool with average proficiency.

The language and research skills requirements must be satisfied before the student presents himself for doctoral candidacy examinations.

**Residence Requirements:** Same as Graduate School requirement.

**Qualifying Examination:** Same as Graduate School requirement.

**Candidacy Examinations:** When a student has completed most or all of his course work, and not later than eight months before the granting of the Ph.D. in Political Science, he will take a candidacy examination. This will consist of written examinations in three fields of Political Science, and an oral examination in all four fields in which the student has undertaken doctoral studies. A student who successfully completes this requirement will be recommended to the Graduate School for admission to candidacy for the doctorate in Political Science. Any student who fails the candidacy examination may, with the permission of his examining committee and after the lapse of at least one semester, be permitted to repeat the ex-

amination. If he fails the candidacy examination a second time he will not be permitted to continue work toward the doctorate in the Department of Political Science.

**Oral Examination:** Same as Graduate School requirement.

**Limitation of Time:** Same as Graduate School requirement.

**Teaching Skill Requirement:** All students in the Ph.D. program will be required to participate in a training program in classroom techniques. Ordinarily the requirement will be met through direct involvement in the instructional program for at least one semester under the close supervision of a faculty member.

## Course Offerings

**NOTE:** A "T" after a course number indicates that an old number is being re-used for a new or retitled course.

## AMERICAN GOVERNMENT AND POLITICS

### 404. Metropolitan Governing Systems (3)

An examination of the political and structural elements of public decision-making in metropolitan areas. Particular emphasis is placed upon the impact of public and private influences, exercised through the network of government agencies, upon urban regions. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 303.

### 405. Urban Political Behavior (3)

The organization, conduct, and problems of politics in American urban government. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 303.

### 410. American Constitutional Development (3)

The growth and development of American constitutional law, based on an analysis and discussion of leading judicial decisions, with attention to the environmental setting of the cases. Prerequisite: Pol.S. 140 or 200.

### 411. The Supreme Court and Individual Rights (3)

The role of the Supreme Court as protector of individual rights, with emphasis on the communicative freedoms, religion, procedural due process, and civil rights. Prerequisite: Pol.S. 140 or 200.

### 416. Field Work in American Politics (3)

Application of Political Science knowledge in actual political settings. All student participation and related research project

in any semester will focus on one activity, such as election campaigns, interest group activity, or working for elected officials. Prerequisites: Pol.S. 305 and consent of instructor.

### 506. Intergovernmental Relations (3)

An analysis of national-state, national-local, state-local, inter-state, and interlocal relationships within the United States. The nature of federalism, constitutional and statutory power bases, and cooperative problem-solving.

### 510T. Seminar in the Judicial Process (3)

Judicial systems and roles, judicial selection, organization and management of litigation, influences on judicial decision-making, impact and enforcement of judicial decisions, relationships among courts and other policy makers in the political system.

### 511. Administrative Law (3)

The law as it affects public officials and their activities, the legal control of relations of public and private groups, rights and duties of interested parties.

### 516. Legislative Behavior (3)

Functioning of legislative bodies, actions of members, coalitions, policy outputs, decision processes, and constituency relationships.

### 600. Seminar in American Government and Politics I (3), II (3)

Research and discussion of selected topics. Each may be repeated to a maximum of 6 semester hours.

### 605. Seminar in Political Parties (3)

Survey of the literature and research pertaining to American political parties.

### 610. Seminar in Public Law (3)

Survey of the literature and research in public law with special reference to Anglo-American legal history, systems, and jurisprudence.

### 615. Seminar in Urban Politics (3)

The theory of urban politics with special emphasis upon urban research design.

## INTERNATIONAL RELATIONS

### 480. International Law (3)

Principles of the international law of peace, war, and neutrality. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 280.

### 481. International Organization (3)

The origins, structure, and functioning of the United Nations and its specialized agencies. Contemporary problems. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 280.

**482. Foreign Policies of the Western European Powers (3)**

The traditional and contemporary foreign policies of such major Western European countries as Great Britain, France, and Germany. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 280.

**483. Soviet Foreign Policy (3)**

The traditional objectives of Russian foreign policy and the contemporary policies of the Soviet Union. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 280 and 366.

**484. Africa in International Politics (3)**

The foreign relations of the new state of sub-Saharan Africa. Included will be an examination of relations among these states, their relations with European and other non-African states, and the international implications of the national liberation movements in Southern Africa. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 260 or 280.

**580. American National Security Policy (3)**

An analysis of national security policy and problems. U.S. national security objectives, major themes of policy and strategy, policy-making structure, instruments of policy (military, political, psychological, economic, and intelligence).

**581. Theory and International Politics (3)**

A study of the various attempts to establish a theoretical framework for and to apply new techniques to a study of international politics.

**582. Seminar in International Law and Organization (3)**

Selected topics and cases in international law. Structural and functional problems of the United Nations and its specialized agencies.

**583. Seminar in Regional Organizations (3)**

A course on the impact of regional organizations in their functional and geographic impact on the development of international relations, including economic, political, and social factors influencing the international system.

**585. Problems of American Foreign Policy (3)**

An examination of major problems in the formulation and conduct of American foreign policy.

**586. Seminar in International Relations (3)**

Research and analysis of selected topics in the field of International Relations.

**587. Southeast Asia and International Politics (3)**

An examination of Southeast Asia's role in contemporary international politics with emphasis on conflict and cooperation among neighboring states, commitment vs. neutrality in the cold war, and participation in international organizations.

**588. Latin America and International Politics (3)**

An examination of the role of Latin American countries in regional and world affairs.

**680. Research Seminar in International Relations (3)**

Research and class discussion of selected topics. May be repeated to a maximum of 9 semester hours.

**COMPARATIVE POLITICS****460T. Comparative Communist Political Systems (3)**

Analysis of the political processes and institutions of contemporary communist states and an evaluation of the theoretical methods appropriate to such a study. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 260; prior course work in Soviet, East European, or Communist Chinese governmental systems.

**461T. Politics of Developing Areas (3)**

A broad comparative introduction to the problems and politics of developing areas. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 260.

**470. Political Disintegration and Conflict (3)**

An introduction to the theories of conflict, opposition, and the disintegration of political systems; includes an analysis of the origins, characteristics, and methods of concluding violent conflicts, including war. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 260.

**472. Comparative Elites (3)**

A critical analysis of the current theories of elite behavior and function in social science literature. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 260.

**473. Comparative Political Parties (3)**

A comparative analysis of the origins, development, characteristics, and functions of modern political parties and party systems. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 260 and courses at the 300 level.

**474. Comparative Pressure Groups and Interest Articulation (3)**

A comparative study of the nature of interest articulation and of the functions, structures, and behavior of political interest groups in selected national systems, including the United States, the United Kingdom, France, the Soviet Union, Czechoslovakia, India, and Ghana. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 260.

**560T. Seminar in Comparative Political Analysis (3)**

Reading seminar in the major theoretical and methodological

concerns of the field of comparative government. Required for advanced graduate work in comparative government.

**565. Seminar in Democratic Political Systems (3)**

An analysis of pluralistic and consensual systems. The course will concern the effects of ideological, institutional, historical, and behavioral forces on the political decision-making and developmental processes of these systems. Students will be expected to have a background in American and Western European political systems.

**566. Seminar in Totalitarian Political Systems (3)**

Intensive study of totalitarianism as a theoretical concept and its application to contemporary and pre-modern political systems. Recommended: Familiarity with the governmental systems of the Soviet Union, East Europe, or Communist China.

**567. Seminar in Political Development (3)**

A reading seminar devoted to a comprehensive survey of the literature on the problems of political development and social modernization in the developing nations.

**570. Reading Seminar in Southeast Asian Politics (3)**

An examination of the literature concerning the diverse political cultures of Southeast Asia, the salient political forces, and the major political problems of development, integration, and stability in the area.

**575. Seminar in Comparative Political Institutions and Processes (3)**

An examination of the literature dealing with selected institutions and processes, such as parties, interest organizations, elites, legislatures, and executives, in a comparative framework, and the methodology used in examining these phenomena.

**660T. Research Seminar in Comparative Politics (3)**

Examination of aspects of research in comparative politics and preparation and execution of research projects. May be repeated to a maximum of 9 semester hours.

**670. Research Seminar in Southeast Asian Politics (3)**

Analytical cross-national research dealing with salient political issues of Southeast Asia.

## POLITICAL THEORY

**450T. American Political Thought (3)**

An analysis of the political thought of selected American statesmen having political responsibility at the critical moments in American history. Particular attention is given to the relationship between the political philosophy in their thinking and

the political actions which they initiated. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 350 or 351.

**451. Southeast Asian Political Thought (3)**

Major political concepts which have influenced Southeast Asian societies. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 371.

**455. Marxism (3)**

Marxism and the origins of modern communism. The theories of Lenin, Trotsky, Stalin, Mao Tse-Tung, and Tito. Discussion of the practice of communism in the Soviet Union, Soviet satellites, and China; the international communist movement. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 352.

**550T. Basic Problems in Political Philosophy (3)**

A comparative analysis of Aristotle's *Politics* as illustrative of classical political philosophy and one or more of such modern political philosophers as Machiavelli, Hobbes, and Locke. May be repeated once.

**551. Principles of Plato's Political Theory (3)**

An analysis of Plato's political dialogues.

**552. Theory of American Democracy (3)**

An analysis of the theories of the nature of American democracy. May be repeated once.

**650T. Seminar in Political Theory (3)**

Research seminar on selected topics in political philosophy. May be repeated up to 6 semester hours.

## EMPIRICAL THEORY AND BEHAVIOR

**445. Political Opinion (3)**

The nature and formation of political opinion, techniques for its measurement, the role of the mass media. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 305 and 340T.

**446T. Political Participation and Electoral Behavior (3)**

Analysis of the varying types of political participation with emphasis on electoral behavior and the socio-psychological basis of participation. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 200 and 305.

**540T. Major Modes of Empirical Theory (3)**

With focus upon the individual as the basic unit of analysis, the course will examine such major empirical theoretical approaches as institutional analysis; the role of the elites, ideologies, and publics; political power; systems and communications networks; game theory; decision-making, and phenomenology.



**545T. The Roots of Political Behavior (3)**

An examination of the foundations of political behavior of individuals and groups; a survey of the research methods used to study such behavior. May be repeated for a total of 6 credit hours.

**641. Seminar in Empirical Theory and Behavior (3)**

Research and class discussion of selected topics in empirical theory and methodology. May be repeated up to 6 semester hours.

## PUBLIC ADMINISTRATION

**420T. Public Policy Formulation (3)**

The dynamics of public policy formulation in the executive branch of government. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 320T.

**422. Public Organization Theory (3)**

A review of theories regarding the internal functioning of large-scale public organizations. Prerequisite: Pol.S. 140 or 200. Recommended: Pol.S. 200 or 330.

**439T. Internship in Administration (3)**

Admission upon written departmental approval. Two days a week or equivalent in a government agency. Prerequisite: Pol.S. 320T. Recommended: Pol.S. 330.

**522. Urban Planning and Zoning (3)**

The basic theory, techniques, and practice of modern urban planning and land use regulation; current trends and problems; social, political, and economic characteristics of urban, suburban, and metropolitan political systems.

**524. Problems of Municipal Administration (3)**

The administration of local government services in urban and metropolitan areas. Analysis of particular problems faced by local governments in the performance of line and staff functions.

**530T. Public Policy Processes (3)**

An introduction to the processes through which public policy is formulated and executed in the U.S. and selected foreign political systems. Concern is focused on the comparative study of political relationships of administrative agencies with clientele, interest groups, and the legislative, executive, and administrative branches. Special attention is also given to questions of administrative responsibility and ethics in the public service.

**531T. Organization Science I (3)**

Topics include the history and current state of the public administration discipline, a review of approaches to organizational analysis, a detailed study of organizations from sociological and psychological perspectives, and an introduction to systems-analysis concepts in administrative theory.

**532. Organization Science II (3)**

As a continuation of Pol.S. 531T, the course focuses on quantitative techniques in administration analysis and on the behavioral and systems approaches to budgeting theory. A general review of fiscal planning and reporting methods is included. Prerequisite: Pol.S. 531 or consent of instructor.

**535. Administration Research and Analysis (3)**

A systematic analysis of the scope and method of Public Administration through time and space. Emphasis upon the use of theory in empirical research and the development of research designs.

**620. Seminar in Public Administration (3)**

Research and discussion of selected topics.

**621. Seminar in Comparative Public Administration (3)**

Research and discussion of administrative problems, processes, and methods in various governments.

**622. Seminar in Metropolitan Governance (3)**

Selected problems in the governing of metropolitan areas.

**623. Seminar in Administrative Theory (3)**

Intensive examination of selected topics related to the science of public management, the politics of administration, and the role of government agencies in the formulation of public policy.

**630. Seminar in Public Policy Analysis (3)**

A research seminar on public policy analysis.

**635. Seminar in Governmental and Administrative Problems of Underdeveloped Countries (3)**

Research and discussion of selected topics.

**639. Internship in Public Administration (2-6)**

Individual work in government agency. May be repeated. Prerequisite: Written consent of department chairman.

## GENERAL

**490. Materials and Problems of High School Instruction in the Social Sciences (3)**  
(Cross-listed as Economics 490X)



## POLITICAL SCIENCE

Offered in conjunction with the Departments of Anthropology, Economics, and Sociology.

### **491. Materials and Problems of Elementary School Instruction in the Social Sciences (2)**

Offered in conjunction with the Departments of Anthropology, Economics, and Sociology.

### **493X. Seminar in Political Economy (3)** **(Economics 493)**

- A. Decision-Making in the Public Sector**
- B. International Relations**
- C. Metropolitan Studies**
- D. Manpower Policy**

Selected topics in political economy, offered jointly by the Departments of Political Science and Economics. Topics will be listed by semester. May be repeated once as topics change. Prerequisite: Consent of instructors.

### **495. Seminar in Current Problems (3)**

Contemporary issues and policies in government and politics. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of department adviser.

**497. Elementary Computer Techniques for Political Analysis (3)**  
Fundamentals of preparation and manipulation of data using the computer with emphasis upon problems and programs particular to research in Political Science. Prerequisites: Pol.S. 140 or 200, Math. 305B or equivalent. Recommended: Pol.S. 340T.

### **498. Seminar Abroad (3-9)**

A foreign study program to be arranged with the department chairman.

### **590. Scope and Method of Political Science (3)**

Examination of research and scholarly methods pursued in Political Science, the philosophy of science and other philosophical bases for the study of political phenomena. Required of all Political Science majors.

### **591. Seminar in College Teaching of Political Science (1)**

Open to graduate teaching interns in Political Science as an integral part of the college teaching intern program. Prerequisite: Consent of department chairman. May be repeated.

### **595. Political Research Techniques and Research (3)**

Political generalizations and hypotheses; techniques of data gathering; fundamentals of statistics as applied to political research; scales; clustering techniques; applications, counter sorter and computer; mathematical modeling and simulation in studies of political behavior. Recommended for students taking "computer applications" in lieu of language requirements for M.A. and Ph.D.

### **596. Independent Study in Political Science (3-6)**

Open to qualified students who wish to do individual advanced work in Political Science. May be repeated to a maximum of 9 semester hours.

### **597. Advanced Computer Techniques for Political Analysis (3)**

Use of the computer for advanced political analysis and research. Recommended: Pol.S. 497 or equivalent.

### **599. Thesis (1-6)**

### **698. Foreign Study and Internship (3-9)**

Individual research, study, and work abroad.

### **699. Doctoral Research and Dissertation (2-16)**

May be repeated to a maximum of 32 semester hours.

# Department of Psychology

**GRADUATE FACULTY:** Dean, Department Chairman. Bell, Bischof, Davis, Ditrichs, Doty, Feldman, Grier, Hershberger, Kaplan, Katkovsky, Lints, Lotsof, McAllister, Martin, Ord, Peterson, Pielstick, Schwartz, Senkowski, Simon, Stewart, Woodruff.

## MASTER OF ARTS

The degree Master of Arts, with a major in the field of Psychology, is designed to give the student an adequate graduate foundation on which to build the remainder of his professional education. It is recognized that in no way should the M.A. in Psychology be regarded as a terminal degree from the professional standpoint, since there are few opportunities in the field of Psychology for one with this limited level of education. There is need for further preparation before one can be regarded as a psychologist, in either the research or the applied area. The major is designed to give the student: (1) some core experiences in the field of Psychology; (2) an opportunity to do some intensive study in a restricted area of the field; (3) an opportunity to take two or three courses from outside the field of Psychology to enrich his educational experiences; and (4) experience in research and thesis writing.

Students who elect a graduate major in Psychology must satisfy the following requirements:

	Semester hours
Core courses: Psych. 501, 504, 506, and three of the following four courses: Psych. 502, 503, 509, 565	18
Thesis: Psych. 599	3-6
Graduate courses in Psychology and related fields (to be determined by the student and his adviser)	6-9
	<hr/> 30

## DOCTOR OF PHILOSOPHY

The doctoral program in Psychology is built around the areas of Biopsychology, Developmental, Personality, Clinical, Learning and Performance, and School Psychology, with strong emphasis on quantitative methods and research techniques.

Several principles serve as guidelines: (1) the development of knowledge of methodologies; (2) acquaintance with basic literature; (3) integration of course work, practical experience, and research experience; (4) emphasis upon depth in a relatively few areas; and (5) study in related fields when appropriate.

Among the requirements for the Ph.D. in Psychology are the following:

- Students must complete a minimum of 30 semester hours of graduate work beyond the master's degree, exclusive of dissertation and internship. These must be taken in the Department of Psychology at Northern Illinois University.
- Students in clinical or school psychology programs must do a year of internship in addition to the usual 90 semester hours beyond the bachelor's degree.
- Students must demonstrate a knowledge of:
  - Two foreign languages, average reading proficiency;
  - One foreign language, high level of proficiency;
  - One foreign language with average reading proficiency and one research tool with average proficiency;
  - Two research tools, average proficiency; or
  - One research tool, high level of proficiency.
- Students entering Northern Illinois University with a master's degree from another institution will be expected to enroll in the Core Course sequence. With departmental approval students with adequate background may be exempted from individual courses.
- The candidacy examination will consist of an extensive written examination covering the student's major area.
- The Ph.D. candidate will complete a dissertation. Normally the dissertation and related research will be the equivalent of two semesters' work (24-32 semester hours). The dissertation will be a substantial contribution to knowledge in which the student displays powers of original scholarship. Prior to the time the student begins gathering his specific research data, a prospectus of his dissertation must be approved by the members of his advisory committee and filed with the department.
- After completing all other requirements for the Ph.D. in Psychology, including a dissertation which has been approved by his committee, the student will present an oral defense of his dissertation. Normally, this oral defense will be conducted in the presence of his committee; however, other members of the department and the faculties of other disciplines will be invited to attend and participate.

## Course Offerings

### 415. Psychology of Exceptional Children (3)

Psychology of atypical children—gifted, mentally subnormal,

physically handicapped, chronically ill, and socially maladjusted. Their needs and dynamics of behavior in home, classes, and institutions. Prerequisite: Psych. 225 or equivalent.

**416. Introduction to Psychopathology (3)**

An introduction to the study of abnormal behavior with emphasis on the neuroses and psychoses. The dynamics of mental disorders and psychological factors involved in the treatment of mental disorders. Prerequisites: Psych. 102, plus one other course in Psychology.

**428. History of Psychology (3)**

A review of the historical roots of the science of psychology and the development of the field to contemporary times. Prerequisites: Psych. 102, plus one other course in Psychology.

**430. Psychology of Motivation (3)**

The study of behavior as a function of biological need and activation. The experimental analysis of the factors which change the effectiveness of positive reinforcements and punishments. Prerequisite: Psych. 330 or consent of instructor.

**431. Physiological Psychology (4)**

(Cross-listed as Biological Sciences 431X)

An understanding of the physiological functioning of the body as it affects behavior. Emphasis is given to the neurological factors involved. Lecture and laboratory. Prerequisite: B.Sci. 200 or equivalent, or consent of instructor.

**432. Psychology of Personality (2)**

Consideration of basic concepts used in study of personality. Discussion and examination of contemporary studies in personality, with a critical evaluation based on experimental, psychometric, and other evidence. Prerequisites: Psych. 102, plus one other course in Psychology.

**433. Psychology of Personality, Laboratory (2)**

Training in current research techniques used in the study of personality. Experiments will be conducted in the areas of emotional processes, motivation, conflict, and learning as applied to the study of personality. Prerequisite: Psych. 432, or concurrent enrollment.

**445. Psychology of Thinking (3)**

A general introduction to the areas of verbal learning and verbal behavior. Emphasis will be placed on empirical findings derived from the experimental laboratory. Topics to be discussed will include rote learning, primary and secondary generalization, conceptual learning, and problem solving. Prerequisite: Psych. 330 or consent of instructor.

**465. Developmental Psychology (3)**

The span of life from conception to death, emphasizing the outstanding characteristics of normal behavior for each period. Graduate majors in Psychology will not receive credit for this course. Prerequisites: Psych. 102, plus one other course in psychology.

**470. Social Factors and Behavior (3)**

Individual behavior in relation to a variety of social stimuli; emphasis on such concepts as social interaction and influence, socialization, group processes, leadership, mass media, and prejudice. Prerequisites: Psych. 102 and one additional course in psychology.

**480. Comparative Psychology (3)**

(Cross-listed as Biological Sciences 480X)

A critical examination of experimental studies using animals as subjects. A comparison of the behavior of the various species. Lecture and laboratory. Prerequisites: Psych. 102 and an additional course in psychology.

**485. Individual Study in Psychology (1-3)**

Qualified students interested in specific problems in psychology may take this course, working with any faculty member of the department. The student must have written permission from the faculty member with whom he is doing the work and the chairman of the department. May be repeated to a maximum of 6 semester hours.

**GENERAL PREREQUISITE:** It is assumed that students enrolling in 500 and 600 level courses in Psychology will have had an adequate background on which to build. If the student has any question about his preparation, he should consult with the instructor of the course.

**501. Fundamentals of Learning (3)**

An analysis of methodology, empirical findings, and theoretical attempts in the area of learning with an emphasis on classical and instrumental conditioning. Prerequisite: Graduate standing in Psychology or permission of the instructor.

**502. Introduction to Experimental Personality (3)**

An introduction to methods and empirical findings in the area of personality, with emphasis on experimental investigation. The study of several key topics of current interest in the field will be utilized to illustrate typical methods and findings. Prerequisite: Graduate standing in Psychology or permission of instructor.

**503. Biopsychology (3)**

A selected review of current research concerned with the biological and chemical bases of behavior. Prerequisite: Graduate standing in Psychology or permission of instructor.

**504. Advanced Psychological Statistics (3)**

Probability and probability models; linear functions of independent random variables; sampling; the binomial, hypergeometric, normal, t, chi-square, and F distributions; estimation of parameters; tests of statistical hypotheses; correlation; introduction to nonparametric methods. Prerequisite: A course in statistics or consent of instructor.

**505. Statistical Problems in Psychology (3)**

Consideration of advanced statistical techniques used in psychological research, such as analysis of variance and complex correlational methods. Prerequisite: A course in statistics or consent of instructor.

**506. Experimental Design (3)**

A basic course in experimental design and data analysis, including such designs as factorial experiments, randomized blocks, Latin squares, incomplete blocks, and nested designs; the uses of confounding and fractional replication; some nonparametric tests related to the analysis of variance designs. Prerequisite: Psych. 504.

**507. Psychometric Techniques (3)**

A consideration of the assumptions involved and the techniques available in psychometrics. Consideration made of development of psychological tests. Prerequisite: Psych. 504.

**508. Factor Analysis (3)**

A study of various factor analysis techniques, with emphasis placed on their applications to behavior investigation.

**509. Fundamentals of Perception (3)**

The major theories of perception and their historical antecedents, classical and contemporary psychophysics, some basic auditory and visual phenomena, and selected topics from the current research literature. Prerequisite: Graduate standing in Psychology or permission of the instructor.

**512. Principles of Psychotherapy (3)**

Analysis of the various techniques and theories of psychotherapy and an evaluation of their respective effectiveness.

**516. Advanced Psychopathology (3)****520. Experimental Social Psychology (3)**

A survey in depth of topics of current interest in the study of social interaction. Emphasis will be on experimental approaches to the social behavior of humans, but developments in animal social experimentation will also be utilized. Topics examined will include, but not necessarily be limited to, attitudes and persuasion, conformity, social judgment, aggression, and interpersonal attraction. Prerequisite: Graduate standing in Psychology or consent of instructor.

**526. Theories of Personality (3)**

A systematic study of the theoretical contributions of major psychologists to basic understanding of the dynamics of human personality.

**528. Neuroanatomical Bases of Behavior (3)**

Gross, microscopical, and ultramicroscopical anatomy of the nervous system; basic subdivisions of the central, peripheral, and autonomic components of the nervous system; histology and ultrastructure of nervous tissue; neuroanatomical mechanisms in the regulation of behavior. Prerequisites: Graduate standing in Psychology and Psych. 431 or 503, or consent of instructor.

**529. Neurophysiological Bases of Behavior (3)**

Excitation, conduction, and transmission in the nervous system; neural networks and cellular approaches to the study of learning; neural coding and the transformation and representation of information in the nervous system; limbic and hypothalamic regulation of drives and reinforcement. Prerequisites: Graduate standing in Psychology and Psych. 528, or consent of instructor.

**530. Neurochemical Bases of Behavior (3)**

(Cross-listed as Biological Sciences 530X)

Biochemistry of the nervous system; chemical composition, metabolism and chemistry of neurons and glia; chemical bases of learning, motivation, and other categories of behavior. Prerequisites: Graduate standing in Psychology, Psych. 529, or consent of instructor.

**535. Theories of Learning (3)**

A general study of theories of learning with particular emphasis on theories which have emerged from the psychological laboratory.

**539. Introduction to School Psychology (3)**

A review of the history and development of school psychology, types of problems handled, methods employed, and current perspectives on psychological work in the schools with emphasis on research functions and the utilization of principles of learning. Prerequisite: Consent of instructor.

**540. Introduction to Clinical Psychology (2)**

Introduction to the area of clinical psychology, with a survey of specific skills and techniques used. Consideration of research in the area.

**541. Introduction to Clinical Psychology, Laboratory (2)**

Observation of and initial contact with subjects under direct supervision of clinical staff. Controlled introduction to use of clinical instruments. Prerequisite: Psych. 540 or concurrent enrollment.



**542. Assessment of Cognitive Functions (2)**

The theory, methods, and empirical data regarding cognitive functions. The assessment of intelligence and central nervous system dysfunction will be emphasized. Prerequisites: Psych. 539 or 540 and consent of instructor.

**543. Assessment of Cognitive Functions, Laboratory (2)**

Supervised practice in administering, evaluating, and reporting the results of the assessment of intelligence, brain damage, cognitive disorders, etc. Prerequisites: Psych. 542 or concurrent enrollment and consent of instructor.

**544. Assessment of Personality (2)**

Methods of appraising personality in a clinical setting. Critical evaluation of psychodiagnostic tools, such as Rorschach and TAT. A review of the research literature on psychodiagnostics. Prerequisites: Psych. 542 and consent of instructor.

**545. Assessment of Personality, Laboratory (2)**

Supervised practice in the administration and interpretation of various tools for personality assessment, with particular emphasis on projective techniques. Prerequisite: Psych. 544 or concurrent enrollment.

**548. Current Problems in Assessment (3)**

A consideration of current problems in psychological assessment. The exact topics will vary with each presentation. May be repeated. Prerequisite: Consent of instructor.

**549. Current Problems in Psychotherapy (3)**

A consideration of problems in psychological diagnosis met in practicum situations and in the current literature of the field. The exact topics will vary with each presentation. May be repeated.

**550. Techniques of Behavior Modification (4)**

Lecture and laboratory. Prerequisites: Psych. 512 and 541, and consent of instructor.

**553. Practicum in School Psychology (1-3)**

Experience in psychological work in schools. Activities will vary depending on the prior experience of the student but may include observation and analysis of behavior, assessment of learning dysfunctions, research work, design of learning programs, and consultation with school personnel. May be repeated to a maximum of 6 semester hours. Prerequisite: Psych. 539.

**554. Practicum in Psychotherapy (1-3)**

May be repeated to a maximum of 9 semester hours. Prerequisite: Consent of instructor.

**555. Internship (0)**

**A. Clinical Psychology**

**B. School Psychology**

A period of one academic year in a setting such as a hospital, clinic, or school, where the student will perform the functions of a psychologist under the direct supervision of qualified personnel. The internship setting must have the approval of the Department of Psychology. Prerequisites: For A, Psych. 549 and approval of the Department of Psychology. For B, at least 4 semester hours of Psych. 553 and approval of the Department of Psychology.

**560. Mathematical Psychology I (3)**

The nature of quantitative models in psychology, their mathematical basis, and techniques of construction. Elementary models from learning, psychophysics, choice behavior, and other areas are examined. Emphasis is on preparation to read current literature and conduct research. Prerequisite: A year of mathematical statistics, or consent of instructor.

**561. Mathematical Psychology II (3)**

A continuation of Psychology 560 in which more advanced models from the current literature, and their mathematical basis, are considered. Emphasis is given to the axioms and models for measurement in psychology. Prerequisite: Psych. 560.

**565. Behavioral Development (3)**

An intensive review of the processes involved in behavioral development. The focus is on the factors affecting these processes, rather than on a cross-sectional description of characteristic behavioral changes related to age. Prerequisite: Psychology major or permission of instructor.

**566. Current Issues in Developmental Psychology (3)**

An examination of major historical and contemporary areas within the field of developmental psychology, with the focus on research and theoretical writings appearing within the current five-year period. A combination of classroom activities and out-of-class projects will be utilized. Prerequisites: Psych. 565 and consent of instructor.

**567. Research Methodology in Developmental Psychology (3)**

An examination of the interplay of theory, research methodology, and design as they exert their influences on data collecting, analysis, and interpretation in the field of developmental psychology. Prerequisites: Psych. 504, 506, and 565, or consent of instructor.



**570. Studies in Experimental Psychology (2-6)**

- A. Learning**
- B. Perception**
- C. Motivation**
- D. Sensory Processes**
- E. Physiological**
- G. Comparative**
- H. Mathematical**

Specialized courses in the area of experimental psychology offered under the appropriate heading. The courses will be on specific topics within this area and may be lecture, laboratory, seminar, or a combination of these methods. The topics and the semester hours of credit will vary from semester to semester. May be repeated to a maximum of 15 semester hours in each sub-section.

**571. Studies in General Psychology (2-6)**

- A. Behavioral Development**
- B. Individual Differences**
- C. Personality**
- D. Quantitative Methods**
- E. Instrumentation**
- G. Social Behavior**

Specialized courses in the area of general psychology offered under the appropriate heading. The courses will be on specific topics within this area and may be lecture, laboratory, seminar, or a combination of these methods. The topics and the semester hours of credit will vary from semester to semester. May be repeated to a maximum of 15 semester hours in each sub-section.

**572. Studies in Clinical Psychology (2-6)**

- A. Clinical Methods**
- B. Behavioral Pathology**
- C. Group Processes**
- D. Child-Clinical**

Specialized courses in the area of clinical psychology offered under the appropriate heading. The courses will be on specific topics within this area and may be lecture, laboratory, seminar, or a combination of these methods. The topics and the semester hours of credit will vary from semester to semester. May be repeated to a maximum of 6 semester hours in each sub-section.

**580. Seminar in Psychology (2-4)**

- A. Psychotherapy**
- B. School Psychology**
- C. Professional Problems**
- D. College Teaching**

Specialized topics will be considered that are of professional concern to those entering the field of Psychology. A and B may be repeated once; C and D may not be repeated. Prerequisite: Consent of instructor.

**585. Independent Study (1-10)**

May be repeated to a maximum of 6 semester hours for the M.A., and 15 semester hours for the Ph.D.

**599. Master's Thesis (1-6)**

The student is eligible to register for this course after he has been accepted as a candidate for the master's degree by the Department of Psychology.

**699. Ph.D. Dissertation (2-15)**

May be repeated for additional credit.

Area majors involving the Social Sciences are possible through the departments of Anthropology, Economics, Political Science, and Sociology. Students interested in a Social Science

major should consult the chairman of one of these four departments.

## Social Sciences

# Department of Sociology

**GRADUATE FACULTY:** Seymour, Department Chairman. Beaudry, Burchard, Cavan (Emeritus), Das, Davis, Doyle, Elkholy, Engelmann, Ferdinand, Godfrey, Horoszowski, Howard, Irle, Jessor, Kornacker, Kourvetaris, Krauss, Lazar, Marshall, More, Rhoads, Schindler, Smith, Suchner, Struzzo, Upchurch, Vedder (Emeritus).

The Department of Sociology offers graduate courses and research opportunities leading to the degree Master of Arts and to the Certificate of Advanced Study. The department also cooperates with other departments in offering an area major leading to the degree Master of Science in Education.

Graduate work in this field is designed to prepare students for teaching or research in Sociology, for positions in public and private administration, and for further advanced study. Students desiring to pursue the graduate curriculum in Sociology are required to consult with the departmental graduate adviser before being admitted to courses.

## MASTER OF ARTS

Students who elect the master's program with a major in Sociology must have had at least 10 semester hours in Sociology and a course in statistics. When these are lacking, they must be compensated for during the graduate program. Students pursuing the master's degree in Sociology will be required to complete one advanced course in statistics (Soc. 575), one graduate course or seminar in sociological theory (Soc. 570, 571, 670), and one graduate seminar in research methods (Soc. 576, 675, 676).

In addition students are required to elect either (A) a thesis (Soc. 599A), and a comprehensive examination in the field in which the thesis falls, or (B) comprehensive examinations in theory, methods, and one other field (social organization and institutions, social psychology, disorganization, comparative analysis of societies).

The remaining work for the degree is to be elected from the graduate offerings of the department in consultation with the graduate adviser. Total for the degree: 30 semester hours.

## CERTIFICATE OF ADVANCED STUDY

Prerequisite: master's degree. Candidates working toward the Certificate of Advanced Study in Sociology will plan a course of study designed especially to meet their needs. The course of study will then be presented to the advisory committee for

its approval. The program may be concentrated entirely in Sociology, although a minor of 9 semester hours in a closely related field is acceptable. A comprehensive examination, either written or oral, or both, is required. In addition the student must either: take 24 semester hours of course work and write a thesis (6 hours); or take 30 semester hours of course work. Total for the certificate: 30 semester hours.

## Course Offerings

### 453. Sociology of Education (3)

The relationship of the educational system to the social structure; the changing function of education in an advanced industrial society; the impact of education on technological changes and social mobility; a comparison of systems in various cultures. Prerequisite: 6 semester hours of Sociology or consent of instructor.

### 457. Comparative Family Systems (3)

Structural-functional and comparative analysis of family systems in relation to other societal systems and to social change. Prerequisite: 6 semester hours of Sociology or consent of instructor.

### 460. Collective Behavior (3)

A systematic study of social processes which emerge in unstructured social situations; principles of behavior as expressed in crowds, mobs, panic, fads, fashion, social movement; personal organization and behavior in unstructured social situations. Prerequisites: Soc. 170 and 260 or equivalent.

### 461. Intergroup Relations (3)

Analysis and exposition of cultural and social-psychological influences underlying relations among racial, ethnic, and other minority and majority groups. Emphasis upon problems of prejudice and discrimination, and the promotion of harmonious intergroup relations. Prerequisite: 6 semester hours of Sociology or consent of instructor.

### 462. Gerontology (3)

The social problems of the aged and the aging. Prerequisite: 6 semester hours of Sociology or consent of instructor.

### 463. Advanced Social Psychology (3)

Advanced treatment of the principles of social psychology with emphasis on recent developments in theory and research. Prerequisites: Soc. 170 and 260 or consent of instructor.

### 470. History of Social Thought (3)

Ancient and medieval philosophies leading to the development of modern sociological theory.

**473. Sociological Theory (3)**

Sociological theory as a body of unifying principles and as a guide for research. The significant contributions of outstanding sociologists past and present. Primarily for majors in Sociology.

**476. Social Science Research (3)**

Principal methods of research in the social sciences; the planning and execution of a research project; current techniques of collecting, analyzing, interpreting, and reporting data. Prerequisites: 6 semester hours in one of the social science fields and a course in statistics.

**483. Social Disorganization (3)**

Effects on social patterns and institutions of various disruptive forces; social conflict as a process; aspects of social control and social change in influencing reorganization of groups. Prerequisite: 6 semester hours of Sociology or consent of instructor.

**487. Probation and Parole (3)**

Early development, types of service, administrative organization, investigative and supervisory aspects of probation and parole within the legal structure of society. Prerequisite: Soc. 288.

**488. Juvenile Delinquency (3)**

Social and psychological factors in delinquent behavior; causation, prevention, and rehabilitation; the role of community agencies; the juvenile court. Visits to juvenile correctional agencies. Prerequisites: Soc. 170, 288.

**491. Demographic Research Methods (3)**

Introduction to research and statistical procedures of population analysis. Measures of fertility, mortality, morbidity, and migration; critical analysis of census and migration; critical analysis of census and vital registration data; construction of life tables; population estimates and projections. Prerequisites: Soc. 170 or consent of instructor and Math. 301.

**493. Sociology of Selected Developing Societies (3)**

Modifications in social structures in relation to economic development and urbanization. Focus on East Asian, Southeast Asian, or Middle Eastern societies. Prerequisite: Consent of instructor.

**495. Proseminar in Sociology (3)**

Selected topics from major areas of sociology: social psychology; social organization, social disorganization, theory or methods of research. Prerequisite: Consent of instructor.

**550. Complex Organizations (3)**

Comparative analyses of the functioning of complex groupings;

growth, authority, leadership and decision-making, centralization and dispersion, survival and change in various types of organizations. Prerequisites: Soc. 170 and one other course in Sociology.

**552. Community Analysis (3)**

Selected topics and studies in the structure and functioning of urban communities. Attention given to urbanization and other processes and factors associated. Prerequisite: 9 semester hours of Sociology or consent of instructor.

**553. Social Dynamics (3)**

The constants of social change, the variability of rates of change, the factors involved from a sociological point of view in the various forms of revolution typified by the Industrial Revolution, the Protestant Reformation, and various political movements. Prerequisite: 9 semester hours of Sociology or consent of instructor.

**558. Social Dynamics of Non-Western Societies (3)**

Structural change including evolution, revolution, social disintegration and the development of new forms; the role of elites. Prerequisite: Soc. 391 and consent of instructor.

**559. Development: Modernization and Social Structure (3)**

Sociological analysis of economic development, agrarian reform, industrialization, and urbanization in economically underdeveloped countries. Prerequisites: Soc. 391 and consent of instructor.

**560. Personality in Social Structure (3)**

Development of judgmental capacity. Attitude change and social structure. Prerequisite: 9 semester hours in Sociology, including a course in social psychology, or consent of instructor.

**563. The Individual in Mass Society (3)**

Recent research on relationships between personality and opinions; social and psychological foundations of communication, ideology, conformity, and alienation. Prerequisite: 9 semester hours in Sociology, including a course in social psychology, or consent of instructor.

**564. Research Fields and Problems in Social Psychology (3)**

Historical developments related to recent research in experimental social psychology, small groups, and related fields. May be repeated to a maximum of 6 semester hours. Prerequisites: A course in social psychology and consent of instructor.

**570. Classical Sociological Theory (3)**

Critique of Durkheim, Weber, and other early theorists. Prerequisite: Soc. 470 or equivalent.

## SOCIOLOGY

### **571. Contemporary Sociological Theory (3)**

Critique of Mead, Parsons, Becker, Homans, Merton, and other recent theorists. Prerequisite: Soc. 473 or equivalent.

### **572. Proseminar in Sociology (3)**

Analysis and synthesis of current research, concepts, and issues in various areas. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of instructor.

### **575. Sociological Statistics (3)**

Methods of sampling and testing hypotheses; statistical inference; correlation and other measures of association; methods of treating both quantitative and non-quantitative variables. Prerequisite: A 3-semester-hour course in statistics.

### **576. Advanced Research Methodology (3)**

The scientific approach, selection of problems, design, methods of analysis. Prerequisite: Soc. 476 or equivalent.

### **581. Theories of Delinquency and Crime (3)**

Relation of theories of delinquency and crime to general biological, sociological, and psychological theories. Prerequisite: Soc. 488 or equivalent.

### **583. Theories and Types of Social Disorganization (3)**

Disruptive forces which affect institutions and social habits. Processes leading to reorganization or disintegration. Prerequisites: Soc. 170 and 483.

### **590. Independent Study in Sociology (3)**

Supervised readings and research in special areas of Sociology. May be repeated to a maximum of 12 semester hours. Prerequisite: Written permission of department chairman.

### **599. Thesis**

#### **A. Master's Degree (1-6)**

#### **B. Certificate of Advanced Study (1-6)**

May be repeated to a maximum of 6 semester hours.

### **651. Seminar in Social Institutions (3)**

Recent research in sociology of religion, the family, sociology of education, or other topics. May be repeated to a maximum of 9 semester hours. Prerequisite: Consent of instructor.

### **652. Seminar in Social Organization (3)**

Recent research in stratification, population, or other selected topics. May be repeated to a maximum of 9 semester hours. Prerequisite: Consent of instructor.

### **658. Seminar in Comparative Analysis of Societies (3)**

Comparative and functional analyses of social systems, locality groupings, and social change. A maximum of 9 semester hours may be taken in Soc. 658 and 659 combined. Prerequisite: Soc. 558 or 559 or consent of instructor.

### **659. Seminar in Selected Societies (3)**

A maximum of 9 semester hours may be taken in Soc. 658 and 659 combined. Prerequisite: Soc. 558 or 559 or consent of instructor.

### **661. Seminar in Social Psychology (3)**

Theory, experimental social psychology, small groups, gerontology, or other topics. May be repeated to a maximum of 9 semester hours. Prerequisite: A graduate course in social psychology or consent of instructor.

### **670. Seminar in Sociological Theory (3)**

Analyses of viewpoints, such as functionalism, systems theory, conflict theory, symbolic interactionism, or areas such as logic of research, social change, sociology of knowledge, or other topics. May be repeated to a maximum of 9 semester hours. Prerequisite: Soc. 571 or 572 or consent of instructor.

### **675. Seminar in Special Research Techniques (3)**

Survey methods, measurement and scaling, design, factor analysis, or other topics. May be repeated to a maximum of 9 semester hours. Prerequisite: Consent of instructor.

### **676. Seminar in Methodological Issues (3)**

May be repeated to a maximum of 6 semester hours. Prerequisite: Soc. 576.

### **681. Seminar in Crime, Delinquency, and Correctional Administration (3)**

Comparative analyses and typologies of delinquency and crime, corrections, the prison systems, criminal law, or other topics. May be repeated to a maximum of 6 semester hours. Prerequisite: Soc. 581 or equivalent.

### **682. Seminar in Social Disorganization (3)**

Analysis of selected topics such as conflict, revolution, natural catastrophes, social change, or other topics. May be repeated to a maximum of 6 semester hours. Prerequisite: Soc. 583 or consent of instructor.

# Department of Speech

**GRADUATE FACULTY:** Gulley, Department Chairman. Andrews, Arnold, Breen, Crawford, Dallinger, Deihl, Dewey, Fisher, Gray, Hanna, Irvin, Johannesen, Kresheck, LaBelle, Lankford, Larson, Parker, Pflaumer, Polzin, Potts, Powell, Sanders, Schaffer, Shearer, Tucker, Ulrich, Welsh, Wilderman, Williams, Wood, Zachman.

The Department of Speech offers graduate programs leading to the degrees Master of Arts, Master of Science in Education, and the Certificate of Advanced Study. The graduate program in Speech is adapted to the student's individual needs and academic background. Each student plans his program in consultation with an adviser from the graduate faculty of the department.

## MASTER OF ARTS AND MASTER OF SCIENCE IN EDUCATION

### GENERAL REQUIREMENTS

1. A student may concentrate his graduate study in the areas of Speech Communication; Speech Pathology and Audiology; or Theatre Arts.
2. With the approval of his adviser, the student may elect a maximum of 10 semester hours in allied studies. The remainder of the semester hours he submits for the degree must be taken in courses offered by the Department of Speech.
3. Introduction to Graduate Study in Speech (Spch. 591) is required of all students in Speech Communication and Speech Pathology and Audiology.
4. A candidate, with the advice and consent of his adviser, may elect to earn either a Master of Arts or a Master of Science in Education degree with or without a thesis according to the following requirements:

#### Degree with thesis

- a. The student must earn a minimum of 30 semester hours of graduate credit.
- b. A thesis must be submitted and approved. A maximum of 6 semester hours may be allotted to thesis research and writing.
- c. The student must pass a written examination which will assess his knowledge and ability in his area of concentration in graduate study and an oral examination on his thesis.

#### Degree without thesis

- a. The student must earn a minimum of 36 semester hours of graduate credit.
  - b. The student must pass a written examination which will assess his knowledge and ability in his area of concentration in graduate study.
5. A student concentrating in Speech Communication must take at least one course in each of the areas of: Communication Theory, Rhetorical Theory and Public Address, Radio-Television-Film, and Speech Education.

### ADDITIONAL REQUIREMENTS IN SPEECH PATHOLOGY-AUDIOLOGY

Students electing to concentrate in Speech Pathology and Audiology must meet two additional requirements:

1. Completion of the minimum academic requirements for the Certificate of Clinical Competence (ASHS). These requirements are available from the Department of Speech.
2. An experience assignment during each semester of full-time registration. Such assignments will be of a research, clinical, or teaching nature, dependent upon the needs of the student and the availability of the assignment.

### ADDITIONAL REQUIREMENTS FOR THE MASTER OF SCIENCE IN EDUCATION

1. If the student's area of concentration is Speech Communication, Seminar in the Teaching of Speech (Spch. 533) will be required. Students who are majoring in Speech Pathology and Audiology will be expected to fulfill Illinois state requirements for certification as speech and hearing therapists.
2. Although a student may concentrate his graduate study in the area of Speech Communication; Speech Pathology and Audiology; or Theatre Arts, his adviser will reserve the right to require courses in more than one area if the student's academic background is deficient in certain basic courses.

### REQUIREMENTS IN THEATRE ARTS

Students electing a concentration in Theatre Arts are expected to have acquired basic knowledge and skills in both the performing arts and the production aspects of the theatre. They



are expected to have a demonstrable ability in the analysis of Western Civilization. A liberal arts undergraduate background and a major in any of the humanities is preferred for admission to the program. However, all students may be eligible for admission to the program if they can demonstrate their ability to proceed at an advanced level.

The graduate program is designed to broaden and deepen the student's understanding of the theatre arts by developing his abilities to do independent research of an academic nature while developing his artistic capabilities. Specific programs to fit each student's needs are developed within the framework of the requirements listed below. Programs are developed in consultation between the student, his faculty adviser, and his graduate faculty advisory committee.

#### Master of Arts

1. The student will take work in each of the three general areas: Performing Arts, Design and Technology, History and Criticism.
2. Each student will choose an area of concentration.
3. The student will take Bibliography and Research Techniques in Theatre Arts (Spch. 534).
4. The student will be required to demonstrate his artistic aptitude through participation in University Theatre Productions.
5. Courses in other academic departments of the University which contribute to the student's program may be taken provided they have received prior approval of the student's faculty adviser. No more than 10 hours of such courses may be counted toward the M.A. in Theatre Arts.
6. The student must pass a written comprehensive examination covering the three areas.
7. The student will complete the additional requirements for either the program with thesis or that without thesis. In the non-thesis program, the student must complete a project culminating in a written report of independent study (Spch. 597) acceptable to a committee of three graduate faculty members. Three semester hours of credit shall be allotted for this project toward the minimum of 36 semester hours.

## CERTIFICATE OF ADVANCED STUDY

The candidate for the Certificate of Advanced Study must ar-

range a program which meets the approval of the Department of Speech. The nature of the program will depend on the student's experience and academic background.

## Course Offerings

**NOTE:** A "T" after a course offering indicates that an old number is being reused for a new or retitled course.

## SPEECH COMMUNICATION

### 400. Introduction to Rhetorical Theory and Criticism (3)

Basic approaches, methods, concepts and standards in rhetorical appraisal, classical and modern.

### 401. Contemporary Public Address (3)

An application of the logical, historical, and aesthetic disciplines to the study of the speeches of representative spokesmen of the 20th-century thought.

### 402. Group Communication (3)

The nature of group processes. Leadership, communication, and decision-making problems in small groups.

### 404. Communication Theories (3)

The role of spoken communication in social adaptation. Relationships among thought, language, and expression; verbal perception and cognition; communication models.

### 408. Semantics of Oral Discourse (3)

An approach to the problems in the use of symbols of thought and attitude in speech. Consideration of recent contributions of semantics and general semantics and their impact on such functions of oral discourse as the informative, logical, and evocative.

### 434. The Teaching of Speech (3)

The problems confronting the teacher of speech. Lectures and collateral reading on the following major subjects: the organization, content, and methods of teaching the foundation course in speech and other courses in a balanced speech curriculum. Six periods a week for nine weeks. Prerequisites: Spch. 305, 460.

### 435. Oral Communication in the Elementary Classroom (3)

A survey of the theories, practices, and research which relate oral communication to effective learning in the elementary school. Evaluation of speech behaviors in the elementary classroom. May be offered for nine weeks.

**450. Educational Radio-Television (3)**

Practical methods for the use of radio-television instruction in the classroom. Studio experience in the preparation and presentation of instructional units for telecasting. Not open to students with credit in Spch. 353 or its equivalent.

**452. Broadcasting and Society (3)**

Broadcasting as a social force in the United States. Current social issues as they are treated by the broadcasters.

**453. Comparative Systems of Broadcasting (3)**

The broadcasting systems of other nations relative to their social, economic, cultural, and political aspects.

**454. International Broadcasting (3)**

(Cross-listed as Journalism 454X)

A study of the development, structure, functions, and control of international broadcast systems and activities as they affect world relations.

**455. Broadcasting Law and Regulations (3)**

The development, structure, and functions of the legal control of broadcasting and their effect on programming processes. Prerequisite: Spch. 459.

**456. History of Film (3)**

Historical development of the motion picture.

**457. The Television Film Documentary (3)**

Investigation of the theories and techniques of the television documentary.

**458. Seminar in Radio-Television (3)**

Investigation of specific areas in radio-television. May be repeated to a maximum of 6 semester hours provided no repetition of subject matter occurs.

**459. History of Broadcasting (3)**

(Cross-listed as Journalism 459X)

The history of radio and television broadcasting in the United States from its inception to the present.

**461. Organizational Communications Seminar (3)**

Communication systems within and among organizations; types and components of communication systems; the effects of communication systems upon values, productivity, morale, dispersion of responsibility, etc.

**500. The Classical Tradition in Rhetorical Theory (3)**

Foundations of rhetoric, emphasizing the contributions of Plato, Aristotle, Cicero and Quintilian and selected medieval and Renaissance rhetorics.

**501T. Modern Rhetorical Theory (3)**

Rhetorical theory from the 18th to early 20th century.

**502T. Contemporary Rhetorical Theory (3)**

Recent approaches to rhetorical theory of Richards, Burke, Perelman, McLuhan, Goffman, or Birdwhistell and others.

**503. Studies in Communication: American (3)**

Critical studies of speeches on selected issues in American history. May be repeated for a maximum of 6 semester hours, provided that there is no duplication of material.

**505. Theory and Uses of Argument (3)**

A study of modern theories of argument and a critical examination of the function of debate in the determination of public policy.

**506. Advanced Public Speaking and Group Discussion (2)**

For school administrators and teachers who are not specialists in speech but who, in the discharge of their professional and civic duties, are called upon to give various types of speeches, to lead group discussions, and to preside at meetings governed by parliamentary law.

**507. Theory of Discussion (3)**

Survey of the development of contemporary theories and research in the study of discussion.

**508. Studies in Communication: British (3)**

Critical studies of speeches on selected issues of British history. May be repeated for a maximum of 6 semester hours, provided there is no duplication of material.

**510. Symbolic Behavior and Communication (3)**

Description of the nature of symbols and the major forms of symbolic systems used in speech communication. Emphasis on linguistic, tonal, and visual codes during the speech act.

**530. Speech Communication Workshop (1-3)**

For teachers and other professionals who wish to study current problems and keep abreast of trends, innovations and knowledge in various areas of speech communication. Only 3 semester hours of Spch. 530 may be applied toward a master's degree or a Certificate of Advanced Study in Speech. However, Spch. 530 may be repeated for credit provided no duplication of subject matter occurs.

**533. Seminar in the Teaching of Speech (3)****535. The Forensic Program (3)**

The organization, direction, and evaluation of intraschool, community, and interschool activities in debate, discussion, extempore speaking, and oratory.

**536. Seminar in Oral Interpretation in Senior High School (3)**

A summary and critical analysis of literature concerning oral interpretation on the senior high school level. Considers the planning of a high school program.

## SPEECH

### **539. Internship Teaching of Speech Communication (1)**

For graduate students preparing to teach. Study of problems related to selection, organization, and evaluation of course content will be augmented by internship experience in the presentation of units of instruction in classes under supervision and criticism. One credit hour per semester required of all teaching assistants during their teaching experience. May be repeated for a total of 3 semester hours.

### **550. Seminar in Broadcasting (3)**

Intensive study of selected topics in broadcasting. Topics will vary from semester to semester. May be repeated to a maximum of 9 semester hours provided that no repetition of subject matter occurs. Prerequisite: Consent of instructor.

### **551. Seminar in Broadcast Research (3)**

Problems, methods, techniques, and responsibilities related to radio-television research.

### **552. Seminar in Advanced Problems of Broadcast Production (3)**

Techniques, theories, and criticism of production for radio, television, or film as used in television. May be repeated to a maximum of 6 semester hours provided there is no duplication of course content. Prerequisite: Consent of instructor.

### **553. Seminar in Radio-Television Management (3)**

Problems in the operation and management of the broadcast station in the commercial or educational field. May be repeated to a maximum of 6 semester hours provided there is no duplication of course content. Prerequisite: Consent of instructor.

### **591. Introduction to Graduate Study in Speech (3)**

### **592. Communications Research Methodology (3)**

A survey of research problems and procedures in Speech with consideration of treatments and analysis of experimental data.

### **598A. Directed Individual Study I (1-6)**

Independent study of problems in any area of Speech: speech communication, radio-television-film, speech education, speech pathology, audiology, interpretation; and related fields. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of instructor.

### **598B. Directed Individual Study II (1-6)**

Independent pursuit of advanced problems in Speech of special concern to qualified graduate students. Open only to candidates enrolled in the sixth-year program. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of instructor.

### **599A. Thesis I (1-6)**

Open only to students engaged in writing a thesis in a Master of Arts or a Master of Science in Education program. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of the student's graduate adviser.

### **599B. Thesis II (1-6)**

Open only to students engaged in writing a thesis in a Certificate of Advanced Study program. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of the student's graduate adviser.

### **607. Seminar in Persuasion (3)**

Survey of the literature and research in the field of persuasion with special reference to the analysis of theories and techniques of obtaining attention and motivation in oral advocacy. Prerequisites: Spch. 304 and/or 404 or the equivalent in courses taken in another institution.

### **630. Seminar in Speech Education (3)**

May be repeated to a maximum of 9 semester hours provided that no repetition of subject matter occurs.

### **660. Special Topics in the History and Criticism of Public Address (3)**

Intensive studies of selected topics in the history and criticism of public address. Extensive use will be made of books, government documents, articles in journals and newspapers, and speeches relevant to the topic selected. May be repeated to a maximum of 9 semester hours, provided that no repetition of subject matter occurs.

## SPEECH PATHOLOGY AND AUDIOLOGY

### **420. Hearing Problems and Audiometric Methods (3)**

An introduction to clinical audiology; etiology, diagnosis, and rehabilitation of auditory disorders. Observation and orientation in hearing testing.

### **421. Aural Rehabilitation (3)**

Methods and materials of speech writing, auditory training, hearing aids, and speech conservation for the hard-of-hearing. Observation and presentation of sample lessons. Prerequisites: Spch. 420. Students must enroll for at least 1 semester hour of Spch. 428, Introduction to Hearing Practicum.

### **422. Clinical Methods in Speech Pathology (3)**

Therapeutic procedures for the correction of speech-defective children in the public school. Problems of surveying, scheduling, and administering a public school speech-correction program. Six periods a week for nine weeks. Prerequisite: Consent of instructor.

**423. Voice and Articulation Disorders (4)**

Nature and causes of disorders of articulation and voice. Consideration of diagnostic and therapeutic procedures. Observation and demonstration laboratory. Prerequisites: Spch. 220 and Spch. 323 or consent of instructor.

**424. Stuttering (3)**

Modern theories of stuttering. An overview of etiological and concomitant factors in stuttering with emphasis on basic therapy procedures for stuttering children and adults.

**425. Organic Disorders of Speech (3)**

Causes, symptoms, and speech therapy procedures for cerebral palsy, aphasia in children and adults, and other language disabilities related to pathologies of the central nervous system.

**426. Assessment of Hearing (3)**

A lecture-laboratory course in the standard audiometric battery, special tests of auditory function, and their evaluation and interpretation. Clinical practice in hearing testing. Prerequisites: Spch. 420 and consent of instructor.

**427. Introduction to Speech and Language Practicum (1)**

Observation, discussion, and beginning clinical practice of diagnostic and therapeutic procedures. Prerequisite: Spch. 423 or consent of instructor.

**428. Introduction to Hearing Practicum (1)**

Observation, practice, and discussion of diagnostic and rehabilitative audiologic procedures. Prerequisite: Spch. 221 or consent of instructor.

**429. Diagnostic Procedures for Speech and Language (3)**

Fundamental concepts underlying measurement procedures in speech pathology. Emphasis on basic practices in the construction, administration, and interpretation of tests. Techniques of the diagnostic interview and reporting case material. Prerequisites: Spch. 425 and a course in elementary statistics or consent of instructor.

**466X. Sign Language and Fingerspelling for the Deaf (3)  
(Special Education 466)**

Development of receptive and expressive skills in sign language and fingerspelling. Practice in the simultaneous use of speech and sign language or fingerspelling. Other aids to visual communication by the deaf.

**520. Speech Handicaps (3)**

A consideration of classification, etiologies, and symptomatology of speech problems among children and adults with special attention to rehabilitative procedures; clinical observation.

**521. Seminar in Voice and Articulation Disorders (3-6)****A. Voice Disorders (3)****B. Articulation Disorders (3)**

Discussion and review of the literature bearing on the theory, etiology, and treatment of voice and articulation disorders.

**522. Clinical Measurement in Speech Pathology (3)**

Principles and methods of assessing the significant parameters of normal and defective speech with particular emphasis upon measurement and diagnosis; clinical practicum.

**525. Speech Science (3)**

The acoustical, physiological, and psychological foundations of oral communication; laboratory experimentation.

**526. Seminar in Language Development (3)**

Theories and research on speech and language acquisition from infant vocalizations to the decoding and encoding of abstract concepts, description, measurement and analysis of normal and variant language patterns.

**527. Anatomy and Physiology of the Ear (3)**

The study of the anatomical aspects of the human auditory system. Major division of the auditory system as a function of the embryonic formation, morphological and physiological aspects. Prerequisite: Consent of instructor.

**528. Behavioral Characteristics of the Acoustically Deprived (3)**

Psychological and social behavior of the acoustically handicapped studied in detail. Methods of testing this population for therapy and rehabilitation. Prerequisite: Consent of instructor.

**529. Industrial and Military Audiology (3)**

Methods and procedures of analyzing noise levels in various industrial and military environments. Damage risk criteria and control programs. Effects of various levels of noise on the basic communication process and its effect on the human auditory system.

**540. Seminar in Audiological Assessment (3)**

Recruitment, nonorganic hearing loss, or other specialized considerations in the functioning of the auditory system. Prerequisites: Spch. 420 and 426.

**541. Seminar in Aural Rehabilitation for Adults (3)**

Speech reading, auditory training, hearing aids, or speech conversation for the hard-of-hearing. Prerequisites: Spch. 420 and 421.

**542. Aural Habilitation for Children with Hearing Impairments (3)**

Methods and procedures of evaluating hearing loss in young



children and infants. Parent counseling and early use of hearing aids. Preschool and elementary therapy technique as related to language development, speech therapy, auditory training, and environmental development. Prerequisite: Consent of instructor.

**544. Seminar in Stuttering (3)**

Advanced study of stuttering behavior, including an intensive investigation of research with particular emphasis upon theories of behavior and their application to the stuttering problem; clinical practicum.

**545. Seminars in Organic Disorders of Speech (3-9)**

**A. Cleft Palate and Speech—Laryngectomy (3)**

**B. Cerebral Palsy (3)**

**C. Aphasia (3)**

Problems in etiology, diagnosis, and therapy of speech and language disturbances associated with organic handicaps. May be offered concurrently and repeated for credit.

**546. Audition (3)**

Acoustics, psychophysical methods, and the measurement of the normal ear's response to sound.

**547. Acoustic Instrumentation (3)**

Theoretical and practical aspects of electronic audio-frequency laboratory equipment commonly used for evaluation and research in speech pathology and audiology.

**625. Experimental Phonetics (3)**

Research literature and laboratory methodology employed in the analysis of vocalized speech and the speech mechanism. Includes laboratory experiences relating to speech synthesis, acoustics, phonetic analysis, and the physiological correlates of verbal behavior.

**640. Seminar in Pediatric Audiology (3)**

The significance of early detection of auditory disorders in the young child. Methods, techniques, and procedures used in obtaining audiological diagnosis of the auditory system of the pediatric case. Prerequisite: Consent of instructor.

## THEATRE ARTS

**410. Advanced Acting (3)**

Special acting styles for the theatre. Emphasis will be placed on Greek, Shakespearean, Restoration and experimental modern styles. Prerequisite: Speech 301 or consent of instructor.

**412T. Advanced Directing (3)**

Advanced theory of stage direction with particular emphasis on

problems in classical styles, experimental and special contemporary modes. Course is heavily research oriented with additional practice in directing projects. Prerequisite: Speech 312 or consent of instructor.

**414. Problems in Creative Dramatics (3)**

A presentation of the theory of creative dramatics through a survey of research and methodological literature. Laboratory practice in creative dramatics and dramatic play with children will be required.

**415T. Group Interpretation (3)**

An examination of the aesthetics and practice of group interpretation including Readers Theatre and Chamber Theatre. Prerequisite: Spch. 210 or 215 or consent of instructor.

**419. Problems in Performing Arts (1-3)**

An in-depth research and performance preparation in one significant area of the performing arts. Open to students who are prepared for advanced and specialized study. Topics and prerequisites to be announced in advance.

**436. Stage Costume Design (3)**

Analysis of costume aesthetics, production requirements, historical periods, and theatrical style. Preparation of designs from initial research to working drawings to finished renderings and production plans. Supervised and independent laboratory experience required. Prerequisite: Spch. 230 or consent of instructor.

**441. Stage Lighting (3)**

Theories and principles of lighting for the stage. Training in the principles and uses of electricity, types of lighting equipment and control, color and its application, and the planning and rigging of lights for the stage. Actual practice and application of principles provided through required laboratory experience in lighting of university theatre production.

**445. Stage Design (3)**

Modern techniques in designing stage scenery. Analysis of production requirements, historical period, and theatrical style. Preparation of designs through initial research, sketches, designer's elevations and floor plans. Practical experience through supervised participation in the mounting of theatrical productions.

**449T. Problems in Design and Technology (1-3)**

Seminar in special problems and topics in design and technology. Open to students who are prepared for advanced and specialized study. Topics and prerequisites to be announced in advance.



**460. Educational Theatre Methods (3)**

The place of the teacher of theatre in the secondary school. The organization, content, material, and procedure for teaching theatre as a curricular subject and as an extra-curricular program within the educational system.

**470. History of Theatre to 1650 (3)**

The origin of theatre as a social force and an artistic form and its development to the middle of the 17th century. Relation of play to theatre, actor, and audience, to social, literary, and artistic interests in the classical Greek, Roman, Elizabethan, and Neo-Classical French periods. Reading and analysis of theatre classics worthy of revival.

**471. Theatre History, 1650-Present (3)**

The history of the theatre and its literature from the middle of the 17th century to the present. Analysis of significant persons and events, including Moliere, Restoration, French Romanticism, the rise of the director, independent theatre movement, realism, and expressionism.

**476. Problems in Theatre History (1-3)**

Seminar in special periods and topics of theatre history. Open to students who are prepared for advanced and specialized study. Topics and prerequisites to be announced in advance.

**481. Playwriting (3)**

The conventions and techniques that playwrights use to communicate in the theatre. Analysis of selected plays. Lectures and discussion combined with exercises in the planning and writing of scenes and short plays.

**511. Seminar: Performing Arts in the Theatre (3)**

- A. Classical Styles
- B. Experimental Styles of Performance
- C. Directing Problems in the Modern Theatre
- D. Acting Problems in Varying Forms of Theatre

The subject and materials of this seminar will change from term to term. Each unit will be related to some advanced concept in the performing arts and will include laboratories and artistic projects. May be repeated for credit.

**513. Seminar: Theatre History (3)**

- A. Classical and Neo-Classical Theatre
- B. British Theatre
- C. Roots of the Modern Theatre
- D. Early American Theatre
- E. Modern American Theatre

The subject and materials of this seminar will change from term to term. May be repeated for credit.

**515. Seminar: Production, Design, and Technical Problems (3)****A. The Physical Theatre****B. Developments in Technical Practices****C. Theatre Architecture****D. History of Costume****E. Lighting Theory****F. Scene Design**

The subject and materials of this seminar will change from term to term. May be repeated for credit.

**516. Voice and Diction in the Educational Theatre (2)**

Training methods involved in the development of good stage speech and an effective stage voice including a study of foreign and regional dialects for character impersonation.

**532. Seminar in Theatre Education (3)**

A problem-solution approach to the difficulties encountered in teaching theatre as an integral part of the curricular and/or extra-curricular program in school systems. Both hypothetical and practical problems will be explored. Particular emphasis will be placed upon investigation and research. Prerequisite: Spch. 460 or teaching experience.

**534. Bibliography and Research Techniques in Theatre Arts (3)**

An investigation of the resources and research tools used in graduate study of theatre arts. Study of historical, critical, and experimental methods as they apply to the academic study of theatre arts; consideration of the production and creative thesis; consideration of report-writing style and the mechanics of thesis and report writing; and preparation of bibliographies, prospectuses, and reports.

**597A. Directed Individual Study in Theatre Arts I (1-3)**

Independent study of problems in any area of theatre. May be repeated to a maximum of 3 semester hours. Prerequisite: Consent of instructor.

**597B. Directed Individual Study in Theatre Arts II (1-3)**

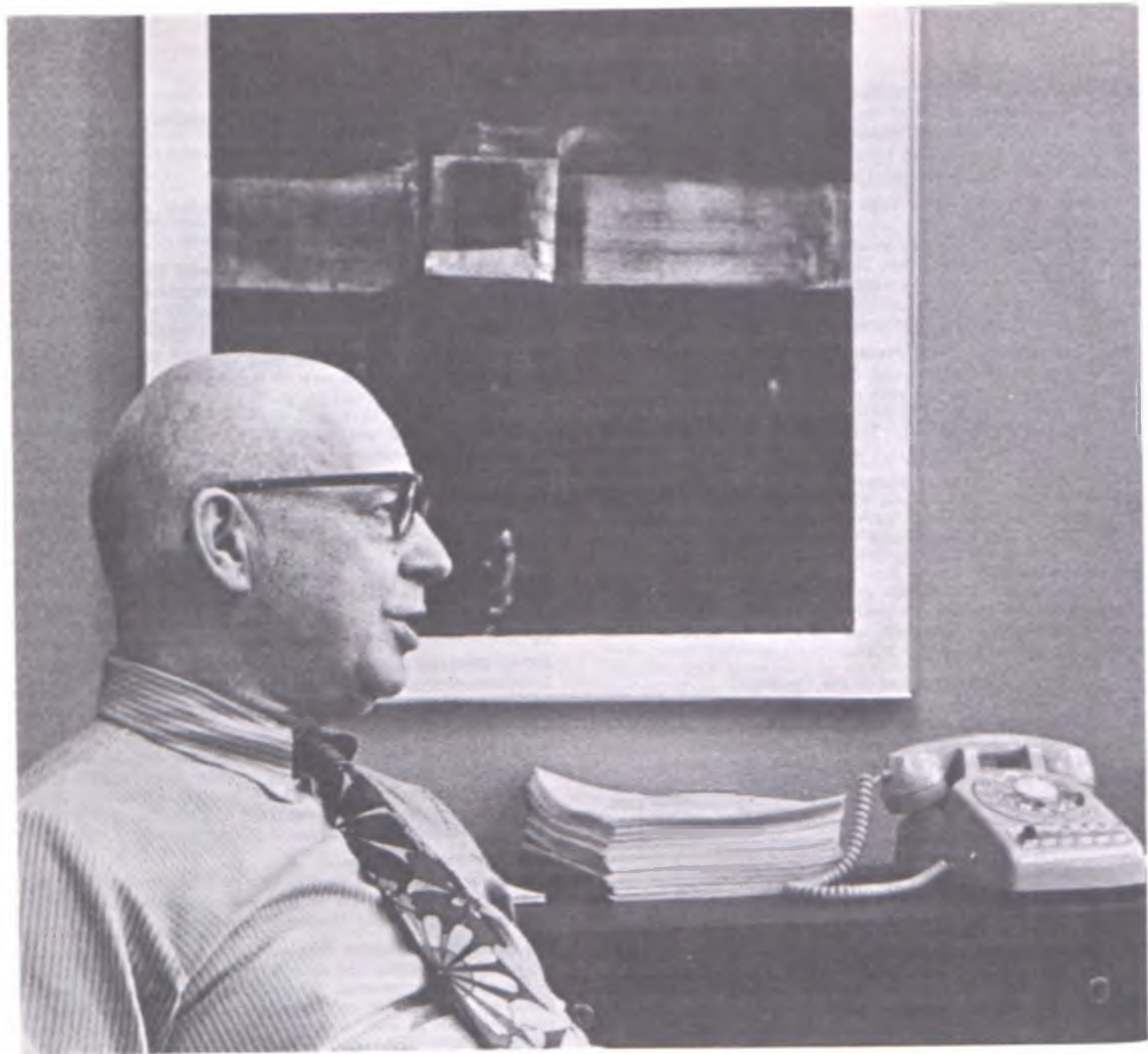
Independent pursuit of advanced problems in theatre arts to qualified graduate students. Open only to candidates in the sixth year program. May be repeated to a maximum of 3 semester hours. Prerequisite: Consent of instructor.

**612. Theatrical Criticism (3)**

The major contributors to the arts of dramatic and theatrical criticism from the Greeks to the present day as they have influenced dramatic and theatrical practices.

**617. Seminar in Theatre Research (3)**

An intensive investigation of a single significant dramatic form or theatrical phenomenon. The selection of each topic will be made on the basis of current research needs and will be announced prior to each semester. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of instructor.



Robert W. Buggert, Ph.D., Dean  
Philip S. Wells, Ed.D., Assistant to the Dean

# College of Fine and Applied Arts

Art  
Home Economics  
Industry and Technology  
Music

# Department of Art

**GRADUATE FACULTY:** Arends, Department Head. Canon, Assistant Department Head. Armstrong, Ball, Bealmer, D. Beard, R. Beard, Bell, Bisanz, Bornhuetter, Brown, Burke, Caldwell, Driesbach, Even, Fairchild, Fox, Fullington, Haendel, Kabak, McKay, Mahmoud, Shahzaman, Stevens, Stewart, Strawn, Syrek, Wells, White.

The Department of Art offers graduate programs leading to the degrees Master of Science in Education with a major in Art, Master of Arts, and Master of Fine Arts. Deficiencies may be removed through the satisfactory completion of courses required by the department; these courses may not be used to satisfy degree requirements. The Department of Art may retain for its collection any work produced in scheduled classes or presented for the one-man show. A departmental folio, *Graduate Programs in Art*, is available from the Art Department upon request. It contains complete and detailed information about the graduate programs in Art. The student's adviser will guide him in planning his program, in the preparation of his research project, thesis, or one-man show, and in the preparation for the final departmental examination.

## MASTER OF SCIENCE IN EDUCATION

Candidates for the degree Master of Science in Education with a major in Art must complete a minimum of 30 semester hours of graduate work. The program is designed for those students who wish to prepare for an administrative, research, or supervisory role in art education in addition to classroom teaching. Degree requirements include:

- Art 580, Seminar (2)
- Art 584, History and Philosophy of Art Education (3)
- Art 585, Research Methods in Art Education (3)
- Art Education electives (3)
- Related fields outside the Department of Art (0-6)
- Studio Art and Art History electives (10-16)
- Art 681, Problems in Art Education (Research Project) (3)

Before this degree is conferred students must be qualified for a valid State of Illinois teaching certificate and must have taken Art 344 and 345 or equivalent courses.

## MASTER OF ARTS

The degree Master of Arts is designed for those students who wish to concentrate their study in one of three areas: Studio Art, Art History, or Art Teaching. Candidates for the degree must complete a minimum of 30 semester hours of graduate work and must choose their area of emphasis prior to requesting candidacy for the degree. Students who select the Studio or Art Teaching emphasis must pass a portfolio

exam prior to being admitted to candidacy for the degree. Degree requirements include:

### Studio Emphasis

- Art 504, Drawing (3)
- Art 510, Design (3)
- Art 580, Seminar (2)
- Art History electives (6)
- Studio Art electives (minimum—12)
- Art 599B, One Man Show and Documentation (2)  
Three copies of a pictorial documentation of the one-man show must be submitted to the Graduate School as the equivalent of a thesis.

### Art History Emphasis

- Art 428, Studio Problems in the Technical and Historical Resources of the Artist: Drawing (3)
- Art 429, Studio Problems in the Technical and Historical Resources of the Artist: Painting (3)
- Art 601, Seminar in Art History (3)
- Art History electives (minimum—15)
- Art 599A, Thesis (2)

### Art Teaching Emphasis

- Art 580, Seminar (2)
- Art 584, History and Philosophy of Art Education (3)
- Art 585, Research Methods in Art Education (3)
- Art Education electives (3)
- Studio Art and/or Art History electives (17-19)
- Art 599A, Thesis, or Art 599B, One Man Show and Documentation (2)  
In the case of a one-man show, three copies of a pictorial documentation of the show must be submitted to the Graduate School as the equivalent of a thesis.

The following additional requirements must be completed before the Master of Arts degree is conferred:

1. Demonstration of a reading knowledge of one modern foreign language (Art History Emphasis)
2. An area concentration in studio courses (Studio Emphasis)
3. Art 481 or equivalent (Art Teaching Emphasis)

## MASTER OF FINE ARTS

The degree Master of Fine Arts requires 60 semester hours of graduate study. The degree is designed primarily for those students who plan to prepare themselves for college teaching in one of the studio areas or for a profession in the fine and commercial art fields. Degree requirements include:

- Art 428, Studio Problems in the Technical and Historical Resources of the Artist: Drawing (3)



Art 429, Studio Problems in the Technical and Historical Resources of the Artist: Painting (3)

Art 580, Seminar (4)

Art 680, Teaching Art at the College Level (Internship) (3)  
Art History electives (9-12)

Art 599B, One Man Show and Documentation (2)

Three copies of a pictorial documentation of the one-man show must be submitted to the Graduate School as the equivalent of a thesis.

In certain cases, Art 428 and 429 may be waived by the student's advisory committee.

## Course Offerings

### 413. Advanced Photography (3)

Further exploration of the technical and aesthetic aspects of photography as a contemporary art medium. Studio and lecture. Six periods a week. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 313 or consent of instructor.

### 421. Advanced Painting (3)

Individually selected problems in studio techniques of painting in a variety of media. Studio and lecture. Six periods a week. Prerequisite: Art 326.

### 422. Advanced Painting (3)

Advanced studio problems in various painting media. Six periods a week. Studio and lecture. Prerequisite: Art 421.

### 428. Studio Problems in the Technical and Historical Resources of the Artist: Drawing (3)

The media and processes of the artist and their historical significance. The studies emphasize drawing techniques from the 14th through the 19th centuries.

### 429. Studio Problems in the Technical and Historical Resources of the Artist: Painting (3)

The media and processes of the artist and their historical significance. The studies emphasize painting techniques from the 14th through the 19th centuries.

### 431. Advanced Printmaking (3)

Opportunity for individual development of printmaking skills and techniques through selected problems. Studio and lecture. Six periods a week. Prerequisite: Art 336.

### 432. Advanced Printmaking (3)

Continuation of the study of printmaking techniques through work in selected areas. Studio and lecture. Six periods a week. Prerequisite: Art 431.

### 445. Technical Problems in Ceramics (3)

Advanced theory and laboratory experience in glaze calculation

and testing, clay body formulation and testing, engobe formulation, properties of glaze oxide, kiln firing, and kiln construction. Study of contemporary and historical examples of ceramics. Six periods a week. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 441 or consent of instructor.

### 451. Advanced Metalwork and Jewelry (3)

Further work in techniques and design in contemporary metalwork and jewelry. Studio and lecture. Six periods a week. Prerequisite: Art 354.

### 452. Advanced Metalwork and Jewelry (3)

Opportunity to develop studio skills in the technical processes and design of contemporary metalwork and jewelry. Studio and lecture. Six periods a week. Prerequisite: Art 451.

### 455. Advanced Glassblowing (3)

Continuation of Art 355 with emphasis upon individual style in glassblowing as an art form. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 355 or consent of instructor.

### 456. Woodcraft Studio (3)

This course is intended to provide the opportunity for crafts and sculpture students to use wood as a creative medium as the potter uses clay, the metal craftsman silver, or the sculptor bronze. Emphasis will be upon sculptural use of materials by both hand and machine techniques. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 212 or consent of instructor.

### 461. Advanced Sculpture (3)

Further work in processes, materials, and design of sculpture in selected media. Studio and lecture. Six periods a week. Prerequisite: Art 364.

### 462. Advanced Sculpture (3)

Continuation of Art 461 with emphasis on expression and competency in the processes and design of sculpture. Individual problems. Studio and lecture. Six periods a week. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 461.

### 471. Advanced Weaving (3)

Advanced study and application of contemporary techniques of weaving. Emphasis on personal expression in two and three dimensional form. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 371.

### 472. Advanced Textile Printing (3)

Advanced studio work in textile print processes, which may include batik, tie-dye, silk screen, and direct painting on fabrics. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 372.



**473. Tapestry and Rug Weaving (3)**

Study and application of historic and contemporary methods of tapestry and rug weaving. May be repeated to a maximum of 9 semester hours.

**475. Tubular and Double Weaving (3)**

Study and use of double and tubular weaving techniques on four and multiple harness looms. Prerequisite: Art 471 or consent of instructor.

**476. Art of the Eastern Mediterranean and Anatolia (3)**

An analytical study of the art and architecture of the Eastern Mediterranean, Western Asia Minor, Anatolia, and the Levant Coast from the beginning of the Stone Age to the downfall of the Phoenician commercial empire.

**483. Art in Elementary Schools (3)**

Art education in relation to the needs, growth, and development patterns of children. Studio and lecture. Not open to Art majors.

**484. Aesthetic Education (3)**

A theoretical analysis of the problems of teaching for appreciation in general education. An appraisal of some current attempts at their solution based upon insights afforded by contemporary studies in aesthetics and art education.

**485. Studies in Art History (3)**

A course designed to study specific topics in art history. Topics to be announced. May be repeated but credit is limited to 3 semester hours per topic.

**486. Special Problems in Art History (3)**

Specific studies in related areas of art history: i.e., aesthetics, iconography, criticism, or literary sources of art. May be repeated, but credit is limited to 3 semester hours per topic. Prerequisite: 6 hours of art history survey or equivalent, or permission of instructor.

**487. Southeast Asian Art (3)**

The art of Burma, Thailand, Malaya, Cambodia, Laos, North Vietnam, South Vietnam, Indonesia.

**488. African Art (3)**

The ancient and contemporary art of Africa.

**489. Workshop in Art or Art Education (2 or 3)**

Concentrated study with professional artists and art educators. Offered irregularly. May be repeated.

**490. Independent Research (1-9)**

Work on individual problems in the student's major field. May be repeated to a maximum of 9 semester hours. Prerequisite: Consent of head of department and instructor.

**491. History of Prints and Graphic Processes (3)**

The development of woodcuts, etching, engraving, lithography, etc., in the history of art.

**492. Contemporary Art (3)**

A study of current art directions, styles, and attitudes and their relationships to contemporary society.

**493. History of Architecture III: From 1900 (3)**

The study of building styles, theories, form, and construction as exemplified by the major architectural monuments from 1900 to the present.

**496. History of Decorative Arts (3)**

Chronological survey of the minor arts (furniture, textiles, ceramics, glass, etc.)

**497. History of Architecture I: To 1400 (3)**

Building styles, theories, form, and construction as exemplified by the major architectural monuments from the ancient world through the end of the Middle Ages.

**498. History of Architecture II: 1400-1900 (3)**

Building styles, theories, form, and construction as exemplified by the major architectural monuments from the Renaissance through the 19th century.

**501. Drawing (3)**

Advanced problems in drawing based upon a study of the human figure. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 402 or consent of instructor.

**504. Drawing (3)**

Analytical studies of style and composition in the drawing media. Attention will be given to the capacities and limitations of pencil, pen, brush, ink, silverpoint, reed, etc. May be repeated to a maximum of 9 semester hours.

**510. Design (3)**

Comprehensive problems involving two and three dimensional design in various media. May be repeated to a maximum of 9 semester hours. Prerequisite: Consent of instructor.

**511. Advertising Design (3)**

Advanced problems in visual communication with an emphasis on media reproduction processes. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 412 or consent of instructor.

**512. Design: Technical Problems (3)**

Opportunity for research in specialized laboratory problems. May be repeated to a maximum of 9 semester hours. Prerequisite: Consent of instructor.

**513. Photography (3)**

Photographic techniques in black and white and color with an emphasis on the aesthetic approach to photography. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 413 or consent of instructor.

**514. Photography (3)**

The techniques and processes in the production of motion pictures as an art form. Individual and group problems in black and white and color production. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 513 or consent of instructor.

**515. Design: Seminar (3)**

A survey of contemporary design theory and practice including consultant techniques; psychological, sociological, and economic factors in designing for consumer acceptance. May be repeated to a maximum of 9 semester hours. Prerequisite: Consent of instructor.

**516. Industrial Design (3)**

Technology and product development. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 417 or consent of instructor.

**517. Interior Design (3)**

Advanced problems in interior design including both commercial and domestic fields. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 305 or consent of instructor.

**522. Painting (3)**

Advanced study of pictorial structure through the use of various techniques and materials. Extended independent study. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 422 or consent of instructor.

**523. Painting (3)**

The development of individual style in painting. Extended independent study. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 522 or consent of instructor.

**526. Painting (3)**

Current modes in painting. Extended independent study. May be repeated to a maximum of 9 semester hours. Prerequisite: Consent of instructor.

**531. Printmaking (3)**

Advanced work in intaglio, lithography, serigraphy, or woodcut. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 432 or consent of instructor.

**532. Printmaking (3)**

Experimental printmaking. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 531 or consent of instructor.

**533. Printmaking (3)**

Advanced: the exploration of technical problems in any of the various areas of printmaking. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 532 or consent of instructor.

**541. Ceramics (3)**

Exploration of three dimensional form using fired clay. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 444 or consent of instructor.

**542. Ceramics (3)**

Advanced ceramics laboratory work emphasizing the development of a personal, professional style. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 541 or consent of instructor.

**543. Advanced Ceramics (3)**

Advanced ceramics laboratory work relating to the professional development of the concerned student. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 542.

**551. Metalwork and Jewelry (3)**

Advanced design and execution of contemporary metalwork and jewelry. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 452 or consent of instructor.

**552. Silversmithing (3)**

Design and execution of flat and hollow ware. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 551 or consent of instructor.

**553. Enameling (3)**

An investigation of the area of enameling, glass, and vitreous materials. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 454 or consent of instructor.

**560. Sculpture (3)**

Advanced: individual development through work in various media. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 462 or consent of instructor.

**561. Sculpture (3)**

Investigation of the various methods of metalworking in sculpture. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 560 or consent of instructor.

**562. Sculpture (3)**

Technical problems in the casting of metal alloys. May be repeated to a maximum of 9 semester hours. Prerequisites: Art 561 and consent of instructor.

**571. Weaving (3)**

Advanced weaving laboratory work emphasizing the develop-

ment of a personal, professional style. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 471 or consent of instructor.

**572. Advanced Tapestry and Rug Weaving (3)**

Advanced laboratory work in tapestry and rug weaving with emphasis on personal and professional style. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 473.

**573. Textile Printing (3)**

Advanced studio work in varied textile printing media emphasizing the development of a personal and professional style. May be repeated to a maximum of 9 semester hours. Prerequisite: Art 472.

**580. Seminar (2)**

Investigation and discussion of current and historical issues related to the visual arts. Required of all graduate students. One semester required of M.S. and M.A. candidates and 2 semesters required of M.F.A. candidates.

**581. Organization and Supervision of Elementary Art Programs (3)**

An investigation of the philosophy, materials, and procedures related to the teaching of art in the elementary schools. Intended for those graduate students who plan to work in art supervisory positions.

**582. Organization and Supervision of Secondary Art Programs (3)**

Survey of trends and procedures in the teaching of art in the secondary school.

**584. History and Philosophy of Art Education (3)**

Survey and appraisal of the historical and philosophical basis for teaching of art. Consideration of current objectives with implications for change.

**585. Research Methods in Art Education (3)**

Methods and techniques of research including statistical analysis and data processing. Critical evaluation of selected studies.

**588. Learning Theory in Art Education (3)**

A study of those theories of learning that are specifically related to the creative experience. The results of this study are applied to the problems of learning and teaching in art education; to questions of method, scope, and sequence in art programs.

**589. Workshop in Art (3)**

Concentrated study with professional artists. Offered irregularly as specialists become available. May be repeated. A limit of 6 semester hours may be applied toward an advanced degree.

**590. Independent Study (1-9)**

Work on individual problems in the student's chosen field. Prerequisites: Consent of head of department and instructor.

**591. Studies in Medieval Art (3)**

Specific subjects chosen from Early Christian, Byzantine, Romanesque, or Gothic art. May be repeated to a maximum of 9 semester hours.

**592. Studies in Italian Renaissance Art (3)**

Specific subjects in Italian art from ca. 1200 to ca. 1600. May be repeated to a maximum of 9 semester hours.

**593. Studies in Northern Renaissance Art (3)**

Specific subjects chosen from the arts of Northern Europe from ca. 1400 to ca. 1600. May be repeated to a maximum of 9 semester hours.

**594. Studies in 17th and 18th Century Art (3)**

Specific subjects chosen from Baroque or Rococo art. May be repeated to a maximum of 9 semester hours.

**595. Studies in 19th Century Art (3)**

Specific subjects in 19th century art from the time of the French Revolution to ca. 1900. May be repeated to a maximum of 9 semester hours.

**596. Studies in American Art (3)**

Specific subjects chosen from the development of art in America from ca. 1670 to the present. May be repeated to a maximum of 9 semester hours.

**598. Studies in Oriental Art (3)**

Specific subjects chosen from the arts of the Middle East, Far East, or Southeast Asia. May be repeated to a maximum of 9 semester hours.

**599A. Thesis (1-6)**

A study of the thesis from the point of view of both content and form. Prerequisite: Admission to degree candidacy.

**599B. One-Man Show (1-6)**

Preparation of the one-man show and documentation from the point of view of both content and form. Prerequisite: Admission to degree candidacy.

**600. Studies in Ancient Art (3)**

Specific subjects in the arts of Egypt, Mesopotamia, Greece, or Rome. May be repeated to a maximum of 9 semester hours.

**601. Seminar in Art History (3)**

Investigation of specific topics in art history. Topics to be announced. May be repeated but limited to 3 semester hours per topic.

**602. Studies in Latin American Art (3)**

Specific subjects chosen from the arts of Central or South America. May be repeated to a maximum of 9 semester hours.

**603. Independent Study in the History of Art (3)**

A course designed for individual research in special problems and original subjects in art history as determined by the student with his adviser. Prerequisites: Permission of adviser and graduate standing. May be repeated.

**604. Studies in Primitive Art (3)**

Specific subjects chosen from the arts of Africa, Oceania, or the Americas. May be repeated to a maximum of 9 semester hours.

**605. Studies in 20th Century Art (3)**

Specific subjects chosen from the development of contemporary art from ca. 1900 to the present. May be repeated to a maximum of 9 semester hours.

mum of 9 semester hours.

**622. Comparative Arts (2)**

(Cross-listed as Music 622X)

The interrelationship of music and the visual arts in western Europe and the Americas. Offered jointly by the Departments of Art and Music.

**680. Teaching Art at the College Level (Internship) (3)**

Teaching art at the college level under the supervision of a master teacher. Required of M.F.A. Candidates.

**681. Problems in Art Education (1-9)**

Independent study in depth of selected problems related to the teaching of art. May be repeated to a maximum of 9 semester hours.

# Department of Home Economics

**GRADUATE FACULTY:** Johnston, Department Head. Barra, Hart, Matthews, Murphy, Paek, Parham, Reed, Rehfeld, Rockwood, Sie, Smith.

The Department of Home Economics offers graduate programs leading to the degrees Master of Science and Master of Science in Education. The graduate programs offer graduate instruction in the following areas:

1. Nutrition and Dietetics
2. Marriage and Family Life
3. Child Development—Nursery School Education
4. Textiles and Clothing
5. Home Economics Education

A candidate for an advanced degree in Home Economics is expected to have an undergraduate major in Home Economics or a major in a closely related field and a minor in Home Economics. Those who plan to teach must fulfill State of Illinois certification requirements. Deficiencies in the area of specialization at the undergraduate level will be determined by a committee of graduate staff members and must be made up before admission to candidacy.

The graduate student works with an adviser in the major area chosen for study. The student's program is subject to approval by a committee of graduate faculty in the department. All candidates for master's degrees are to complete 30 semester hours of credit. A candidate for a degree may offer up to 6 semester hours of credit from the Foreign Study Program, 401. The writing of a thesis is optional in some of the major areas for the Master of Science degree; students should consult with the department head for information as to which areas allow a non-thesis program. A final written examination is given, and an oral examination may also be given upon request of the department.

All students planning to major in Home Economics should have a conference with the head of the department or a member of the graduate faculty in the department before registering for the first time.

## MASTER OF SCIENCE

### Major in Nutrition and Dietetics

This major increases the student's ability to work as a nutritionist with a promotional or service organization, as an administrative or therapeutic dietitian, as a home economist with a public service company, or as a research assistant in nutrition, dietetics, or food science.

**Required Courses:** H.Ec. 500A, 504, 547, 599; Educ. 508.

**Prerequisite** to a major in this area is a minimum of 16 semester hours in Chemistry including general and organic chemistry, biochemistry, or physiological chemistry.

### Major in Marriage and Family Life

A choice of options is provided so that the student may increase teaching proficiency at the high school or college level, or prepare to work with family agencies or organizations relating to this specialization.

#### Option 1 — Marriage and Family Life (Thesis Required)

**Prerequisite:** To choose this option a student should have a total of 18 semester hours in the fields of Marriage and Family Life, Child Development, and Psychology and Sociology.

**Required courses:** 21 semester hours within the Department of Home Economics including H.Ec. 500B, 504, 599. Nine semester hours should be elected outside the major area.

**Recommended courses:** H.Ec. 438, 484, 485, 486, 539, 584; Educ. 508. Courses related to the major area may be elected with the approval of the major adviser.

#### Option 2 — Marriage and Family Life (Non-Thesis)

**Prerequisite:** To choose this option a student should have a total of 18 semester hours in the fields of Marriage and Family Life, Child Development, and Psychology and Sociology.

**Required courses:** A minimum of 21 hours within the Department of Home Economics including H.Ec. 500B, 504, 584.

**Recommended Courses:** H.Ec. 438, 484, 485, 486, 539, 589; Educ. 521.

### Major in Child Development—Nursery School Education

Majors in Child Development may choose from the following two options:

#### Option 1 — Child Development and Anthropology or Psychology or Sociology (Thesis Required)

The purpose of this option is to prepare the student with a theoretical foundation in Child Development, suitable for teaching at the junior college and/or college levels, and also to prepare the student for advanced graduate work.

**Prerequisite:** A total of 18 semester hours in the fields of Child Development and Nursery School Education; Marriage and the Family; Anthropology; Psychology; and Sociology.

**Required Courses:** 15 semester hours in Home Economics including H.Ec. 500C, 504, 532, 599.

**Recommended Courses:** H.Ec. 439, 485, 535, 537, 552, 589; Psych. 415, 526; Soc. 461; Anth. 442, 520; Educ. 508.



### Option 2 — Child Development and Early Childhood Education (Non-Thesis)

The purpose of this option is to prepare students to teach, supervise, and administer educational programs for young children and to work with their parents.

Prerequisite: A total of 18 semester hours in Child Development, Early Childhood Education, and related fields.

Required Courses: 15 semester hours in Home Economics including H.Ec. 434 and 504; a choice of H.Ec. 500C or 532; and 6 hours elected from H.Ec. 431, 438, 535, 539, or 601.

Recommended Courses: H.Ec. 485, 537, 552; Educ. 400, 443, 507, 574; Sp. Ed. 420, 500.

## Major in Textiles and Clothing

This major prepares the student to teach clothing and/or textiles in high school or at the college level; to work with design or the textile science field. The choice of option is guided by the academic goals and professional requirements of the field of specialization.

Prerequisites to all options: 12 semester hours from the Textile and Clothing field and an additional 6 semester hours from supportive fields.

### Option 1 — Textiles and Clothing

Required courses: H.Ec. 452 or 454, 500E, 504, 562, 574.

Additional requirements:

Thesis option: H.Ec. 599; Educ. 508.

Non-thesis option: H.Ec. 601 (3-6), or Textile and Clothing electives (3-6)

### Option 2 — Textile and Clothing Design

Required courses: H.Ec. 452, 454, 500E; Art 510 or 512.

Additional Requirements:

Thesis option: H.Ec. 504 and 599.

Non-thesis option: H.Ec. 601 (3-6), culminating in a one-man show.

### Option 3 — Clothing and Human Behavior

Required courses: H.Ec. 468, 500E, 504, 574, 599; Educ. 508; social science courses (3-6).

### Option 4 — Textile Science

Required courses: H.Ec. 500E, 504, 562, 564, 599; Educ. 508.

## MASTER OF SCIENCE IN EDUCATION

### Major in Home Economics Education

The program is designed to prepare for improved classroom teaching in secondary schools and junior colleges, and for supervisory positions in home economics. Candidates for the degree may elect either a thesis or a non-thesis option. Students must elect 9 semester hours outside the major area.

Required courses: H.Ec. 500D, 504, 520, 521, 525.

Recommended electives: H.Ec. 407, 458, 522, 524.

Additional suggestions: H.Ec. 412, 468, 485, 486, 547, 589; Educ. 430, 431, 432, 500, 501, 521, 530, 560, 592.

**Thesis Option:** The required 30 semester hours must include H.Ec. 599, 6 semester hours. The thesis must be approved by the adviser and another graduate staff member.

**Non-Thesis Option:** The required 30 semester hours must include at least 9 semester hours outside the major field.

This degree is conferred only on students who meet Illinois certification requirements. Students who are not certified upon entering the program must plan a program which will lead to certification.

## Course Offerings

### 406. Nutrition in the Educational System (3)

Need for nutrition education. Influence of nutrition on long-term mental and physical development. Techniques for effective nutrition teaching.

### 407. Consumer Protection (3)

Current trends in consumption; consumer movement in the United States; laws and agencies protecting and serving the consumer; product analysis using appropriate materials and skills. Prerequisite: Graduate standing.

### 408. Current Problems and Trends in Nutrition and Foods (3)

Readings in and discussion of selected classic studies and recent developments in the field of nutrition and foods. Implications for dietitians, nutritionists, teachers, extension workers, and others. Prerequisite: Consent of instructor.

### 409. Food Facilities—Design, Layout, and Equipment (3)

Layout and design of food service facilities. Selection of equipment. Consideration of relationships between facility and service. Prerequisite: Consent of instructor.

### 410. Community Nutrition (3)

Nutrition problems and practices in the community. Special consideration of the influence of modifying factors such as age, ethnic differences, economic resources, etc. Prerequisite: H.Ec. 200 A and B or consent of instructor.

### 412. World Nutrition (3)

Survey of problems characteristic of nations such as nutritional status, incidence and treatment of deficiency diseases, population, and food supply. Programs on national, international, and community level. Prerequisite: H.Ec. 410 or consent of instructor.

**424. Cultural and National Food Patterns (3)**

Food preparation as influenced by cultural and national food patterns. Prerequisite: H.Ec. 200A, 301 or consent of instructor.

**428. Experimental Foods I (3)**

Application of scientific method in the study and design of experimental food problems. Development of attitudes and techniques through group and individual projects. Prerequisites: H.Ec. 300 and consent of instructor.

**429. Experimental Foods II (3)**

Experiments on individual basis. Prerequisites: H.Ec. 428 and consent of instructor.

**431. Internship in Community Programs (3)**

Observation and participation in community programs. Student will be assigned to an experience appropriate to his professional interest. May be repeated to 10 semester hours. Prerequisite: Consent of instructor.

**A. Child Development**

Child Development majors are required to take the course for one-half semester for 7 semester hours, alternating with H.Ec. 490.

**B. Family Life**

**C. Dietetics, Nutrition, and Food Services**

**434. Administration and Supervision in Early Childhood Education (3)**

Basic principles in the guidance of young children, with emphasis on the individual child. Planning for the total program, the administration and supervision of various types of group care for children under five. Work with parents. Prerequisite: H.Ec. 331 or consent of instructor.

**438. Parent Education (3)**

Basic principles in organization, formulation, and presentation of parent study programs. The student experiences ways of working with parents of children ranging in age from preschool through adolescence. The group dynamics approach is used in planning and carrying out meetings, with opportunity to test a variety of types of meetings. The use of mass media to educate parents is demonstrated. Prerequisite: Consent of instructor.

**439. Infant in the Family (3)**

The infant in the context of the family. Opportunity to become familiar with major scientific findings concerning prenatal and postnatal development of the child from conception through the first two years of life. Integration of this information through observation, laboratory experience, and home visits. Prerequisite: H.Ec. 230 or consent of instructor.

**450. Workshop in Home Economics (1-4)**

Advanced techniques in the study of various phases of home economics. Nature and length of workshop dependent upon the needs of students. Number enrolled limited. Additional problem required for graduate credit. May be taken more than once but not in the same phase. Maximum of 6 semester hours may be applied toward the master's degree.

**452. Flat Pattern and Design (3)**

Basic pattern designing and experience in working with a variety of fabrics and fitting problems. Prerequisite: H.Ec. 252, or consent of instructor.

**454. Draping (3)**

Apparel design based upon the interrelating factors of material, line, and form. Prerequisite: H.Ec. 252, or consent of instructor.

**458. Adult Education in Home Economics (3)**

Curriculum and methods for teaching adults. Observation and participation.

**466. Economics of Apparel and Textile Industries (3)**

Factors affecting the production, distribution, and consumption of clothing and textile products: the role of the apparel and textile industries in the national economy. Prerequisite: Econ. 260.

**468. Family Clothing (3)**

The socio-economic aspects of consumer behavior which apply to the selection of clothing by families to meet developmental needs. Prerequisites: Psych. 102, Soc. 170, or consent of instructor.

**484. Family Relationships (3)**

Interpersonal relationships within the family group as influenced by basic human needs, family member roles, values and attitudes in a changing society. Problems unique to different stages of the family life cycle. Prerequisite: H.Ec. 180 or Psych. 102 or consent of instructor.

**485. Comparative American Families (3)**

Identification of contemporary family behavior patterns and interactions according to differences by: sex, rural-urban residence, level of living, education, occupation, ethnicity, and religion. Prerequisite: Soc. 170.

**486. Aging and the Family (3)**

The multidisciplinary approach to aging; changing family functions and the consequences with reference to workforce participation, financial status; health status of the aged and its implications for the family; housing needs; leisure in contemporary and future society; the role of public and private

agencies and institutions in the provision of services for the aged. Prerequisite: Psych. 102 or equivalent.

**500. Seminar (1-9)**

- A. Nutrition and Dietetics
- B. Marriage and Family Life
- C. Child Development and Nursery School Education
- D. Home Economics Education
- E. Textiles and Clothing

Readings and reports in the designated areas of Home Economics. May be repeated up to 9 hours of credit.

**504. Research Methods (3)**

Evaluating and understanding research. Identifying needed research. Planning a research problem.

**515. Diet Therapy II (3)**

A survey of recent trends in diet therapy. Prerequisite: H.Ec. 415.

**520. Curriculum in Home Economics (3)**

Principles of curriculum development involving theoretical and philosophical concepts with specific emphasis on home economics programs including elementary, secondary, continuing education, and college. Prerequisite: H.Ec. 344 or consent of instructor.

**521. Evaluation in Home Economics (3)**

Methods of evaluation. Relationship to curriculum. Selection, construction, and use of evaluation devices for home economics programs. Prerequisite: H.Ec. 344 or consent of instructor.

**522. Trends and Issues in Home Economics (3)**

Exploration of current issues in home economics education at the secondary, post-high-school, and college level. Consideration of trends contributing to the issues and proposed solutions.

**524. Home Economics in the Junior College (3)**

Exploration of curriculum, teaching methods, evaluation, and facilities for occupational, technical, and pre-professional programs in home economics in the junior college.

**525. Supervision in Home Economics (3)**

Theories and principles of leadership and supervision as related to home economics student teaching, secondary departments, and state departments. Objectives, techniques, and evaluation of supervision.

**531. Theories of Child Development (3)**

Analysis of the major theories of child development and their implications for young children.

**532. Child Development and Early Childhood Education (3)**

Literature in the field of child development and early childhood education covering the first five years of life. Prerequisite: 3 credits in Child Development or consent of instructor.

**535. Behavior Assessment of the Infant and Young Child (3)**

Content and methodology of the assessment of behavior of the infant and young child. Specific discussions and materials on the measurement of personality, maturation and readiness, intelligence, social behavior, and interests and attitudes. Application of some of these tests and measurements will be an integral part of this course. Prerequisite: Consent of instructor.

**537. The Child in His Family (3)**

An understanding of the effect of the basic social institutions upon the socialization of the child.

**539. Parent Education Leadership Practicum (3)**

Under staff supervision, the student organizes, develops, and sustains a parent education group. These groups may be associated with schools, correctional institutions, government-sponsored projects, churches, and other community organizations. Prerequisite: H.Ec. 438 or consent of instructor.

**547. Advanced Nutrition (3)**

A comprehensive study of major nutrients with emphasis on their metabolism, interrelationships, and biochemical importance. Recent research. Prerequisite: H.Ec. 410 or its equivalent.

**552. Maternal, Infant, and Child Nutrition (2)**

Nutrition in pregnancy, lactation, infancy, and childhood. Prerequisite: Consent of instructor.

**554. Advanced Draping (3)**

Exploration of the possibilities and limitations of draping technique. Emphasis is placed on the execution of original ideas. Prerequisite: H.Ec. 454.

**562. Current Problems in Consumer Textiles (3)**

New development in textiles; analysis of quality control and production standards, evaluation of current problems. Prerequisites: H.Ec. 351 or consent of instructor.

**564. Experimental Textiles (3)**

Measurement of properties and components of current textile fabrics; experimental designs, comparative testing, handling of data, analysis of results. Prerequisites: H.Ec. 351, Math. 301, quantitative or qualitative chemistry, or equivalents or consent of instructor.

## HOME ECONOMICS

### **566. Textile Microanalysis (2)**

Introduction to histological and microchemical methods as applied to the study of textile fibers. Prerequisite: H.Ec. 351.

### **568. Independent Study in Textiles (2)**

#### **A. Cellulose and Cellulose-like Fibers**

#### **B. Protein and Protein-like Fibers**

Properties, structure, composition, and manufacture of fibers as related to end-use. Prerequisite: Organic chemistry.

### **570. Advanced Flat Pattern (2)**

Pattern design using a sloper with emphasis on individuality in style and use of fabric. Augmented techniques for unusual designs. Prerequisite: H.Ec. 452.

### **572. Historic Textiles (3)**

Methods of textile formation and textile design processes over time and in diverse cultures. Prerequisite: H.Ec. 152 or equivalent.

### **574. Clothing and Human Behavior (3)**

Clothing as a reflection of human behavior as related to the concepts from the behavioral sciences. Interpretation of research findings. Prerequisite: H.Ec. 464 or consent of instructor.

### **583. Conceptual Frameworks in Family Analysis (3)**

Analysis of theoretical frameworks in family relations by examining their development, concepts, assumptions, inadequacies, and contradictions. Prerequisites: H.Ec. 484 and Soc. 170, and consent of instructor.

### **584. The Family with Teenagers (3)**

Developmental tasks of the family with teenagers; parental

roles, adolescent roles, communication networks, problems of teen identity and sexuality.

### **585. The Atypical Family (3)**

An analysis of the adjustments, possible problems, and ways to strengthen the atypical family. Prerequisites: H.Ec. 484, Soc. 170, or consent of instructor.

### **586. Family Life Programs (3)**

An examination of the philosophical perspectives and current status of family life programs, including methodology, techniques, procedures, and ways of strengthening family life. Prerequisite: H.Ec. 484 or consent of instructor.

### **589. Marriage and Family Life (3)**

An analysis of our Western family system; its present crisis; some causes and effects. Theories underlying these changes occurring in the family system. Prerequisite: H.Ec. 484 or consent of instructor.

### **599. Thesis (1-6)**

Independent study under supervision of an adviser. Work on thesis. Prerequisite: H.Ec. 504.

### **601. Problems in Home Economics (1-3)**

Independent study, individual problems, action, or other research. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of the head of the department.

### **610. Teaching College Level Home Economics (3)**

Teaching at college level under the direct supervision of an experienced faculty member. Prerequisite: Consent of major adviser.



# Department of Industry and Technology

**GRADUATE FACULTY:** Jacobsen, Department Head. Beck, Brown, Comer, Cornwell, Erickson, Gilbert, Glogovsky, Hamm, Johnson, Kohler, Newell, Quick, Senteney, Simpson, Warner, White.

The Department of Industry and Technology offers graduate work leading to the degrees Master of Science in Education and Master of Science and to the Certificate of Advanced Study. Graduate instruction is in the following areas:

1. Teacher Education
  - a. Industrial Education
  - b. Industrial Arts
  - c. Vocational and Technical Training
  - d. Safety
  - e. Community College
2. Safety
3. Technologies
4. Industrial Training

A candidate for an advanced degree is expected to have at least an undergraduate minor in this field or a major in a closely related field. Students should review the admission and graduate degree requirements found in this catalog.

A graduate faculty adviser is appointed for each student seeking a master's degree and together they plan a program of courses leading to the degree. For the Certificate of Advanced Study an advisory committee of three graduate faculty members of the department assists the student in planning his program of courses.

A candidate for a master's degree is to complete successfully a minimum of 30 or 32 semester hours of graduate credit, depending upon his program option, as well as passing a comprehensive written examination. An oral examination may be given upon request of the department.

## MASTER OF SCIENCE IN EDUCATION

Industrial Education teachers, under advisement, may select courses to improve their teaching competencies and qualify for advancement.

A graduate major working toward the degree Master of Science in Education must satisfy one of the following program options:

1. A minimum of 24 semester hours of work in courses plus a thesis (Ind. & T. 599) for 6 semester hours. Total minimum—30 semester hours.
2. A minimum of 32 semester hours of work in courses.

Other requirements:

1. Ind.&T. 500, Introduction to Graduate Work in Industrial Education
2. Ind.&T. 601, History and Philosophy of Industrial Education

3. Of the total semester hours for the degree (30-32), 9 should be earned in courses outside the major field.
4. At least 21 to 23 semester hours must be taken in the department.

## MASTER OF SCIENCE

Students may select the Master of Science degree if they wish increased depth within the work offered in this department. Students from business, industry, and industrial education may plan work to increase their job efficiency and thus qualify for advancement.

Students who elect a graduate major in this department toward the degree Master of Science must satisfy one of the following program options:

1. A minimum of 24 semester hours of work in courses plus a thesis (Ind.&T. 599) for 6 semester hours. Total minimum—30 semester hours.
2. A minimum of 32 semester hours of work in courses.

Other requirements:

1. Ind.&T. 500, Introduction to Graduate Work in Industrial Education.
2. Of the total semester hours for the degree (30-32), 12 may be outside the Department of Industry and Technology.

## CERTIFICATE OF ADVANCED STUDY

Since the purpose of the sixth-year program is to permit the student to attain greater mastery of a chosen field, the requirements are flexible. The student is expected to complete a minimum of 30 semester hours' graduate work beyond the master's degree and a thesis is required. Emphasis may be placed on areas of work within the department such as Industrial Education, Industrial Training and Technologies, or Safety. Other departments of the University may be drawn upon where deemed desirable.

## Course Offerings

### INDUSTRY AND TECHNOLOGY

#### 401. Facilities for Industrial Education (3)

Experience in planning facilities for industrial education classes. Problems relating to new buildings and equipment, as well as problems of redesign. Scale layouts are planned and drawn. Prerequisite: Ind.&T. 345.

#### 402. Industrial Training and Evaluation (3)

The history of employee training, kinds of training, training programs, and instructional methods and evaluation procedures.

#### 403. Instructional Aids in Industrial Education (3)

The design, preparation, use, and evaluation of teaching aids



with emphasis on applications in industrial arts and other school classes. Intensive study of the various audio-visual devices.

### **404. Supervision in Industry (2)**

Principles, methods, and techniques for supervision of people in their work. For supervisory personnel and those preparing for such positions.

### **406. Occupational Analysis (2)**

Techniques and procedures in analyzing occupations to ascertain their basic elements.

### **407. Industrial Cooperative Education (2)**

Problems and procedures in the operation of cooperative part-time programs.

### **408. Conference Leading for Industry (2)**

Purposes, advantages, and limitations of the conference method. Instruction in techniques of conference procedure. Experience in planning, leading, and evaluating conferences and in writing summaries.

### **413. Design in Industrial Education (3)**

The principles of design and the application of such principles in designing industrial education and other creative projects.

### **450. Advanced Photo-Offset Processes (3)**

Offset lithography, related photography, process camera operation, linework and halftones, platemaking, offset press operation, and production methods. Assignments involving work in basic color, layout, and publications. Prerequisite: Ind.&T. 350 or consent of instructor.

### **454. Cold Type Composition (3)**

Tape operation in typesetting; the use of computers in printing; operation of typical photographic, electronic, and strike-on cold type machines; field trips to study commercial installations. Prerequisite: Ind.&T. 350 or consent of instructor.

### **456. Printing Estimating (3)**

Identification and determination of costs relative to materials, operations, and factors involved in the production of printed matter. Prerequisite: Consent of instructor.

### **457. Color Reproduction (3)**

Color theory, color films, filters, and inks, flat and process color, instruments and controls, masking, separation on enlarger and process camera, direct and indirect screening, electronic scanners, color proofs, controlling press runs, with emphasis on offset presses. Prerequisite: Ind.&T. 450 or consent of instructor.

### **469. Multi-Axis Part Programming (3)**

Advanced part programming methods for multi-axis machine tools using the APT and sub-set languages. Prerequisite: Ind.&T. 364 or consent of instructor.

### **471. Electronic Operational Amplifiers (3)**

An analysis of operational amplifiers in electrical circuits. Application of operational amplifiers, analysis of operational amplifiers and the theory of operation. Prerequisite: Ind.&T. 378 or consent of instructor.

### **491. Industrial Quality Control (3)**

Techniques of establishing and maintaining quality of product including statistical quality control applications.

### **493. Materials Analysis (3)**

Principles related to the behavior of materials and the examination and testing of these materials. Prerequisite: Ind.&T. 293 or consent of instructor.

### **495. Industrial Computer Programming (3)**

Digital computer programming of industrial technology and industrial education problems. Use and organization of computer systems. Application topics including models for decision making, computer simulation, man-machine communication, industrial information storage and retrieval, data collection and transmission, symbolic computation, and advanced computer languages. Prerequisite: Ind.&T. 295.

### **500. Introduction to Graduate Work in Industrial Education (3)**

The methods of research available for use by graduate students in industrial education; a review of current research studies in this field; and the application of the findings of these studies to the improvement of industrial arts, vocational-industrial, and technical education programs.

### **502. Content and Methods of Industrial Education (3)**

Interest and motivation of learning, skill development, teaching devices, methods and procedures, and shop management. Designed to improve the techniques of teaching industrial education subjects.

### **505. Curriculum Construction in Industrial Education (3)**

The concepts underlying course construction in industrial education. Problems in the selection and organization of instructional materials and course content.

### **542A. Industrial Arts Activities for Classroom Teachers (3)**

Classroom teachers in grades K-6 observe children's activities with tools and materials. Construction of sample projects, teaching aids, and resource units. Not recommended for Industrial Arts majors.

**542B. Industrial Arts in Grades K-6 (3)**

Organization and administration of industrial arts activities in grades K-6. Classroom observations followed by consideration of purpose, selection of activities, purchase of tools and equipment, and means of starting a program. For administrators and Industrial Arts majors.

**562. Principles of Automated Manufacturing (3)**

Principles of organization and administration of computer-aided manufacturing. Special attention is given to the design of organizational structures for C.A.M. and numerical control of production. Prerequisite: Ind.&T. 364 or consent of instructor.

**563. Individual Problems in N/C (1-6)**

An advanced independent study course in numerical control technology. Research reading and written reports are required. Problems must be defined and approved before registration. May be repeated to a total of 6 semester hours. Prerequisite: Ind.&T. 562 or consent of instructor.

**566. Problems in Adult Education (3)**

History of the adult education movement; learning abilities, educational interests, and needs of adults; problems and procedures in organizing and operating adult education programs; relation of adult education to public school education.

**570. Electronic Function Generators (3)**

The basic problems and their solutions concerning the generation, translation, and utilization of complex waveforms are presented. Frequency and amplitude stability analysis techniques are presented.

**571. Electronic Network Synthesis (3)**

Presentation of network synthesis procedures. The image parameter method is presented in terms of image impedance function and image transfer functions.

**573. Advanced Electrical Servomechanisms (3)**

The analysis and design of servomechanisms using analytical tools.

**574. Electronic Information Theory (3)**

A treatment of information theory as it applies to electronic communications. Including properties of signals, their treatment, noise reduction, and shaping of signals.

**575. Nonlinear Analysis of Electronics Systems (3)**

Techniques for finding approximate solutions for nonlinear control problems; emphasis is placed on the use of these analysis techniques as applied to solutions of advanced technology problems.

**577. Advanced Active Electronic Devices (3)**

Advanced study of fundamentals of design and operation of active devices with emphasis on design of integrated circuits including active devices.

**578. Electrical Noise (3)**

An analysis of noise in electrical circuits; including the study of sources of noise, analytical techniques used to analyze noise, and detection measurements and standards of noise.

**598. Technical Problems****A. General (1-3)****B. Crafts (1-3)****C. Drawing (1-3)****D. Electricity and Electronics (1-3)****E. Graphic Arts (1-3)****G. Metal (1-3)****W. Woodworking (1-3)**

An opportunity for the individual student to undertake advanced study of technical problems in various technical areas. May be repeated. A limit of 6 semester hours in all courses may be applied toward advanced degrees. Prerequisite: Consent of instructor.

**599. Thesis or Directed Study (1-6)**

Open to qualified students who wish to do individual research. The thesis is written in this course. May be repeated. Prerequisites: Consent of adviser and instructor.

**601. History and Philosophy of Industrial Education (3)**

The leaders, organizations, and movements that have contributed to the development of industrial education. Philosophies, issues, and problems, relating to past and present.

**603. Evaluation in Industrial Education (3)**

The principles and techniques of evaluation of instruction as applied to courses in industrial education.

**606. Programs and Organization of Industrial Education (3)**

The philosophy, objectives, organization, administration, and significant literature for vocational-industrial all-day, part-time, and evening programs, including apprenticeship and vocational rehabilitation. Special attention given to legislation and standards for state and federal aid to local vocational-industrial and technical programs.

**607. Trends in Industrial Education (2)**

The evaluation and significance of trends from the viewpoints of theory and practice.

**608. Administration and Supervision of Industrial Education (3)**

Administrative and supervisory principles and practices pertaining to leadership, communications, and personnel functions, and their evaluation.

**645. Technology in Industrial Education (3)**

Modern industrial developments such as automation, uses of new types of energy, and synthetic materials.

**647. Occupational Surveys (3)**

Problems, methods, and procedures involved in planning, organizing, and conducting occupational surveys in local communities and labor market areas.

**658. Seminar in Industrial Education (1-3)**

Individual and group concerns related to industrial education. May be repeated. A limit of 6 semester hours may be applied for advanced degrees.

**690. Industrial Education for the In-Service Teacher (3)**

Problems of in-service education that need to be considered in upgrading programs of industrial education. Special emphasis given to individual problems.

## **SAFETY**

Students who elect a graduate major in the Department of Industry and Technology toward the degree Master of Science and wish to concentrate in the area of Safety must satisfy the Master of Science degree requirements of the Department of Industry and Technology. See page 129.

For all other major programs in the Department of Industry and Technology, including Industrial Education, the following courses may be taken as elective semester hours outside the major area.

**431. Driving Ranges and Simulators (3)**

Principles and practices of teaching on multiple-car driving ranges and with driving simulators; administration of multi-phase programs in driver and traffic safety education. Laboratory activities: observation and teaching on a range and with simulators. Prerequisite: Ind.&T. 333.

**432. Disaster Preparedness (3)**

Organization for survival from natural and man-made disasters. Warning and communication systems, radiological monitoring, shelter management. Fallout shelter experience required.

**433. Special Teaching Practices in Traffic Safety Education (3)**

Principles and techniques for fabrication and/or utilization of multi-media instructional aids, programmed instructional systems, special classroom instructional methods. Communication skills for exceptional students. Laboratory activities: teaching demonstrations; instruction of exceptional children. Prerequisite: Ind.&T. 333.

**434. Industrial Accident Prevention (3)**

A survey of the principles and techniques used to minimize the frequency and severity of industrial accidents.

**436. Design and Administration of Industrial Safety Programs (3)**

An analysis of current problems and trends in the design and supervision of model industrial accident prevention programs. Prerequisite: Ind.&T. 434.

**438. Safety in Transportation Systems (3)**

The status of, and rationale for, improvements in safety practices and legislation for the commercial carriers (rail, highway, water, and air transportation). Each student shall investigate one system in depth.

**530. Man's Safety in the Modern World (3)**

Philosophies and principles of the need for, and status of, safety programs. Dimensions and directions of new and existing safety programs explored.

**532. School Safety Programs (3)**

The organization, supervision, and administration of school safety programs. Each student shall investigate one safety program in depth. Prerequisite: Ind.&T. 530 or consent of instructor.

**534. Behavioral Factors in Safety (3)**

Psychological, physiological, and sociological factors as they affect man's safety. Each student shall identify and pursue a topic of interest. Prerequisite: Ind.&T. 530 or consent of instructor.

**535. Seminar in Safety (1-6)**

Current issues or problems in safety. May be repeated. A limit of 6 semester hours may be earned toward advanced degree.

**537. Systems Analysis in Safety (4)**

Systems analysis techniques applied to accident record systems, theories of accident causation, and effectiveness of safety programs. Prerequisite: Ind.&T. 530 or consent of instructor.

**539. Research in Safety (1-3)**

Open to qualified students who wish to do individual research in safety. May be repeated. A limit of 6 semester hours may be earned toward advanced degrees. Prerequisites: Consent of adviser and instructor.

# Department of Music

**GRADUATE FACULTY:** Ballinger, Department Head. Bach, Baker, Beezhold, Bird, Buggert, Dill, Fay, Floyd, Fred, Haugland, Kirkpatrick, Loessel, Modell, Pursley, Rast, Riffin, E. Smith, W. Smith, Steg, Tipton, Weed.

The Department of Music offers programs leading to the degree Master of Music and to the Certificate of Advanced Study. All programs are arranged in consultation with a departmental adviser and must have the approval of the adviser.

## MASTER OF MUSIC

The Master of Music degree may be earned with a major in Music Education, Music Theory and Composition, Music History and Literature, or Performance and Pedagogy in Piano, Voice, or an Orchestral Instrument.

Only those persons whose undergraduate preparation has been at least equivalent to the comparable undergraduate music curriculum at Northern Illinois University will be admitted to a program leading to the Master of Music Degree. Students whose previous work fails to meet these requirements may in some cases be permitted to begin graduate work in Music. They will be required, however, to make up any deficiencies, as determined by the Music Department, before being admitted to a Master of Music program. In the case of the Master of Music in Music Education, such deficiencies may be in the area of teacher certification as well as in the area of preparation in the major field.

The completion of the degree Bachelor of Music with a Performance major is the normal prerequisite for admission to a course of study leading to the Master of Music degree in Performance and Pedagogy. Students holding the B.S., B.A., or B.M.E. degree may be eligible, however, if, in the opinion of the Music faculty, they have reached the necessary level of proficiency in the major performance area. Candidates for a program in Performance and Pedagogy must pass an audition in the major performance area before admission to the program.

## Major in Music Education

### Option 1

Minimum Hours  
Required  
12

1. Music Education
  - a. Music 524, Techniques of Research in Music (3)
  - b. Music 525, Foundations of Music Education (3)
  - c. Music Education and/or Conducting electives (6)

2. Music History and Literature and Theory and Composition	10
a. Music History and Literature (2-8)	
b. Theory and Composition (2-8)	
3. Music Performance	4-6
a. Major performing medium (2-4)	
b. Ensemble (2)	
4. Music 599, Thesis, Recital, Transcription, or Original Composition	4
<b>Total</b>	<b>32</b>

### Option 2 (Non-Thesis)

The basic requirements are the same as Option 1, except that performance requirements are 4 semester hours and Music 599 is not required. Instead, 6 semester hours may be chosen from Music or any other field with the adviser's consent.

## Major in Music Theory and Composition

	Minimum Hours Required
1. Music History and Literature	6
2. Music Performance	6
a. Applied electives (4)	
b. Ensemble electives (2)	
3. Theory and Composition	12
a. 2 hours selected from Music 407, Counterpoint I (2), or Music 408, Counterpoint II (2)	
b. Music 507, Advanced Counterpoint (3)	
c. 3 hours selected from Music 505, Advanced Orchestration (3); Music 598, Advanced Wind and Percussion Scoring (3); or Music 547, Vocal Arranging (3)	
d. Music 552, Composition (4)	
4. Music 599 (thesis*)	4
5. Electives	4
<b>Total</b>	<b>32</b>

## Major in Music History and Literature

	Minimum Hours Required
1. Music History and Literature	9
2. Theory and Composition	4-6
3. Music Performance	6

\*May be a written thesis in music theory or an original composition, subject to the approval of the appropriate committee.



## MUSIC

a. Applied (4)	
b. Ensembles (2)	
4. Music 599	4
5. Electives in Humanities or Music History and Literature	6-9
Total	32

### Major in Performance and Pedagogy in Piano or Voice

	Minimum Hours Required
1. Music History and Literature	6
2. Music Performance, major area*	10
3. Recital	4
4. Electives**	12
Total	32

### Major in Performance and Pedagogy in an Orchestral Instrument

	Minimum Hours Required
1. Music Theory and Composition	6
2. Music History and Literature	6
3. Music Performance	12
a. Major instrument (10)	
b. Large or small ensemble or both (2)	
4. Recital	4
5. Electives	4
Total	32

### Graduate Requirements

In partial fulfillment of graduate requirements, candidates for the Master of Music degree in Performance and Pedagogy must prepare and perform a full length public recital. Candidates for the Master of Music degree with a major in Music Education, upon approval of the departmental graduate faculty, may

\*Enrollment in the major performance area is required in each semester or summer session of residence; however, no more than 16 semester hours of credit for music performance in the major area may be applied toward the 32 semester hour total.

\*\*Electives chosen from offerings outside the Music Department must embrace a single cognate area totaling at least 6 semester hours.

present a formal public recital; write a thesis, a transcription, or an original composition; or elect a non-thesis option. Candidates for the Master of Music degree with a major in Music Theory and Composition may elect to write a thesis or submit an original composition. Candidates for the Master of Music degree with a major in Music History and Literature must write a thesis.

## CERTIFICATE OF ADVANCED STUDY

Students wishing to enroll in the sixth-year program leading to the Certificate of Advanced Study in Music should consult with the head of the department. Each program will be planned to meet the student's individual needs. Admission to a program leading to the Certificate of Advanced Study in Music will be granted only to those candidates who have completed work equivalent to that required for the Master of Music degree at Northern Illinois University. Candidates for the Certificate of Advanced Study may, subject to the approval of the appropriate departmental committee, submit a thesis, a transcription, or an original composition, or perform a full public recital.

## Course Offerings

### MUSIC HISTORY AND LITERATURE

#### 437. Piano Literature (2)

A survey of clavichord and piano literature to the mid-19th century. Two periods a week. For piano majors, or by consent of instructor.

#### 438. Piano Literature (2)

A survey of the late Romantic and contemporary piano literature. Two periods a week. For piano majors, or by consent of instructor.

#### 445. History of American Music (3)

The development of music in the United States from the Colonial Period to the present. Particular emphasis on pre-Revolutionary War music and contemporary compositions.

#### 521. The History and Development of Instrumental Forms (3)

Analytical techniques applied to the sonata, suite, and related forms.

#### 522. The History and Development of Vocal Forms (3)

The mass, oratorio, cantata, art song, opera, and related forms.

#### 523. Contemporary Idioms I (3)

Twentieth-century harmonic, contrapuntal, and formal develop-



ment; primitivism; neoclassicism; jazz influences; early serial techniques. Prerequisite: Undergraduate degree or consent of instructor.

**530. Seminar in Music History and Literature (3)**

Research and analysis in selected areas of music history and literature. May be repeated to a maximum of 6 semester hours.

**531. Contemporary Idioms II (3)**

Historical, organizational, and theoretical aspects of electronic and computer music, and other experimental compositions. Prerequisite: Music 523 or consent of instructor.

**603. The Renaissance (3)**

An introduction to music in the Renaissance (ca. 1450-1600), with study of representative styles.

**604. The Art Song (3)**

The history of the art song from the early 17th century to the present with particular emphasis on the German Lied.

**605. The Oratorio and Cantata (3)**

The development of the oratorio and cantata with special stress on Baroque idioms.

**606. Survey of Operatic Literature (3)**

The history and development of the opera from the Florentine Camerata to the present.

**607. Symphonic Literature (3)**

A survey of orchestral music from its beginning. The Mannheim composers, the Viennese classics, the Romantics, the National schools, the late European and American developments. Works will be analyzed and their historical, cultural, and philosophical background discussed.

**608. Chamber Music Literature (3)**

A study of chamber music from the trio sonata to present-day media.

**622X. Comparative Arts (2)**

(Art 622)

The interrelationship of music and the visual arts in western Europe and the Americas. Offered jointly by the Departments of Art and Music.

## MUSIC THEORY AND COMPOSITION

**407. Counterpoint I (2)**

Class performance, analysis, and writing of counterpoint in Renaissance style as exemplified by works of such composers as Josquin, Lassus, Palestrina, and others. Preliminary study of Gregorian Chant. Prerequisites: Music 201-202.

**408. Counterpoint II (2)**

Aural study, analysis, and writing of contemporary "linear counterpoint" as employed by such 20th-century composers as Stravinsky, Bartok, Hindemith, Schoenberg, and others. Prerequisite: Music 407 or consent of instructor.

**418. Physics of Musical Instruments and Sound (2)**

The science of musical sound and the physical principles involved in the production of music by the various instruments and the voice. Elements of architectural acoustics of music rooms and acoustical engineering of electronic recorders and reproducers. Open to non-majors by consent of instructor.

**504. Seminar in Theory and Composition (3)**

Projects and studies in theory and composition. Topic to be announced. May be repeated to a maximum of 6 semester hours.

**505. Advanced Orchestration (3)**

The scoring of original and other works for various combinations of instruments as well as one complete score for full symphony orchestra.

**507. Advanced Counterpoint (3)**

Analysis and use of contrapuntal devices employed in the passacaglia, canon, and fugue.

**547. Vocal Arranging (3)**

The practical exposition of the principles of choral composing and arranging for various vocal combinations, as well as developing a style of writing for single voice with accompaniment.

**552. Composition (2)**

Composing in all musical media and forms. May be repeated.

**598. Advanced Wind and Percussion Scoring (3)**

Scoring for diverse wind and percussion ensembles. Prerequisite: Music 307 or consent of instructor.

**601. Evolution of Harmonic Theories (3)**

Music theory from antiquity through the present.

## MUSIC PERFORMANCE

### Conducting

**512. Advanced Choral Techniques and Conducting (3)**

A practical exposition of all facets of choral directing, effective rehearsal procedures, score study, and organization of choral ensembles.

**513. Advanced Instrumental Techniques and Conducting (3)**

Advanced problems in baton techniques and score reading and

## MUSIC

the analysis of graded band and orchestra literature. Conducting of band and orchestra groups from the University or from the University "Music for Youth" summer camp.

### Piano and Organ

#### 430. Keyboard Instruments, Secondary (½-1)

Development of the basic keyboard skills necessary for public school teaching. Students must meet required standards of proficiency. For non-majors only. May be repeated. Prerequisite: Consent of instructor.

#### 533. Keyboard Instruments, Primary (1-4)\*

Individual study in the student's major medium of performance. May be repeated. Prerequisite: Consent of instructor.

#### 535. Piano Pedagogy (3)

The methods and materials used in teaching piano either in the public schools or privately. Class piano methods, organizations, and materials. Observation of and participation in University piano classes.

### Voice

#### 440. Voice (½-1)

Development of the basic vocal skills necessary for public school teaching. Students must meet required standards of proficiency. For non-vocal majors only. May be repeated. Prerequisite: Consent of instructor.

#### 446. Vocal Ensemble (1)

The study of vocal repertoire as developed through ensemble participation. Sections include Madrigal Singers, Women's Chorus, and Opera Workshop. May be repeated. Admission by consent of instructor.

#### 447. Concert Choir (1)

The study and performance of musical masterworks from the 16th through the 20th century. May be repeated. Prerequisite: Consent of instructor.

#### 485. Chorus (1)

Open to all students proficient in singing and interested in choral activities. May be repeated.

#### 543. Private Voice (1-4)\*

Individual study in the student's major medium of performance. May be repeated. Prerequisite: Consent of instructor.

\* Two semester hours a semester (1 a summer) in the Music Education course of study. Four semester hours a semester (2 a summer) in a Performance and Pedagogy course of study. No student may receive 4 semester hours a semester (2 a summer) until he has passed an audition for admission to a course of study in Performance and Pedagogy and has received permission to register for 4 semester hours a semester (2 a summer).

### Band and Orchestra

#### 450. Band and Orchestral Instruments, Secondary (½-1)

Individual study of a band or an orchestral instrument. For non-majors only. May be repeated. Prerequisite: Consent of instructor.

#### 456. Instrumental Ensemble (1)

Brass, stringed, and woodwind ensembles. May be repeated. Prerequisite: Consent of instructor.

#### 480. Symphony Orchestra (1)

Open to all qualified students. May be repeated. Prerequisite: Consent of instructor.

#### 492. University Bands (1)

Open to all qualified students. May be repeated. Prerequisite: Consent of instructor.

#### 536. Seminar in Performance and Pedagogy (3)

Projects related to problems of performance and/or pedagogy. Topic to be announced. May be repeated to a maximum of 6 semester hours.

#### 553. Band and Orchestral Instruments, Primary (1-4)\*

Individual study in the student's major medium of performance. May be repeated. Prerequisite: Consent of instructor.

## MUSIC EDUCATION AND RESEARCH

#### 509. Supervision and Administration of the Music Program (3) (Cross-listed as Education 509X)

Functions and techniques of supervision and administration of the music program. Emphasis on problems in curriculum, equipment and materials, budget, schedules, and programs. Techniques for in-service training in music for classroom teachers.

#### 511. Workshop in General Music (1)

A short concentrated course covering one or more aspects of General Music at one or more educational levels, with particular emphasis on recent developments and contemporary trends in the field. May be repeated to a maximum of 3 semester hours. Not more than 2 semester hours may be applied to the M.M. or the C.A.S.

#### 519. Measurement, Evaluation, and Guidance in Music (3) (Cross-listed as Education 519X)

Measurement includes standardized tests, classroom or studio marking, auditioning, and adjudication. Evaluation weighs such measures of aptitude in the light of professional and educational criteria. Guidance considers the use of these data in counseling programs in public schools and colleges.

**524. Techniques of Research in Music (3)**

The nature of research and scientific method; application to problems in music and music education; problem of definition; development of a research design; probability and sampling procedure; specialized techniques for the location, collection, quantification, and treatment of data. Required for the M.M. degree with a major in Music Education.

**525. Foundations of Music Education (3)**  
**(Cross-listed as Education 525X)**

The historical and philosophical bases of music education. The application of learning theories to problems of music teaching. Required for the M.M. degree with a major in Music Education.

**526. Current Trends in Elementary Music Education (3)**

A detailed study of the conceptual and behavioral approaches to the elementary general music program. Evaluation of current methods and materials.

**527. Curriculum Problems in Secondary Music Education (3)**

A detailed consideration of the music program in the Junior and Senior High School. Particular attention given to the general music program as a part of the humanities, and music learning in performance groups.

**529. Seminar in Music Education (3)**

Investigation of specific issues in the various areas of music education. Topics to be announced. May be repeated to a maximum of 6 semester hours.

**545. Advanced Music Instructional Techniques and Materials—Voice (2)**

Techniques and procedures of teaching vocal production and interpretation in group lessons. Emphasis is on current materials in the field.

**551. Advanced Music Instructional Techniques and Materials—Woodwinds (2)**

Techniques of class and individual instruction in orchestral woodwind instruments, with particular emphasis upon intermediate and advanced levels. Review and evaluation of solo, ensemble, and other instructional literature for all levels.

**561. Advanced Music Instructional Techniques and Materials—Strings (2)**

Techniques of class and individual instruction in orchestral stringed instruments, with particular emphasis upon intermediate and advanced levels. Review and evaluation of solo, ensemble, and other instructional literature for all levels.

**571. Advanced Music Instructional Techniques and Materials—Brasses (2)**

Techniques of class and individual instruction in orchestral brass instruments, with particular emphasis upon intermediate and advanced levels. Review and evaluation of solo, ensemble, and other instructional literature for all levels.

**572. Instrumental Techniques and Materials—Percussion (2)**

Techniques of individual and class instruction in the percussion instruments. Review and evaluation of solo and ensemble material at all levels.

**582. Workshop for Instrumental Directors (1)**

A short concentrated course covering one or more aspects of the instrumental music program at one or more educational levels, with particular emphasis upon recent developments and contemporary trends in the field. May be repeated to a maximum of 3 semester hours. Not more than 2 semester hours may be applied to the M.M. or C.A.S.

**586. Workshop for Choral Directors (1)**

An intensive discussion and demonstration of practical choral techniques with a view to improving choral rehearsal procedures and performance abilities. May be repeated to a maximum of 3 semester hours. Not more than 2 semester hours may be applied to the M.M. or C.A.S.

**599. Thesis or Recital (2 or 4)**

The preparation and presentation of a thesis or a graduate recital, the choice to be approved by the departmental graduate faculty. May be taken for two semesters for 2 semester hours or for one semester for 4 semester hours. Required of all candidates for the M.M. degree or the C.A.S. in Music. If taken for the M.M., may be repeated for the C.A.S.

**609. Special Problems in Music (2 or 3)**

Individual or group study of selected problems. May be repeated to a maximum of 6 semester hours.

**610. Psychology of Music (3)**

The functions of the music mind and the factors involved in the development of musical skills and maturity.

**614. College Music Teaching (3)**

Lectures on the theory of teaching, philosophic assumptions, aesthetic theories, approaches to education, and the implications for teaching music education, music history and literature, and theory courses at the college level.





James E. Heald, Ph.D., Dean  
David C. Smith, Ph.D., Associate Dean  
Samuel C. Davis, Ed.D., Assistant Dean

# College of Education

Educational Administration and Services  
Elementary Education  
Secondary Professional Education  
The School of Nursing  
Outdoor Teacher Education  
Physical Education for Men  
Physical Education for Women  
Special Education



# Departments of Education:

## Educational Administration and Services

**GRADUATE FACULTY:** Getschman, Acting Department Chairman. Alexander, Ary, Axelson, Bauernfeind, Belnap, Bosdell, Carroll, Collins, Davis, Dewar, Fox, Grant, Holden, Husa, Johansen, Johns, Kremer, Landry, Leonard, Loughlin, McConeghy, Merritt, C. Miller, Nejedlo, H. O'Connor, Pecilunas, Powell, Ripley, Roesch, Rosemier, Schmidt, Speelman, Van Duyn, Wells, Wheat, Winkley, Yankow.

## Elementary Education

**GRADUATE FACULTY:** Deprin, Acting Department Chairman. Barney, Binter, Bishop, Borstad, Bradtmueller, Brantley, Carr, Chaffee, Chastain, Cleland, Davidson, DiCola, Dlabal, Ende, Ferguson, Foster, Griffiths, Grothe, Hoffmann, Horton, Hull, Jacobs, Kise, Kuhn, Kuipers, Lanning, Lipscomb, McClay, Many, Meyer, D. Miller, E. Miller, Morrison, Moss, Moyers, Nerbovig, Olberg, Palmer, G. Scriven, Seaberg, Seguel, Sheriff, C. Smith, L. Smith, Speer, R. Starkey, Syverson, Triplett, Vlasak, Wernick, Wheeler.

## Secondary Professional Education

**GRADUATE FACULTY:** Maple, Acting Department Chairman. Amar, Armstrong, Bazeli, Bragg, Brode, Frerichs, Frey, Harrison, Haugen, Hoppe, King, Lang, McDowell, Mason, Mueller, Nelson, Peterson, Pourchot, Radebaugh, Reyes, Riley, E. Scriven, Sherman, Simpson, R. Smith, J. Starkey, Thompson, Tink, Van Buer, Vedral, Wendel, Wills.

The Departments of Education offer opportunity for study toward the degree Master of Science in Education (fifth year), Master of Science in Community Mental Health, the Certificate of Advanced Study (sixth year), and the degree Doctor of Education. Procedures and other detailed information about these programs are explained in *Graduate Study in Education*. Copies are available in the offices of the Departments of Education.

Information relative to obtaining a teaching certificate for the junior college level in Illinois and in other states may be obtained from the Department of Secondary Professional Education. Programs of study designed for this level of certification will vary according to the present certification status of the individual, teaching goals, and the geographical area in which the individual desires to teach. However, the degree Master of Science in Education is conferred only on students who meet Illinois certification requirements for the standard elementary, secondary, or specialist's certificate and have approval of this institution, except for those completing approved programs in the area of the community college or school business management in the College of Education.

Students may specialize in the following areas listed under each degree or certificate.

### Master of Science in Education

- Elementary Education
- Curriculum and Supervision
- Specialization in Reading
- Counselor Education
- Educational Administration
- School Business Management
- Secondary Professional Education
- History and Philosophy of Education
- Instructional Media
- Early Childhood Education

### Master of Science in Community Mental Health

#### Certificate of Advanced Study

- Educational Administration
- School Business Management
- Elementary Education
- Curriculum and Supervision
- Secondary Professional Education
- Counselor Education

### Doctor of Education

- Educational Administration
- Counselor Education
- Curriculum and Supervision
- Educational Psychology
- Elementary Education
- Secondary Professional Education
- Instructional Media

## MASTER OF SCIENCE IN EDUCATION

### General Requirements

Education majors may earn the degree Master of Science in Education by electing one of two options. Option 1 includes the writing of a thesis; Option 2 is a program of courses without a thesis. In either option, the requirements are a minimum of 30 semester hours which are distributed as follows:

Option 1	Semester Hours
a. Education 503 and 6 semester hours of foundations to be selected from Educ. 500, 501, 504, 505	9
b. 15 semester hours approved by the student's adviser with an emphasis in one of the fields listed above	15
c. Master's thesis, Educ. 599A.	6
	30

### Option 2

Same basic requirements as Option 1 except that the thesis (Educ. 599A) is not required. Instead, 6 semester hours in the major field are selected with the approval of the student's adviser.

### Objectives for Each Area of Specialization

**1. Elementary Education.** Specialized study is undertaken for the purpose of strengthening and broadening the professional preparation of teachers for the elementary school. In addition to the basic requirements, course work will be determined on the basis of the individual student's undergraduate preparation, experience, and professional goals.

**2. Curriculum and Supervision.** The work of this major area is planned to provide the student with information and to develop competence in supervisory techniques, curriculum theory and practice, cooperative planning for improvement of instruction, coordination of educational media utilization, and evaluation of programs of curriculum improvement. This area is especially appropriate for the person desiring to meet the requirements for the general supervisory endorsement on the administrative certificate in compliance with the State of Illinois School Code.

**3. Specialization in Reading.** This program of specialization provides training for experienced teachers in diagnosing reading problems and giving remedial treatment to individual pupils. Teachers with such training and experience are in demand to function as remedial reading teachers and, after broader experience, to serve as coordinators of reading programs in elementary and secondary schools.

**4. Counselor Education.** This sequence provides preparation in the theory, techniques, and information needed by the professional school counselor or other interested educators at the elementary and secondary school levels. The requirements as set forth by the Office of the Superintendent of Public Instruction in Illinois for recognition of guidance personnel are fully met. One academic year of practical experience in personnel work or teaching, or both, prior to graduation in this area is essential. A background of other work experience is recommended to enhance the student's grasp of vital issues in guidance.

**5. Educational Administration.** This program is intended for the beginning student of school administration and should be of particular interest to persons who are entering administrative work. The emphasis is on areas of administrative responsibility, leadership skills, and technical and theoretical resources. Only persons with teaching or administrative experience should apply for this program. The completion of this program will fulfill requirements for the general administrative endorsement on the administrative certificate in compliance with the State of Illinois School Code.

**6. School Business Management.\*** This area is designed to prepare persons who are entering the work of managing the business affairs of a school system. A student in this program will divide his course time between education and business.

**7. Secondary Professional Education.** This area is intended for the college graduate who is generally interested in increasing his competencies in the field of professional education. Candidates may elect this sequence as a means of obtaining a general background in education. Persons electing this area are not limited to one specific professional goal; however, in order to meet the requirements of the Graduate School, students must follow a program which insures satisfaction of the certification standards for teaching in the State of Illinois if certification has not already been obtained.

**8. History and Philosophy of Education.** This area is designed to provide background knowledge in the historical and philosophical foundations of education for people who are interested in teaching at the collegiate level, preparing for an advanced degree in this area, or increasing their understanding of the theoretical development of education. The program will be planned to provide a broad background in the history and philosophy of education and to meet the needs of the specific goal of the student. A student in this program will complete approximately one-third of his course work in the Departments of History and/or Philosophy according to the particular pattern of his desired specialization.

**9. Instructional Media.** This area is designed to provide graduate study in the utilization, production, and administration of instructional materials and devices. Conventional instructional media, as well as more recently developed instructional systems, are considered. The program is intended to

\*See also p. 188.

be flexible and will meet the goals of students with varying backgrounds and abilities in the area.

**10. Early Childhood Education.** Specialized study is undertaken for the purpose of strengthening and broadening the professional preparation of teachers of young children, ages 3-8. The student may select, under guidance of an adviser, areas of emphasis in nursery school, kindergarten, or primary education. In addition to the basic requirements, course work will be determined on the basis of the individual student's undergraduate preparation, experience, and professional goals.

### Area Majors

The possibilities for area majors involving the study of Education and one other University subject are listed on pages 6-7. Area major students may expect to spend approximately one-half of their course time in each of the two subject areas; and they shall have two advisers, one from each of their two major departments. Area majors working in Education must pass the appropriate examinations set forth by the Departments of Education before receiving their degrees.

### Field Work

Such work under supervision is sometimes required in a given program of study especially when, in the adviser's judgment, it is necessary to prepare the student in his chosen specialty.

### Deficiency Study

In cases in which the student's background is limited with reference to his chosen specialty, he may be required to fulfill deficiency requirements.

### Internship Programs

The Departments of Education currently utilize internship programs in the areas of educational administration, guidance, the community college, curriculum and supervision, school business management, elementary teaching, and secondary teaching. For further information and internship possibilities see course descriptions.

### Options for Advanced Preparation for Secondary School Teaching

Students who wish further university preparation for teaching in the secondary school have several options. They may (a) major in a subject for teaching offered by one of several college departments, (b) major in Secondary Professional Education as indicated above in 7, or (c) elect an area major involving Education.

### Certification at the Master's Level

#### ELEMENTARY CERTIFICATION AND A MASTER'S DEGREE

Provisions are made to assist noncertified persons holding degrees in other fields to acquire certification and a Master of

Science degree in Education with a specialization in Elementary Education. Details are explained in the Departments of Education bulletin *Graduate Study in Education*. Copies of this bulletin are available in the Departments of Education offices. Attention is directed to procedures outlined for making application for admission to teacher education, page 10 of the Graduate Catalog.

### SECONDARY CERTIFICATION SEQUENCES

Persons who hold baccalaureate degrees from accredited institutions without courses in professional education often wish to undertake further college work in order to qualify for secondary teacher certification in Illinois.

The qualified graduate student may seek certification by way of any one of three sequences open to him at Northern. First, he may seek admission to teacher education and meet minimal Illinois certification requirements in regard to professional education courses by completing the following requirements: Educ. 500, Social Foundations of Education; Educ. 501, Psychological Foundations of Education; Educ. 510, Test Construction and Evaluation; Educ. 521, Seminar in Adolescent Behavior; a special methods course (or Educ. 424, Methods and Materials in the Secondary School); 7 semester hours in student teaching, which must be taken for undergraduate credit.

Second, the student may seek fulfillment of his professional education certification requirements by including the necessary courses in his master's degree program in Secondary Professional Education. However, student teaching cannot be taken for graduate credit.

Third, under Secondary Professional Education, the fifth-year secondary teaching internship offers the promising young man or woman an unusual opportunity. The internship program calls for (1) careful screening of candidates through inspection of credentials, testing, and interviews by University staff and hiring school administrators; (2) continuing supervision throughout the teaching internship by personnel from the hiring school and the University; and (3) a combination of internship teaching, seminars, course work, and individual study. The program consists of four phases. Phase I, which is taken during the first summer, is blocked with professional education courses. This concentration of professional course work qualifies the candidate for a provisional certificate which permits him to teach during the ensuing internship under contract. Phase II consists of the two semesters during which the intern teaches a three-fifths load at three-fifths base pay on a full day schedule. During the first semester the intern attends an on-campus seminar in secondary professional education; during the second semester he will attend a seminar on adolescent behavior. In Phase III, the second full summer session, the candidate completes the professional education requirements and strengthens



his teaching field through graduate level course work. Completion of this phase should result in full secondary certification in Illinois, permitting full employment as a regular teacher. Phase IV consists of completing all requirements for the Master of Science in Education degree at Northern, and meeting the required levels on the comprehensive examinations for the degree. Completing this final phase may permit the candidate to earn the Master of Science in Education degree in two full summer terms, two internship teaching semesters, and a third semester of part-time work in evening courses. The internship program at Northern Illinois University has the approval and cooperation of the Certification Division of the Illinois State Department of Public Instruction and of the North Central Association.

All three of the above sequences are based on the assumption that the individual student enrolled has met certification requirements in general education and has completed a subject matter major for which there are teaching assignments in the public school.

### **Application for Admission to Teacher Education by Graduate Students**

All graduate students who have not qualified earlier for teacher certification in Illinois and who wish the approval of this institution for such certification are required to make formal application for admission to teacher education. An application form for admission to teacher education must be completed and forwarded to the Dean of the Graduate School along with the application for graduate study. The reason for early application is to provide appropriate counseling for those seeking certification and institutional approval. The criteria for admission to teacher education are listed on page 10. After the student's application has been approved by the Dean of the Graduate School, the student will be interviewed by the appropriate department chairman and informed of the procedure for becoming certified in Illinois and the professional education prerequisites for student teaching at this institution. The student will then be interviewed by the director of student teaching and receive application forms for applying for student teaching. After the student has completed all deficiencies for certification, except for student teaching, he will be issued an admission card marked "graduate special" to permit him to do his student teaching.

For admission to student teaching, the student must possess a grade-point average of 3.00 in graduate courses taken at Northern Illinois University. Secondary majors must also have a major for which there are student teaching assignments in public schools. No graduate of a college or university who has been rejected for admission to a teacher education program will be admitted at the graduate level. No student will be recommended by the institution for certification who has not met the above admission requirements and those of an approved professional curriculum.

## **MASTER OF SCIENCE IN COMMUNITY MENTAL HEALTH**

Admission to the program will require the consent of the interdepartmental training committee. The program of study will be planned by an assigned adviser. A minimum of 30 semester hours of graduate credit is required for the degree. Certification is not required nor is admission to teacher education. If a candidate desires teaching or guidance credentials, it will be necessary for him to meet the requirements for such credentials.

### **Option 1**

- a. 12 semester hours in Education courses required:  
Educ. 560  
Educ. 562A  
Educ. 562B  
Educ. 569
- b. 6 semester hours in Sociology required, including Soc. 552, Community Analysis.
- c. 6 semester hours in Psychology required, including Psych., 416, Introduction to Psychopathology.
- d. 6 semester hours in Home Economics required, including H.Ec. 484, Family Relationships.

### **Option 2**

Same basic requirements as Option 1 but 6 semester hours of Educ. 599A (Master's Thesis) will be required. In fulfilling the requirements in Sociology, Psychology, and Home Economics, the candidate will take only one course instead of two in two of these three departments.

## **CERTIFICATE OF ADVANCED STUDY**

### **General Requirements**

A candidate for this certificate must:

1. Apply to the Dean of the Graduate School for admission to the Graduate School and the C.A.S. program.
2. File complete application forms with the appropriate Department of Education no later than registration day of the term marking formal admission to the program.
3. Work with his interim adviser planning work for the first semester.
4. Take a screening test during his first semester, or earlier.
5. Arrange an interview with the chairman of his advisory committee after receiving notification of acceptance by the Departmental Admission Committee.
6. Confer with his advisory committee to plan a program of study. (Quadruplicate copies of the program shall be prepared.)

In addition, other required procedures for sixth-year programs as indicated on pages 15-17 are to be followed.

## Specific Requirements for Each C.A.S. Area of Specialization

**1. Educational Administration.** This area is designed to prepare qualified graduate students for various administrative positions in school systems. It emphasizes the technical and specialized aspects of administration. In addition, it includes studies intended to refine the student's competency to deal with more general aspects of educational theory. This area is appropriate for the person who wants to fulfill the requirements for the superintendent endorsement on the administrative certificate in compliance with the State of Illinois School Code.

Candidates for this area must have a minimum of two years of teaching experience and two years of acceptable and successful administrative experience or satisfy the absence of the latter with internship experience. (See Educ. 695.)

Candidates who do not have a master's degree in the area of educational administration must take Educ. 533, 534, and 551.

**2. School Business Management.\*** This area is designed to afford additional and advanced technical study for persons who are serving as school business managers. The program offers both technical and general theoretical study related to work of school management in school systems of medium and large sizes.

Candidates are required to have had a minimum of two years of teaching or administrative experience, to have a master's degree in educational administration or business administration, to present evidence of two years of appropriate and successful supervisory experience or to satisfy this deficiency through Internship (Educ. 695).

**3. Elementary Education.** This area is designed for experienced elementary teachers and others who are interested in further study of elementary education. Emphasis is on research approaches to the improvement of elementary education. Candidates must have a minimum of two years of successful teaching experience.

**4. Curriculum and Supervision.** This area is designed for students who wish to continue study in curriculum and supervision with emphasis on their relationship to the behavioral sciences, school community relations, personnel management, and leadership skills pertaining to the curriculum. In addition, the student works on more advanced educational theory of a general nature. Advanced graduate students who are interested in reading as a major area of emphasis may select this field of study.

**5. Secondary Professional Education.** This area is designed for those students who are interested in increasing general competency in professional education. Its primary purpose is to serve the needs of persons desiring to increase their effectiveness as classroom teachers or those who plan to enter the field of teacher education. A candidate must have a minimum of two years of successful teaching experience in secondary

\*See also p. 189.

schools prior to admission to the sixth-year program. His program must include Educ. 508 and 602. Other courses are to be determined through conference with the appointed committee in terms of the candidate's background, interests, and needs. A candidate who has not had Educ. 500, 501, and 506 or their equivalents will be required to complete them in addition to the foregoing course requirements.

**6. Counselor Education.** This area offers professional preparation for the attainment of the necessary competencies and level of performance recommended by national professional organizations and the requirements for the Illinois Special Certificate in Guidance. To qualify for study in this area, the candidate must have a master's degree in Counselor Education or satisfy the deficiency prerequisites set by the candidate's committee. Through individualized planning, focused upon the candidate's professional objectives, programs utilizing courses from other departments and having a variety of emphases may be designed: e.g., advanced counselor preparation, administration of pupil personnel and/or guidance services, student personnel work, research in guidance.

## DOCTOR OF EDUCATION

### General Requirements

The degree Doctor of Education, the highest professional degree offered by the Graduate School through the Departments of Education, is awarded to those students who demonstrate superior qualities and attainment during their period of study and give clear evidence of exceptional promise in their field.

Applicants for the doctoral degree in Education are expected to have a broad base of general education in the Humanities, Sciences, and Social Sciences, represented by a minimum of 75 undergraduate and graduate hours and distributed equitably among the various fields. Where significant deficiencies are found by the candidate's advisory committee, additional hours above the 90 required for the doctor's degree may be prescribed. This degree is a professional degree intended to prepare for two services: (1) Administrative and Educational Services for those who will serve as administrators or service personnel and (2) Education as a Field of Study for those who wish to continue advanced study for the purpose of becoming superior teachers or teacher educators. Within the first type of service, an area of emphasis may be selected from the following five: (a) Administration, (b) Counselor Education, (c) Educational Psychology, (d) Instructional Media, or (e) Supervision and Curriculum. Within the second type of service, two areas of emphasis are offered: Elementary Education and Secondary Education. Both (1) and (2) may serve to prepare individuals for teaching at the college level. Preparation for research responsibilities both as producer and as consumer is an integral part of the program.



A candidate for the doctorate in any of these areas is required to present evidence of a minimum of three years of acceptable professional experience.

The procedures of initial application, in general, are similar to those listed for the master's degree and the C.A.S. However, the candidate will also have additional interviews and letters of recommendation, and will take aptitude tests, as stated elsewhere in this catalog.

To complete the residence requirements, the candidate is expected to fulfill a minimum of one full academic year in residence. This is interpreted to mean two consecutive regular terms, exclusive of summer terms. Residence credit is credit earned on the campus at DeKalb and may not be satisfied by transfer or extension credit.

All general requirements and procedures referring to admission, residence credit, thesis, final examination, and graduation as set forth by the Graduate School are to be satisfied.

The Departments of Education require the equivalent of at least three years of full-time academic work, or a minimum of 90 semester hours of graduate work beyond the bachelor's degree including the dissertation. The 90 semester hours include the following:

1. A minimum of 15 cognate semester hours outside the field of professional education.
2. A minimum of 18 semester hours in the specialization, including any courses which the doctoral committee believes necessary to complete the specialization in any department in any college.
3. A limitation of 30 semester hours on the amount of master's degree work that may be applied to basic competencies or to cognate or specialization requirements noted above.
4. A dissertation for 12 semester hours.

The dissertation is to be based upon original research, or it may be related to a field project of highly creative quality. Students must participate in a research seminar before undertaking their dissertation problems.

## Examinations

**Candidacy Examination.** A written candidacy examination will be scheduled and administered at least twice each year. A graduate student will be eligible to take this examination, with the permission of the chairman of his doctoral committee, if he has completed at least two-thirds of his studies including the basic competencies. Dates on which application for the examination can be made will be announced by the Departments of Education. This examination will encompass major areas of professional knowledge. Any student who fails may, with the recommendation of his committee, be granted the oppor-

tunity to take a second examination. The second examination, however, will be final.

**Final Examinations.** A final oral examination related to the dissertation is required and is conducted in accordance with the general requirements of the Graduate School.

## Course Offerings

**NOTE:** A "T" after a course number indicates that an old number is being re-used for a new or retitled course.

### 400. Early Childhood Education (3)

The school program for children ages three to seven. Planning the learning environment, developing learning activities, organizing the school day, interpreting children's growth to parents, exploring community resources. Special help for each student in planning for individual classroom situations. Prerequisite: Educ. 375 or equivalent or consent of instructor.

### 402X. Curriculum and Instruction in Elementary School Mathematics (3) (Mathematics 402)

The aims and organization of materials for the mathematics programs for the elementary school. Primarily for Elementary Education majors. Not open for credit toward the major or minor in Mathematics. Prerequisite: Math. 201 or equivalent.

### 424. Methods and Materials in the Secondary School (3)

Modern principles of teaching and learning in relation to the guidance of learning activities in the high school class. Prerequisite: Consent of instructor.

### 428. Workshop in Elementary Education (1-6)

Suggestions for experiences suitable for children six to twelve years old. Total time devoted to new media and the construction of teacher-made materials. Prerequisite: Consent of instructor.

### 430. Survey of Instructional Media (3)

Selection, evaluation, and use of various media, including computerized instruction, programmed instruction, television, and other devices. Laboratory periods.

### 431. Instructional Materials Production (3)

First in a series of courses in materials production. Construction of overhead transparencies, slides, and other graphic materials. Prerequisite: Educ. 430.

### 432. Television in the Classroom (3)

The effective use of television as an instructional device in the classroom.

### 443. Trends and Issues in Kindergarten Education (3)

The contemporary philosophy and psychology in kindergarten

education. Emphasis on child development goals, methodology, and physical facilities. Prerequisite: Educ. 375 or equivalent courses.

### **444. Workshop in Kindergarten Education (3)**

Suggestions for experiences suitable for kindergarten children in the classroom. Total time devoted to new media and the construction of teacher-made materials. Prerequisite: Consent of instructor.

### **450T. Workshop in Adult-Continuing Education (1-3)**

Opportunity provided to work cooperatively under the guidance and supervision of an experienced adult educator. An intensive analysis of specific programs of adult education. The literature of the field and the techniques of studying agency problems. Special projects assigned to each student for intensive study. Prerequisite: Consent of instructor.

### **474. Education in Urban Schools (3)**

Provides educators with a working knowledge of sociological forces operative in urban school systems. Cultural values, needs, and cognitive styles of disadvantaged children. Teaching strategies will be explored.

### **481. The Improvement of Reading in the Elementary School (3)**

Advanced course in the teaching of developmental reading at the elementary level. Criteria for a desirable reading program and a consideration of innovative procedures in relation to the findings of research. Prerequisites: Educ. 361, 375, or equivalent.

### **482. The Improvement of Reading in the Secondary Schools (3)**

Nature and organization of the junior and senior high school reading program. Ways of increasing basic reading competencies. The teaching of reading in the various content fields as well as the improvement of interests and tastes.

### **500. Social Foundations of Education (3)**

Social forces influencing American education; basic educational traditions as reflections of American culture; the school and cultural change; educational issues and the sources of conflict in American culture.

### **501. Psychological Foundations of Education (3)**

The broad fields of psychology as they relate to and provide foundations for educational practice. A constructive analysis of the principal areas, theories, experimentation, and conclusions in psychology with attention focused on such topics as motivation, intelligence, learning, personality, and emotions.

### **503. Introduction to Educational Research (3)**

A basic course in methods of research in education; the planning and conducting of a research study; the developing of skills in problem identification, data collection, analysis, interpretation, and preparation of research reports.

### **504. Philosophical Foundations of Education (3)**

Emphasis on the nature of philosophical inquiry as distinct from other types of investigation which reconstruct educational theory.

### **505. Historical Foundations of Education (3)**

The history of education in Western civilization from the Classical Period to the present with emphasis on leading theories of education and descriptions of school and teacher performance in the light of major problems of a given cultural era. Attention given to research skills in this field.

### **506. Historical Foundations of American Education (3)**

The history of education in the United States from colonial times to the present. The prevailing educational thought and practice in each of the various historical periods. Attention given to research skills in this field.

### **507. The American Preschool Movement (3)**

A study of the development of the American preschool movement.

### **508. Educational Statistics (3)**

Introductory course to provide students with the techniques necessary for understanding, analyzing, and interpreting data. Grouping of data, graphical representation, measures of central tendency, variability and relationship, the normal distribution, standard score and percentile interpretation, regression equation, and reliability of statistical measures.

### **509X. Supervision and Administration of the Music Program (3) (Music 509)**

Functions and techniques of supervision and administration of the music program. Emphasis on problems in curriculum, equipment and materials, budget, schedules, and programs. Techniques for in-service training in music for classroom teachers.

### **510. Test Construction and Evaluation (3)**

Modern concepts of evaluation; the preparation and use of teacher-made tests. Techniques of item analysis and concepts of reliability and validity. Procedures for assessing relatively intangible outcomes, through observational and judgmental techniques.

### **511. Understanding and Guiding the Elementary School Child (3)**

Advanced child development and the role of the teacher in the daily guidance of children. The practical application of child development principles to specific classroom procedures and to the selection of appropriate curriculum experiences.

### **512. The Elementary School Curriculum (3)**

Basic principles in the construction and administration of modern school curricula, the relation of the curriculum to society, and present practices in the schools.

### **513. Problems in Elementary Education (3)**

A seminar requiring individual investigations of problems in elementary education culminating in a research project.

**514. Seminar in Elementary Education (3)**

The use of theory in the analysis and interpretation of teacher-learning situations, as observed or recorded from elementary classrooms, kindergarten through sixth grade. Particular attention to (1) the identification and use of goals in education and (2) the application of knowledge in the areas of learning, human growth, group behavior, and curriculum. Prerequisite: Consent of instructor.

**515. The Teacher in the Elementary School (3)**

A practicum in elementary education based on teaching-learning situations. The examination of these situations as they suggest means for the improvement of instruction. Prerequisite: Consent of instructor.

**516. Mental Health in the School (3)**

Study of mental health concepts, research, and the dynamics of normal human behavior with emphasis on the use of these data by counselors and other school personnel.

**517. The Elementary School Principal (3)**

The basic performance patterns of the elementary school principal in the organization and administration of the educational process. Prerequisite: Educ. 551 or administrative experience.

**518. New Developments in Primary Education (3)**

Philosophy and psychology of primary education as related to factors in the contemporary scene.

**519X. Measurement, Evaluation, and Guidance in Music (3)**  
(Music 519)

Measurement includes standardized tests, classroom or studio marking, auditioning, and adjudication. Evaluation weighs such measures of aptitude in the light of professional and educational criteria. Guidance considers the use of these data in counseling programs in public schools and colleges.

**520. Seminar in Child Behavior (3)**

An analysis of research dealing with the nature of child development and the implications of such for the classroom teacher. The areas of emotional, intellectual, and social development.

**521. Seminar in Adolescent Behavior (3)**

An analysis of research dealing with the nature of adolescence and the implications of such for the classroom teacher.

**522. Junior High School Organization and Problems (3)**

The development of the junior high school organization and its philosophy; forms of curricula; characteristics of junior high school students. Administrative problems such as program making, co-curricular activities, junior high school physical facilities, role of staff, and junior high school-community relations.

**523. Seminar in Secondary Education (3)**

A seminar concerned with professional and classroom problems of secondary school teachers.

**524. Introduction to Comparative Education (3)**

An introduction to the purpose, methodology, and research in comparative education with special reference to understanding and comparing systems of education. Advanced systems of education, such as those of England and the Soviet Union, and education in the underdeveloped nations of the world.

**525X. Foundations of Music Education (3)**  
(Music 525)

The historical and philosophical bases of music education. The application of learning theories to problems of music teaching. Required for M.M. degree with a major in Music Education.

**526. Workshop in Education (1-3)**

Workshops designed for teachers, supervisors, counselors, and administrators to study contemporary issues and problems of the public school. Content varies to provide the opportunity to study current problems. May be repeated to a maximum of 12 semester hours. Prerequisite: Acceptance by the director of the workshop.

**527. The Secondary School Principal (3)**

For junior high and high school administrators. Program construction, staff utilization, pupil records, organizational structures, and plant utilization. Prerequisite: Educ. 551 or administrative experience.

**528. Survey of Research in Educational Administration (3)**

Survey of selected research studies in educational organization and administration. Prerequisite: Educ. 551.

**529. Teaching in Adult-Continuing Education (3)**

A critical examination of major problems of teaching and learning in adult education. The factors which affect learning ability, achievement, and motivation to learn through the adult life-cycle.

**530. The Community College (3)**

The development of the junior college movement; its present status, purposes, functions, organization, and curriculum; and the characteristics of the emerging community college.

**531. Community College Student Personnel Services (3)**

A seminar on student personnel services and problems peculiar to the community (junior) college. Analysis of current practice and research in the field with emphasis on personnel practices and instruments, orientation procedures, counseling and record keeping, registration, testing and test interpretation, placement, student activity programs, and institutional research on student characteristics. Prerequisites: Educ. 530, 6 semester



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hours of guidance and/or measurement or consent of instructor.

### **532. The College Student and His Culture (3)**

Concepts of culture, subculture, and societal participation with reference to students in the college and university setting.

### **533. The Organization of Curriculum (3)**

The assumptions underlying current curriculum organizations. Decision-making procedures regarding development and evaluation of educational programs.

### **534. Improvement of Instruction (3)**

An investigation and analysis of common problems in teaching. The principles which apply at all levels of instruction.

### **535. Secondary School Curriculum (3)**

For advanced students who wish to make a thorough study of basic principles in the construction and administration of secondary school curricula, the relation of the curriculum to society, and present practices in secondary schools.

### **536. Supervisory Behavior (3)**

The theoretical constructs underlying supervisory behavior in educational settings.

### **537. Survey of Research in Curriculum (3)**

Analysis of curriculum research with emphasis on current research studies. Prerequisite: Educ. 533.

### **538. Advanced Materials Production (3)**

Second in a series of production courses, this course includes the design and production of audio and visual materials of an advanced nature for use in an instructional system. Prerequisite: Educ. 431 or equivalent.

### **539. Instructional Television Programming (3)**

Closely supervised preparation of instructional television lessons from conception through execution, utilization, and evaluation. Prerequisite: Speech 450 or equivalent.

### **540. Administration of Media Programs (3)**

Rationale for, and planning of, media programs. Selection, organization, and distribution of equipment, materials, and staff. Prerequisite: Educ. 430.

### **541. The Improvement of Instructional Programs (3)**

Analysis of supervisory functions, methods, and responsibilities of educational leadership. Group dynamics in in-service programs. Prerequisite: Educ. 533.

### **542. Fundamentals of Curriculum Development (3)**

Application of curriculum principles to the development of educational programs. Assessment of current plans for organization of the curriculum. Prerequisite: Educ. 533.

### **543. Problems in Curriculum Development (3)**

Students are required to undertake a curriculum project which emphasizes current curriculum strategy. Prerequisites: Standing as C.A.S. or doctoral student; Educ. 533 or equivalent.

### **544. School Business Management (2-3)**

Management of auxiliary enterprises, including accounting and financial control. Maintenance of buildings and grounds, personnel and office management, transportation, insurance, investments, administration of supplies and equipment, and administrative relationships.

### **545. Maintenance and Operations in School Business Management (3)**

Problems of maintaining buildings and grounds: custodian relationships, scheduling, budgeting, purchasing, supply administration, recordkeeping, and cost analysis.

### **546. Practicum in School Business Management (1-6)**

A concentrated program designed to provide maximum participation by each enrollee and directed by a faculty drawn from many sources, such as school administrators, business managers, members of boards of education, representatives from industry, professors, etc. All phases of business management will be considered, and time will be provided for field trips. Open to school business officials and other school personnel. May be audited for no credit.

### **550T. Organization and Administration of Adult-Continuing Education (3)**

The organizing, financing, staffing, promoting, and evaluating of programs of adult education. Teaching resources and the role of the adult education administrator.

### **551. School Organization and Administration: Principles, Concepts, and Structure (3)**

Development of an awareness and understanding of the social, political, and behavioral bases for school administration.

### **553. Problems in School Administration (3)**

A seminar requiring individual investigation of fundamental problems in school administration and school business management culminating in a research paper. Problems based largely on past or anticipated experience of the students. Prerequisites: Educ. 551 and 517 or 527 or consent of instructor.

### **556. School Organization and Administration: Programs and Practices (3)**

Examination of administrative practices in the areas of educational programs, staff and pupil personnel functions, physical plant, finance and business management, and school-community relations. Prerequisite: Educ. 551.

### **557. Essentials of School Law (3)**

Survey course on legal problems in the school setting. Designed for master's degree candidates.

**559. Nature and Theory of Administration (3)**

Analysis of relationships in organizational structures, decision making, and informal organization. Assessment and analysis of models and systems for the solution of problems in administration. Prerequisite: Educ. 551 or consent of instructor.

**560. Personnel and Guidance (3)**

Introduction to personnel work in elementary and secondary school. Recognition of needs for guidance, guidance principles, practices, and their application.

**561T. Group Procedure in Guidance and Counseling (3)**

Theory and practice of working with groups for guidance and counseling purposes, with emphasis on small groups. Review of theories and research in group dynamics, communication, and role playing. Practice with selected techniques.

**562A. Counseling Techniques: Theory and Practice (3)**

An introduction to counseling theory and practice with emphasis on interview techniques.

**562B. Practicum in Counseling (3)**

A continuation of Educ. 562A. The practical aspects of the counseling situation. Cases, tapes, role playing, and analysis of the counseling movement and counselor responses. Prerequisites: Educ. 562A, 563, and consent of instructor.

**563. Standardized Testing (3)**

Principles of measurement as applied to group standardized measures of achievement, special aptitude, intelligence, personality, and interest for use in educational personnel work. Administering, scoring, and interpreting these measures.

**564. Principles and Techniques in Pupil Personnel Work (3)**

Foundations of guidance and pupil personnel work. Implementation of specific practices with emphasis on the use of various techniques and records in guidance and counseling.

**565. Individual Educational Diagnosis (3)**

For training selected school personnel in the administration, scoring, and interpretation of individually administered tests used to diagnose the abilities of students in the classroom. Prerequisite: Consent of instructor.

**567. Educational and Occupational Information in Guidance (3)**

Methods of obtaining, evaluating, and organizing materials of occupational, educational, personal, and social information in the counseling and group guidance process. Prerequisite: Educ. 560 or equivalent.

**568. Guidance in Elementary Education (3)**

Principles and methods and practical problems pertinent to the elementary school. Recognition of early remedial problems in reading and behavior. The use and importance of anecdotal personal data records, parent and teacher interviews, and in-

terpretation for referrals. Planning programs for individual pupils with teachers.

**569. Professional Seminar in Community Mental Health (3)**

Lectures, reading, and discussion. Instructors from various departments and guest lecturers on the following topics: administering community health programs; communication with medical and/or psychiatric personnel; communication with educators and the schools; communication with the clergy; professional ethics; social service agency organization and interaction; related community organizations and agencies.

**570. Methods of Appraisal in Higher Education (3)**

Basic concepts and procedures in appraisal of applicants for admission and retention in institutions of higher education.

**571. Organization and Administration of Guidance Services (3)**

The functions, basic elements, and effective organization of guidance services within the pupil personnel framework. Problems in activating, organizing, and administering guidance services; selection and education of the staff; evaluating the services; utilizing community resources; and developing records. Prerequisite: Educ. 560.

**572. School-Community Relations (3)**

The responsibility of the school to offer leadership and interpret home-school-community relationships. The task of surveying and utilizing community resources, studying promising programs and practices, and evaluating educational criticism.

**573. Seminar in Urban Education—Programs and Organization (3)**

Provides educators with an opportunity to become familiar with research, practices, and programs being carried out in the field of urban and compensatory education. Class members will be encouraged to conduct research in areas of interest. Prerequisite: Consent of instructor.

**574. Language Arts in Early Childhood Education (3)**

Focus is on language experiences as an integral part of the young child's growth and development.

**575. Diagnosis and Treatment of Reading Difficulties (3)**

Causes of reading difficulties, their diagnosis and correction. Current reading tests.

**576. Clinical Diagnosis of Reading Difficulties (3)**

A practicum emphasizing case study techniques in the diagnosis of reading problems. The administration of various formal and informal tests and the interpretation of the test results. Making case studies, followed by the preparation of case reports. Written permission of instructor required. Prerequisites: Educ. 481, 482 or equivalent, and 575.

**577. Clinical Problems in Teaching Reading (3)**

A practicum providing clinical experience in applying pro-



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cedures with severely disabled readers. Written permission of instructor required. Prerequisites: Educ. 481, 482 or equivalent, 575, and 576.

### **579. Instructional Media Systems (3)**

Analysis and design of systems of instruction. Programmed materials and machines, dial access systems, and other multimedia systems are stressed. Prerequisite: Educ. 430.

### **580. Seminar in Guidance and Counseling (3)**

Selected problems in guidance and counseling with emphasis on current issues and individual problems. Prerequisite: Minimum of 12 graduate semester hours in guidance or consent of instructor, or both.

### **582. The Kindergarten Years: Transition and Perspective (3)**

A study of learning continuity in early childhood years. Emphasis upon the kindergarten years.

### **583. The Teaching of Social Studies in the Elementary School (3)**

Emphasis on principles of instruction in the social studies; the examination and evaluation of issues in the teaching of social studies.

### **584. The Teaching of Science in the Elementary School (3)**

Implications for instruction are derived from the analysis of selected trends in the teaching of elementary school science.

### **585. Teaching Language Arts in the Elementary School (3)**

Focus on principles of instruction in the language arts and the substantiation of these principles in order that they may become working theory for the teacher.

### **586. Related Arts in the Elementary School (3)**

The function of the arts in the elementary school curriculum; an examination of trends and issues in the planning of learning experiences in the fine and applied arts.

### **587. Social Learnings in Early Childhood Education (3)**

Emphasis on social learnings for the young child. Principles and procedures in the development of social experiences. Child growth and development, democratic values and processes, and common life problems are stressed.

### **588. Corrective Reading in the Elementary School (3)**

Diagnostic techniques and corrective procedures suitable for testing and teaching the less severe reading disability cases among elementary school children. Some supervised laboratory practice with children in a school setting required. Written consent of instructor required. Prerequisite: Educ. 481 or equivalent.

### **589. Corrective Reading in High School (3)**

To acquaint qualified students with corrective procedures appropriate for the less severe reading disability cases in secondary schools. An investigation of classroom corrective pro-

cedures and the application of these procedures in teaching secondary school students. The use of the more recently developed visual aids used in teaching reading. Prerequisite: Educ. 482 or 575 or equivalent.

### **590. Counseling and Guidance Training Institute (9)**

A concentrated institute offered to improve the qualifications of (1) personnel engaged in counseling and guidance of students in secondary schools and (2) teachers in such schools preparing to engage in such counseling and guidance. Admission to this course is controlled by committee action growing out of prior application bearing the endorsement of the student's immediate superior in his employment as a teacher.

### **591. Advanced Educational Statistics (3)**

Testing experimental hypotheses by use of t-tests, Chi-square, analyses of variance procedures. Use of confidence intervals in estimating population parameters. Consideration of power and of control of errors in simple and complex designs. Prerequisite: Educ. 508 or equivalent, or consent of instructor.

### **592. Philosophical Analysis of Educational Thought (3)**

Procedures of formal and informal philosophical inquiry explored for the purpose of acquiring facility in using philosophical resources for the criticism, development, and refinement of educational theory.

### **593. Supervision of Student Teachers (3)**

To provide cooperating teachers, administrators, and supervisors with a better understanding of the function of student teaching in the professional education of teachers. Discussion of the basic issues to bring out valuable techniques in supervising, directing, and evaluating the experience of the student teacher. Prerequisite: Consent of instructor.

### **594. Seminar in the Supervision and Administration of Professional Laboratory Experiences (3)**

An advanced seminar dealing with the theory and practice of professional laboratory experiences such as micro-teaching, observation, participation, simulation, student teaching, and internships. Prerequisite: Educ. 593 or consent of instructor.

### **595B. Internship (TBA)**

For those actively engaged in supervisory work. Study under the guidance of the University instructor. Individual observation and conferences and a number of Saturday meetings to consider common problems. Anecdotal records and other materials analyzed and evaluated. Prerequisites: Educ. 543, 593, and consent of the Student Teaching Office.

### **596. Reading Institute (2-3)**

Basic reading problems in the elementary, junior high, and senior high school. Guest instructors and regular staff members. An intensive course for two or three weeks.

**597. Independent Research (1-3)**

Independent research on the fifth-year level under faculty supervision. May be repeated to a maximum of 3 semester hours. Prerequisites: Admission to candidacy for the master's degree and consent of faculty member who will direct research.

**598. Independent Research (1-3)**

Independent research projects at the sixth and seventh-year levels under faculty supervision. May be repeated to a maximum of 6 semester hours.

**599A. Master's Thesis (1-6)**

Open only to the student who elects to write a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. May be taken for 3 semester hours and repeated, or once for 6 semester hours. Prerequisites: Educ. 503 and consent of the adviser.

**599B. C.A.S. Thesis or Field Study (1-6)**

Prerequisites: Advancement to candidacy for C.A.S. and consent of the chairman of the advisory committee.

**601. Advanced Educational Psychology (3)**

Detailed analysis of modern learning theories and practices as they relate to education. Further development of major areas of human growth as they relate to the school. A detailed investigation of major research in educational psychology. Prerequisite: Educ. 501.

**602. Educational Research Planning and Interpretation (3)**

An advanced course dealing with problems in criterion definition and various handicaps in deriving valid inferences. An analysis is made of how these handicaps can be resolved by study design and tool, data, and sample selection. Prerequisites: Educ. 503 and Educ. 508 or equivalents.

**606. Seminar in Research Studies in the Field of Reading (3)**

Designed for the advanced student who is interested in the serious study of research reports in education, psychology, linguistics, and other disciplines which have a bearing on the problems in teaching reading. Prerequisite: Consent of instructor.

**607. Supervisory Problems in Reading (3)**

Procedures for developing a curriculum in reading and the supervisory responsibilities of administrators and reading consultants in improving reading instruction in the schools.

**610. Seminar in School Business Management (2-3)**

The problems involved in the business administration of schools. Concentrated study and research concerned with all phases of school business management, such as accounting and finance, cafeteria management, purchasing, transportation, building planning and construction.

**611. Advanced Child Study (3)**

The formulation of generalizations about trends and modifications in the research on child development produced during the 20th century. The acquisition of facility in the formulation of hypothetical research designs to advance knowledge in child development. Prerequisites: Sixth-year standing and Educ. 602. Co-requisite: Educ. 612.

**612. Practicum in Child Study (3)**

The examination of research in child development produced during the last decade. The formulation of hypotheses for research designs applicable to actual classroom procedures. Co-requisite: Educ. 611.

**616. Elementary Teacher Education (3)**

A survey of selected undergraduate programs of preparation which have been designed to educate teachers for the public elementary schools. Intensive analysis of the program at Northern Illinois University involving supervised laboratory experiences. Internship correlative with this course recommended. Prerequisite: Consent of instructor.

**617. Curriculum Design in Elementary Education (3)**

Interrelationships of various components of a curriculum design. Curriculum design as a basis for decision making in constructing an instructional program in elementary education. Prerequisite: Consent of instructor.

**622. Advanced Seminar in Human Development (3)**

An in-depth study of the field of human development including child development, adolescent development, and a special emphasis on maturity and old age. The primary orientation will be toward theories of human development.

**623. Supervision in Counseling and Personnel Services (3)**

Theory and practical experience relating to supervision of counselors and other personnel workers in elementary, secondary, or higher educational levels.

**624. Seminar in Comparative Education (3)**

Advanced cross-cultural comparisons of educational systems in order to understand and compare international features in education. A detailed multifactor analysis of the educational systems under investigation.

**632. Seminar in European Educational Thought (3)**

Educational theories and practices of European leaders that have influenced Western civilization. An examination of original writings by Plato, Aristotle, Comenius, Locke, Rousseau, Pestalozzi, Froebel, Herbart. Emphasis will be placed on historical research techniques and the opportunity to pursue specialized interests.

**633. Seminar in American Educational Thought (3)**

Theories of education which have been influential in American

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educational history examined through the means of historical and philosophical research. Prerequisites: Educ. 504 and either 505 or 506; or consent of instructor.

### **637. Practicum in Media (3)**

Development of devices and materials for instructional media through individual production and design. May be repeated to a total of six hours. Prerequisites: Educ. 431 and 538 and consent of instructor.

### **638. Media Curriculum Development (3)**

Development of media courses and programs at the college level. Prerequisite: Consent of instructor.

### **639. Theory of Media Communication (3)**

Applies basic concepts of communication to problems in teaching and learning. The role of communication in problem solving, attitude formation, and teaching is emphasized.

### **640. Seminar in Media (3)**

Problems in organization, administration, and research in media. Prerequisite: Consent of instructor.

### **643. Research Seminar in Curriculum (3)**

Designed for the advanced student who is interested in planning and conducting a research study in curriculum. May be an exploratory or pilot study related to the doctoral dissertation. May be repeated to a maximum of 6 semester hours. Prerequisites: Admission to C.A.S. or doctoral program and consent of instructor.

### **645. Field Study in Curriculum (3)**

Methods of analyzing and evaluating educational programs through participation in curriculum studies in field settings. Prerequisite: Consent of instructor.

### **648. Curriculum Inquiry (3)**

Analysis of curriculum theories. Construction of new paradigms or models based on current curriculum thought. Prerequisite: Standing as C.A.S. or doctoral student.

### **650. Systems Analysis in Education (3)**

Extended study of the systems approach to decision making in education, focusing upon specific problems of design, implementation, and evaluation. Prerequisite: Completion of master's degree or equivalent.

### **653. Seminar in School Administration (3)**

The identification and integration of the human and technical skills required for modern school administration. Prerequisite: Educ. 551 or consent of instructor.

### **654. School Buildings (3)**

School plant planning, the school plant survey, population and utilization studies, and evaluation of existing plant. Laboratory and field work. Prerequisite: Educ. 551 or consent of the in-

structor. This course is also open, with the consent of the instructor, to students who are members of building planning committees.

### **655. School Finance (3)**

Basic course in educational finance. Theoretical and practical aspects of the various phases of financial administration; foundation programs, cost-quality relationship, taxation, state and federal participation, and the more prevalent aspects of operational finance. Prerequisite: Educ. 551 or consent of instructor.

### **656. School Administration Field Studies (3)**

Methods of administrative planning in the areas of community background, evaluation of buildings, transportation, scheduling, utilization of staff, and financial analysis.

### **657. School Law (3)**

Emphasis on case studies in school law. Designed primarily for students working toward the Certificate of Advanced Study or the doctoral degree.

### **660. Theories of Counseling (3)**

A critical evaluation of theories of counseling. Review of research in the application of theoretical counseling constructs. Prerequisites: Educ. 562A and 562B.

### **662. Advanced Practicum in Counseling and/or Guidance (3-6)**

For students majoring in guidance. Practical experience in counseling and/or guidance functions at elementary, secondary, or higher educational levels. Prerequisites: Educ. 562A, 562B, and consent of instructor.

### **663. Organization and Administration of the School Testing Program (3)**

Procedures of establishing goals for the school testing program, selecting tests appropriate to stated goals, coordinating the testing program with other members of the school's professional staff, and using test results in curriculum analyses and in administrative decisions. Prerequisite: Educ. 510 or 563.

### **664. Pupil Personnel Administration (3)**

Attendance, health, guidance, psychological, and social work services. Organization patterns and problems of budget, staffing, supervision, and program evaluation. Prerequisite: A master's degree or its equivalent in guidance or a related area of personnel work.

### **666. Personnel Services in Higher Education (3)**

A comprehensive study of the organizational structure and administrative relationships of personnel services in the collegiate setting. Student personnel services included are admission, testing, records, housing, scholarships and loans, health and counseling, student activities, discipline, student government, and placement. Prerequisite: A master's degree or its equivalent in guidance or a related area of personnel work.

**667. Seminar in Vocational Development Theory (3)**

Review of recent and contemporary theories of vocational development. Attention given to analysis of related research. Prerequisites: Educ. 567 or equivalent, or admission to doctoral program, and consent of instructor.

**669. Learning Research Practicum (3)**

Extended study of learning theory and individual research focusing upon specific and persistent problems of design, translation and interpretation of learning research for educators. May be repeated to a maximum of 6 semester hours. Prerequisites: Educ. 508 and 601, or consent of instructor.

**670. Research Seminar in History and Philosophy of Education (2-6)**

Selected problems in education appropriate to historical or philosophical investigation. Training will be given in the methods of research and creative scholarship in these areas. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of instructor.

**671. Advanced Research Seminar (3-12)**

- A. Methodology and Design—Learning
- B. Methodology and Design—Developmental
- C. Methodology and Design—Statistics and Measurement
- D. Methodology and Design—Educational Psychology

Students will design and conduct a study dealing with a problem in education. It may be a pilot study related to the doctoral dissertation. May be repeated to a maximum of 12 semester hours. Each semester will be devoted to research in one of the four major areas of Educational Psychology. Prerequisite: Master's degree.

**673. Administration of Staff Personnel (3)**

The problems and issues associated with administration and supervision of school personnel. Organization of staff, collective negotiations, selection of personnel, and development of reward systems.

**675. Seminar in Higher Education (3)**

Teaching problems in colleges and universities, including professional schools and community colleges. Course organization, methods, and class management. Educational problems confronting higher education in connection with the anticipated expansion in the number of students who will demand admis-

sion. Experiments and proposals looking toward increasing the "productivity" and efficiency of college teachers.

**682. Non-Parametric Statistics (3)**

Application, computation, and interpretations of non-parametric statistical tests and correlation measures. Comparison of these tools and techniques with their parametric counterparts. Prerequisite: Educ. 508 or equivalent.

**683. Methods of Correlation (3)**

An intensive study of statistical techniques appropriate to analyzing the extent of relationship among two or more variables. Linear and curvilinear analysis, correlation with non-continuous variates, single and multiple variate regression, and methods of multi-factor analysis. Prerequisites: Educ. 508 or equivalent and consent of instructor.

**690. Theory of Measurement (3)**

Analysis of theoretical approaches to reliability and validity, effects of external factors on test parameters, techniques with composite scores, use of factor analysis. Prerequisites: Educ. 508 and 510 or 563 and consent of instructor.

**691. Construction of Scaling Instruments (3)**

Techniques of scale construction for use in assessing attitudinal, interest, temperament, and personality variables, and psychomotor skills; reliability and validity of each technique. Prerequisite: Educ. 591 or consent of instructor.

**695. Internship (TBA)**

Work individually or in small groups in a practical school situation under the guidance of a member of the school's staff and a University supervisor.

**696. Externship in Educational Administration (3)**

A seminar designed expressly for practicing school administrators and directly related to applied problems in educational administration. Must be taken in fall semester and the following spring semester for a total of 6 semester hours. Written permission of instructor required.

**699. Doctoral Research and Dissertation (1-12)**

Student must accumulate 12 semester hours prior to graduation. Prerequisites: Candidacy for the doctoral degree and consent of chairman of doctoral committee.



# School of Nursing

**GRADUATE FACULTY:** Lefkowitz, Director. Hart, Frerichs, Murin, Nissen, Pender.

The School of Nursing offers a program of graduate studies leading to a Master of Science degree with a major in Nursing.

## MASTER OF SCIENCE

Admission to graduate study in Nursing requires graduation from a state-approved school of nursing, a baccalaureate degree from an accredited college or university, and consent of the Graduate Committee of the School of Nursing. Applicants who lack an upper-division Nursing major will be required to earn a specified number of hours in undergraduate Nursing courses prior to admission to candidacy.

The Master of Science with a major in Nursing may be earned by electing one of two options. Option One includes the writing of a thesis whereas Option Two is a program of courses without a thesis. In either option a minimum of 30 semester hours is required, distributed as follows:

Option One	Semester Hours
a. Area of nursing specialization	18
b. Cognate courses approved by the department adviser	6
c. Master's thesis	6
Total	30
Option Two	
a. Area of nursing specialization	18
b. Cognate courses approved by the department adviser	12
Total	30

The graduate student plans a program in consultation with an assigned adviser from the School of Nursing. The student may select an area of specialization in medical-surgical nursing, maternal and child health nursing, community health nursing, or nursing administration. Courses that must be taken in each of the areas of specialization are as follows:

### 1. Medical-Surgical Nursing

- Nursing 501, Nursing Perspectives
- Nursing 502, Nursing Research
- Nursing 503, Curriculum Development in Nursing
- Nursing 520, Seminar in Medical-Surgical Nursing
- Nursing 521, Seminar and Practicum in Teaching Medical-Surgical Nursing

### 2. Maternal and Child Health Nursing

- Nursing 501, Nursing Perspectives

- Nursing 502, Nursing Research
- Nursing 503, Curriculum Development in Nursing
- Nursing 540, Seminar in Maternal and Child Health Nursing
- Nursing 541, Seminar and Practicum in Maternal and Child Health Nursing

### 3. Community Health Nursing

- Nursing 501, Nursing Perspectives
- Nursing 502, Nursing Research
- Nursing 560, Group Dynamics in Community Health
- Nursing 561, Health Structure of the Community
- Nursing 562, Seminar and Practicum in Community Nursing

### 4. Nursing Administration

- Nursing 501, Nursing Perspectives
- Nursing 502, Nursing Research
- Nursing 503, Curriculum Development in Nursing
- Nursing 570, Nursing Administration
- Nursing 571, Practicum in Nursing Administration

## Course Offerings

### 400. Workshop in Nursing (1-3)

Study of current issues and problems in the field of nursing. Prerequisite: Acceptance by the director of the workshop. May be repeated.

### 442. Aspects of Rehabilitation (3)

A survey of origins, trends, and contemporary developments in rehabilitative processes and services available to persons with disabling conditions. Open to non-Nursing majors.

### 487. Medical Legal Problems (3)

Aspects of professional and legal problems and issues in the health fields in relation to the individual, the citizen, and the practitioner.

### 497. Comparative Health Care Patterns (3)

An exploration of varying systems for providing health services, and the recruitment and education of personnel. Stress is on the interrelationship of health care and economic, cultural, and ideological factors in society. Comparison of basic differences in provision of health services in selected countries.

### 501. Nursing Perspectives (3)

An overview of nursing giving consideration to the philosophies of nursing, nursing trends, legal implication, patient care practices, health legislation, and the changing societal role of the nurse.

### 502. Nursing Research (3)

Analysis and evaluation of nursing research projects and studies.



A special emphasis upon the need for continuing research in light of current and future needs of the profession. Prerequisite: Introductory statistics course.

### **503. Curriculum Development in Nursing (3)**

Utilization of the principles of curriculum development as a frame of reference for planning educational programs in schools of nursing and nursing services.

### **520. Seminar in Medical-Surgical Nursing (3)**

Exploration of selected broad concepts relating to the health of the individual, his family, and community. Analysis of pathophysiological, psychosocial, and cultural factors affecting nursing care.

### **521. Seminar and Practicum in Teaching Medical-Surgical Nursing (6)**

Analysis of the role of the nurse as a clinical practitioner and teacher. Field experiences will provide opportunity for exploration and practice in the area of interest. Prerequisite: Nursing 520 and consent of instructor.

### **530. Independent Research (1-3)**

Independent research projects under faculty supervision. May be repeated to a maximum of 6 semester hours.

### **540. Seminar in Maternal and Child Health Nursing (3)**

Study of the impact of societal changes on the family during the child-bearing and the child-rearing years with consideration of the independent functions of the nurse in this dynamic society.

### **541. Seminar and Practicum in Maternal and Child Health Nursing (6)**

Analysis of the role of the nurse as a teacher or a clinical practitioner. The field experience will provide opportunity to increase competency in the area of interest. Prerequisites: Nurs-

ing 540 and consent of instructor.

### **560. Group Dynamics in Community Health (3)**

Examination of group work theories, concepts, and the process of group behavior. Structural and functional characteristics of small groups and forces that promote or impede group interaction. On-going group processes are observed and evaluated.

### **561. Health Structure of the Community (3)**

Analysis of health structure on local, state, and national levels with emphasis on nurse participation in local health organizations.

### **562. Seminar and Practicum in Community Nursing (6)**

Examines concepts from the behavioral sciences and psychiatric and public health nursing to provide a theoretical base for practice within a family and community orientation. Clinical experiences focus on work with families in selected community agencies and participation in the collaborative care given by members of an interdisciplinary team. Prerequisites: Nursing 560 and 561 and consent of instructor.

### **570. Nursing Administration (3)**

Administration as it relates to nursing service and nursing education. Prerequisite: Nursing 503.

### **571. Practicum in Nursing Administration (6)**

A field experience in the administrative area of nursing service or nursing education. The observation and utilization of the administrative processes as a means of effective operation. Prerequisite: Nursing 570.

### **599. Master's Thesis (1-6)**

Open only to the student who elects to write a thesis for the degree Master of Science with a major in Nursing. The student enrolls with the faculty member directing the thesis. Prerequisite: Nursing 502.

# Department of Outdoor Teacher Education

**GRADUATE FACULTY:** Hammerman, Department Head. Brigl, Donaldson, Goering, Jones, Stark, Swan, Wiener.

The Department of Outdoor Teacher Education offers a program leading to the degree Master of Science in Education with a major in Outdoor Teacher Education. The Departments of Outdoor Teacher Education and Education cooperate in offering course work required for the major in Outdoor Teacher Education.

## MASTER OF SCIENCE IN EDUCATION

Admission to the program will be by consent of a faculty advisory committee. A final comprehensive examination is required. It may be either written or oral or both at the option of the department.

Students who elect a major in Outdoor Teacher Education leading to the degree Master of Science in Education may follow either of two options:

### Option 1

- a. A minimum of 21 semester hours in courses offered by the Department of Outdoor Teacher Education to include O.T.E. 410, 504, 511, and 599. The program of courses will be selected in conference with the graduate faculty adviser and should include sufficient additional courses to bring the total to 21 semester hours.
- b. Sufficient additional courses in other departments to bring the total credits to a minimum of 30 semester hours. At least 9 semester hours must be taken outside the Department of Outdoor Teacher Education and must include Educ. 503. A student may also wish to include recommended cognate courses Educ. 500 or 501 in his program of studies.

### Option 2

Students electing Option 2 must satisfy all requirements listed under Option 1 except O.T.E. 599, Master's Thesis. Option 1 requires the equivalent of five 3-semester-hour courses in the major department, Outdoor Teacher Education, plus 6 semester hours for the thesis. Option 2 requires the equivalent of seven 3-semester-hour courses in the major department. In addition a student pursuing either option would take a minimum of 9 semester hours of credit in courses outside the major department.

## Course Offerings

### 405. Workshop in Outdoor Education (1-3)

The investigation and application of outdoor education principles to the particular needs and interests of the workshop

participant. Participation in outdoor learning experiences, and analysis of instructional materials and resources. May be repeated to a maximum of 6 semester hours of credit.

### 410. Foundations of Outdoor Education (3)

To acquaint teachers with the basic concepts of outdoor education. The meaning, scope, and value of outdoor education. Emphasis upon procedures and instructional materials especially suited for teaching out-of-doors. May be taken for either graduate or undergraduate credit. A prerequisite for all required courses in the Department of Outdoor Teacher Education.

### 415. Field Science (3)

Provides a basic fund of scientific knowledge which can be studied in the natural environment. The study of plants, soil, water, insects, weather, and geology. Special attention devoted to research techniques of scientific investigation.

### 417. Arts and Crafts in Outdoor Education (3)

Participation in a program of arts and crafts activities utilizing natural materials.

### 504. Historical and Philosophical Development of Outdoor Education (3)

Detailed examination of the meaning and scope of outdoor education. The historical and philosophical foundations of outdoor education. Evolvement of this movement in American public education is traced and recent significant trends and existing outdoor education programs are examined. Prerequisite: O.T.E. 410.

### 511. Advanced Field Experiences in Outdoor Teacher Education (3)

For experienced teachers who wish to supplement and enrich their classroom teaching by including outdoor learning experiences. Ways and means of relating various outdoor learning activities to the various subject matter areas of the school curriculum. Prerequisite: O.T.E. 410.

### 514. Organization and Administration of Outdoor Education Programs (3)

The initiation and administration of outdoor education experiences of varying lengths and the acquisition, development, and maintenance of outdoor education facilities. Prerequisites: O.T.E. 410 and 504.

### 520. Analysis and Development of Curriculum Materials in Outdoor Education (3)

The selection, production, and utilization of audio-visual materials related to outdoor education. The student will learn how to operate and care properly for scientific and audio-visual equipment and materials. Techniques of producing and constructing teaching aids will be demonstrated. The educational

materials available from educational and commercial sources will be surveyed. Prerequisite: O.T.E. 410.

**525. Independent Study in Outdoor Education (1-3)**

Individual investigations in outdoor education under the supervision of graduate faculty members. May be repeated to a maximum of 3 semester hours. Prerequisites: O.T.E. 410, 504, and consent of adviser.

**530. Internship in Outdoor Education (1-6)**

An internship designed to provide supervised experiences in

program planning and organization, outdoor instruction, supervision, and administration. May be repeated to a maximum of 6 semester hours of credit. Prerequisites: O.T.E. 410, 504, and consent of adviser.

**599. Master's Thesis (1-6)**

Open only to the student engaged in writing a master's thesis under the Master of Science in Education program. The student enrolls with the faculty member directing the thesis. Prerequisites: O.T.E. 410, 504, 511, and Educ. 503.

# Department of Physical Education for Men

**GRADUATE FACULTY:** Brigham, Department Head. Dean, Dunn, Healey, Kahler, LaBaw, Luck, Stroup, Wells.

The Department of Physical Education for Men offers programs leading to the degree Master of Science in Education and the Certificate of Advanced Study.

## MASTER OF SCIENCE IN EDUCATION

A student working toward the degree Master of Science in Education with a major in the Department of Physical Education for Men is expected to have completed an undergraduate major in Physical Education. This major should include Anatomy, Kinesiology, Administration of Physical Education, Tests and Measurements in Physical Education, Theory of Coaching in two sports, and a variety of technique courses in physical education activities.

Any undergraduate deficiencies, as appraised by the department, must be removed before a student may become a candidate for the degree.

In addition to meeting requirements established for all candidates for the degree, students majoring in the Department of Physical Education for Men must successfully complete a minimum of 21 semester hours of graduate work in the department and 9 semester hours of work outside the department. The semester hours in the department must include PE-M 570 and must also include either PE-M 500 or 510 and either PE-M 520 or 613.

In pursuing the degree, a candidate may choose to follow one of two options.

**Option 1:** A minimum of 30 semester hours, approved by his adviser, including PE-M 581 and 599A.

**Option 2:** A minimum of 33 semester hours approved by his adviser.

## CERTIFICATE OF ADVANCED STUDY

A student who wishes to pursue a program leading to the Certificate of Advanced Study normally must have a baccalaureate degree or master's degree (or its equivalent) in Physical Education. The student may elect either a thesis or a non-thesis program, each of which requires 30 semester hours beyond the master's degree. Of the 30 hours required for the Certificate, a minimum of 20 hours must be taken in the Department of Physical Education for Men.

During the semester in which he is enrolled in his first graduate course leading to the Certificate of Advanced Study, the student will confer with his advisory committee to plan

a program of study. The requirements will be flexible, and the program of courses to be taken will be constructed with consideration given to the student's background, interests, and professional objectives.

A candidate for the Certificate of Advanced Study who did not receive a master's degree in the Department of Physical Education for Men, Northern Illinois University, must take a qualifying examination. The results will be used in counseling the student and in determining his eligibility for admission to candidacy. The examination is to be taken during the first semester in which he is enrolled in the program and should precede the establishment of a program of study. In cases where the department finds that a student's academic background is limited with reference to a planned program, he may be required to fulfill deficiency requirements which will not count toward meeting the total credit hour requirements of the C.A.S. Failure to take the examination at the prescribed time may result in dismissal from the program.

## Course Offerings

### 400. Materials and Problems in Health Education (2-3)

Health education programs in elementary and secondary schools. Materials and problems involved in teaching health; the promotion of a healthful school environment. Prerequisites: PE-M 190 and 262.

### 442. Organization of Extracurricular Activities (3)

Organization and administration of an effective program of extracurricular sports. The relationship between physical education class content and intramural and extramural sports. History, objectives, program financing, officiating, and other problems relating to an extracurricular sports program.

### 500. History and Philosophy of Physical Education (3)

Historical development of physical education from primitive to modern times. Philosophy of modern physical education with application to present-day educational programs.

### 510. Scientific Foundations of Physical Education (3)

Background of physical education from the biological, anatomical, and physiological aspects, with stress on past and present procedures.

### 511. Psychology of Coaching (3)

The application of principles of psychology to learning situations involved in competitive sports. The general learning situations involved in the mastery of skills and the special situations involved with individual and group problems of motivation and response.

**520. Mechanical Analysis of Motor Skills (3)**

Investigations of physical principles operative in the performance of physical education activities with attempt to analyze for methods of greater effectiveness and improved performance. Prerequisite: A course in kinesiology.

**521. Care, Treatment, and Prevention of Athletic Injuries (3)**

Prevention and correction of accidents in athletic activities. The use of proper personal and field equipment, support methods, conditioning exercises, therapeutic aids, medical examinations, massage, and advanced first aid. Prerequisites: Anatomy and physiology, kinesiology, and first aid.

**537. Public Relations for Physical Education (3)**

Purposes, materials, and methods relevant to keeping the public informed and interested in the various aspects of the physical education program. A term project for a real or simulated situation will be produced.

**538. Planning and Administration of Social Recreation (3)**

A treatment of procedures for determining the needs, outlining the plans, and implementing the program of community and special recreation.

**541. Organization and Administration of Inter-Scholastic Athletics (3)**

Organization of high school athletics with special reference to national, state, and local control. Staff, program, budget, health and safety, and other phases of administration.

**542. Advanced Techniques of Coaching (1-3)**

A seminar concerned with current trends in the specific areas of inter-school athletic programs. A detailed study of sport techniques.

**544. Workshop in Physical Education (1-3)**

Workshops designed for study of special topics of current interest in physical education. Content varies and may focus attention on substantive material or operational problems. May be repeated to a maximum of 12 semester hours. Prerequisite: Acceptance by the director of the workshop.

**570. Seminar in Research Studies in Physical Education (3)**

Appraisal of recent research and significant literature in physical education for the purpose of orienting the student as to the nature of problems, the research methods used, the conclusions reached, and the questions remaining unanswered. Each student will also be expected to do intensive review of research done in a specific area.

**581. Master's Thesis Seminar (3)**

A study of research methods applicable to physical education and of acceptable procedures in writing a research re-

port. Each student will do the preliminary work for an independent research study. Prerequisites: PE-M 570 and admission to candidacy.

**599A. Master's Thesis (1-3)**

Satisfactory completion of master's thesis. Prerequisite: PE-M 581.

**599B. C.A.S. Research and Thesis (1-6)**

Open only to students who are writing theses for the Certificate of Advanced Study. Topic should be approved before the student enrolls in course. May be repeated to a maximum of 6 semester hours. Prerequisites: Demonstrated proficiency in the use of research tools and admission to candidacy for the C.A.S.

**613. Advanced Tests and Measurements in Physical Education (3)**

Principles of construction and administration of physical performance tests. Fundamental statistics leading to interpretation of results of testing. Prerequisite: PE-M 360 or equivalent.

**631. Seminar in Physical Education Curriculum (3)**

Recognition of and proposed solutions to controversial issues involving organizational setup, legal aspects, and administrative problems of correlating the physical education program with other aspects of the school program. Particular attention given to the practical problems of the individual members of the class.

**632. Supervision of Physical Education (3)**

Methods and policies of the school supervisor of physical education; critical studies of methods of instruction and procedures in supervision applicable to physical education. Planning and improving programs, in-service training, relationships with administration, and types of conferences.

**634. Planning and Use of Facilities for Physical Education (3)**

Principles, terminology, and standards for planning, construction, use, and maintenance of facilities for the indicated programs. Standard authoritative references studied and critically evaluated.

**635. Advanced Administration of Physical Education (3)**

The organizational and administrative problems of physical education on the high school level. Aims and objectives and administrative policies.

**671. Individual Research Problems (1-3)**

Individual investigations of a problem in physical education, health, or recreation that will involve one of the techniques of research. Students will work under a designated member of the faculty and must have their problems approved before registering. Prerequisite: PE-M 570.



# Department of Physical Education for Women

**GRADUATE FACULTY:** Cunningham, Department Chairman. Bell, Duncan, Heidorn, Lane, Mitchem, Moyer, Payne, Plowman, Popp, Porter, Ringo, Zimmerman.

The Department of Physical Education for Women offers programs leading to the degree Master of Science in Education and to the Certificate of Advanced Study.

## MASTER OF SCIENCE IN EDUCATION

Students seeking to qualify for the degree Master of Science in Education with a major in Physical Education are expected to have completed an undergraduate major in Physical Education. Any deficiencies on the undergraduate level, as determined by the graduate faculty of the department, must be removed prior to the student's admission to candidacy.

In addition to satisfying Graduate School requirements (see pp. 12-13), candidates majoring in the Department of Physical Education for Women must successfully complete a minimum of 9 semester hours of graduate work outside the major field. Candidates must fulfill the following course requirements:

PE-W 570

3 hours from PE-W 465 or 500 or 575

3 hours from PE-W 546 or Educ. 508 or 591 or Psych. 504

In addition students must adopt an area of emphasis with further requirements within areas. All students must plan their programs in consultation with their departmental advisers.

In pursuing the degree, a candidate may follow one of two options.

**Option 1:** A minimum of 30 semester hours including PE-W 570, PE-W 599A, and an oral examination on the thesis.

**Option 2:** A minimum of 33 semester hours including PE-W 570.

## CERTIFICATE OF ADVANCED STUDY

The sixth-year program leading to the Certificate of Advanced Study offers the opportunity to experienced teachers, supervisors, and administrators to develop further competence through advanced study and research.

An applicant for admission to the sixth-year program must have completed an undergraduate major in Physical Education and possess the master's degree or equivalent with a major in Physical Education. Exceptions to these provisions will be reviewed by the advisory committee. Deficiencies determined by the committee must be removed prior to admission to candidacy.

The program of courses must be planned with and approved

by an advisory committee from the major department. Admission to candidacy is dependent upon successful completion of 12 semester hours of work in courses approved for the candidate's program.

Students planning to apply for admission to the sixth-year program with a major in the Department of Physical Education for Women should consult with the chairman of the department.

## Course Offerings

**434. Curriculum Designs in Elementary Physical Education (3)**  
Introduction to elementary school physical education curriculum with attention to organization and implementation of programs. Prerequisite: PE-W 302 or PE-W 343 or equivalent.

**446. Health Education Problems (2)**

Problems, techniques, and materials related to programs of health education in elementary and secondary schools with specific reference to combined programs of health and physical education.

**448. Organization and Supervision of Co-curricular Programs for Junior and Senior High Schools (3)**

The functions and contributions of intramural and extramural activities as part of junior and senior high school physical education programs. The organization of play days, tournaments, demonstrations, and State G.A.A. programs.

**452. Physiology of Activity (3)**

The functioning of the systems of the body during activity; the physiological adaptations during work; and the lasting changes which result from different levels of performance. Practical experience in selected experimental procedures. Prerequisite: B.Sci. 257 or equivalent.

**453. Adapted Physical Education (3)**

Modification of physical education activities to meet the needs of the handicapped. Materials, methods, and the development of a program of adapted physical education activities.

**465. History and Philosophy of Dance (3)**

Survey of the historical development of dance from primitive man to the contemporary period. Philosophical concepts and significant trends relative to dance and associated areas.

**467. Dance Notation (3)**

Historical survey of movement notation methods used throughout the world. Theory and practice in writing various methods, with concentration on Labanotation.

**468. Seminar in Rhythmic Activities for Elementary and Junior High Schools (3)**

Basic rhythmic movement correlated with creative activities in

the school program. Movement in relation to elementary music composition, choral reading, original chants, creative writing, graphic media, percussion, and other accompaniment. Experimentation with various media.

**473. Seminar in Dance and Related Art Forms (3)**

The development of aesthetic theory and the philosophy of dance as an art form. The correlation of dance media with the fine and the performing arts.

**480. Philosophy and Principles of Coaching Sports for Women (3)**

Philosophy and standards of extramural sports for women. Principles and techniques of coaching team and individual sports.

**486. Principles of Motor Learning (3)**

Principles of motor learning and the relationship of current learning theory and experimental research in motor learning to the teaching of motor skills in physical activity.

**500. History and Philosophy of Physical Education (3)**

Historical background of physical education in relation to the cultural patterns of civilization and educational movements. Development of philosophical concepts paralleling educational philosophy. Application of basic philosophy to the instructional program.

**510. Applied Anatomy (Kinesiology) (3)**

Analysis of joint and muscle action in the balance and movement of the human body in everyday and physical education activities. Prerequisite: Anatomy.

**512. Fundamental Basis of Movement (3)**

The various systems of the body and their application to body movement. Practical application to physical education activities. Designed for the classroom teacher.

**532. Principles of Supervision of Health and Physical Education (3)**

Techniques and procedures of supervision in school health and physical education programs. Prerequisite: Teaching experience.

**540. Seminar in Elementary School Physical Education (3)**

Present day programs and problems related to elementary school physical education.

**543. Administration of Health and Physical Education (3)**

Methods and procedures of administration in school physical education programs. Prerequisite: Consent of instructor.

**544. Problems in Curriculum and Program of Physical Education (3)**

A seminar concerned with individual investigation of principles and procedures in developing the physical education program for elementary and secondary schools.

**545. Curriculum in Health and Physical Education for Junior High Schools (3)**

Principles and procedures applicable to health and physical education programs at the junior high school level.

**546. Evaluation in Health and Physical Education (3)**

Uses and limitations of evaluating devices, construction and administration of tools for evaluations, and interpretation of results. Prerequisite: PE-W 445 or consent of instructor.

**549. School and Community Recreation (3)**

Administrative problems, personnel standards, finance, facilities, and programs. Analysis of organizational plans for cooperative development of school community programs.

**550. Camp Administration (3)**

Administrative problems, selection of personnel, organization of programs, selection, maintenance, and supervision of facilities.

**551. Analysis and Procedures in the Control of Postural Deviations (3)**

Analysis of body alignment and remedial measures used in the control of postural deviations. Prerequisite: Human anatomy.

**555. Seminar in Teaching Skills (3)**

Practical and theoretical study of methods of teaching physical activities. Scientific foundations of education. Prerequisite: Consent of instructor.

**556. Workshop in Physical Education (1-3)**

Workshops designed for teachers, supervisors, counselors, and administrators to study selected contemporary issues and problems. May be repeated to a total of 12 semester hours. Prerequisite: Acceptance by the director of the workshop.

**560. Seminar in Rhythms and Dance (3)**

Rhythms and dance as a basic educational technique. Designed to assist in planning, teaching, and supervising the rhythmic program. Experiences in group process. Prerequisite: Consent of instructor.

**565. Seminar in Motor Development in Childhood (3)**

Survey of research on acquisition of motor skills with emphasis on findings pertaining to growth patterns, modifiability, and specificity. Application to methods and principles of teaching physical education in pre-school and elementary school.

**566. Seminar in Movement Education (2-3)**

The approach to movement education as the core of physical education. Designed for teachers of kindergarten through college, including classroom teachers and specialists in physical education. Development of an individual problem and special conferences. Prerequisite: PE-W 302 or 343 or equivalent.

**569. Independent Study in Physical Education (1-3)**

Open to candidates who wish to do advanced study in the area of physical education or recreation. Study planned in consultation with adviser. Special conferences and development of report. May be repeated to a maximum of 6 semester hours. Prerequisites: Consent of adviser following approval of written proposal.

**570. Methods of Research in Physical Education (3)**

Introduction to methods and techniques, research design and development, resources, and the research report. Required of departmental majors prior to registration in PE-W 599A or 599B. Prerequisite: Consent of adviser.

**572. Current Trends in Physical Education (3)**

Contemporary trends in the field of physical education and related areas.

**575. Philosophical Bases of Physical Education and Recreation (3)**

To develop a better understanding and appreciation of the purposes, values, nature, scope, and significance of physical education and recreation in America.

**586. Seminar in Motor Learning (3)**

Evaluation of the current motor learning research in the area of physical education and the development of a specific motor learning topic for discussion. Prerequisite: PE-W 486 or equivalent.

**599A. Master's Thesis (1-6)**

Open only to students writing the master's thesis. Topic should

be approved prior to enrollment in course. May be repeated to a maximum of 6 semester hours. Prerequisites: PE-W 570 or equivalent and approval of research by advisory committee.

**599B. Research and Thesis for C.A.S. (1-6)**

Must be taken by a student doing research for the thesis. Approval of the research study must be granted prior to registration. Prerequisites: PE-W 570 or equivalent and approval of research problem by advisory committee.

**612. Physiological Aspects of Motor Activity (3)**

The physiological effects of physical activity on the various systems of the human organism. Selected problems for experimentation and research. Prerequisites: Anatomy and physiology.

**620. Teaching Physical Education at the College Level (3)**

Discussion and evaluation of problems of instruction in physical education on the college level. Development of an individual problem. Prerequisites: Teaching experience and PE-W 396 or equivalent.

**632. Advanced Supervision of Physical Education (3)**

Principles and practices in supervision. Open only to supervisors of elementary and secondary school programs, cooperating teachers, and school administrators.

**636. Program and Facilities for Physical Education (3)**

The special facility requirements for physical education programs for girls and women. Principles, standards, functional lay-out, design and construction features for indoor and outdoor facilities. Maintenance, use, scheduling, and supervision of facilities in terms of functional needs. Individual projects. Prerequisite: PE-W 440 or 543 or equivalent.

**643. Seminar in Administration of Physical Education, Health Education, and Recreation Programs (3)**

Analysis of problems specifically related to departmental organization in high schools, colleges, and universities. Consideration of individual problems. Prerequisite: Consent of instructor.

# Department of Special Education

**GRADUATE FACULTY:** Pritchett, Department Head. Bischoff, Blankenship, Cannell, Downey, Hadden, Huston, Klemm, Myklebust, Nachtman, Umsted.

The Department of Special Education offers a program leading to the degree Master of Science in Education with a major in Special Education.

## MASTER OF SCIENCE IN EDUCATION

Admission to the program will be by consent of the Graduate Advisory Committee of the Department of Special Education. A candidate for this degree will be required to select an area of emphasis in Special Education. These areas are:

Administration and Supervision  
Deaf and Hard of Hearing  
Learning Disabilities  
Maladjusted  
Mentally Handicapped  
Multiply Handicapped  
Physically Handicapped  
Visually Handicapped

A graduate student must plan a program of study in consultation with an assigned departmental adviser. The program will be submitted for approval to the Graduate Advisory Committee of the Department of Special Education prior to recommendation for candidacy. A minimum of 30 semester hours of graduate credit is required for the degree.

A student who selects a major in Special Education leading to the Master of Science in Education may follow either of two options.

### Option 1

- a. Educ. 503, Introduction to Educational Research
- b. Sp.Ed. 509, Educational Diagnostics for Exceptional Children
- c. Sp.Ed. 599, Master's Thesis
- d. 18 semester hours approved by the adviser with an emphasis in one of the areas listed above

### Option 2

Same basic requirements as Option 1 except that the master's thesis (Sp.Ed. 599) is not required. Instead, 6 semester hours in Special Education are selected with approval of the adviser.

Provisions are made to assist non-certified persons who hold baccalaureate degrees in fields other than Special Education to acquire certification and a Master of Science degree in Education with a specialization in Special Education. In some cases more than 30 semester hours will be necessary to meet the requirements for both certification and the master's degree.

## Course Offerings

### 409. Psycho-educational Measurements of Exceptional Children (3)

Special diagnostic procedures with exceptional children. Emphasis on the identification and the problems of measurement of exceptional children. Prerequisites: Sp.Ed. 300, and Educ. 375 or consent of instructor.

### 410. Characteristics of Mental Retardation (3)

The classification, diagnosis, characteristics, and education of mentally retarded children. Prerequisites: Sp.Ed. 301 and Educ. 303.

### 411. Curriculum, Methods, and Materials for the Educable Mentally Handicapped—Elementary (3)

The curriculum, instructional methods, and materials appropriate for the teaching of educable mentally handicapped children from ages five through fifteen. Course work is related to practice through laboratory experience in special education classrooms. Prerequisites: Sp.Ed. 410, and Educ. 375 or consent of instructor.

### 412. Curriculum, Methods, and Materials for the Educable Mentally Handicapped—Secondary (3)

The curriculum, instructional methods, and materials appropriate for the teaching of educable mentally handicapped children from age fifteen through twenty-one. Course work is related to practice through laboratory experience in special education classrooms. Prerequisites: Sp.Ed. 410, Educ. 375, or Educ. 302.

### 413. Curriculum, Methods, and Materials for the Trainable Mentally Handicapped (3)

The curriculum, instructional methods, and materials appropriate for teaching trainable mentally handicapped children, including objectives and class organization. Prerequisite: Sp.Ed. 410.

### 420. Learning Disabilities in Children I (3)

Designed to help the student gain an initial understanding of learning difficulties in children. Current research and publications by recognized authorities in the area of learning difficulties will be considered. Prerequisites: Sp.Ed. 300 and 409 or consent of instructor.

### 430. Introduction to Problems of the Physically Handicapped and Health Impaired (3)

Introduction to the educational programs for children with physical handicaps and/or health problems. Approached through medical understanding of the differences in physiological adaptation of the handicapped child. Consideration given to planning for both the child and his environment to meet his special needs. Prerequisites: Sp.Ed. 301 and Educ. 303.



**431. Medical Aspects of Crippling Conditions (3)**

Etiology, care, and treatment of crippling conditions, and other types of special health problems. Prerequisite: Sp.Ed. 430 or consent of instructor.

**432. Methods and Materials in the Education of Physically Handicapped Children (3)**

For students who intend to qualify as special teachers of physically handicapped children. Curricula, methods, materials of instruction, and evaluation. Prerequisite: Sp.Ed. 430.

**440. Introduction to the Education of the Visually Handicapped Child (3)**

Introduction to educational programs, services, and resources for blind and partially sighted children; exploration of historical background, literature, philosophy, sociological and psychological aspects of blindness. Prerequisites: Sp.Ed. 300 and Educ. 303.

**441. Anatomy, Physiology, and Hygiene of the Eye (3)**

Medical lectures and laboratory demonstration by an ophthalmologist, with an educator presenting functional implications of various pathologies in the educational setting.

**442. Beginning Braille (3)**

Mastery in the reading, writing, and teaching of braille. Development and use of special materials: slate and stylus techniques presented; introduction to Nemeth Code of Mathematics.

**443. Methods and Materials in Teaching Blind Children (3)**

Identification, classification, and methods of curriculum development; principles of selection, preparation, use, and effective evaluation of materials. Prerequisite: Sp.Ed. 440.

**444. Methods and Materials in Teaching Partially Sighted Children (3)**

Identification, classification, and methods of curriculum development; principles of selection, preparation, use, and effective evaluation of materials. Administration and evaluation in vision screening presented; and application of low vision aids in the utilization of residual vision. Prerequisite: Sp.Ed. 440.

**445. Advanced Braille (3)**

Intensive study of the Nemeth Code, advanced mathematics, the music code, and chemical notations. Transcription and adaptation of print material for blind children. Prerequisite: Sp.Ed. 442 or proficiency in braille.

**446. Orientation and Mobility for Blind Children (3)**

Philosophy and history of cane instruction, guide dogs, and other methods of travel. Practicum parallels the concentration on the development of orientation skills and pre-cane mobility techniques. Prerequisite: Consent of instructor.

**461. Introduction to the Education of the Deaf (2)**

An overview of education of the deaf and hard of hearing. Causes and effects of different types of hearing loss. The role of the teacher, speech and hearing therapist, audiologist, and others dealing with the problems of the acoustically handicapped. Prerequisite: Sp.Ed. 300.

**462A. The Teaching of Speech to the Deaf (3)**

Principles and techniques used in developing the formation of English sounds. Introduction of speech by the whole-word method. The development of speech in the preschool and school-age deaf child. Demonstrations and practice with deaf children under supervision. Prerequisite: Sp.Ed. 461.

**462B. The Teaching of Speech to the Deaf (3)**

Continuation of Sp.Ed. 462A. Prerequisite: Sp.Ed. 462A.

**463A. The Teaching of Language to the Deaf (3)**

Principles and techniques of teaching language to the preschool and school-age deaf using natural language and the Fitzgerald Key. "Language Outline," prepared by a committee of teachers at the Central Institute for the Deaf, is followed. The language problems of deaf children with multiple handicaps. Prerequisite: Sp.Ed. 461.

**463B. The Teaching of Language to the Deaf (3)**

Continuation of Sp.Ed. 463A. Prerequisite: Sp.Ed. 463A.

**464. Methods of Teaching School Subjects to the Deaf (4)**

Principles and methods of teaching reading, arithmetic, social studies, and science to deaf children. Use of visual aids. Prerequisite: Sp.Ed. 463B.

**465. History, Education, and Guidance of the Deaf (3)**

History of education of the deaf. Evaluation of educational methods for the deaf. Personal, educational, and vocational guidance for the deaf. The role of the parent. Research studies dealing with psychology, social adjustment, and learning problems of the deaf.

**466. Sign Language and Fingerspelling for the Deaf (3)  
(Cross-listed as Speech 466X)**

Development of receptive and expressive skills in sign language and fingerspelling. Practice in the simultaneous use of speech and sign language or fingerspelling. Other aids to visual communication by the deaf.

**470. The Gifted Student (3)**

Characteristics of gifted children. Emphasis given to identification, growth and development, creativity, motivation, guidance, and evaluation of gifted children.



**496. Guidance for the Exceptional Child (3)**

Social and vocational guidance for exceptional children using local, state, and national resources. Basic guidance techniques as they relate to a particular type of exceptionality. Prerequisites: Sp.Ed. 300 and Educ. 375 or consent of instructor.

**498. Workshop in Special Education (1-3)**

The investigation and application of special education principles to the particular needs and interests of the workshop participant. May be repeated to a maximum of 6 semester hours of credit.

**500. Foundations of Special Education (3)**

The education of exceptional children including contemporary changes in philosophy, objectives, curriculum, methods, materials, and evaluation. Prerequisite: Consent of instructor.

**505. Vocational Programming for the Handicapped (3)**

The vocational training, evaluation, and placement of special education pupils of senior high school age; the role of work-study and sheltered workshop personnel. Prerequisite: Consent of instructor.

**509. Educational Diagnostics for Exceptional Children (3)**

Diagnosis of learning problems. Special attention is given to the identification of specific problems and recommendations for corrective procedures. Prerequisite: Sp.Ed. 409.

**510. Medical Aspects of Mental Retardation (3)**

An advanced course in mental retardation covering the biological and medical problems and causes of mental retardation. Prerequisite: Sp.Ed. 410.

**511. Educational and Sociological Aspects of Mental Retardation (3)**

A study of the educational and sociological characteristics of retarded children with emphasis on research. Prerequisite: Sp.Ed. 410.

**512. Psychological Aspects of Mental Retardation (3)**

An advanced course in mental retardation covering the psychological problems and characteristics of mentally retarded children. Prerequisite: Sp.Ed. 410.

**515. Advanced Curriculum Development for the Mentally Handicapped (3)**

Principles in the construction and administration of curricula for mentally handicapped children. Prerequisite: Sp.Ed. 411 or 412 or 413 and/or consent of instructor.

**520. Learning Disabilities in Children II (3)**

Perceptual dysfunctions and concomitant disorders interfering with the development of communication and learning processes

in children. Visual, auditory, and kinesthetic perception, spatial orientation, and figure-background discrimination; the training of perceptual functions. Prerequisites: Sp.Ed. 420 and consent of instructor.

**522. Educational Procedures for Children with Learning Disabilities (3)**

Techniques for specific identification and educational treatment of learning disabilities. Organization and planning of instructional activities, materials and equipment, use of resources, records and reports, and classroom management. Prerequisites: Sp.Ed. 520 and consent of instructor.

**529. Advanced Educational Diagnostics for Children with Learning Disabilities (3)**

Advanced training in educational diagnosis of children with learning disabilities including the administration and interpretation of specialized testing instruments. Prerequisite: Sp.Ed. 509 or equivalent.

**532. Educational Problems of Cerebral Palsy (3)**

Problems in development, learning, and adjustment; multiple handicaps; study and development of materials to meet special educational needs; parent counseling; integration of services necessary to meet the child's individual needs. Prerequisite: Consent of instructor.

**543. Educational Procedures for the Blind-Retarded (3)**

Characteristics, learning problems, curriculum adaptations, and special methods and materials for blind children who are mentally retarded. Prerequisite: Sp.Ed. 443.

**546. Advanced Orientation and Mobility (3)**

Reinforcement of earlier skills and techniques, concentration on the long cane as a travel aid, and observation of certified instructors working with children. Teaching materials, procedures, and program planning are reviewed and evaluated. Students will learn to travel independently with a cane while under a blindfold. Prerequisite: Sp.Ed. 446.

**547. Internship in Orientation and Mobility (3-6)**

Orientation and mobility instruction of the pre-cane skills and techniques and of cane travel. Observation and participation in residential school, day school, and agency programs for blind children. Specific experiences will include working with children and development of programs which will be presented to school, family, and community. Prerequisites: Sp.Ed. 446 and 546.

**550. Nature and Needs of Emotionally Disturbed Children (3)**

Basic understanding of emotional disturbances including causes, characteristics, and implications for educational planning. Prerequisite: Consent of instructor.

**552. Methods and Materials in the Education of Emotionally Disturbed Children (3)**

Programs, methods, and materials in the education of the child who is emotionally disturbed; the role of the teacher in relation to other members of the team; use of resources; records and reports. Prerequisites: Sp.Ed. 550 and consent of instructor.

**555. Programs for Socially Maladjusted Children (3)**

Techniques for early identification, programming, and remediation of socially maladjusted children. Emphasis given to the period of early childhood to preadolescence. Prerequisite: Consent of instructor.

**556. Programs for Socially Maladjusted Adolescents and Young Adults (3)**

Procedures for the identification and remediation of socially maladjusted adolescents and young adults. Prerequisite: Consent of instructor.

**560. Educational Problems of the Hard of Hearing (3)**

The educational deficit produced by impaired hearing. Theories and research in teaching the hard of hearing. Prerequisite: Consent of instructor.

**561. Educational Procedures in Teaching the Hard of Hearing (3)**

The impact of a hearing loss on the processes of learning. Methods of overcoming the educational deficit of the hard of hearing. Prerequisite: Sp.Ed. 560.

**563. Problems in the Education of the Deaf-Retarded (3)**

An orientation to the special problems involved in the care and education or training of persons who are both retarded and deaf and who may have other handicaps.

**564. The Education of Preschool Deaf Children (3)**

The rationale of preschool education of deaf children. Intensive training in the methods and procedures of teaching language, speech, and basic reading readiness skills to preschool-aged deaf children.

**572. Procedures for Educating the Gifted (3)**

Current practices, trends, and issues in curriculum development and instructional methods for gifted children; procedures as they relate to cognitive functions, factors of intellect, and creative expression. Prerequisite: Sp.Ed. 470 or consent of instructor.

**580. Administration and Supervision of Special Education (3)**

Overview of the functions, responsibilities, and problems in the organization, administration, and supervision of special education programs and classes. Prerequisite: Consent of instructor.

**594. Independent Study (1-3)**

Opportunity and challenge for self-directed, independent study in special education. May be repeated to a maximum of 3 semester hours of credit. Prerequisite: Consent of adviser.

**595. Seminar in Special Education (3)**

To review and analyze current research in special education in terms of the special interests of the student. Open only to Special Education majors.

**597. Practicum in Special Education (3-5)**

Supervised field experience in special education programs in schools, institutions, and other facilities for exceptional children. May be repeated to a maximum of 10 semester hours of credit. Prerequisite: Consent of head of department.

**598. Institute in Special Education (1-3)**

A series of lectures, consultations, and discussion sessions on a relatively limited area of research or education.

**599. Master's Thesis (1-6)**

Enrollment by special arrangement with the graduate's major adviser. May be taken for 2 semester hours and repeated to a maximum of 6 semester hours, or once for 6 semester hours. Prerequisite: Admission to candidacy.

**601. The Brain and Learning (3)**

Detailed consideration of associations between brain function and aspects of behavior. Emphasis on the neurology of learning with focus on implication for education of handicapped children. Prerequisite: Consent of instructor.

**602. Cognitive Processes and Handicapped Children (3)**

A critical evaluation of the impact of handicaps on cognition, with consideration of the differences among the mentally retarded, emotionally disturbed, deaf, blind, and those with learning disabilities. Prerequisite: Consent of instructor.

**603. Seminar: Handicaps and Learning (3)**

An analysis of concepts and research related to learning in handicapped children. Prerequisite: Standing as advanced sixth-year student, or consent of instructor.

**609. Educational Assessment for Handicapped Children (3)**

Advanced study of symptomatology in relation to the diagnostic process, with attention to its significance for educational planning. Prerequisite: Sp.Ed. 509 or equivalent.

**620. Disorders of Written and Read Language (3)**

Consideration of the written and read language systems as they relate to all areas of handicap. Emphasis on the associations among these disorders and psychology of learning in the sensorially impaired and those with dysfunctions of the central nervous system. Prerequisite: Consent of instructor.

**622. Remedial Education for Exceptional Children (3)**

A study of principles and practices in remedial education as they pertain to enhancement of learning in handicapped children. Prerequisite: Consent of instructor.

**690. Laboratory Studies in Special Education (3)**

Theoretical constructs, design, and procedures for laboratory research in Special Education. Participation in research projects required. May be repeated. Prerequisite: Consent of instructor.

**694. Independent Research (3)**

Advanced study of specific problems related to the student's interest area; may cover any area of handicap. May be repeated. Prerequisites: Standing as sixth-year student and consent of instructor.

**695. Seminar: Research Methodologies in Special Education (3)**

A consideration of the major concepts underlying research on handicapped children with analysis of the design, variables, and parameters most critical in study of children who have limited language, motor, and mental abilities. Prerequisite: Consent of instructor.

**697. Internship (6-12)**

Assignment as an intern in assessment and/or in programming. Participation in on-going programs in residential or public schools for handicapped children; work as a student-staff member according to the assignment that has been undertaken. Students must accumulate 12 semester hours prior to graduation. Prerequisite: Consent of adviser.





Robert L. Thistlethwaite, Ph.D., Dean  
Don W. Arnold, Ph.D., Assistant to the Dean  
William J. Masson, Ph.D., Assistant to the Dean  
William J. Brown, Ph.D., Coordinator of  
Business Research  
Donald D. Scriven, Ph.D., Coordinator of  
Computer Systems in Business

# College of Business

Accountancy  
Business Education  
Finance  
Management  
Marketing



# Programs in Business

## Admission to Programs in Business

Admission to the graduate programs in business is limited to those students who can demonstrate high promise of success in a graduate business degree program. Applicants must first satisfy the admission requirements of the Graduate School of the University. If these requirements are satisfied, the applicant's credentials are reviewed for the purpose of applying the admission standards of the College of Business.

The scores on the Admission Test for Graduate Study in Business (ATGSB) are required as an admission credential. The minimum standards that the College of Business will apply to admission to all graduate programs in business at the master's level are: (1) graduation from a regionally accredited college with a grade-point average of 2.5 or above (based on a 4.0 grading system) or a score of 450 or above on the ATGSB; (2) demonstration of growth, maturity, and motivation as evidenced from trends and patterns in college, employment, and civic experiences.

## Graduate Study in Business Administration

At the master's level, the College of Business offers two professional degrees, the Master of Business Administration (M.B.A.) and the Master of Science degree in Business Administration (M.S.). All graduate students working toward these degrees must complete Mathematics 210 or the first course in calculus or the equivalent.

## MASTER OF BUSINESS ADMINISTRATION (M.B.A.)

The aim of the M.B.A. program is to prepare students for careers in business enterprises and other organizations such as public institutions, educational systems, and nonprofit organizations. It is believed that this objective can be best accomplished through a broad, integrated program designed to foster an understanding of many of the basic functions of the business firm and the interrelationships among these functional areas. An additional purpose of the program is to develop an understanding of research as it relates to business decision making as an instrument through which additions are made to society's rapidly expanding fund of knowledge.

A large number of students desiring graduate study in business do not have undergraduate preparation in business administration. One of the aims of the M.B.A. is to meet the needs of these students. Thus, the M.B.A. is a program varying in length, with the upper limit at 60 semester hours. Students with a bachelor's degree in business administration will

usually have met all, or most, of the requirements of Phase One. Programs for such students will consist of the 30 semester hours of graduate work required in Phase Two. Students whose bachelor's degree is in some field other than business will have the maximum of 60 semester hours reduced in accordance with their previous background in business and economics.

For the M.B.A. degree, the total program for most students will require a minimum of 24 semester hours (or equivalent) work beyond the core and the baccalaureate degree in classes reserved exclusively for graduate students. For other master's degrees, the total program for most students will require a minimum of 16 semester hours' (or equivalent) work beyond the core and the baccalaureate degree in classes reserved exclusively for graduate students.

As outlined below, the M.B.A. is divided into two distinct phases:

### Phase One

The first phase of the program consists of 30 semester hours of course work if no previous formal education in business administration has been taken. Phase One requirements may be reduced by previous acceptable credit in courses that are equivalent to courses listed in Phase One. Such credit will be evaluated in the Office of the Dean of the College of Business at the time of admission to the M.B.A. program.

Phase One course requirements which have not been satisfied at the time of admission to the Graduate School at Northern Illinois University may be fulfilled by any one, or a combination, of the following:

1. Completion of NIU graduate extension courses
2. Completion of graduate courses in residence at NIU
3. Transfer of graduate residence credit from any regionally accredited college or university.

Normally a student will complete 18 semester hours of Phase One requirements before enrolling in Phase Two courses.

	Semester Hours
Fin. 500, Survey of Business Economics	3
Accy. 505, Accounting Theory and Practice for Non-Accounting Majors	3
Fin. 505, Financing the Business Enterprise	3
Mgt. 505, Principles of Business Organization	3
Mktg. 505, Graduate Survey of Marketing	3
Accy. 507, Business Information Systems	3
Mgt. 511, Legal Aspects of Business	3
Fin. 524, Business Statistics for Research I	3
Electives in Business or Business-related disciplines	6
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**Phase Two**

Phase Two consists of an advanced core and electives. A core of seven courses totaling 21 semester hours is required of all M.B.A. students. The remaining 9 semester hours needed to meet the course requirements for the degree will be selected in consultation with the student's adviser and should be consistent with the student's personal objectives. These 9 semester hours of elective courses may be used to achieve a degree of specialization or greater breadth.

	Semester Hours
Fin. 503 or Mgt. 503 or Mrktg. 503, Introduction to Research	3
One of the following five courses:	
Accy. 605, Financial and Managerial Accounting Concepts II (3)	
Fin. 680, Quantitative Analysis in Business Research (3)	
Fin. 525, Business Statistics for Research II (3)	
Fin. 527X - Mgt. 527, Operations Research in Business (3)	
Accy. 561 - Fin. 561X, Computer Theory and Programming (3)	3
Mgt. 633, Organization and Management Development (3)	
or	
Mgt. 634, Administrative Theory and Practice (3)	3
Mrktg. 654, Marketing Management	3
Mgt. 672, Business Policies	3
Fin. 607, Financial Analysis	3
Mrktg. 665, Marketing Structures and Price Policies (3)	
or	
Fin. 671, Business and Economics Forecasting (3)	3
Electives	9
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**Thesis Option.** A thesis is not required. A candidate, with the approval of his advisory committee, may, however, elect to write a thesis for a maximum of 6 semester hours of credit.

**Final Examination Requirements.** The final examination of each candidate is administered by the chairman of the candidate's advisory committee. Comprehensive in nature, the examination may be written or oral, or both. The candidate must notify the chairman of his advisory committee of his intent to take the examination. (See Calendar.)

## MASTER OF SCIENCE IN BUSINESS ADMINISTRATION (M.S.)

A student pursuing the Master of Science degree in Business Administration must present a minimum of 30 semester hours of undergraduate work in the following areas prior to entering the major field of concentration: Accountancy, Business Law, Economics, Finance, Management, Marketing, and Statistics. Accordingly, the courses listed in Phase One of each of the areas of specialization meet these requirements.

Therefore, an individual who presents 30 or more semester hours of acceptable business and economics courses enters Phase Two in one of the following areas of specialization: Accountancy, Finance, Management, or Marketing. Phase One course requirements that have not been satisfied at the time of admission to the Graduate School at Northern Illinois University may be fulfilled by any one, or a combination, of the following:

1. Completion of NIU graduate extension courses
2. Completion of graduate courses in residence at NIU
3. Transfer of graduate residence credit from any regionally accredited college or university.

Normally a student will complete 18 semester hours of Phase One requirements before enrolling in Phase Two.

A thesis is required for the Master of Science degree.

### Specialization in Accountancy

#### Phase One

Students pursuing the M.S. degree are required to include the following courses in Phase One in their programs. Credit earned in these Phase One graduate courses will not count toward the 30-semester-hour degree requirement in Phase Two.

Fin. 500, Survey of Business Economics	3
Fin. 505, Financing the Business Enterprise	3
Mgt. 505, Principles of Business Organization	3
Mrktg. 505, Graduate Survey of Marketing	3
Mgt. 511, Legal Aspects of Business	3
Fin. 524, Business Statistics for Research I	3

In addition to the above, the student must show proficiency in the following Accountancy courses. This requirement may be satisfied by (1) previous credit with a grade of "C" or better, (2) a proficiency examination, or (3) satisfactory completion of the course.

Accy. 121, Elementary Accounting I	3
Accy. 122, Elementary Accounting II	3

## PROGRAMS IN BUSINESS

Accy. 224, Intermediate Accounting I	3
Accy. 225, Intermediate Accounting II	3
Accy. 330, Cost Accounting I	3
Accy. 440,* Auditing Theory	3
Accy. 455,* Individual and Business Taxation	3
Accy. 459X,** Introduction to Data Processing Systems	3
Accy. 471,* Advanced Accounting	3

### Phase Two

Students pursuing the degree Master of Science with specialization in Accountancy will meet the following additional requirements:

Accy. 503, Introduction to Research	3
Accy. 575, Income Theory (3) or	
Accy. 532, Managerial Accounting Theory (3)	3
Accy. 599A, Master's Thesis	3
Accy. 663, Seminar in Accounting	3
Electives in Accountancy as approved by adviser	6-9

Related area electives (9-12 semester hours) must be earned outside the department and approved by the adviser.

Total—30 semester hours.

## Specialization in Finance

### Phase One

Students pursuing the M.S. degree are required to include the following courses in Phase One in their programs. Credits earned in these Phase One graduate courses will not count toward the 30-semester-hour degree requirement in Phase Two.

Fin. 500, Survey of Business Economics,	3
Accy. 505, Accounting Theory and Practice for Non-Accounting Majors	3
Fin. 505, Financing the Business Enterprise	3
Mgt. 505, Principles of Business Organization	3
Mrktg. 505, Graduate Survey of Marketing	3
Mgt. 511, Legal Aspects of Business	3
Fin. 524, Business Statistics for Research I	3
Electives in Business and/or Economics	9
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Total for Phase One	30

\*These courses may be taken for graduate credit (with the approval of the academic adviser) as one or more of the Accountancy electives noted in Phase Two.

\*\*Accountancy 459X is considered a part of Phase One and cannot be taken as a part of the requirements for Phase Two.

### Phase Two

Students pursuing the degree Master of Science with specialization in Finance will meet the following additional requirements:

Fin. 503, Introduction to Research	3
Fin. 599, Master's Thesis	3-6
Fin. 662, Seminar in Business Finance	3
Electives in Finance as approved by adviser	12-15

Related area electives (at least 6 semester hours) must be earned outside the department and approved by the adviser.

Total—30 semester hours.

## Specialization in Management

### Phase One

Students pursuing the M.S. degree are required to include the following courses in Phase One in their programs. Credit earned in these Phase One graduate courses will not count toward the 30-semester-hour degree requirement in Phase Two.

Fin. 500, Survey of Business Economics	3
Accy. 505, Accounting Theory and Practice for Non-Accounting Majors	3
Fin. 505, Financing the Business Enterprise	3
Mgt. 505, Principles of Business Organization	3
Mrktg. 505, Graduate Survey of Marketing	3
Mgt. 511, Legal Aspects of Business	3
Fin. 524, Business Statistics for Research I	3
Electives in Business and/or Economics	9
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### Phase Two

Students pursuing the degree Master of Science with specialization in Management will meet the following additional requirements:

Mgt. 503, Introduction to Research	3
Mgt. 633, Organization and Management Development	3
Mgt. 634, Administrative Theory and Practice	3
Mgt. 635, Human Relations in Business	3
Mgt. 672, Business Policies	3
Mgt. 599, Master's Thesis	3-6
Electives in Management as approved by adviser	9-12

Students must choose at least one seminar course from among the following: Mgt. 620, 638, and 661. Related area

electives (at least 6 semester hours) must be earned outside the department and approved by the adviser.  
Total—30 semester hours.

## Specialization in Marketing

### Phase One

Students pursuing the M.S. degree are required to include the following courses in Phase One in their programs. Credit earned in these Phase One graduate courses will not count toward the 30-semester-hour degree requirement in Phase Two.

Mrktg. 443, Marketing Research	3
Mrktg. 463, Marketing Problems	3
Fin. 500, Survey of Business Economics	3
Accy. 505, Accounting Theory and Practice for Non-Accounting Majors	3
Fin. 505, Financing the Business Enterprise	3
Mgt. 505, Principles of Business Organization	3
Mrktg. 505, Graduate Survey of Marketing	3
Mgt. 511, Legal Aspects of Business	3
Fin. 524, Business Statistics for Research I	3
Electives in Business and/or Economics	3
	—
	30

### Phase Two

Students pursuing the degree Master of Science with specialization in Marketing will meet the following additional requirements:

Mrktg. 503, Introduction to Research	3
Mrktg. 654, Marketing Management	3
Mrktg. 599, Master's Thesis	3-6
Electives in Marketing as approved by adviser	9
Related area electives outside the department as approved by adviser	12

Total—30 semester hours.

## Graduate Study in Business Education

The Department of Business Education offers the following graduate programs: a major in Business Education leading to the degree Master of Science in Education, a sixth-year program leading to the Certificate of Advanced Study in Business Education, and a doctoral program leading to the degree Doctor of Education.

## MASTER OF SCIENCE IN EDUCATION

Students pursuing the degree Master of Science in Education with a specialization in Business Education are required to have completed each of the following courses, or its equivalent, or to remove any deficiency by satisfactorily completing the course defined as the graduate equivalent. Credits earned in the Phase One graduate courses will not count toward the 30-semester-hour degree requirement in Phase Two. A minimum of 30 semester hours in Business or Economics is required in Phase One.

The Master of Science in Education degree is conferred only on those students who meet certification requirements for the Illinois secondary certificate, except for those who are completing approved programs in the community college area and who have the approval of this institution.

### Phase One

<i>Undergraduate Course</i>	<i>Graduate Equivalent</i>
Accy. 121-122, Elementary Accounting I, II (6)	Accy. 505, Accounting Theory and Practice for Non-Accounting Majors (3)
Econ. 260-261, Principles and Problems of Economics I, II (6)	Fin. 500, Survey of Business Economics (6)
Fin. 320, Principles of Finance (3)	Fin. 505, Financing the Business Enterprise (3)
Fin. 323, Business Statistics I (3)	Fin. 524, Business Statistics for Research I (3)
Mgt. 311, Business Law I (3)	Mgt. 511, Legal Aspects of Business (3)
Mgt. 333, Principles of Management (3)	Mgt. 505, Principles of Business Organization (3)
Mrktg. 310, Principles of Marketing (3)	Mrktg. 505, Graduate Survey of Marketing (3)
Business or Economics Electives (9)	Business or Economics Electives (3)

### Phase Two

Students pursuing the degree Master of Science in Education with a specialization in Business Education will meet the following additional requirements:

- Bus.E. 500, Principles and Problems of Business Education (3)
- Bus.E. 501, Introduction to Research in Business Education (3)
- Bus.E. 599A, Master's Thesis or Directed Research in Business Education (3-6)

Students must elect one of the following options:

- A. Under Option A, the student must write a thesis for 3 to 6 semester hours of credit.



## PROGRAMS IN BUSINESS

- B. Under Option B, the student must complete in approved form one or more major papers or projects for 3 semester hours of credit.

The student will take 19-22 hours in elective courses. Electives in related areas (at least 6 semester hours) must be earned outside the department and approved by the adviser.

Total—30 semester hours.

## CERTIFICATE OF ADVANCED STUDY

The Certificate of Advanced Study has been established to provide educational programs beyond the master's degree suited to the needs,<sup>\*</sup> interests, abilities, and experiences of qualified candidates for advanced study in Business Education.

Programs of study are offered leading to the Certificate of Advanced Study in Business Education in conformity with the requirements of the Graduate School.

## DOCTOR OF EDUCATION

Students desiring to arrange graduate programs at the doctoral level in Business Education are permitted considerable flexibility in the selection of graduate Business Education courses. The type of program arranged will depend upon the student's undergraduate preparation, his present position, and his plans for the future. The student will have an advisory committee whose membership will include three people from the Department of Business Education. Graduate faculty members from other departments in the University may also be appointed to this committee. The chairman of the committee will be a graduate faculty member from the Department of Business Education.

The general requirements for doctoral study listed below apply to all applicants.

### General Requirements

- a. All doctoral candidates in Business Education must meet the undergraduate requirements of this university. If deficiencies exist in either the Business Education or the Business Administration area, they must be made up without graduate credit.
- b. Full-time teaching experience for three years, or the equivalent, is required for admission to candidacy for a doctor's degree.
- c. For admission to the doctoral program, see Graduate School policy on page 17. The master's degree must have been received prior to admission to candidacy for the doctoral program.
- d. Residence. Two consecutive semesters of residence are required, not including summer session. (See page 18 for Graduate School requirement.) The total program requires the equivalent of three academic years beyond the bachelor's degree. The minimum number of semester hours, including the dissertation, is 96.
- e. Statistics Requirements. Candidates are required to take two courses in statistics.
- f. Dissertation. A research project must be prepared which is based on special investigation of a subject of importance to the candidate's professional work. The dissertation may be concerned with a significant phase of educational theory or practice or it may be a scholarly interpretative study in some important area in the subject matter field. The dissertation subject must be approved by the candidate's dissertation committee. A satisfactory oral defense of the dissertation is required before final acceptance.
- g. Examinations. Business Education Department doctoral students will be required to take the Cooperative English Test at the beginning of the first summer or semester of enrollment. For new students with a master's degree, an achievement test in Business Education may be administered by the Business Education Department.  
A written candidacy examination will be given and read by the student's committee after completion of at least 64 semester hours of graduate course work. This examination will cover the major and related fields in which the candidate has planned his program. A follow-up oral examination will then be administered by the student's committee.

### Specific Requirements

- a. Concentration—60 semester hours  
Major in Business Education (20-40\*)  
Required: Bus.E. 600 and Bus.E. 645.  
Business Administration (Accountancy, General Business, Finance, Marketing, Management) (12-36)  
Two courses in statistics (6)  
Dissertation (10-25)
- b. Education—12-28 semester hours  
Recommended graduate background courses in Education:  
Educ. 500, Social Foundations of Education (3)  
Educ. 501, Psychological Foundations of Education (3)  
Educ. 504, Philosophical Foundations of Education (3)

<sup>\*</sup>Electives from Business Administration may be substituted for Business Education, as determined by student's background and needs.



Educ. 533, The Organization of Curriculum  
or

Educ. 535, Secondary School Curriculum (3)

- c. Related fields—9-18 semester hours
- d. Minimum requirements for the degree—96 semester hours

## International Business

The College of Business through its courses dealing with international marketing, international finance, international accounting, travel seminars, and others, is prepared to meet the

needs of students who have interest and aptitude in the broad area of international business. It is possible for a student to obtain a concentration of work devoted to international business by working closely with an adviser in one of the fields mentioned above.

## Teaching in Junior Colleges

The College of Business has programs leading to teaching careers in the junior colleges. By following programs combining Business Education and Business Administration, graduate students are in a position to qualify for teaching at the junior college level.

# Department of Accountancy

**GRADUATE FACULTY:** Casler, Department Head. Anderson, Avery, Barbour, Cheng, Delaney, Foth, Iliff, Istvan, Jain, Kieso, Lahey, McClary, Perritt, Poor, Scriven.

## Course Offerings

### **421. Consolidations—Theory and Practice (3)**

Accounting principles as applied to corporate consolidations, business combinations, home office and branch relationships, foreign operations, and other topics in advanced accounting theory and practice. Prerequisite: Accy. 225.

### **440. Auditing Theory (3)**

The principles, practices, and procedures followed in the audit of corporate accounts, preparation of related working papers, and the final audit report. Prerequisite: Accy. 225, or concurrent registration.

### **441A. Auditing Practice (2)**

The student is required to prepare a complete set of auditing working papers, write formal audit reports, study the official auditing bulletins and case studies, and discuss current topics. Prerequisite: Accy. 440.

### **454. Accounting Systems (3)**

The problems involved in the design and installation of accounting systems, including systematizing the clerical department of a business. Classification of accounts, account codes, ledgers, financial reports, flow charts, and function charts. Prerequisites: Accy. 225, 330, or concurrent registration.

### **455. Individual and Business Taxation (3)**

Federal taxes as they apply to the individual and to business. Considerable emphasis upon the individual return, including pay-as-you-go, social security, declarations, and payments. Prerequisite: Accy. 122 or consent of instructor.

### **456. Advanced Federal Taxes (3)**

Advanced phases of income taxation with particular attention to corporations, partnerships, estates, and research problems. Prerequisite: Accy. 455.

### **457. Governmental Accounting (2)**

Budgets, general funds, bond funds, sinking funds, trust and agency funds, working capital funds, and special assessment funds. Prerequisite: Accy. 122.

### **459. Introduction to Data Processing Systems (2-3) (Cross-listed as Finance 459X)**

Characteristics of unit-record equipment and electronic data processing. A study of the theoretical and procedural applications to specific fields in business, industry, and education.

Laboratory assignments in the use of data processing equipment, supplemented by field trips. Prerequisite: Consent of instructor.

### **471. Advanced Accounting (3)**

Contemporary accounting theory and practice pertaining to partnerships, receiverships, estates and trusts, and other special areas of current interest including governmental accounting and the application of actuarial science to problems of accounting measurement and cost allocation. Prerequisite: Accy. 225.

### **480. International Accounting (3)**

An introduction to the international dimensions of accounting. An examination of accounting theory and practice from an international perspective related to the current influence of multinational business and investment activities. Prerequisite: Accy. 122 or equivalent.

### **503. Introduction to Research (3)**

To acquaint the student with research which has been completed in the departmental area during recent years. The student will become familiar with the methods, techniques, and procedures of research. The prospectus for the thesis may be developed in cooperation with the director of the paper. Prerequisite: At least 6 semester hours of graduate work, or consent of instructor.

### **505. Accounting Theory and Practice for Non-Accounting Majors (3)**

A comprehensive survey of accounting theory for non-accounting majors which touches on all areas of general and specialized accounting, such as financial accounting, cost accounting, fund accounting, tax accounting, budgeting, and auditing. Special emphasis is placed upon the contribution accounting makes to business management, planning, and control. Open to students with no background or less than 6 semester hours in accounting.

### **507. Business Information Systems (3) (Cross-listed as Finance 507X)**

An introduction to business information concepts with attention directed to designing and using a business information system. The course emphasizes data communication as well as the administration and control of data files within a business information system.

### **532. Managerial Accounting Theory (3)**

An examination of the central issues which arise in the application of managerial accounting concepts to situations encountered in business. Readings, cases, and problems will be used in the study of such topics as product costing, budgeting,

standard costs, differential costs, and cost-volume-profit analysis. Prerequisite: Accy. 330 or equivalent.

**539X. Seminar in Teaching College Business Subjects (3)**  
(Business Education 539)

The teaching of business administration at the college level. The problems, principles, and techniques of effective instruction in teaching college business subjects. Problems and cases covering objectives, instructional procedures, measurement and evaluation.

**540. Financial Statements Analysis (3)**

Analysis and interpretation of financial reports with particular reference to the construction of statements, the meaning of accounts, ratios, and other evaluating indices.

**543. Advanced Theory of Auditing (3)**

An examination of the theoretical framework of auditing with emphasis upon the development and analysis of the philosophy, methodology, and concepts of auditing. Prerequisite: Accy. 440.

**561. Computer Theory and Programming (2-3)**

(Cross-listed as Finance 561X)

Flow charting, block diagramming, coding and programming techniques. Development of an electronic data processing system for business, industry, or schools. Implementation of computer tasks through laboratory exercises in programming and field trips. Prerequisite: Accy. 459 or Fin. 459X or equivalent.

**575. Income Theory (3)**

Examination of income theories and their impact on accounting principles and techniques. Review of current literature and pronouncements of the two major accounting associations

with considerable emphasis on controversial areas. Prerequisite: Consent of instructor.

**599A. Master's Thesis (1-6)**

Open to students writing a thesis under the M.S. or M.B.A. program. The student enrolls with the faculty member directing the thesis. Prerequisite: Accy. 503 or equivalent.

**603. Seminar in Business Research (3)**

A review and evaluation of current research in business giving consideration to the implication of findings for the improvement of business practices. Not for credit on the thesis. Prerequisite: Accy. 503 or consent of instructor.

**604. Independent Study in Business (1-3)**

Open to students qualified to do individual study in business. Not for credit on the thesis. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of instructor.

**605. Financial and Managerial Accounting Concepts II (3)**

Extended analysis of financial and managerial accounting concepts. The uses of accounting information in interpreting, coordinating, and implementing management's policies, in measuring and evaluating performance, and in tactical and strategic planning for future business activity. Prerequisite: Accy. 505 or equivalent. Not open to students with more than 9 hours of accounting except by permission of the department head.

**663. Seminar in Accounting (3)**

The various theories, principles, practices, and procedures in all phases of accounting. Students will investigate independently, and as a group, problems of special interest in the field of accounting.

# Department of Business Education

**GRADUATE FACULTY:** Maxwell, Department Head. Brown, Cambridge, D. Crank, F. Crank, Garman, Harris, Pender, Stehr, Wool-schlager.

## Course Offerings

### **405. Methods of Teaching Distributive Subjects (2)**

Development of distributive education, nature and purpose of instruction, curriculum and course planning, learning process, types of learning activities, sources and storing of instructional materials, measurement of learning, managing individual instruction.

### **406. Organization and Operation of Cooperative and Project Plan Occupational Education Programs (3)**

Overview of vocational education, changing philosophy and environment, planning and organizing new programs, role of coordinator in implementing the many facets of occupational education programs.

### **407. Directed Occupational Experience (1-4)**

A combination of classroom and on-the-job instruction provides occupational education teachers and teacher coordinators with an opportunity to secure and apply practical experiences to improve teaching and coordination competencies. Various concepts of cooperative and project plan programs are developed in class and applied and tested during the laboratory (on-the-job) training phase of the course. May be repeated to a maximum of 4 semester hours.

### **408. Coordination Techniques in Cooperative Vocational Education (2-3)**

Background and development of occupational education programs, techniques for effective public relations, selection and placement of trainees, selection of training stations, development of training station personnel, working with advisory committees, solving problems faced by coordinators, follow-up activities, program development activities.

### **409. Individualizing Instruction in Cooperative and Project Plan Occupational Education Programs (2-3)**

Performance-oriented curricula, systems for identifying competencies needed by students; sources and types of instructional media; designing, implementing, and evaluating selected instructional systems.

### **500. Principles and Problems of Business Education (3)**

The characteristics of present-day Business Education in terms of its basic principles and typical practices, problems, and trends.

### **501. Introduction to Research in Business Education (3)**

Designed to acquaint students with significant research in Business Education and to develop competencies in research methodology through an intensive study of the methods, techniques, and procedures used in research in Business Education.

### **510. Administration and Supervision of Business Education (3)**

General managerial problems of Business Education in the secondary school, designed for in-service business teachers. Curriculum construction and material, student measurement and evaluation, classroom supervision and rating, physical layout, and administration of supplies, textbooks, and equipment.

### **515. Guidance in Business Education (2)**

Principles and practices in guidance applied to secondary Business Education students. Educational and vocational counseling and occupational information pertaining to business.

### **516. Problems in Distributive Education (2-3)**

Problems and research in technical subjects, facilities and equipment, selection and placement of students, organization, and administration of high school programs, counseling for distributive occupations, coordination characteristics, evaluation of distributive education, coordination techniques, instructional techniques.

### **518. Improvement of Instruction in Distributive Education (3)**

Improvement of techniques and materials of teaching distributive subjects in secondary and post-secondary schools. An evaluation of classroom materials, methods, research, and current trends through a mutual exchange of ideas and experience.

### **519. Problems in Business Communications (3)**

Objectives, subject matter selection, presentation, achievement standards, and evaluation related to various business communications forms.

### **520. Improvement of Instruction in Stenography (3)**

Teaching techniques and an evaluation of research in methodology for the purpose of improving instruction in shorthand and transcription. Remedial practices, methods of motivation, and the use of classroom materials will be discussed through an exchange of ideas and experiences.

### **521. Improvement of Instruction in Typewriting (3)**

Methods of improving the techniques of teaching typewriting through an examination of current research and the discussion of such problems as typewriting in the curriculum; objectives; testing and grading for beginning, advanced, and personal-use



classes; remedial practices; motivation; and the use of materials and supplies.

**522. Teaching Procedures in Bookkeeping and Accounting (3)**

The problems and techniques in the teaching of bookkeeping and accounting. The place of bookkeeping in the curriculum, methods of motivation, the use of visual aids and practice sets, testing and grading, and problems of individual teachers.

**523. Methods and Materials in Teaching Basic Business (3)**

Improvement of the techniques of teaching the general and social-business subjects generally found in the secondary school business curriculum. An evaluation of classroom materials, methods, research, and current trends through mutual exchange of ideas and experiences.

**525. Evaluation and Measurement in Business Education (2)**

The kinds and uses of tests in both skill subjects and general business subjects; evaluation of available tests in the various business education subjects, construction of tests in the various business subjects.

**530. Seminar in Consumer Problems (3)**

Personal budgeting; the cooperative movement; consumer standards and grade labels; governmental aids for consumers; the buying of shelter, insurance, and investments; the use of installment buying and other forms of credit.

**535. Adult Education Programs in Office and Distributive Education (3)**

Problems in curriculum, selection and training of instructors, and the promotion of evening school courses for adults. Analysis of content of course work offered and the methods of developing a coordinated program.

**539. Seminar in Teaching College Business Subjects (3)  
(Cross-listed as Accountancy 539X)**

The teaching of business administration at the college level. The problems, principles and techniques of effective instruction in teaching college business subjects. Problems and cases covering objectives, instructional procedures, measurement and evaluation.

**540. Supervision of Student Teachers in Business Education (3)**

For persons who plan to supervise student teachers. Principles and techniques for secondary and college teachers in supervising student teaching and other professional laboratory experiences with emphasis on special problem areas in the business subjects, in both the skill and nonskill courses. Prerequisites: 12 semester hours in education and teaching experience.

**550. Practicum in Office Machines (3)**

Objectives, organization, equipment and layout, content, stand-

ards, and methods of teaching office practice. Operation of common office machines.

**590. Workshop in Business Education (2-3)**

Principles and problems in Business Education. Especially designed for experienced business educators and school administrators of secondary and collegiate institutions. Current practices, administration, and supervision in Business Education. Lectures, individual projects, field trips, and laboratory sessions. May be repeated once.

**591. Workshop in Methods of Teaching Business Subjects (2-3)**

For experienced teachers of business subjects in secondary and collegiate institutions. New developments in the teaching of various business subjects are studied through discussion, demonstration, and practice supplemented by presentations from specialists in the field. May be repeated once.

**592. Seminar in Distributive Education (2-3)**

For experienced teachers in secondary schools and junior colleges. Current practices, administration, legislation, problems in program development, development of instructional materials, selected problems as determined by class enrollees. Prerequisite: Consent of instructor.

**593. Seminar in Office Education (2-3)**

For experienced teachers in secondary schools and junior colleges. Current practices, administration, legislation, problems in program development, development of instructional materials, selected problems as determined by class enrollees.

**594. Distributive Education in the Post-Secondary School (2-3)**

Organization, curriculum construction, certification requirements, state and federal regulations, mid-management, role in area vocational school, programs in operation in various states, problems of teaching, new concepts and developments.

**599A. Master's Thesis or Directed Research in Business Education (1-6)**

Designed to utilize research skills and techniques through writing and developing papers and projects. A student must select, complete, and present in approved written form one or more projects or papers based on significant problems. May be repeated to a maximum of 6 semester hours. Prerequisites: Bus.E. 500, 501, or equivalent.

**599B. C.A.S. Thesis in Business Education (1-6)**

Required for student writing a thesis for the Certificate of Advanced Study. Prerequisite: Bus.E. 501 or equivalent.

**599C. Independent Study in Business Education (1-6)**

For students who wish to pursue individual study and analysis of problems in Business Education of particular interest and

## BUSINESS EDUCATION

value to the students. May be repeated to a maximum of 6 semester hours.

### **600. Seminar in Business Education (3)**

The principal theories, practices, and procedures of establishing and maintaining relationships between Business Education and the total school administrative program. Students are expected to investigate problems of special interest within the field of Business Education. Required of all doctoral candidates in Business Education.

### **610. Curriculum Construction in Business Education (3)**

Problems and methods in Business Education curriculum construction in secondary schools, together with underlying philosophies of curriculum making. Study and evaluation of existing city and state Business Education programs.

### **612. Preparation of Teachers in Business Education (3)**

Issues and problems in business teaching education, curriculum, certification, professional standards, recruiting and selection, experimental programs and research.

### **631. Seminar in Family Finance and Consumer Education (3)**

A concentrated study in the area of personal economic education. Financial planning, consumer buying, housing, taxes, insurance, social security, consumer credit, money and banking, and investments. Lectures by experts in each of these areas. Attention to both personal and professional application.

### **640. Business Education in the Post-Secondary School (3)**

Organizational plans, curriculum construction, and staffing problems of business colleges, junior colleges, four-year colleges, and universities.

### **645. Research in Business Education (3)**

Advanced methods and techniques of research involving statistical analysis and data processing methods employed in the investigation of Business Education problems. Includes study and analysis of significant research in Business Education. Required of all doctoral candidates in Business Education.

### **699. Doctoral Research and Dissertation (1-25)**

# Department of Finance

**GRADUATE FACULTY:** Bishop, Department Head. Alwan, Andrews, Basti, Bozovich, Brown, Chang, Craig, Eaton, Hess, Komarynsky, Kreidle, Kuhn, Masson, Miller, Olive, Simon, Thistlethwaite, Tseng, Wilbur

## Course Offerings

### **416. Life, Accident, and Sickness Insurance (3)**

Growth and functions of life insurance; kinds of policies and their uses; surrender values and policy loans; accident and sickness coverages; assessment insurance; group insurance.

### **417. Property and Casualty Insurance (3)**

Principles underlying the underwriting of property and casualty lines of insurance; functions of the various types of insurance; types of hazards and their significance; analysis of the standard fire policy.

### **418. Real Estate Principles (3)**

Real estate ownership and interest, contracts, title transfer, deeds, mortgage instruments, and leases. Brokerage, real estate development, property management, and appraising.

### **419. Real Estate Evaluation (3)**

Theories of value applied to real estate; appraising residential, industrial, and other income properties. Value analysis and valuation principles as decision guides. Designed for those interested in the property value problem, particularly with respect to valuation for accounting purposes and assessing for tax purposes. Prerequisite: Fin. 418.

### **420. Investment Principles (3)**

Classification and analysis of the contractual features of securities; the mechanics of investment; tests to be applied in the selection of securities for personal and business portfolios; significant financial institutions; and the determination of the qualities of securities based on an analysis of financial statements. Prerequisite: Accy. 122.

### **421. Portfolio Analysis and Management (3)**

Principles and practices used in the management of individual and institutional portfolios. Attention is given to a critical analysis of current portfolio problems. Prerequisite: Fin. 420 or equivalent.

### **430. Financial History of the United States (3)**

A historical survey in the areas of banking, taxation, tariffs, public expenditures and debt, from colonial days to the present time, including a study of financial panics and a review of the financial policies of leading statesmen. The course is designed to give a perspective for an understanding of current problems in these fields. Prerequisite: Econ. 261.

### **450. Money and Banking (3)**

A short historical survey of money and the evolution of banking. The organization and the operation of banks, monetary theory and markets, and the functions of the Federal Reserve System.

### **451. Commercial Bank Management (3)**

An extension of Money and Banking, Fin. 450. Particular emphasis upon the problems of formulating appropriate lending and investment policies. Relationships of the composition and movement of bank deposits to investment and loan policies stressed. Commercial banking problems covered primarily from the standpoint of the management of an individual commercial bank. Prerequisite: Fin. 450 or 484, or consent of instructor.

### **459X. Introduction to Data Processing Systems (2-3) (Accountancy 459)**

Characteristics of unit-record equipment and electronic data processing. A study of the theoretical and procedural applications to specific fields in business, industry, and education. Laboratory assignments in the use of data processing equipment, supplemented by field trips. Prerequisite: Consent of instructor.

### **462. Problems in Business Finance (3)**

A critical study of selected problems dealing with promotion and organization, permanent capital, working capital, capital budgeting, dividend policies, and special financial problems. Prerequisite: Fin. 320 or consent of instructor.

### **480. Corporation Finance I (3)**

The nature of corporation finance and its relation to economics, accounting, and law; financial analysis and interpretation; capitalization of earnings; corporate securities; corporate financing and refinancing. Prerequisite: Fin. 320 or consent of instructor.

### **481. Corporation Finance II (2)**

Corporation finance dealing with expansion, consolidation, concentration, and intercorporate relations; the corporate institution and the problem of monopoly and competition; corporate failure and reorganization; and the problems of economic stability. Prerequisite: Fin. 480 or consent of instructor.

### **483. Cyclical Financial Problems (3)**

Business fluctuations with special reference to financial problems, offering the student a practical application of economic theory to financial problems. Prerequisites: Fin. 323 and 450, or consent of instructor.

### **484. Financial Institutions (3)**

The whole structure of financial institutions in the American economy is reviewed. Financial institutions as recipients and as suppliers of funds in financial markets. The role and

## FINANCE

characteristics of many kinds of financial institutions and the administration of their loan and investment portfolios. Prerequisite: Fin. 320 or consent of instructor.

### **498X. International Business Problems (3)** **(Marketing 498)**

Case study analysis is used with particular emphasis upon foreign financial and marketing problems including product introduction, distribution and promotion patterns, and the procedures of overseas business development. Prerequisite: Consent of instructor.

### **500. Survey of Business Economics (3)**

Business economic concepts relevant to an analysis of the environment within which the business firm operates and those economic concepts basic to an analysis of a broad scope of business problems.

### **503. Introduction to Research (3)**

To acquaint the student with research which has been completed in departmental area during recent years. The student will become familiar with the methods, techniques, and procedures of research. The prospectus for the thesis may be developed in cooperation with the director of the paper. Prerequisite: At least 6 semester hours of graduate work, or consent of instructor.

### **505. Financing the Business Enterprise (1-3)**

For graduate students with little formal background in finance. Financial theory and activities connected with the organization and operation of a business enterprise. The relationship of these financial activities to other aspects of business administration. Financial planning and control, working capital considerations, capital budgeting, sources and use of funds, valuation of enterprise, and the financial environment in which the firm operates. Prerequisite: Accy. 122 or 388 or 505 or equivalent.

### **507X. Business Information Systems (3)** **(Accountancy 507)**

An introduction to business information concepts with attention directed to designing and using a business information system. The course emphasizes data communications as well as the administration and control of data files within a business information system.

### **524. Business Statistics for Research I (3)**

Descriptive statistics; probability and sampling distributions; statistical inference, simple linear regression and correlation. Prerequisite: Math. 210 or equivalent.

### **525. Business Statistics for Research II (3)**

Inferences in regression and correlation; analysis of variance and experimental designs; inferences with discrete data. Prerequisite: Fin. 524 or equivalent.

### **527X. Operations Research in Business (3)** **(Management 527)**

The objectives of operations research and the quantitative method used in the solution of problems of business. Optimum decision models are developed under conditions of certainty and uncertainty. Prerequisites: Math. 210 and a minimum of one course in business statistics, or equivalent.

### **561X. Computer Theory and Programming (2-3)** **(Accountancy 561)**

Flow charting, block diagramming, coding and programming techniques. Development of an electronic data processing system for business, industry, or schools. Implementation of computer tasks through laboratory exercises in programming and field trips. Prerequisite: Fin. 459X or equivalent.

### **582. Investment Management (3)**

Principles underlying the selection and management of portfolios of individual and institutional investors. Formulation of suitable portfolio policies and their revision to meet changing conditions. Prerequisite: Fin. 420 or equivalent.

### **583. Security Analysis (3)**

A detailed study of the methods utilized in analyzing the major types of securities. The greatest emphasis is given to equities. Economic, corporate, financial, and management factors are given due consideration. Prerequisite: Fin. 420 or equivalent.

### **585. International Business Finance (3)**

The methods, practices, and institutions for financing international and foreign business firms including direct and indirect investments. Current developments relating to specific finance and monetary problems. Prerequisite: Fin. 320 or 450 or equivalent.

### **588. Mortgage Banking (3)**

The nature of real estate credit, general and special methods of real estate finance, the mortgage market, principles of mortgage risk analysis, policies and practices of major lending institutions, and the operations of governmental lending and underwriting agencies. Prerequisite: Fin. 418 or consent of instructor.

### **589. Regional Financial Resources (1-3)**

A regional study and analysis, through readings, research data, and sampling of the flow of income, savings, and investment funds. Special emphasis will be placed on financial institutions in the area such as banks, insurance companies, savings and loan associations, finance companies, credit unions, and agricultural credit associations to determine the sources as well as the uses of financial resources.



**599. Master's Thesis (1-6)**

Open to students writing a thesis under the M.S. or M.B.A. programs. The student enrolls with the faculty member directing the thesis. Prerequisite: Fin. 503 or equivalent.

**600. Managerial Economics (3)**

Those phases of business economics that are particularly useful to the management of large industrial corporations. Profit objectives and the measurement and forecasting of demand and costs. The decision-making processes in business. Prerequisite: Fin. 500.

**603. Seminar in Business Research (3)**

A review and evaluation of current research in business giving consideration to the implication of findings for the improvement of business practices. Not for credit on the thesis. Prerequisite: Fin. 503, or consent of instructor.

**604. Independent Study in Business (1-3)**

Open to students qualified to do individual study in business. Not for credit on the thesis. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of instructor.

**606. Seminar in Federal, State, and Local Finance (3)**

Current problems in federal, state, and local taxation, budgetary procedures, debt management and expenditure programs, with emphasis on the effect on public institutions and the national economy.

**607. Financial Analysis (3)**

This course deals with the analysis of current and future financial position that serves as the foundation for the decision making by creditors, managers, and owners. The material covered includes ratio analysis, sources and uses of funds, operating and financial leverage, capital budgeting under risk and uncertainty, the cost of capital and the financial structure. The course is problem oriented but cases and reading may be utilized. Prerequisite: Fin. 320 or 505 or equivalent.

**613. Readings in Finance (1-3)**

Special readings useful to a student's individual program and objectives, but not available in regular course offerings. May be repeated to a maximum of 3 semester hours. Prerequisite: Consent of instructor.

**615. Graduate Seminar in Quantitative Analysis (3)**

Advanced topics in quantitative analysis and the more complex problems arising in the application of statistical theory in business decision making. Applications of the computer in

problem solving. Prerequisites: One semester of statistics and Math. 210 or equivalent of these courses.

**650. Seminar in Managerial Economics (3)**

Selected topics in managerial economics, emphasizing current literature on the theory and analysis of business. Prerequisite: Fin. 600 or consent of instructor.

**651. Seminar in Commercial Bank Management (3)**

This course deals with contemporary developments in commercial bank management. The expansion of commercial banks into a wide range of activities by means of one-bank holding companies, recent changes in bank capital structures, the controversy over the composition of bank financial statements, and innovations in lending policies will be considered in detail. Recognition will be given to recent changes in the tax laws as they affect banks. Prerequisite: Fin. 450.

**662. Seminar in Business Finance (1-3)**

A general seminar which includes financial problems peculiar to business finance, investment management, and bank management. The content depends on current developments in finance. In general, financial problems examined both from the viewpoint of business management and that of the economic system. Prerequisite: Fin. 320 or 505 or equivalent.

**670. Seminar in Insurance Problems (3)**

Intensive investigation of significant topics and problems in insurance. Prerequisite: Fin. 416 or 417 or equivalent.

**671. Business and Economic Forecasting (3)**

Principles, techniques, and applications of forecasting for the economy as a whole, for industries, and for individual business firms. Prerequisites: Econ. 261 or Fin. 500; Fin. 323 or Fin. 524 or equivalent.

**680. Quantitative Analysis in Business Research (3)**

Basic principles of classical statistical inference as applied to analyzing and reporting business research and to choosing the best action in business decision problems; completion of this theory by recent developments in personal probability. Prerequisites: Fin. 323 and Math. 210 or equivalent courses.

**681. Advanced Quantitative Methods for Business Research (3)**

This course provides the advanced graduate student with the quantitative tools necessary for conducting empirical research for advanced study and for the type of research currently undertaken in the scholarly literature of business. Emphasis is on business research applications, not on developing theory. Prerequisite: Fin. 324 or equivalent.

# Department of Management

**GRADUATE FACULTY:** Hackamack, Department Head. Andreasen, Baumbach, Dirksen, Giese, Green, Graham, Kendall, Kennedy, Lane, Novak, Pecenka, Plumlee, Rifai, Sims.

## Course Offerings

### **428. Advanced Production Management (3)**

Issues and problems in production management at the corporation level; emphasis on specific cases and supporting investigations. Prerequisite: Mgt. 327 or consent of instructor.

### **429. Manufacturing Applications and Controls (3)**

Integration of the characteristics and requirements of process, product, and operation into a total production system. Prerequisite: Mgt. 327 or consent of instructor.

### **436. Wage and Salary Administration (3)**

Managerial problems in the determination of a wage structure that will enable the business firm to procure and maintain an efficient work force. Structure and operations of labor markets, determination of the wage level of the firm, job evaluation, wage surveys, and federal and state legislation affecting wages.

### **437. Small Business Management (3)**

The problems of small business relative to personnel, control, finance, marketing, management, and administration in manufacturing, distributive, and service firms.

### **487. Multinational Business Management (3)**

Organizational differences, the varying attitudes toward cartelization, concentration, and government ownership of traditionally private-sector business endeavors; the special personnel problems arising in foreign business ventures with particular emphasis on the causes of xenophobia; the management objectives, strategies, and policies of multinational corporations. Companies producing abroad. Prerequisite: Mgt. 333 or consent of instructor.

### **503. Introduction to Research (3)**

To acquaint the student with research which has been completed in the departmental area during recent years. The students will become familiar with the methods, techniques, and procedures of research. The prospectus for the thesis may be developed in co-operation with the director of the paper.

### **505. Principles of Business Organization (3)**

For graduate students with no previous courses in management principles. An introduction to the role of administrator in interaction with his superiors, associates, and staff; theories of leadership organization, planning and controlling, and administrative skill in communications, coordination, and directing.

### **511. Legal Aspects of Business (3)**

A general seminar in legal problems affecting business in the areas of contracts, personnel, taxation, property, and government regulation of business.

### **527. Operations Research in Business (3)**

(Cross-listed as Finance 527X)

The objectives of operations research and the quantitative methods used in the solution of problems of business. Optimum decision models are developed under conditions of certainty and uncertainty. Prerequisites: Math. 210 and a minimum of one course in business statistics, or equivalent.

### **538. Management of Industrial Relations (3)**

Analysis of issues and techniques involved in manpower procurement and development. Analysis of the industrial relations function in management. Use of cases, role playing, research reports, and theoretical analyses involved in negotiations of collective-bargaining agreement; procedures and methods of settling grievances. Prerequisite: Mgt. 438 or consent of instructor.

### **598. Seminar in Leadership Training (3)**

Problems in the application of scientific knowledge and study of executive leadership. Comparative analysis of the research findings, theories, and practices of different applications to leadership training. Critical analysis of the role of the coordinator of management development. Prerequisites: Mgt. 435 or 635 and consent of instructor.

### **599. Master's Thesis (1-6)**

Open to students writing a thesis under the M.S. or M.B.A. programs. The student enrolls with the faculty member directing the thesis. Prerequisite: Mgt. 503 or equivalent.

### **603. Seminar in Business Research (3)**

A review and evaluation of current research in business giving consideration to the implication of findings for the improvement of business practices. Not for credit on the thesis. Prerequisite: Mgt. 503 or consent of instructor.

### **604. Independent Study in Business (1-3)**

Open to students qualified to do individual study in business. Not for credit on the thesis. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of instructor.

### **611. Readings in Management (1-3)**

Special readings useful to a student's individual program and objective, but not available in regular course offerings. May be repeated to a maximum of 3 semester hours. Prerequisite: Mgt. 633.

**612. Readings in Industrial Relations (1-3)**

Special readings useful to a student's individual program and objective, but not available in regular course offerings. May be repeated to a maximum of 3 semester hours. Prerequisite: Mgt. 433.

**620. Seminar in Personnel Administration and Industrial Relations (3)**

Management's problems, opportunities, and policy alternatives in personnel management and labor relations. The ramifications that labor organizations have in management decision making. Prerequisite: Mgt. 433.

**633. Organization and Management Development (3)**

Traces historical development of organization theory from pre-classical through contemporary theories. Analysis of organizational structure and behavior ranging from systems in the steady state to complex, dynamic social systems concerned with adaptation, growth, and conflict. Prerequisite: Mgt. 505 or equivalent.

**634. Administrative Theory and Practice (3)**

A study of decision making in an organizational setting. Emphasis is placed on concepts, theories, and value issues related to the decision-making process; quantitative techniques available to the decision maker are studied as they apply to the business firm. Prerequisites: Mgt. 505 and Math. 210.

**635. Human Relations in Business (3)**

A critical review of the theory, research, and practice related to the human factor of production, including concepts influencing communication, decision making, group cohesiveness, and productivity. Prerequisite: Mgt. 435 or consent of instructor.

**638. Seminar in Industrial Relations (3)**

Advanced analysis of policies and techniques in industrial relations. The employee-employer relationship is analyzed with special attention devoted to the changing elements related to

manpower management. Research and current literature emphasized. Prerequisites: Mgt. 438 or 538 and consent of instructor.

**640. Seminar in Office Management (3)**

Problems, practices, and policies involved in office administration. Methods of directing, planning, and organizing office systems. A critical survey of current trends and problems in the field of office management through case studies of systems in business firms, reports of research on office management problems, and field investigations in business firms.

**650. Seminar in Current Business Problems (3)**

Contemporary business conditions and problems facing businessmen in the United States. An analysis and evaluation of current literature pertaining to general business activity and the implications of changing business conditions. Prerequisite: Mgt. 633.

**661. Seminar in Management (3-6)**

Management problems at the various levels of business organization and the role of management in the determination of business policies and procedures. Prerequisite: Mgt. 633.

**672. Business Policies (3)**

An analysis of the problems of business and the functions of management in the determination of business policy in the areas of internal organization, financial policies, operating methods; and the nature, objectives, and elements of business policy determination. Prerequisites: Mgt. 505 and Mgt. 633 or 634.

**697. Seminar for Executives (1)**

The purpose of the seminar is to offer executives the opportunity to broaden their interest in general problems of management as well as to enrich the background of participants. Lectures and discussions on economics, literature, philosophy, art, music, science, history, and world affairs. May be repeated to a maximum of 3 semester hours.

# Department of Marketing

**GRADUATE FACULTY:** Howland, Department Head. Arnold, Bell, Brown, Grokš, Hancock, Hanna, Hendrickson, Johnson, Kizilbash, McNamara, Nelson, Stewart, Wales, Wasson.

## Course Offerings

### **410. Agribusiness Systems and Public Policy (3)**

An analysis of agribusiness systems in an urban society. Focus is on principles of marketing and economics as applied to private and public decision making in the production and marketing of food and fiber in the United States and the world economy.

### **443. Marketing Research (3)**

Research methods as applied to the field of marketing, including methods of gathering and interpreting data; presentation of results; market analyses, consumer surveys, and sales forecasting. Prerequisites: Mrktg. 310, Fin. 323.

### **444. Quantitative Methods in Marketing (3)**

Decision making based on quantitative factors existing in marketing. The managerial use of quantitative tools in market measurement and control. An interdisciplinary approach is used to integrate market cost analysis into the total marketing system. Prerequisites: Mrktg. 310 and Business Statistics, Fin. 323.

### **446. Sales Management (3)**

The application of principles of sales and marketing management to the solution of problem situations, and a study of the work of sales managers and their role in the marketing process. Prerequisite: Mrktg. 310 or 339 or consent of instructor.

### **447. Public Relations in Business (3)**

Public relations as a marketing tool to supplement the advertising efforts of management; business-community relations, customer-company relations, and business-media relations as these are integrated with business management policies. Prerequisite: Mrktg. 310.

### **458. Internship in Business (3-7)**

The student will work full-time for a nine-week period, a summer or a semester, as an intern in a business firm under the supervision of the staff of the College of Business. Prerequisite: Consent of the head of the department.

### **463. Marketing Problems (3)**

Cases are discussed with emphasis on decision making. The areas of product planning, channels of distribution, promotion, and pricing are analyzed and integrated into a complete marketing program. Prerequisite: Mrktg. 310 or equivalent.

### **465. Retailing (3)**

A study of types of retail institutions; store location and organization, buying and merchandising techniques, retail advertising and sales promotion, inventory control; personnel policies and career opportunities available in retailing. Prerequisite: Mrktg. 310 or equivalent.

### **466. Marketing Communication and Promotion (3)**

The uses of advertising and advertising campaigns by business which give emphasis to the patterns of marketing strategy and its various functions, problems in developing and evaluating advertising programs, budgeting and scheduling, and client-advertising agency relationship. Prerequisite: Mrktg. 348 or equivalent.

### **467. International Business (3)**

Principles and methods of international business as related to organizational aspects, international marketing, and advanced technical and financial features of doing business abroad. Prerequisite: Mrktg. 310 or 367, or consent of instructor.

### **475. Industrial Marketing (3)**

The special problems of marketing industrial products. Marketing planning as a management function. Management of the marketing channels. Pricing of industrial products. Getting the industrial products sold. Efficient physical distribution of industrial products. Customer services. Prerequisite: Mrktg. 310 or equivalent.

### **477. Physical Distribution Management (3)**

A systems approach to physical distribution is presented, integrating all of the component activities: transportation, inventory, warehousing, unitization, and communications. A quantitative emphasis, utilizing various transportation costing, unit control, and location techniques, is stressed as an aid to the design and administration of an effective system. Prerequisite: Mrktg. 310 or equivalent.

### **490. Seminar in Current Marketing (3)**

Intensive study of currently important issues or developments in marketing. Prerequisites: Mrktg. 310 or equivalent and consent of instructor.

### **498. International Business Problems (3) (Cross-listed as Finance 498X)**

Case study analysis is used with particular emphasis upon foreign financial and marketing problems including product introduction, distribution and promotion patterns, and the procedures of overseas business development. Prerequisite: Mrktg. 367 or consent of instructor.



**503. Introduction to Research (3)**

To acquaint the student with research which has been completed in the departmental area during recent years. The students will become familiar with the methods, techniques, and procedures of research. The prospectus for the thesis may be developed in cooperation with the director of the paper.

**505. Graduate Survey of Marketing (3)**

A comprehensive survey analysis of marketing functions, institutions, policies, and problems designed specifically to serve the needs of graduate students with no previous formal marketing education.

**556. Seminar in International Business (3)**

Provides research training in the administrative relationships of international business operations. Particular emphasis is given to research organizational procedure, product introduction, personnel and financial problems, promotional aspects and overseas business development. Prerequisite: Mrktg. 467 or consent of instructor.

**599. Master's Thesis (1-6)**

Open to students writing a thesis under the M.S. or M.B.A. programs. The student enrolls with the faculty member directing the thesis. Prerequisite: Mrktg. 503 or equivalent.

**603. Seminar in Business Research (3)**

A review and evaluation of current research in business, giving consideration to the implication of findings for the improvement of business practices. Not for credit on the thesis. Prerequisite: Mrktg. 503 or consent of instructor.

**604. Independent Study in Business (1-3)**

Open to students qualified to do individual study in business. Not for credit on the thesis. May be repeated to a maximum of 6 semester hours. Prerequisite: Consent of instructor.

**612. Readings in Marketing (1)**

Special readings useful to a student's individual program and objective, but not available in regular course offerings. May be repeated to a maximum of 3 semester hours. Prerequisite: Consent of instructor.

**625. Consumer Behavior and Marketing Communication System (3)**

An investigation of behavioral and communications research, appraising models, methodology, and concepts applicable to marketing. Emphasis is placed on designing marketing communication systems which in structure and output reflect a behavioral orientation toward the market place.

**654. Marketing Management (3)**

An analysis of the problems facing marketing managers in the formulation of marketing policies with particular reference to these areas of decision making in sales management, promotion, product development, and marketing channels. Prerequisite: Mrktg. 310 or 505 or equivalent.

**655. Promotion Policies and Planning (3)**

An intensive analysis of problems associated with formulating promotion policies and with planning and integration of personal selling, advertising, and publicity into an effective promotional program. Prerequisite: Mrktg. 505 or equivalent.

**660. Seminar in Marketing (3-6)**

The problems involved in the performance of the marketing functions at the various levels of distribution and the problems of policy determination by the manufacturer, the wholesaler, and the retailer. Prerequisite: Mrktg. 310 or 505 or equivalent.

**665. Marketing Structures and Price Policies (3)**

An analysis of the role of prices in various market structures; the price making mechanism under conditions of imperfect competition with special emphasis on administered pricing. Prerequisites: Mrktg. 505 or its equivalent and Fin. 500 or its equivalent.

**666. Seminar in Marketing Research (3)**

A critical analysis of marketing research programs including a study of projective and quantitative marketing research methods. Prerequisite: Mrktg. 505 or equivalent.

**675. Marketing Strategies and Programming (3)**

The marketing program and the decisions underlying integration into an effective strategy. Quantitative approaches in developing a total marketing program for the firm. Prerequisite: Mrktg. 505 or equivalent.

**677. Marketing Institutions and Channels (3)**

An intensive analysis of the various institutions comprising the total marketing structure with emphasis on the rationale underlying the channels of distribution through which goods are marketed. Prerequisite: Mrktg. 505 or equivalent.

**695. Marketing Theory (3)**

Students are encouraged to use the present body of marketing knowledge as a springboard from which to think creatively toward the objective of advancing and refining marketing theory. Prerequisite: Mrktg. 505 or equivalent.

# Special Programs in Business

## International Business

**GRADUATE FACULTY:** Groke, Coordinator. Basti, Brown, Dirksen, Kizilbash.

International Business is an area option, not a degree-offering unit. All graduate degrees in this area are obtained through departments of the College of Business. The following courses are suggested for graduate students interested in a concentration in International Business.

### Course Offerings

**Mrktg. 467. International Business (3)**

Principles and methods of international business as related to organizational aspects, international marketing, and advanced technical and financial features of doing business abroad. Prerequisite: Mrktg. 310 or 367 or consent of instructor.

**Mgt. 487. Multinational Management Policies (3)**

Consideration will be given to organizational differences, the varying attitudes toward cartelization, concentration, and government ownership of traditionally private-sector business endeavors; the special personnel problems arising in foreign business ventures with particular emphasis on the causes of xenophobia; the management objectives, strategies, and policies of multinational corporations. Emphasis will be given to those companies producing abroad.

**Accy. 480. International Accounting (3)**

An introduction to the international dimensions of accounting. An examination of accounting theory and practice from an international perspective related to the current influence of multinational business and investment activities.

**Mrktg. 498. International Business Problems (3)**  
(Cross-listed as Finance 498X)

Case study analysis is used with particular emphasis upon foreign financial and marketing problems including product introduction, distribution and promotion patterns, and the procedure of overseas business development. Prerequisite: Mrktg. 367, or consent of instructor.

**Mrktg. 410. Agribusiness Systems and Public Policy (3)**

An analysis of agribusiness systems in an urban society. Focus is on principles of marketing and economics as applied to private and public decision making in the production and marketing of food and fiber in the United States and the world economy.

**Mrktg. 556. Seminar in International Business (3)**

Provides research training in the administrative relationships of international business operations. Particular emphasis is given to research organizational procedure, product introduction, personnel and financial problems, promotional aspects, and overseas business development. Prerequisite: Mrktg. 467 or consent of instructor.

**Fin. 585. International Business Finance (3)**

The methods, practices, and institutions for financing international and foreign business firms including direct and indirect investments. Current developments relating to specific finance and monetary problems. Prerequisite: Fin. 320 or 450 or equivalent.

## School Business Management

**GRADUATE FACULTY:** Yankow, Coordinator.

### Course Offerings

**Accy. 541. Accounting, Statement Analysis, and Budgeting (2-3)**

Principles of accounting, including a study of budgeting, payroll administration, bonded indebtedness, accounting for receipts and expenditures. Special attention to accounting for extra-curricular funds and analysis of statements. Accounting for auxiliary enterprises such as cafeteria, store, etc.

**Accy. 641. Advanced School Fund Accounting and Budgeting (2-3)**

Problems in designing systems and procedures in school fund accounting. The application of data processing systems to payroll, inventories, curriculum, personnel, registration procedures, budget, textbook accounting, and other business office functions. Prerequisite: Accy. 541 or equivalent.

**Bus.E. 551. School Office and Personnel Management (2)**

Work simplification in office management; administration of noncertified school personnel; legal and insurance problems of the school business office.

**Mgt. 552. Management of Auxiliary Enterprises (2)**

Budgeting, cost analysis, accounting, and other problems related to food service management, transportation, and school store operation. Prerequisite: Consent of instructor.

**Mrktg. 542. Purchasing and Supply Administration (2)**

Principles and procedures of purchasing supplies, equipment,

and services. Specifications, quality analysis, sources of information, testing materials and services, determination of standards, inventory control, store management, property accounting, etc.

## **Intra Business**

### **668. Seminar in Business Administration**

This course is designed as a capstone course in business ad-

ministration. The student draws upon analytical tools and background knowledge from other M.B.A. courses to analyze comprehensive business problems. The process of policy formation, executive decision making and strategic planning are emphasized. Reading and lectures related to the business firm's social, political, and economic environment are scheduled. Prerequisite: Final semester standing in the M.B.A. program.

# Special University Programs

## International and Foreign Study Programs

**GRADUATE FACULTY:** Wit, Director. Baker, Coordinator.

The University is developing an increasing number of varied opportunities for graduate students to study and to conduct thesis research abroad. During the summer, the International Programs Office and various University departments and colleges sponsor specialized study tours for academic credit. In the past these opportunities have been offered by Anthropology, Art, Business, Economics, Education, English, Foreign Languages, History, Home Economics, Outdoor Teacher Education, Physical Education for Women, Political Science, and Sociology. Although concentrated largely in Europe, the tours also have included Japan, Mexico, British Honduras, and Canada.

During the regular academic year, opportunities exist to study abroad on an individual basis in foreign universities (using the language of the country) or in programs conducted by various American universities. Northern Illinois University is also developing its own sponsored study programs abroad including graduate student exchange arrangements with foreign universities. In addition, it participates in several associations of universities which jointly conduct such programs in different parts of the world. All programs are designed to add to and supplement study and research opportunities available on campus.

Additional details can be obtained through the International Programs Office.

## Course Offerings

### 401. Foreign Study Programs (1-9)

Under certain circumstances, credit for study abroad can be earned directly through this course.

### 402. International Studies (1-9)

Course work undertaken as part of approved university residential study programs abroad. May be repeated to a maximum of 18 hours.

## University Seminars

### 500. Interdisciplinary Seminar: The Human Enterprise (3)

For adults and professional people who wish to reinforce their backgrounds in the arts and sciences. Lectures, readings, discussions, and critiques, based on concepts and insights from the

natural sciences, psychology, social sciences, philosophy, literature, art, and music, concerning the nature of man and the human enterprise. Various phases of the course conducted by specialists from the disciplines represented. Prerequisite: A college degree.

## Department of Military Science

**FACULTY:** Huntington, Department Head. Benford, Kniker, Pilkington, von Schilling.

The Department of Military Science offers male graduate students the opportunity of receiving a commission in the United States Army upon completion of two years of on-campus military studies, and two six-week summer camp sessions. The prerequisites for enrollment in the two-year program are:

1. Status as a U.S. citizen, at least 17 years of age.
2. Full-time enrollment as a graduate student.
3. Two years of academic work remaining.
4. Expectation of achieving a graduate degree prior to reaching 28 years of age.
5. An interview by an Army officer.
6. Successful completion of an Army physical examination and ROTC qualifying test.
7. Successful completion of a six-week basic summer camp the summer prior to admission.

Applicants for the two-year program should contact the Department of Military Science during the period of January-March to complete administrative processing for the basic summer camp.

All textbooks and uniforms required are furnished free by the Department of Military Science. Students in the two-year program receive \$50 per month during the school year. Students will be paid approximately \$185 for the basic summer camp period, and \$315 for the advanced summer camp period. Transportation to and from both summer camps will be paid by the Army.

During the last year of the program, flight training is offered as an extracurricular activity to qualifying students. The training is conducted by an FAA-approved flying school near the University. The instruction consists of 35 hours of ground training and approximately 36 hours of flight instruction. This training is at no cost to the student. A student who completes the two-year ROTC program as a graduate student is eligible to apply for a regular Army commission if designated a distinguished military student.



Credit hours earned in Military Science are not applicable toward graduate degree requirements; however, the following constitute the minimum course requirements:

## Course Offerings

### 301. Advanced Military Science (1)

Leadership techniques; military teaching principles; branches of the Army; leadership laboratory (3 hours of class and 1 hour of leadership laboratory per week).

### 302. Advanced Military Science (2)

Small unit tactics and communications; fundamentals and dynamics of the military team; pre-camp orientation; leadership laboratory (3 hours of class and 1 hour of leadership laboratory per week). Academic Elective: An acceptable 3 semester hour non-military elective.

### 401. Advanced Military Science (1)

Operations, Army administration, military justice, orientation to service leadership, and leadership laboratory (3 hours of class and 1 hour of leadership laboratory per week).

### 402. Advanced Military Science (2)

Organization, logistics, decision making; principles of internal defense-development; review of map reading, terrain appreciation, and land navigation; leadership laboratory (3 hours of class and 1 hour of leadership laboratory per week). Academic Elective: An acceptable 3-semester-hour non military elective beyond degree requirements.

For additional information contact:

Department of Military Science  
Williston Hall, Room 226  
Telephone: (815) 753-0574

# GRADUATE FACULTY, 1971-72

(The date indicates beginning of service to the University.)

Mohammed Fathi Abdel-Hameed, Ph.D., *University of California, Assistant Professor of Biological Sciences* (1967).

Peter D. Abrams, Ph.D., *Illinois Institute of Technology, Professor of Education; Director, Bureau of Institutional Research* (1966).

Robert Agranoff, Ph.D., *University of Pittsburgh, Assistant Professor of Political Science* (1966).

Harold E. Aikins, Ph.D., *University of Colorado, Professor of History* (1949).

Carl H. Albright, Ph.D., *Princeton University, Professor of Physics* (1968).

Virgil W. Alexander, Ph.D., *University of Nebraska, Professor of Education* (1971).

H. Dorothy Allen, Ph.D., *University of Wisconsin, Professor of Foreign Languages* (1966).

Hadi Alwan, Ph.D., *University of Wisconsin, Professor of Finance* (1966).

Wesley F. Amar, Ed.D., *Loyola University, Associate Professor of Education* (1969).

Henry R. Anderson, C.P.A., Ph.D., *University of Missouri, Assistant Professor of Accountancy* (1969).

Haakon L. Andreasen, Ph.D., *University of Iowa, Associate Professor of Management* (1967).

Daniel K. Andrews, Ph.D., *Ohio State University, Associate Professor of Finance* (1967).

E. Wyllys Andrews, Ph.D., *Tulane University, Assistant Professor of Anthropology* (1970).

James R. Andrews, Ph.D., *Northwestern University, Assistant Professor of Speech* (1970).

Rodney Angotti, Ph.D., *University of Pittsburgh, Associate Professor of Mathematics; Assistant Dean, College of Liberal Arts and Sciences* (1967).

Jack Arends, Ed.D., *Teachers College, Columbia University, Professor of Art; Head, Department of Art* (1962).

Carmen L. Armstrong, Ed.D., *Indiana University, Assistant Professor of Art* (1968).

Don W. Arnold, Ph.D., *University of Iowa, Professor of Marketing; Assistant to the Dean, College of Business* (1957).

Richard L. Arnold, Ph.D., *Northwestern University, Professor of Speech; Director, Theatre* (1965).

Donald E. Ary, Ph.D., *University of Iowa, Associate Professor of Education* (1969).

Clarence G. Avery, C.P.A., Ph.D., *University of Illinois, Professor of Accountancy* (1962).

John A. Axelson, Ph.D., *University of Michigan, Associate Professor of Education* (1965).

Jan M. Bach, D.M.A., *University of Illinois, Assistant Professor of Music* (1966).

Charles E. Baker, Ph.D., *Indiana University, Professor of Music* (1947).

S. Orville Baker, Ph.D., *Harvard University, Professor of English; Coordinator of Foreign Study Programs* (1950).

Walter N. Ball, Ph.D., *Ohio State University, Associate Professor of Art* (1968).

James S. Ballinger, D.M.A., *University of Illinois, Associate Professor of Music; Head, Department of Music* (1966).

James M. Banovetz, Ph.D., *University of Minnesota, Professor of Political Science; Director, Center for Government Studies* (1963).

Edna H. Barbour, C.P.A., Ph.D., *Ohio State University, Associate Professor of Accountancy* (1957).

LeRoy Barney, Ed.D., *University of Northern Colorado, Associate Professor of Education* (1965).

Marguerite C. Barra, Ph.D., *Texas Woman's University, Associate Professor of Home Economics* (1968).

Gilbert D. Bartell, Ph.D., *University of Arizona, Associate Professor of Anthropology* (1966).

Martin H. Bartels, Ph.D., *Ohio State University, Professor of Education; Director of Placement* (1951).

Abraham Z. Bass, Ph.D., *University of Minnesota, Assistant Professor of Journalism* (1969).

Abdul Z. Basti, Ph.D., *University of Colorado, Associate Professor of Finance* (1967).

Robert H. Bauernfeind, Ph.D., *Purdue University, Professor of Education* (1963).

Frank P. Bazeli, Ed.D., *Wayne State University, Associate Professor of Education* (1967).

James W. Beach, Ph.D., *Iowa State University, Professor of Mathematics* (1953).

John A. Beachy, Ph.D., *Indiana University, Assistant Professor of Mathematics* (1969).

William Bealmer, M.F.A., *University of Colorado, Associate Professor of Art* (1969).

Ronald E. Beanblossom, Ph.D., *University of Rochester, Assistant Professor of Philosophy* (1970).

Doratheia K. Beard, Ph.D., *Ohio State University, Associate Professor of Art* (1966).

Richard E. Beard, Ph.D., *Ohio State University, Associate Professor of Art* (1966).

Kenneth Beasley, Ph.D., *Northwestern University, Professor of Education; Associate Dean for Research, Graduate School* (1964).

James A. Beaudry, Ph.D., *Cornell University, Assistant Professor of Sociology* (1967).

Burley V. Bechdolt, Jr., Ph.D., *University of Southern California, Assistant Professor of Economics* (1970).

John R. Beck, Ed.D., *Indiana University, Associate Professor of Industry and Technology* (1968).

Frank Beezhold, M.Mus., *Cosmopolitan School of Music, Associate Professor of Music* (1957).

Merlyn J. Behr, Ph.D., *Florida State University, Associate Professor of Mathematics* (1968).

William H. Beik, Ph.D., *Harvard University, Assistant Professor of History* (1968).

James E. Bell, Jr., D.B.A., *Michigan State University, Associate Professor of Marketing* (1968).

Jerome Bell, M.F.A., *Cranbrook Academy of Art, Assistant Professor of Art* (1966).

Mary M. Bell, Ph.D., *University of Iowa, Professor of Physical Education for Women* (1957).

Robert W. Bell, Ph.D., *Purdue University, Associate Professor of Psychology* (1963).

Ralph A. Belnap, Ed.D., *University of Wyoming, Professor of Education* (1958).

C. Jackson Bennett, Ph.D., *University of Wisconsin, Associate Professor of Biological Sciences* (1957).

Alfred Binter, Ed.D., *University of Kansas, Professor of Education* (1961).

Gordon W. Bird, Ed.D., *Teachers College, Columbia University, Professor of Music* (1960).

Rudolf M. Bisanz, Ph.D., *Syracuse University, Associate Professor of Art* (1967).

Ledford J. Bischof, Ed.D., *Indiana University, Professor of Psychology* (1954).

Robert W. Bischoff, Ed.D., *University of Oregon, Associate Professor of Special Education* (1968).

**(The date indicates beginning of service to the University.)**

George W. Bishop, Jr., Ph.D., *New York University, Professor of Finance; Head, Department of Finance* (1965).

Inez E. Bishop, Ed.D., *University of Illinois, Professor of Education* (1967).

Lloyd D. Black, Ph.D., *University of Michigan, Professor of Geography* (1966).

William D. Blair, Ph.D., *University of Maryland, Assistant Professor of Mathematics* (1971).

Martha E. Blankenship, Ed.D., *University of Houston, Assistant Professor of Special Education* (1969).

Harvey I. Blau, Ph.D., *Yale University, Assistant Professor of Mathematics* (1969).

Thomas W. Blomquist, Ph.D., *University of Minnesota, Associate Professor of History* (1965).

Robert L. Bornhuetter, M.F.A., *Tulane University, Assistant Professor of Art* (1969).

Rodney M. Borstad, Ed.D., *University of Northern Colorado, Professor of Education* (1964).

Betty J. Bosdell, Ph.D., *University of Illinois, Professor of Education* (1966).

Ralph H. Bowen, Ph.D., *Columbia University, Professor of History* (1960).

John E. Bower, Ph.D., *University of Michigan, Professor of Chemistry* (1951).

Richard C. Bowers, Ph.D., *University of Minnesota, Professor of Chemistry; Vice President and Provost* (1965).

Helen Bozivich, Ph.D., *Iowa State University, Associate Professor of Finance* (1968).

Weldon G. Bradtmueller, Ed.D., *Indiana University, Associate Professor of Education* (1968).

Roy Bragg, Ed.D., *University of Arizona, Associate Professor of Education* (1967).

Mabel Brantley, Ed.D., *Columbia University, Professor of Education* (1956).

Robert J. Brigham, P.E.D., *Indiana University, Professor of Physical Education for Men; Head, Department of Physical Education for Men; Director of Athletics* (1955).

George Bright, Ph.D., *University of Texas, Assistant Professor of Mathematics* (1971).

## GRADUATE FACULTY

(The date indicates beginning of service to the University.)

Clemens Brigl, Re.D., *Indiana University, Assistant Professor of Outdoor Teacher Education (1970).*

W. Elwood Briles, Ph.D., *University of Wisconsin, Professor of Biological Sciences (1967).*

Robert N. Broadus, Ph.D., *University of Southern California, Professor of Library Science (1961).*

Donald F. Brod, Ph.D., *University of Minnesota, Associate Professor of Journalism (1969).*

E. Leland Brode, Ph.D., *University of Michigan, Professor of Education (1965).*

James E. Brower, Ph.D., *Syracuse University, Assistant Professor of Biological Sciences (1969).*

Cecil H. Brown, Ph.D., *Tulane University, Assistant Professor of Anthropology (1970).*

Harold I. Brown, Ph.D., *Northwestern University, Assistant Professor of Philosophy (1969).*

Richard D. Brown, Ph.D., *University of Illinois, Associate Professor of Business Education (1971).*

Robert D. Brown, Ph.D., *University of Minnesota, Professor of Industry and Technology (1957).*

William J. Brown, Ph.D., *New York University, Professor of Finance; Coordinator of Business Research (1967).*

William T. Brown, Ed.D., *Pennsylvania State University, Professor of Art (1964).*

Wilson B. Brown, Ph.D., *Fletcher School of Law and Diplomacy, Tufts University, Assistant Professor of Marketing (1969).*

Donald R. Buckner, Ed.D., *The American University, Associate Professor; Director of Student Housing Services (1967).*

Robert W. Buggert, Ph.D., *University of Michigan, Professor of Music; Dean, College of Fine and Applied Arts (1964).*

Robert A. Bullington, Ph.D., *Northwestern University, Professor of Biological Sciences (1950).*

Waldo W. Burchard, Ph.D., *University of California, Professor of Sociology (1958).*

Joseph D. Burchfield, Ph.D., *Johns Hopkins University, Assistant Professor of History (1967).*

Roy O. Burke, Ed.D., *Florida State University, Associate Professor of Art (1953).*

Jeffrey M. Burnam, Ph.D., *University of Chicago, Assistant Professor of Political Science (1970).*

Paul S. Burtress, Ph.D., *University of Chicago, Professor of English; Dean, College of Liberal Arts and Sciences (1953).*

William Buscombe, Ph.D., *Princeton University, Professor of Geology (1970).*

David L. Bushnell, Ph.D., *Virginia Polytechnic Institute, Associate Professor of Physics (1961).*

Eleanor J. Caldwell, Ed.D., *Teachers College, Columbia University, Professor of Art (1967).*

Loren T. Caldwell, Ed.D., *Indiana University, Professor (Emeritus) of Earth Sciences (1929).*

Richard W. Cambridge, Ph.D., *University of Iowa, Associate Professor of Business Education (1964).*

Robert Cannell, Ed.D., *University of Missouri, Assistant Professor of Special Education (1970).*

Charles Canon, Ed.D., *Indiana University, Professor of Art; Assistant Head, Department of Art (1948).*

William R. Cantrall, Ph.D., *University of Illinois, Associate Professor of English (1969).*

Milton E. Carlson, Ph.D., *University of Wisconsin, Professor; Associate Director, Bureau of Institutional Research (1959).*

James D. Carney, Ph.D., *University of Nebraska, Visiting Professor of Philosophy (1970).*

David S. Carr, Ph.D., *Northwestern University, Associate Professor of Education (1970).*

George C. Carrington, Jr., Ph.D., *Ohio State University, Associate Professor of English (1967).*

Margaret L. Carroll, Ph.D., *University of Wisconsin, Professor of Education (1953).*

Paul A. Carter, Ph.D., *Columbia University, Professor of History (1966).*

Clifford M. Caruthers, Ph.D., *University of Missouri, Assistant Professor of English (1968).*

Clarence J. Casella, Ph.D., *Columbia University, Associate Professor of Geology (1965).*

Darwin J. Casler, D.B.A., *Michigan State University, Professor of Accountancy; Head, Department of Accountancy (1971).*

Ruth S. Cavan, Ph.D., *University of Chicago, Professor (Emeritus) of Sociology (1967).*

Joseph M. Cavanaugh, Ph.D., *Syracuse University, Assistant Professor of Mathematics (1970).*



Clifford H. Chaffee, Ph.D., *University of Wisconsin, Assistant Professor of Education* (1970).

Wei-Chien Chang, Ph.D., *University of Wisconsin, Assistant Professor of Finance* (1971).

C. Shelton Chastain, Ed.D., *University of Northern Colorado, Associate Professor of Education* (1964).

Philip C. Cheng, Ph.D., *Louisiana State University, Associate Professor of Accountancy* (1968).

John G. Christiano, Ph.D., *University of Pittsburgh, Professor of Mathematics* (1959).

Kenneth L. Cleland, Ed.D., *University of Tennessee, Associate Professor of Education* (1954).

Joseph E. Clettenberg, Ph.D., *University of Chicago, Professor of Education; Director of Extension* (1950).

Silas W. Clifton, Ed.D., *University of Northern Colorado, Professor of Education; Director, University Counseling Center* (1958).

Robert B. Cluff, Ed.D., *Brigham Young University, Associate Professor of Education; Associate Director of Testing* (1960).

Alan L. Cole, Ph.D., *University of Michigan, Associate Professor of Geography* (1969).

Harold W. Collins, Ph.D., *Purdue University, Professor of Education* (1965).

John C. Comer, Ed.D., *Wayne State University, Assistant Professor of Industry and Technology* (1969).

John E. Connett, Ph.D., *University of Maryland, Assistant Professor of Mathematics* (1969).

James Clinton Copeland, Ph.D., *Rutgers University, Adjunct Associate Professor of Biological Sciences* (1971).

Raymond L. Cornwell, Ph.D., *University of Minnesota, Associate Professor of Industry and Technology* (1969).

George D. Craig, Ph.D., *University of Illinois, Associate Professor of Finance* (1969).

Doris H. Crank, Ed.D., *Northwestern University, Professor of Business Education; Director of Graduate Studies in Business* (1965).

Floyd L. Crank, Ph.D., *Northwestern University, Professor of Business Education* (1965).

Paul Crawford, Ph.D., *Northwestern University, Professor of Speech* (1940).

Robert Cunico, Ph.D., *Purdue University, Assistant Professor of Chemistry* (1968).

**(The date indicates beginning of service to the University.)**

Phyllis Cunningham, Ph.D., *University of Iowa, Professor of Physical Education for Women; Chairman, Department of Physical Education for Women* (1970).

Moshe M. Czudnowski, *Docteur de l' Université, Université de Paris, Professor of Political Science* (1971).

Richard E. Dahlberg, Ph.D., *University of Wisconsin, Professor of Geography; Chairman, Department of Geography* (1970).

Carl A. Dallinger, Ph.D., *University of Iowa, Professor of Speech* (1965).

Man Singh Das, Ph.D., *Oklahoma State University, Assistant Professor of Sociology* (1969).

Peter H. Daum, Ph.D., *Michigan State University, Assistant Professor of Chemistry* (1969).

Jane L. Davidson, Ph.D., *University of Michigan, Assistant Professor of Education* (1970).

Joel L. Davis, Ph.D., *University of California, Assistant Professor of Psychology* (1970).

Murray S. Davis, Ph.D., *Brandeis University, Assistant Professor of Sociology* (1969).

Samuel C. Davis, Ed.D., *University of Illinois, Assistant Professor of Education; Assistant Dean, College of Education* (1970).

Mark Dean, P.E.D., *Indiana University, Professor of Physical Education for Men* (1957).

Sanford J. Dean, Ph.D., *Ohio State University, Professor of Psychology; Chairman, Department of Psychology* (1969).

E. Roderick Deihl, Ph.D., *Ohio State University, Associate Professor of Speech* (1967).

Patrick R. Delaney, Ph.D., *University of Illinois, Assistant Professor of Accountancy* (1970).

John Edward DeMott, Ph.D., *Northwestern University, Associate Professor of Journalism* (1971).

Louis D. Deprin, Ed.D., *University of Arizona, Professor of Education; Acting Chairman, Department of Elementary Education* (1968).

David H. de Queljoe, Ph.D., *Teachers College, Columbia University, Associate Professor of Foreign Languages* (1967).

John A. Dewar, Ed.D., *University of Kansas, Professor of Education* (1961).

Walter S. Dewey, Ph.D., *University of Iowa, Professor of Speech* (1966).

## GRADUATE FACULTY

**(The date indicates beginning of service to the University.)**

Martin Diamond, Ph.D., *University of Chicago, Professor of Political Science (1971).*

Joseph M. DiCola, Ed.D., *Northern Illinois University, Assistant Professor of Education (1971).*

Howard R. Dill, M.Mus., *Northwestern University, Associate Professor of Music (1958).*

Charles D. Dillman, Ph.D., *University of Michigan, Associate Professor of Geography (1966).*

P. Allan Dionisopoulos, Ph.D., *University of California, Professor of Political Science (1962).*

Alvin J. Dirksen, Ph.D., *University of Wisconsin, Associate Professor of Management (1969).*

Raymond Ditrichs, Ph.D., *University of Iowa, Associate Professor of Psychology (1963).*

John J. Dlabal, Jr., Ed.D., *University of Kansas, Associate Professor of Education (1965).*

George W. Donaldson, Ed.D., *Teachers College, Columbia University, Professor of Outdoor Teacher Education (1964).*

Larry A. Doty, Ph.D., *Purdue University, Professor of Psychology (1961).*

Richard Downey, Ph.D., *Southern Illinois University, Assistant Professor of Special Education (1970).*

Florence E. Doyle, Ed.D., *University of Northern Colorado, Associate Professor of Education; Counselor, University Counseling Center (1962).*

John E. Doyle, Ph.D., *Northwestern University, Assistant Professor of Sociology (1969).*

William M. Drake, Ed.D., *Indiana University, Associate Professor of Education; University Counseling Center (1965).*

David F. Driesbach, M.F.A., *University of Iowa, Professor of Art (1964).*

Martin D. Dubin, Ph.D., *Indiana University, Associate Professor of Political Science (1965).*

Craig R. Ducat, Ph.D., *University of Minnesota, Assistant Professor of Political Science (1970).*

Margaret M. Duncan, Ed.D., *Teachers College, Columbia University, Professor of Physical Education for Women (1958).*

J. Hubert Dunn, Ph.D., *University of Illinois, Professor of Physical Education for Men (1962).*

Thomas A. W. Dwyer III, Ph.D., *University of Maryland, Assistant Professor of Mathematics (1970).*

James W. Dye, Ph.D., *Tulane University, Associate Professor of Philosophy (1966).*

Paul W. Eaton, Ph.D., *University of Minnesota, Associate Professor of Finance (1969).*

Abdo A. Elkholy, Ph.D., *Princeton University, Professor of Sociology (1965).*

Joseph R. Ellis, Ed.D., *University of Texas, Professor of Education; Coordinator, Research and Services (1964).*

Roland T. Ely, Ph.D., *Harvard University, Associate Professor of History (1966).*

Russell S. Ende, Ph.D., *University of Ottawa (Canada), Professor of Education (1964).*

Hugo O. Engelmann, Ph.D., *University of Wisconsin, Professor of Sociology (1969).*

Richard C. Erickson, Ph.D., *Purdue University, Professor of Industry and Technology; Coordinator of Vocational and Technical Education (1970).*

James E. Erman, Ph.D., *Massachusetts Institute of Technology, Assistant Professor of Chemistry (1970).*

John D. Esseks, Ph.D., *Harvard University, Assistant Professor of Political Science (1968).*

Emory G. Evans, Ph.D., *University of Virginia, Professor of History; Chairman, Department of History (1964).*

Robert L. Even, Ph.D., *University of Minnesota, Professor of Art (1963).*

Mildred L. Fairchild, Ed.D., *Teachers College, Columbia University, Professor of Art (1970).*

David R. Farmer, Ph.D., *University of Texas, Assistant Professor of English (1970).*

Gaylord H. Farwell, Ed.D., *State University of New York (Buffalo), Professor of Education (1962).*

R. Vernon Fay, Ph.D., *Eastman School of Music, University of Rochester, Professor of Music (1955).*

Arthur J. Fedro, Ph.D., *Northwestern University, Associate Professor of Physics (1965).*

Harold F. Feeny, D.Sc., *Laval University (Canada), Professor of Physics (1961).*

Solomon E. Feldman, Ph.D., *Indiana University, Associate Professor of Psychology (1965).*

Theodore H. Ferdinand, Ph.D., *University of Michigan, Professor of Sociology (1970).*

Arthur L. Ferguson, Ph.D., *Illinois State University*, Assistant Professor of Education (1968).

Harvey A. Feyerherm, Ph.D., *Iowa State University*, Professor of Biological Sciences (1950).

Stuart D. Fink, Ph.D., *University of Minnesota*, Coordinator of Space and Facilities (1936).

Cletus G. Fisher, Ph.D., *Ohio State University*, Professor of Speech; Director, Pathology-Audiology Division, Department of Speech (1968).

Victor Eugene Flango, Ph.D., *University of Hawaii*, Assistant Professor of Political Science (1971).

Ronald C. Flemal, Ph.D., *Princeton University*, Assistant Professor of Geology (1967).

Ben V. Flora, Jr., Ph.D., *Ohio State University*, Assistant Professor of Mathematics (1969).

J. Robert Floyd, D.M., *Indiana University*, Professor of Music (1962).

Stephen Foster, Ph.D., *Yale University*, Associate Professor of History (1966).

Walter S. Foster, Ed.D., *University of Oregon*, Professor of Education (1964).

Edward C. Foth, Ph.D., *Michigan State University*, Assistant Professor of Accountancy (1971).

Arnold B. Fox, Ph.D., *New York University*, Professor of English (1955).

Gary L. Fox, M.S., *Illinois State University*, Associate Professor of Art (1968).

Raymond B. Fox, Ed.D., *University of California*, Professor of Education (1959).

Elon W. Frampton, Ph.D., *University of Illinois*, Associate Professor of Biological Sciences (1969).

Bernhart G. Fred, Ph.D., *Northwestern University*, Professor of Music (1959).

Allen H. Frerichs, Ed.D., *University of Illinois*, Professor of Education (1963).

Marian Frerichs, Ed.D., *Northern Illinois University*, Associate Professor of Nursing (1971).

Sherman H. Frey, Ph.D., *University of Iowa*, Professor of Education (1962).

Morton J. Frisch, Ph.D., *Pennsylvania State University*, Professor of Political Science (1964).

William P. Froom, Ed.D., *Indiana University*, Professor; Director of University Relations (1947).

(The date indicates beginning of service to the University.)

Stanley H. Frost, Ph.D., *University of Illinois*, Associate Professor of Geology (1965).

R. J. Michael Fry, M.D., *University of Dublin*, Adjunct Professor of Biological Sciences (1971).

Gilbert A. Fullington, Ed.D., *Teachers College, Columbia University*, Associate Professor of Art (1967).

Anthony Fusaro, Ph.D., *Pennsylvania State University*, Associate Professor of Political Science; Acting Chairman, Department of Political Science (1966).

Arra M. Garab, Ph.D., *Columbia University*, Professor of English (1966).

John B. Gardner, Ph.D., *University of Pennsylvania*, Associate Professor of English; Assistant to the President (1968).

Eric Thomas Garman, Ed.D., *Texas Technological College*, Assistant Professor of Business Education (1969).

William A. Garthe, Ph.D., *Cornell University*, Assistant Professor of Biological Sciences (1964).

F. R. Geigle, Ed.D., *New York University*, Professor of Business Education (1971).

Charles M. Gelven, Ph.D., *Washington University*, Associate Professor of Philosophy (1966).

Charles H. George, Ph.D., *Princeton University*, Professor of History (1961).

Margaret George, Ph.D., *University of Pittsburgh*, Professor of History (1970).

Keith R. Getschman, Ed.D., *Northern Illinois University*, Professor of Education; Acting Chairman, Department of Educational Administration and Services (1965).

James A. Gherity, Ph.D., *University of Illinois*, Professor of Economics (1964).

Willis E. Giese, Ph.D., *University of Wisconsin*, Associate Professor of Management (1968).

Harold G. Gilbert, Ph.D., *Ohio State University*, Professor of Industry and Technology (1956).

Norman S. Gilbert, Ed.D., *University of Illinois*, Associate Professor of Education; Director of University Testing Services (1966).

Gary D. Glenn, Ph.D., *University of Chicago*, Assistant Professor of Political Science (1966).

Ronald J. Glogovsky, Ed.D., *University of Northern Colorado*, Assistant Professor of Industry and Technology (1970).

## GRADUATE FACULTY

### **(The date indicates beginning of service to the University.)**

Eleanor P. Godfrey, Ph.D., Radcliffe College, Professor of Sociology (1970).

Oswald H. Goering, Re.D., Indiana University, Professor of Outdoor Teacher Education, Lorado Taft Field Campus (1958).

Dean J. Goff, Ed.D., University of South Dakota, Assistant Professor; Counselor, University Counseling Center (1968).

Samuel S. Goldich, Ph.D., University of Minnesota, Professor of Geology (1968).

Rubin Gotesky, Ph.D., New York University, Professor of Philosophy (1960).

Robert H. Gourley, Ed.D., University of Northern Colorado, Professor of Education; Associate Director of Placement (1960).

Michael W. Grady, Ph.D., Stanford University, Assistant Professor of English (1970).

Paul Graeser, Ph.D., Columbia University, Assistant Professor of Economics (1967).

Harry E. Graham, Ph.D., University of Wisconsin, Associate Professor of Management (1970).

John D. Graham, Ph.D., Michigan State University, Associate Professor of Chemistry (1965).

Laurine L. Graham, Ph.D., Michigan State University, Assistant Professor of Chemistry (1965).

Douglas Grahn, Ph.D., Iowa State University, Adjunct Professor of Biological Sciences (1971).

Eugene B. Grant, Ed.D., University of Missouri, Professor of Education; Director of Reading Services (1950).

Pierre B. Gravel, Ph.D., University of Michigan, Professor of Anthropology (1965).

Philip A. Gray, Ph.D., Ohio State University, Assistant Professor of Speech (1966).

William D. Gray, Ph.D., University of Pennsylvania, Professor of Biological Sciences (1970).

Gerald G. Green, Ed.D., Indiana University, Professor of Management (1965).

Gwynn A. Greene, Ed.D., Teachers College, Columbia University, Professor of Education; Coordinator of Student Teaching (1954).

David W. Greenfield, Ph.D., University of Washington, Associate Professor of Biological Sciences (1970).

J. Brown Grier, Ph.D., University of Louisville, Associate Professor of Psychology (1965).

Richard W. Griffiths, Ed.D., Illinois State University, Assistant Professor of Education (1969).

Paul O. Groke, Ph.D., Interamerican University, Professor of Marketing; Coordinator of International Business (1962).

James H. Grosklags, Ph.D., University of Wisconsin, Associate Professor of Biological Sciences (1958).

Sue E. Gross, Ph.D., Tulane University, Assistant Professor of History (1968).

Barbara Grothe, Ph.D., University of Nebraska, Assistant Professor of Education (1970).

Roderick T. Groves, Ph.D., University of Wisconsin, Associate Professor of Political Science (1965).

Donald R. Grubb, Ed.D., University of Utah, Professor of Journalism; Chairman, Department of Journalism (1959).

B. Ross Guest, Ph.D., University of Chicago, Professor of Geography (1958).

Halbert E. Gulley, Ph.D., University of Iowa, Professor of Speech; Chairman, Department of Speech (1970).

Dolores A. Gunnerson, Ph.D., University of Utah, Assistant Professor of Anthropology (1970).

James H. Gunnerson, Ph.D., Harvard University, Professor of Anthropology (1963).

Chaitan P. Gupta, Ph.D., University of Rochester, Associate Professor of Mathematics (1969).

John A. Gustafson, Ph.D., Iowa State University, Assistant Professor; Counselor, University Counseling Center (1968).

Lawrence C. Hackamack, Ph.D., University of Iowa, Professor of Management; Head, Department of Management (1961).

Helen J. Hadden, Ed.D., University of Northern Colorado, Associate Professor of Special Education (1967).

Ruth Haddock, Ph.D., Syracuse University, Professor of Education; Dean of Women (1954).

William G. Haendel, M.S., University of Wisconsin, Associate Professor of Art (1955).

Charles W. Hagelman, Ph.D., University of Texas, Professor of English; Chairman, Department of English (1968).

Stephen Haliczzer, Ph.D., St. Andrews University (Scotland), Assistant Professor of History (1968).

Marion T. Hall, Ph.D., Washington University, Adjunct Professor of Biological Sciences (1971).



Hallie J. Hamilton, Ed.D., *Indiana University*, Associate Professor of Journalism (1958).

Erwin C. Hamm, Ed.D., *Cornell University*, Associate Professor of Industry and Technology (1966).

Donald R. Hammerman, Ed.D., *Pennsylvania State University*, Professor of Outdoor Teacher Education; Head, Department of Outdoor Teacher Education; Director, Lorado Taft Field Campus (1954).

Arnold E. Hampel, Ph.D., *University of Wisconsin*, Assistant Professor of Biological Sciences and Chemistry (1970).

William O. Hancock, Ph.D., *Purdue University*, Associate Professor of Marketing (1968).

M. Jamil Hanifi, Ph.D., *Southern Illinois University*, Assistant Professor of Anthropology (1969).

Michael S. Hanna, Ph.D., *University of Missouri*, Assistant Professor of Speech (1971).

Nessim Y. Hanna, Ph.D., *University of Illinois*, Assistant Professor of Marketing (1970).

Laszlo Hanzely, Ph.D., *Southern Illinois University*, Assistant Professor of Biological Sciences (1969).

Clarence Ethel Hardgrove, Ph.D., *Ohio State University*, Professor of Mathematics (1950).

Karl David Hardman, Ph.D., *Indiana University*, Adjunct Assistant Professor of Biological Sciences (1971).

Charles A. Harkness, Ed.D., *University of Kansas*, Associate Professor of Education; Assistant Director of Placement (1967).

Kenneth H. Harmet, Ph.D., *University of Chicago*, Associate Professor of Biological Sciences (1955).

E. Edward Harris, Ed.D., *Northern Illinois University*, Professor of Business Education (1965).

Wendell V. Harris, Ph.D., *University of Wisconsin*, Professor of English; Associate Provost (1970).

Alton Harrison, Ph.D., *University of Oklahoma*, Associate Professor of Education (1967).

William F. Harrison, Ph.D., *University of New Mexico*, Assistant Professor of Foreign Languages (1969).

Ann M. Hart, Ed.D., *Indiana University*, Professor of Nursing (1959).

Donn V. Hart, Ph.D., *Syracuse University*, Professor of Anthropology; Director, Center for Southeast Asian Studies (1971).

Maxine E. Hart, Ph.D., *University of Minnesota*, Associate Professor of Home Economics (1970).

(The date indicates beginning of service to the University.)

Mazhar Hasan, Ph.D., *Illinois Institute of Technology*, Professor of Physics (1961).

Earl S. Haugen, Ed.D., *University of Northern Colorado*, Professor of Education (1965).

A. Oscar Haugland, D.M.A., *Eastman School of Music, University of Rochester*, Professor of Music (1960).

Earl W. Hayter, Ph.D., *Northwestern University*, Professor (Emeritus) of History (1936).

James E. Heald, Ph.D., *Northwestern University*, Professor of Education; Dean, College of Education (1970).

William A. Healey, P.E.D., *Indiana University*, Professor of Physical Education for Men (1954).

Jane H. Heidorn, Ph.D., *Ohio State University*, Associate Professor of Physical Education for Women (1968).

Denise Heilbronn, Ph.D., *Indiana University*, Assistant Professor of Foreign Languages (1971).

Donald E. Hellman, Ed.D., *University of Washington*, Associate Professor of Education; Adviser, Student Activities (1964).

William J. Hendrickson, Ed.D., *Teachers College, Columbia University*, Professor of Marketing (1957).

Edward T. Herbert, Ph.D., *University of Wisconsin*, Associate Professor of English (1957).

William A. Herrmann, Ph.D., *Michigan State University*, Assistant Professor; Coordinator, Student Financial Aids (1960).

Wayne A. Hershberger, Ph.D., *University of Colorado*, Associate Professor of Psychology (1964).

Joseph A. Hess, Ph. D., *Northwestern University*, Associate Professor of Finance (1970).

Hendrick G. Hoeve, Dr., *University of Amsterdam*, Associate Professor of Physics (1964).

Earl E. Hoffman, Ph.D., *University of Wisconsin*, Assistant Professor of Education (1968).

George S. Holden, Ed.D., *State University of New York (Buffalo)*, Associate Professor of Education (1966).

Stephen Holtzman, Ph.D., *University of California*, Assistant Professor of Anthropology (1971).

Kenneth H. Honea, Dr. Phil., *University of Vienna*, Associate Professor of Anthropology (1969).

Arthur Hoppe, Ed.D., *Columbia University*, Professor of Education (1967).

## GRADUATE FACULTY

**(The date indicates beginning of service to the University.)**

Jacob B. Hoptner, Ph.D., *Columbia University, Professor of History* (1966).

Lucie T. Horner, Ph.D., *University of Chicago, Professor of Foreign Languages* (1967).

Pawel Horoszowski, Ph.D., *Warsaw University, Professor of Sociology* (1969).

Donald C. Horton, Ph.D., *University of Michigan, Professor of Economics* (1967).

Lowell W. Horton, Ph.D., *Ohio State University, Associate Professor of Education* (1969).

David H. Howard, Ph.D., *Indiana University, Associate Professor of Sociology* (1958).

Richard H. Howland, Ph.D., *University of Michigan, Professor of Marketing; Head, Department of Marketing* (1964).

Ih-Ching Hsu, Ph.D., *University of New Mexico, Assistant Professor of Mathematics* (1970).

J. Frances Huey, Ed.D., *New York University, Professor of Education* (1952).

Marion A. Hull, Ph.D., *Northwestern University, Professor of Education* (1957).

Robert J. Hunyard, Ed.D., *Indiana University, Professor of Education; Head, Research and Development, Communication Services* (1959).

Harold E. Husa, Ed.D., *Michigan State University, Professor of Education; Acting Vice President, Student Personnel Services* (1969).

Hazel F. Huston, Ed.D., *University of Southern California, Assistant Professor of Special Education* (1968).

Kathryn Iliff, C.P.A., Ed.D., *University of Denver, Professor of Accountancy* (1956).

Roger D. Irle, Ph.D., *University of Oregon, Assistant Professor of Sociology; Director, Honors Program* (1969).

Bruce E. Irvin, Ph.D., *Stanford University, Assistant Professor of Speech* (1968).

Jerome Israel, Ph.D., *Rutgers University, Associate Professor of History* (1970).

Donald F. Istvan, C.P.A., D.B.A., *Indiana University, Professor of Accountancy* (1970).

Mozelle V. Jackson, Ed.D., *University of Tennessee, Assistant Professor; Counselor, University Counseling Center* (1969).

Norman C. Jacobs, Ph.D., *Ohio State University, Associate Professor of Education* (1965).

Eckhart A. Jacobsen, Ph.D., *University of Connecticut, Professor of Industry and Technology; Head, Department of Industry and Technology* (1961).

Tribhowan N. Jain, Ph.D., *Michigan State University, Assistant Professor of Accountancy* (1970).

E. Nelson James, Ph.D., *University of Iowa, Professor of English; Director, Professional Publications* (1948).

Bernard N. Jaroslow, Ph.D., *University of Chicago, Adjunct Associate Professor of Biological Sciences* (1971).

Benjamin Jegers, Dr. Phil., *University of Gottingen (Germany), Associate Professor of Foreign Languages* (1968).

Clinton J. Jessor, Ph.D., *Michigan State University, Associate Professor of Sociology* (1964).

Richard L. Johannesen, Ph.D., *University of Kansas, Associate Professor of Speech* (1971).

John H. Johansen, Ph.D., *Northwestern University, Professor of Education* (1969).

Jerry L. Johns, Ph.D., *Michigan State University, Assistant Professor of Education* (1970).

Duane R. Johnson, Ed.D., *Michigan State University, Associate Professor of Industry and Technology* (1963).

Hal G. Johnson, Ph.D., *University of Wisconsin, Associate Professor of Marketing* (1971).

James A. Johnson, Ed.D., *University of North Dakota, Professor of Education; Acting Director of Student Teaching* (1965).

Betty Jane Johnston, Ph.D., *Purdue University, Professor of Home Economics; Head, Department of Home Economics* (1971).

Malcolm T. Jollie, Ph.D., *Stanford University, Professor of Biological Sciences* (1965).

Orville E. Jones, Ed.D., *University of Oklahoma, Professor of Outdoor Teacher Education; Administrative Assistant to the Director, Lorado Taft Field Campus* (1960).

Thomas B. Jones, Ph.D., *Cornell University, Assistant Professor of History* (1968).

Robert Kabak, M.F.A., *Yale University, Associate Professor of Art* (1968).

Robert W. Kahler, Ed.D., *University of Northern Colorado, Professor of Physical Education for Men* (1962).

Martin I. Kallich, Ph.D., *Johns Hopkins University, Professor of English* (1958).

Tatsuji Kambayashi, Ph.D., *Northwestern University*, Associate Professor of Mathematics (1967).

Martin F. Kaplan, Ph.D., *University of Iowa*, Associate Professor of Psychology (1965).

Robert A. Karabinus, Ph.D., *University of Illinois*, Associate Professor of Education; Associate Director, Admissions and Records (1968).

Walter Katkovsky, Ph.D., *Ohio State University*, Professor of Psychology (1968).

Benjamin Keen, Ph.D., *Yale University*, Professor of History (1965).

Charles W. Keighin, Ph.D., *University of Colorado*, Assistant Professor of Geology (1966).

Edward L. Kendall, Ph.D., *University of Pittsburgh*, Associate Professor of Management (1970).

George T. Kennedy, Ph.D., *Ohio State University*, Associate Professor of Management (1969).

Frederick G. Kent, J.D., *Charles University (Prague)*, Associate Professor of Political Science (1950).

Dennis N. Kevill, Ph.D., *University of London*, Professor of Chemistry (1963).

Donald E. Kieso, C.P.A., Ph.D., *University of Illinois*, Professor of Accountancy; Coordinator, Accountancy Internships (1963).

Young Chin Kim, Ph.D., *Columbia University*, Assistant Professor of Economics (1970).

Clyde W. Kimball, Ph.D., *St. Louis University*, Professor of Physics (1964).

Joshua Kind, Ph.D., *Columbia University*, Associate Professor of Art (1969).

James H. King, Ed.D., *University of Colorado*, Professor of Education (1958).

James T. King, Jr., Ph.D., *University of Notre Dame*, Assistant Professor of Philosophy (1967).

Samuel C. Kinser, Ph.D., *Cornell University*, Professor of History (1965).

William C. Kirkpatrick, Jr., Ed.D., *University of Southern California*, Associate Professor of Music (1965).

Leonard Kise, Ed.D., *Cornell University*, Associate Professor of Education (1967).

Theodore J. Kisiel, Ph.D., *Duquesne University*, Associate Professor of Philosophy (1969).

Edward R. Kittrell, Jr., Ph.D., *University of Chicago*, Professor of Economics (1966).

**(The date indicates beginning of service to the University.)**

Askari H. Kizilbash, Ph.D., *University of Nebraska*, Assistant Professor of Marketing (1971).

Stanislas Klasa, Docteur-es-Sciences, *University of Geneva (Switzerland)*, Assistant Professor of Mathematics (1968).

Eugene W. Klemm, Ph.D., *Northwestern University*, Professor of Special Education (1967).

Paul J. Kleppner, Ph.D., *University of Pittsburgh*, Associate Professor of History (1969).

Roderick G. Kohler, Ed.D., *University of Missouri*, Professor of Industry and Technology (1947).

Jaroslav Komarynsky, Ph.D., *University of Illinois*, Associate Professor of Finance (1969).

Mildred Kornacker, Ph.D., *University of Chicago*, Associate Professor of Sociology (1967).

Leonard J. Kouba, Ph.D., *Boston University*, Assistant Professor of Geography (1966).

George A. Kourvetaris, Ph.D., *Northwestern University*, Assistant Professor of Sociology (1969).

H. Brigitte Krause, Ph.D., *University of Marbourg*, Associate Professor of Physics (1968).

Irving Krauss, Ph.D., *University of California*, Associate Professor of Sociology (1969).

Wilma R. Krauss, Ph.D., *University of Hawaii*, Assistant Professor of Political Science (1969).

John R. Kreidle, C.F.A., Ph.D., *Ohio State University*, Professor of Finance (1963).

Bruce J. Kremer, Ed.D., *Michigan State University*, Professor of Education (1967).

Gordon C. Kresheck, Ph.D., *Ohio State University*, Associate Professor of Chemistry (1965).

Janet D. Kresheck, Ph.D., *Northwestern University*, Assistant Professor of Speech (1968).

Herbert E. Kubitschek, Ph.D., *University of Illinois*, Adjunct Professor of Biological Sciences (1971).

Gerald W. Kuhn, D.B.A., *Indiana University*, Associate Professor of Finance (1967).

Jeanette M. Kuhn, Ed.D., *Teachers College, Columbia University*, Professor of Education (1967).

Joan H. Kuipers, Ed.D., *Wayne State University*, Assistant Professor of Education (1968).

## GRADUATE FACULTY

**(The date indicates beginning of service to the University.)**

Robert G. Kuller, Ph.D., *University of Michigan, Associate Professor of Mathematics* (1968).

William E. Kuschman, Ed.D., *Indiana University, Professor; Coordinator of Research, The University School* (1965).

Jene K. Kwon, Ph.D., *University of Iowa, Assistant Professor of Economics* (1968).

Kern O. Kymn, Ph.D., *University of Chicago, Visiting Associate Professor of Economics* (1971).

Nye L. LaBaw, Ed.D., *Michigan State University, Associate Professor of Physical Education for Men* (1960).

Joseph Lawrence LaBelle, Ph.D., *University of Wisconsin, Assistant Professor of Speech* (1970).

James M. Lahey, C.P.A., Ph.D., *University of Illinois, Associate Professor of Accountancy* (1970).

Arthur A. Landry, Ph.D., *University of Northern Colorado, Assistant Professor of Education; Director of Orientation; Assistant Dean of Men* (1969).

Elizabeth C. Lane, Ph.D., *New York University, Professor of Physical Education for Women; Coordinator of Physical Therapy Program* (1954).

Robert E. Lane, Ph.D., *University of Iowa, Associate Professor of Management* (1964).

Robert M. Lang, Ed.D., *Indiana University, Assistant Professor of Education* (1970).

Charles H. Lange, Ph.D., *University of New Mexico, Professor of Anthropology; Chairman, Department of Anthropology* (1971).

James E. Lankford, Ph.D., *University of Oklahoma, Assistant Professor of Speech* (1969).

Frank W. Lanning, Ed.D., *North Texas State University, Professor of Education* (1961).

Charles U. Larson, Ph.D., *University of Minnesota, Associate Professor of Speech* (1968).

Prem Singh Laurnas, Ph.D., *Wayne State University, Professor of Economics* (1971).

Peter C. Lawes, Ph.D., *Dartmouth College, Assistant Professor of Mathematics* (1970).

Robert Jordan Lazar, Ph.D., *University of Minnesota, Assistant Professor of Sociology* (1969).

Annette S. Lefkowitz, Ed.D., *Teachers College, Columbia University, Professor of Nursing; Director, School of Nursing* (1958).

Henry S. Leonard, Ph.D., *Harvard University, Professor of Mathematics* (1968).

Lloyd L. Leonard, Ed.D., *University of Northern Colorado, Professor of Education* (1963).

Charles W. Leslie, Ph.D., *Harvard University, Professor of Philosophy* (1961).

Lester S. Levy, Ph.D., *Cornell University, Professor of Economics* (1964).

W. Bruce Lincoln, Ph.D., *University of Chicago, Associate Professor of History* (1967).

Wendell A. Lindbeck, Ph.D., *University of Wisconsin, Professor of Chemistry* (1949).

John H. Lindsey, Ph.D., *Harvard University, Assistant Professor of Mathematics* (1969).

Carlton E. Lints, Ph.D., *University of Chicago, Associate Professor of Psychology* (1968).

Edra E. Lipscomb, Ed.D., *Indiana University, Professor of Education* (1956).

D. Richard Little, Jr., Ph.D., *University of California, Associate Professor of Political Science* (1963).

Donald W. Livingston, Ph.D., *Washington University, Assistant Professor of Philosophy* (1967).

John W. Lloyd, Ed.D., *Teachers College, Columbia University, Professor of Economics* (1947).

Cornelius J. Loeser, Ph.D., *University of California, Assistant Professor of Geography* (1965).

Earl O. Loessel, Ed.D., *University of Michigan, Associate Professor of Music* (1965).

William H. Logue, Ph.D., *University of Chicago, Associate Professor of History* (1966).

Erwin J. Lotsof, Ph.D., *Ohio State University, Professor of Psychology* (1961).

Leo J. Loughlin, Ph.D., *University of Wisconsin, Professor of Education* (1960).

Emory F. Luck, Ph.D., *University of Illinois, Associate Professor of Physical Education for Men* (1969).

Ewing L. Lusk, Ph.D., *University of Maryland, Assistant Professor of Mathematics* (1970).

Darrel L. Lynch, Ph.D., *University of Illinois, Professor of Biological Sciences* (1962).

Donald B. McAlister, Ph.D., *Queen's University (Belfast, U.K.), Associate Professor of Mathematics* (1970).



Wallace R. McAllister, Ph.D., *University of Iowa, Professor of Psychology* (1969).

Edith B. McCharen, Ph.D., *Louisiana State University, Assistant Professor of Mathematics* (1970).

John D. McCharen, Ph.D., *Louisiana State University, Assistant Professor of Mathematics* (1970).

Raymond H. McClary, D.B.A., *Indiana University, Associate Professor of Accountancy* (1968).

John McClay, Ed.D., *Northern Illinois University, Assistant Professor of Education* (1971).

James A. McCleary, Ph.D., *University of Michigan, Professor of Biological Sciences; Chairman, Department of Biological Sciences* (1969).

Gary L. McConeghy, Ed.D., *Wayne State University, Associate Professor of Education* (1968).

Harold L. McConnell, Ph.D., *University of Iowa, Professor of Geography* (1967).

Keith H. McDonald, Ph.D., *Michigan State University, Professor of Education; Administrative Student Dean* (1962).

V. Dale McDowell, Ph.D., *Northwestern University, Professor of Education* (1959).

Robert McFadden, Ph.D., *Queen's University (Belfast, U.K.), Professor of Mathematics* (1968).

Lyle D. McGinnis, Ph.D., *University of Illinois, Associate Professor of Geology* (1967).

Wayne J. McIlrath, Ph.D., *University of Iowa, Professor of Biological Sciences; Dean, Graduate School* (1964).

David L. McKay, Ed.D., *Wayne State University, Associate Professor of Art* (1967).

Kevin L. McKeough, Ph.D., *University of Michigan, Associate Professor of Political Science* (1969).

Gordon C. McMeekin, Ph.D., *Wayne State University, Assistant Professor of Economics* (1971).

John J. McNamara, Ph.D., *Purdue University, Associate Professor of Marketing* (1970).

Benjamin L. Mahmoud, M.F.A., *Ohio University, Associate Professor of Art* (1965).

Parvine Mahmoud, Ph.D., *Indiana University, Professor of Foreign Languages* (1965).

Wesley A. Many, Ph.D., *University of Iowa, Professor of Education* (1963).

(The date indicates beginning of service to the University.)

Robert J. Maple, Ed.D., *Northern Illinois University, Associate Professor of Education; Acting Chairman, Department of Secondary Professional Education* (1967).

Hannah L. Marshall, Ph.D., *Northwestern University, Assistant Professor of Sociology* (1969).

Thomas H. Marshall, Ph.D., *Northwestern University, Assistant Professor of Chemistry* (1968).

Joseph A. Martellaro, Ph.D., *University of Notre Dame, Professor of Economics; Associate Dean, Graduate School* (1967).

Randall B. Martin, Ph.D., *Syracuse University, Professor of Psychology* (1963).

Gerald Maryanov, Ph.D., *Indiana University, Associate Professor of Political Science* (1967).

Robert C. Mason, Ed.D., *University of Nebraska, Associate Professor of Education* (1970).

W. Roy Mason III, Ph.D., *Emory University, Associate Professor of Chemistry* (1967).

William J. Masson, Ph.D., *University of Iowa, Professor of Finance; Assistant to the Dean, College of Business* (1968).

Carol K. Mathers, Ph.D., *University of Iowa, Associate Professor of Biological Sciences* (1956).

Lillian Mathews, Ph.D., *Ohio State University, Associate Professor of Home Economics* (1968).

Laurence J. Mauer, Ph.D., *University of Tennessee, Associate Professor of Economics; Chairman, Department of Economics* (1967).

Donald W. Maxfield, Ph.D., *University of Iowa, Associate Professor of Geography* (1970).

Lyle Maxwell, Ed.D., *University of Colorado, Professor of Business Education; Head, Department of Business Education* (1959).

James M. Mellard, Ph.D., *University of Texas, Associate Professor of English; Director of Freshman English* (1967).

James W. Merritt, Ed.D., *Harvard University, Professor of Education* (1948).

Aubrey S. Messenger, Ph.D., *Michigan State University, Assistant Professor of Geography* (1963).

Axel Meyer, Ph.D., *Illinois Institute of Technology, Professor of Physics* (1967).

D. Eugene Meyer, Ed.D., *University of Northern Colorado, Associate Professor of Education* (1971).

Carroll H. Miller, Ed.D., *University of Northern Colorado, Professor of Education* (1962).

## GRADUATE FACULTY

(The date indicates beginning of service to the University.)

Donald C. Miller, Ph.D., *Ohio State University, Assistant Professor of Education* (1970).

Don H. Miller, Ph.D., *University of Chicago, Assistant Professor of Mathematics* (1969).

Elwyn R. Miller, Ph.D., *University of Iowa, Professor of Education; Associate Director of Student Teaching* (1956).

Ethel B. Miller, Ed.D., *George Peabody College for Teachers, Associate Professor of Education* (1967).

Francis M. Miller, Ph.D., *Northwestern University, Professor of Chemistry; Chairman, Department of Chemistry* (1968).

George L. Miller, Ph.D., *Claremont Graduate School, Professor of Finance* (1966).

Herbert F. Miller, Ph.D., *Ohio State University, Professor of Mathematics* (1953).

James I. Miller, Jr., Ph.D., *Harvard University, Assistant Professor of English* (1970).

Richard T. Miller, Ph.D., *University of Michigan, Assistant Professor of Mathematics* (1970).

Joseph E. Milosh, Jr., Ph.D., *University of Illinois, Associate Professor of English* (1970).

John C. Mitchem, Ph.D., *University of Iowa, Professor of Physical Education for Women; Special Assistant to the President* (1962).

Sidney Mittler, Ph.D., *University of Michigan, Professor of Biological Sciences* (1960).

Esther P. Mocega, Doctora en Filosofia y Letras, *University of Havana, Assistant Professor of Foreign Languages* (1962).

Ronald J. Modell, M.Mus., *University of Tulsa, Associate Professor of Music* (1969).

Khan A. Mohabbat, Ph.D., *State University of New York (Buffalo), Associate Professor of Economics* (1968).

J. Carroll Moody, Jr., Ph.D., *University of Oklahoma, Associate Professor of History* (1968).

Douglas M. More, Ph.D., *University of Chicago, Professor of Sociology* (1968).

Robert L. Morgenroth, Ph.D., *University of Colorado, Professor of Foreign Languages* (1963).

Robert C. Morris, Ph.D., *University of Wisconsin, Associate Professor of Geology* (1964).

Harriet B. Morrison, Ed.D., *Boston University, Associate Professor of Education* (1967).

Harold F. Mosher, Jr., Ph.D., *University of Texas, Associate Professor of English* (1970).

James H. Moss, Ed.D., *Ball State University, Assistant Professor of Education* (1970).

William A. Moultrie, Ph.D., *University of Iowa, Assistant Professor of Geography* (1970).

Lou J. Moyer, Ph.D., *University of Iowa, Associate Professor of Physical Education for Women* (1962).

Clyde L. Moyers, Ed.D., *Indiana University, Associate Professor of Education* (1966).

Richard J. Mueller, Ph.D., *University of Iowa, Professor of Education* (1963).

Arthur C. Muns, Ed.D., *Northwestern University, Professor; Associate Director of Extension* (1963).

Richard E. Munson, Ph.D., *Rutgers University, Assistant Professor of Mathematics* (1968).

Donald C. Murphy, Ph.D., *Florida State University, Assistant Professor of Home Economics* (1970).

Donald M. Murray, Ph.D., *New York University, Professor of English* (1956).

Frederic W. Murray, Ph.D., *University of New Mexico, Associate Professor of Foreign Languages* (1969).

Margaret A. Murrin, M.S., *Boston University, Associate Professor of Nursing* (1968).

Gary L. Musser, Ph.D., *University of Miami (Florida), Assistant Professor of Mathematics* (1970).

C. Mason Myers, Ph.D., *University of Michigan, Professor of Philosophy* (1959).

Helmer R. Myklebust, Ed.D., *Rutgers University, Professor of Special Education* (1969).

William R. Nachtman, Ed.D., *University of Northern Colorado, Associate Professor of Special Education* (1967).

Yoshikazu Nakai, Ph.D., *Kyoto University, Visiting Professor of Mathematics* (1971).

Clark D. Neher, Ph.D., *University of California, Assistant Professor of Political Science* (1969).

Robert J. Nejedlo, Ph.D., *University of Wisconsin, Associate Professor of Education* (1967).

J. Howard Nelson, Ph.D., *New York University, Professor of Marketing* (1955).

Richard J. Nelson, J.D., *Northwestern University, President of the University* (1971).

Robert H. Nelson, Ed.D., *University of Northern Colorado, Professor of Education* (1962).

Marcella H. Nerbovig, Ph.D., *University of Wisconsin, Professor of Education* (1957).

Darrell E. Newell, Ph.D., *University of Iowa, Associate Professor of Industry and Technology* (1968).

Theodore E. Newman, Ph.D., *University of Iowa, Assistant Professor of Economics* (1968).

Norman K. Nickolson, Ph.D., *Cornell University, Assistant Professor of Political Science* (1965).

Donald A. Nielsen, Ph.D., *Syracuse University, Assistant Professor of Economics* (1969).

Constance Nissen, M.S., *Columbia University, Assistant Professor of Nursing* (1962).

Knut J. Norstog, Ph.D., *University of Michigan, Professor of Biological Sciences* (1966).

Ralph S. Novak, Ph.D., *University of Iowa, Professor of Management; Coordinator of Executive Development Program* (1960).

Liam O'Carroll, Ph.D., *Queen's University (Belfast, U.K.), Assistant Professor of Mathematics* (1969).

Henry A. O'Connor, Ed.D., *University of Missouri, Professor of Education* (1956).

Ira E. Odom, Ph.D., *University of Illinois, Associate Professor of Geology* (1964).

William K. Ogilvie, Ed.D., *Indiana University, Professor of Education; Director, Community College Services* (1955).

Robert T. Olberg, Ed.D., *Wayne State University, Associate Professor of Education* (1968).

Garnet D. Olive, Ph.D., *University of Iowa, Professor of Finance; Coordinator of M.B.A. Program* (1964).

Otto H. Olsen, Ph.D., *Johns Hopkins University, Professor of History* (1967).

J. Mark Ord, Ph.D., *Western Reserve University, Professor of Psychology* (1968).

Donald Ostberg, Ph.D., *University of California, Professor of Mathematics; Chairman, Department of Mathematics* (1967).

Charlotte M. Otten, Ph.D., *University of Michigan, Professor of Anthropology* (1967).

(The date indicates beginning of service to the University.)

Ross A. Overbeek, Ph.D., *Pennsylvania State University, Assistant Professor of Mathematics* (1971).

Blanche E. Owens, Ph.D., *University of Iowa, Professor of Education* (1960).

Soae Paek, Ph.D., *Texas Woman's University, Assistant Professor of Home Economics* (1967).

Ronald A. Palmer, Ph.D., *Southern Illinois University, Assistant Professor of Education* (1970).

Ellen S. Parham, Ph.D., *University of Tennessee, Assistant Professor of Home Economics* (1966).

M. Jack Parker, Ph.D., *Southern Illinois University, Assistant Professor of Speech* (1970).

Carl P. Parrini, Ph.D., *University of Wisconsin, Associate Professor of History* (1965).

L. Anne Payne, Ph.D., *University of Iowa, Associate Professor of Physical Education for Women* (1965).

Joseph O. Pecenka, Ph.D., *University of Illinois, Associate Professor of Management* (1967).

Leonard P. Pecilunas, Ph.D., *Florida State University, Associate Professor of Education; Coordinator, Mental Health Program* (1968).

Albert R. Pender, Ph.D., *University of North Dakota, Assistant Professor of Business Education* (1967).

Nola J. Pender, Ph.D., *Northwestern University, Associate Professor of Nursing* (1969).

Charles A. Pennel, Ph.D., *University of Illinois, Professor of English; Director of Graduate Studies in English* (1971).

Carl Peraino, Ph.D., *University of Wisconsin, Adjunct Associate Professor of Biological Sciences* (1971).

Roscoe D. Perritt, Ph.D., *Ohio State University, Associate Professor of Accountancy* (1969).

Joseph J. Pesek, Ph.D., *University of California (Los Angeles), Assistant Professor of Chemistry* (1971).

Candida L. Peterson, Ph.D., *University of California (Santa Barbara), Assistant Professor of Psychology* (1971).

Joan L. Peterson, Ph.D., *University of Nebraska, Associate Professor of Education* (1964).

Elizabeth M. Pflaumer, Ph.D., *Ohio State University, Assistant Professor of Speech* (1969).

David M. Piatak, Ph.D., *University of Maine, Assistant Professor of Chemistry* (1966).

## GRADUATE FACULTY

**(The date indicates beginning of service to the University.)**

N. L. Pielstick, Ph.D., *University of Illinois, Associate Professor of Psychology* (1959).

Sharon A. Plowman, Ph.D., *University of Illinois, Assistant Professor of Physical Education for Women* (1970).

Edward L. Plumlee, D.B.A., *Texas Technological College, Associate Professor of Management* (1970).

Donald E. Polzin, Ph.D., *University of Iowa, Professor of Speech* (1962).

Frederick A. Poor, Ph.D., *University of Minnesota, Associate Professor of Accountancy* (1970).

M. Joan Popp, Ph.D., *University of Iowa, Associate Professor of Physical Education for Women* (1959).

Lorena R. Porter, Ph.D., *University of Iowa, Professor of Physical Education for Women* (1961).

Norman B. Potts, Ph.D., *Indiana University, Assistant Professor of Speech* (1969).

Leonard L. Pourchot, Ed.D., *University of Northern Colorado, Professor of Education* (1962).

Jon T. Powell, Ph.D., *University of Oregon, Associate Professor of Speech* (1969).

Marvin Powell, Ph.D., *Syracuse University, Professor of Education* (1961).

Michael J. Powers, Ph.D., *Indiana University, Assistant Professor of Mathematics* (1968).

Kadaba V. Prahlad, Ph.D., *University of Missouri, Professor of Biological Sciences* (1966).

Eleanor M. Price, Ph.D., *Cornell University, Professor of Education; Counselor, University School* (1951).

Granville Price, Ph.D., *University of Missouri, Professor of Journalism* (1962).

Richard N. Price, D.Phil., *University of Sussex, Associate Professor of History* (1968).

E. Milo Pritchett, Ed.D., *University of Northern Colorado, Professor of Special Education; Head, Department of Special Education* (1966).

Wilbur F. Pursley, Ph.D., *Eastman School of Music, University of Rochester, Associate Professor of Music* (1964).

Otho J. Quick, Ph.D., *University of Minnesota, Professor of Industry and Technology* (1956).

Byron F. Radebaugh, Ed.D., *University of Toledo, Associate Professor of Education* (1966).

Yueh Erh Rahmar, M.D., *Louvain University (Belgium), Adjunct Assistant Professor of Biological Sciences* (1971).

Lawrence R. Rast, Ph.D., *Northwestern University, Associate Professor of Music* (1970).

Damon D. Reach, Ed.D., *George Peabody College for Teachers, Professor of Education; Director of the Summer Session* (1956).

Mary F. Reed, Ph.D., *University of Illinois, Professor of Home Economics* (1959).

Betty Mae Rehfeld, Ph.D., *University of Wisconsin, Assistant Professor of Home Economics* (1970).

John A. Rehfuss, D.P.A., *University of Southern California, Associate Professor of Political Science* (1969).

Eldon A. Reiling, Ph.D., *Michigan State University, Assistant Professor of Economics* (1965).

Martin Reinemann, Ph.D., *Northwestern University, Professor of Geography* (1947).

Arthur Reissner, Juris Utriusque Doctor, *University of Basel (Switzerland), Associate Professor of Foreign Languages* (1959).

Clayton H. Reitan, Ph.D., *University of Wisconsin, Assistant Professor of Geography* (1971).

Robert H. Renshaw, Ph.D., *Michigan State University, Assistant Professor of Economics* (1965).

Albert Resis, Ph.D., *Columbia University, Associate Professor of History* (1964).

Donald J. Reyes, Ed.D., *University of Northern Colorado, Assistant Professor of Education* (1969).

Rosalie D. Reynolds, Ph.D., *University of Wyoming, Professor of Chemistry* (1960).

John K. Rhoads, Ph.D., *University of Wisconsin, Associate Professor of Sociology* (1966).

John R. Richards, Ph.D., *University of Durham (England), Visiting Professor of Geology* (1971).

Jerry R. Ridenhour, Ph.D., *Arizona State University, Assistant Professor of Mathematics* (1971).

Ahmed K. Rifai, Ph.D., *Syracuse University, Assistant Professor of Management* (1970).

Glen W. Riffin, Ed.D., *University of Illinois, Assistant Professor of Music* (1970).

G. Glenn Riley, Ph.D., *Southern Illinois University, Associate Professor of Education* (1968).



- Mildred B. Ringo, Ph.D., *University of Oregon, Associate Professor of Physical Education for Women* (1966).
- David B. Ripley, Ph.D., *University of Iowa, Assistant Professor of Education* (1971).
- Robert M. Ristroph, Ph.D., *Louisiana State University, Assistant Professor of Mathematics* (1970).
- Kiffin A. Rockwell, Ph.D., *University of North Carolina, Associate Professor of History* (1964).
- Catherine A. Rockwood, Ph.D., *University of Chicago, Professor of Home Economics* (1958).
- Robert H. Rodine, Ph.D., *Purdue University, Associate Professor of Mathematics* (1968).
- Winston L. Roesch, Ph.D., *University of Michigan, Professor of Education* (1962).
- Charles J. Rohde, Jr., Ph.D., *Northwestern University, Professor of Biological Sciences* (1946).
- Frederick W. Rolf, Ph.D., *University of Iowa, Professor of Chemistry* (1946).
- William J. Roscelli, Ph.D., *Ohio State University, Professor of English* (1971).
- Robert A. Rosemier, Ph.D., *University of Iowa, Professor of Education* (1967).
- Marvin S. Rosen, Ph.D., *University of California, Assistant Professor of History* (1964).
- Daniel N. Rubel, Ph.D., *University of Michigan, Associate Professor of Geology* (1964).
- Morley E. Russell, Ph.D., *University of Michigan, Associate Professor of Chemistry* (1965).
- Robert W. Russell, Ph.D., *Fletcher School of Law and Diplomacy, Tufts University, Assistant Professor of Political Science* (1970).
- Michael Salovesh, Ph.D., *University of Chicago, Assistant Professor of Anthropology* (1970).
- Robert Eric Sanders, Ph.D., *University of Iowa, Assistant Professor of Speech* (1971).
- Anthony E. Scaperlanda, Ph.D., *University of Texas, Associate Professor of Economics* (1964).
- Byron S. Schaffer, Jr., Ph.D., *Ohio State University, Associate Professor of Speech* (1964).
- Alfred A. Schilt, Ph.D., *University of Illinois, Professor of Chemistry* (1962).
- (The date indicates beginning of service to the University.)**
- Marvin S. Schindler, Ph.D., *Ohio State University, Professor of Foreign Languages; Chairman, Department of Foreign Languages* (1971).
- Paul T. Schindler, Ph.D., *Northwestern University, Assistant Professor of Sociology* (1969).
- Ole A. Schjeide, Ph.D., *University of California, Professor of Biological Sciences* (1969).
- Fritz Schlenk, Ph.D., *University of Berlin, Adjunct Professor of Biological Sciences* (1971).
- Wesley I. Schmidt, Ed.D., *Michigan State University, Professor of Education* (1961).
- Robert W. Schneider, Ph.D., *University of Minnesota, Associate Professor of History* (1961).
- Gertrude Schoenbohm, Ph.D., *University of Iowa, Associate Professor of Foreign Languages* (1961).
- Marguerite T. Schormann, Ed.D., *Indiana University, Associate Professor of Library Science* (1966).
- Martha E. Schreiner, Docteur de l'Universite, *University of Paris, Professor of Foreign Languages* (1946).
- Mary S. Schriber, Ph.D., *Michigan State University, Assistant Professor of English* (1967).
- Steven Schwartz, Ph.D., *Syracuse University, Assistant Professor of Psychology* (1971).
- Jordan A. Schwarz, Ph.D., *Columbia University, Associate Professor of History* (1965).
- David W. Scott, Ph.D., *Northwestern University, Assistant Professor of Political Science* (1968).
- Donald D. Scriven, Ph.D., *University of Iowa, Professor of Accountancy; Coordinator of Computer Systems in Business* (1969).
- Eldon G. Scriven, Ed.D., *Cornell University, Associate Professor of Education* (1958).
- Georgia Scriven, Ed.D., *Northern Illinois University, Assistant Professor of Education* (1969).
- Dorothy I. Seaberg, Ed.D., *Wayne State University, Professor of Education* (1964).
- William R. Seat III, Ph.D., *Indiana University, Professor of English* (1954).
- Mary L. Seguel, Ed.D., *Teachers College, Columbia University, Associate Professor of Education* (1957).
- John L. Selfridge, Ph.D., *University of California (Los Angeles), Professor of Mathematics* (1971).

## GRADUATE FACULTY

**(The date indicates beginning of service to the University.)**

Peter C. Senkowski, Ph.D., *University of Iowa, Assistant Professor of Psychology* (1971).

George W. Senteney, Ed.D., *University of Missouri, Professor of Industry and Technology* (1955).

S. Frederick Seymour, Ph.D., *University of Chicago, Professor of Sociology; Chairman, Department of Sociology* (1969).

John C. Shaffer, Ph.D., *University of Delaware, Associate Professor of Physics* (1966).

Mahboob Shahzaman, Ed.D., *Teachers College, Columbia University, Professor of Art* (1965).

Harvey L. Shapiro, Ph.D., *Purdue University, Associate Professor of Mathematics* (1969).

James R. Shawl, Ph.D., *University of Washington, Assistant Professor of Foreign Languages* (1967).

William M. Shearer, Ph.D., *University of Denver, Professor of Speech* (1958).

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Homer C. Sherman, Ph.D., *University of Iowa, Professor of Education* (1966).

James R. Shirley, Ph.D., *University of California, Associate Professor of History* (1962).

Georgiana W. Sie, Ph.D., *University of Iowa, Professor of Home Economics* (1964).

Larry R. Sill, Ph.D., *Iowa State University, Associate Professor of Physics; Associate Dean, College of Liberal Arts and Sciences* (1964).

Seymore Simon, Ph.D., *University of California, Professor of Psychology* (1961).

Simon M. Simon, Ph.D., *New York University, Associate Professor of Finance* (1969).

Edwin L. Simpson, Ed.D., *Indiana University, Associate Professor of Education* (1968).

Victor G. Simpson, Ed.D., *Indiana University, Associate Professor of Industry and Technology* (1967).

Clarence A. Sims, Ph.D., *University of Illinois, Associate Professor of Management* (1961).

Warren K. Sinclair, Ph.D., *University of London, Adjunct Professor of Biological Sciences* (1971).

Wilson E. Singletary, Ph.D., *University of Illinois, Professor of Mathematics* (1971).

Jack W. Skeels, Ph.D., *University of Wisconsin, Professor of Economics* (1963).

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David C. Smith, Ph.D., *Northwestern University, Professor of Education; Associate Dean, College of Education* (1970).

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Lois A. Smith, Ed.D., *Michigan State University, Assistant Professor of Education* (1967).

Miriam L. Smith, Ed.D., *Pennsylvania State University, Assistant Professor of Home Economics* (1968).

Richard B. Smith, Ed.D., *Michigan State University, Professor of Education* (1968).

Wilbur A. Smith, Ph.D., *University of Southern California, Professor of Music* (1949).

Linda Sons, Ph.D., *Cornell University, Associate Professor of Mathematics* (1967).

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William E. Southern, Ph.D., *Cornell University, Associate Professor of Biological Sciences* (1959).

Larry K. Sowder, Ph.D., *University of Wisconsin, Assistant Professor of Mathematics* (1969).

Charles W. Spangler, Ph.D., *University of Maryland, Assistant Professor of Chemistry* (1965).

Gladys R. Spargo, Ph.D., *Northwestern University, Assistant Professor of Library Science* (1966).

Larry Speelman, Ph.D., *Ohio State University, Assistant Professor of Education* (1971).

William R. Speer, Ed.D., *University of Northern Colorado, Associate Professor of Education* (1963).

Elaine Spencer, Ph.D., *University of California, Assistant Professor of History* (1967).

George W. Spencer, Ph.D., *University of California, Assistant Professor of History* (1967).

Sherman M. Stanage, Ph.D., *University of Colorado, Associate Professor of Philosophy; Chairman, Department of Philosophy* (1968).

William D. Stark, Ed.D., *Pennsylvania State University, Assistant Professor of Outdoor Teacher Education* (1968).

John D. Starkey, Ed.D., *University of Northern Colorado, Professor of Education* (1967).

Roberta Starkey, Ed.D., *Texas Technological College, Professor of Education* (1967).

Marvin J. Starzyk, Ph.D., *University of Wisconsin, Assistant Professor of Biological Sciences* (1966).

Allen E. Staver, Ph.D., *University of Wisconsin, Assistant Professor of Geography* (1969).

Paul O. Steg, D.M.A., *Boston University, Professor of Music* (1961).

Bennie W. Stehr, Ed.D., *University of Northern Colorado, Professor of Business Education* (1964).

George P. Stevens, Ph.D., *University of Wisconsin, Professor of Geography* (1950).

Nelson Stevens, M.F.A., *Kent State University, Assistant Professor of Art* (1969).

Daniel K. Stewart, Ph.D., *Michigan State University, Associate Professor of Marketing* (1970).

J. Douglas Stewart, M.F.A., *Ohio University, Assistant Professor of Art* (1967).

Manard Stewart, Ph.D., *University of Oregon, Assistant Professor of Psychology* (1970).

Gerald D. Stormer, Ph.D., *Tulane University, Assistant Professor of Philosophy* (1970).

Cecil G. Strawn, Jr., M.F.A., *Southern Illinois University, Associate Professor of Art* (1953).

Francis E. Stroup, Ed.D., *University of Southern California, Professor of Physical Education for Men* (1959).

John A. Struzzo, Ph.D., *Florida State University, Assistant Professor of Sociology* (1970).

Lucien H. Stryk, M.F.A., *University of Iowa, Professor of English* (1958).

Robert W. Suchner, Ph.D., *University of Wisconsin, Assistant Professor of Sociology* (1970).

**(The date indicates beginning of service to the University.)**

Joseph Suhadolc, Dottore in Lingue e Letterature Straniere, *University of Venice, Professor of Foreign Languages* (1959).

Virtus W. Suhr, Ph.D., *Iowa State University, Professor; Acting Dean, College of Continuing Education* (1962).

Howard A. Swan, Jr., Ph.D., *University of Iowa, Associate Professor of Education; Educational Media Coordinator* (1966).

Malcolm D. Swan, Jr., Ed.D., *University of Montana, Associate Professor of Outdoor Teacher Education* (1965).

Mary B. Swynehardt, Ed.D., *University of Colorado, Professor of Education; Supervising Teacher of Art, The University School* (1947).

Edward F. Syrek, M.F.A., *University of Wisconsin, Associate Professor of Art* (1960).

Genevieve B. Syverson, Ph.D., *University of Michigan, Professor of Education* (1960).

Ryland Taylor, Ph.D., *University of Notre Dame, Assistant Professor of Economics* (1967).

Clair R. Tettemer, Ph.D., *Ohio State University, Professor of Education; Director, Communication Services* (1967).

Robert L. Thistlethwaite, Ph.D., *University of Iowa, Professor of Finance; Dean, College of Business* (1954).

M. Ladd Thomas, Ph.D., *Fletcher School of Law and Diplomacy, Tufts University, Professor of Political Science* (1963).

Michael L. Thompson, Ed.D., *University of Arkansas, Professor of Education* (1960).

John F. Thomson, Ph.D., *University of Chicago, Adjunct Professor of Biological Sciences* (1971).

Albert K. Tink, Ph.D., *Northwestern University, Professor of Education* (1957).

Eleanor L. Tipton, Ed.D., *Teachers College, Columbia University, Associate Professor of Music* (1965).

Felicia H. Trager, Ph.D., *State University of New York (Buffalo), Assistant Professor of Anthropology* (1971).

George L. Trager, Ph.D., *Columbia University, Professor of Anthropology* (1971).

Stanley M. Trail, Ph.D., *Oklahoma State University, Associate Professor of Mathematics; Assistant Chairman, Department of Mathematics* (1967).

DeWayne R. Triplett, Ed.D., *University of Nebraska, Professor of Education* (1965).

## GRADUATE FACULTY

**(The date indicates beginning of service to the University.)**

Carol M. Troesch, Ed.D., *Indiana University, Assistant Professor of Education; Conference Bureau* (1953).

Peter Tsao, Ph.D., *Texas Agricultural and Mechanical University, Assistant Professor of Physics* (1958).

Chipei P. Tseng, Ph.D., *University of Iowa, Associate Professor of Finance* (1967).

Charles O. Tucker, Ph.D., *Ohio State University, Associate Professor of Speech* (1965).

John H. Ulrich, Ph.D., *University of Iowa, Professor of Speech* (1963).

Richard Umsted, Ed.D., *George Peabody College for Teachers, Assistant Professor of Special Education* (1970).

Harley M. Upchurch, Ph.D., *Louisiana State University, Assistant Professor of Sociology* (1969).

Jack L. Uretsky, Ph.D., *Massachusetts Institute of Technology, Professor of Physics* (1968).

Franklin D. Van Buer, Ph.D., *University of Illinois, Assistant Professor of Economics* (1966).

Gustaaf Van Cromphout, Ph.D., *University of Minnesota, Associate Professor of English* (1968).

H. John Van Duyne, Ed.D., *University of Rochester, Assistant Professor of Education* (1969).

Johanna Van Lente, Ph.D., *Northwestern University, Assistant Professor of Foreign Languages* (1968).

Elston W. Van Steenburgh, Ph.D., *University of Michigan, Associate Professor of Philosophy* (1969).

Joe W. Vaughn, Ph.D., *University of Kentucky, Professor of Chemistry* (1961).

Clyde B. Vedder, Ph.D., *University of Southern California, Professor (Emeritus) of Sociology* (1959).

Nancy M. Vedral, Ed.D., *Indiana University, Associate Professor of Education* (1969).

Ludmilla A. Velinsky, Ph.D., *Masaryk University (Brno, Czechoslovakia), Professor of Foreign Languages* (1964).

Jack R. Villmow, Ph.D., *University of Wisconsin, Professor of Geography* (1968).

Richard F. Vlasak, Ed.D., *University of Illinois, Assistant Professor of Education* (1970).

Dieter Von Ehrenstein, Ph.D., *University of Heidelberg, Associate Professor of Physics* (1969).

Bruce W. Von Zellen, Ph.D., *Duke University, Associate Professor of Biological Sciences* (1959).

Paul D. Voth, Ph.D., *University of Chicago, Professor of Biological Sciences* (1970).

David L. Wagner, Ph.D., *University of Michigan, Assistant Professor of History* (1962).

Hugh G. Wales, Ph.D., *Northwestern University, Professor of Marketing* (1971).

Albert Walker, Ph.D., *Case Western Reserve University, Associate Professor of Journalism* (1967).

LaVern A. Walther, Ed.D., *Indiana University, Professor of Library Science; Chairman, Department of Library Science* (1959).

Craig Walton, Ph.D., *Claremont Graduate School, Associate Professor of Philosophy* (1968).

James C. Warner, Ed.D., *University of Missouri, Professor of Industry and Technology* (1962).

Chester R. Wasson, Ph.D., *University of Minnesota, Professor of Marketing* (1967).

Allen D. Weaver, Ph.D., *New York University, Professor of Physics* (1955).

Robert B. Webb, Ph.D., *University of Oklahoma, Adjunct Associate Professor of Biological Sciences* (1971).

Maurice J. Weed, Ph.D., *Eastman School of Music, University of Rochester, Professor of Music* (1954).

Dale H. Weeks, Ph.D., *University of Nebraska, Associate Professor of Economics* (1957).

Jack Weiner, Ph.D., *Indiana University, Associate Professor of Foreign Languages* (1970).

Malcolm P. Weiss, Ph.D., *University of Minnesota, Professor of Geology; Chairman, Department of Geology* (1967).

Harold P. Wells, Ph.D., *University of Illinois, Associate Professor of Physical Education for Men* (1964).

Philip C. Wells, Ed.D., *Indiana University, Professor of Education* (1956).

Philip S. Wells, Ed.D., *Teachers College, Columbia University, Associate Professor of Art; Assistant to the Dean, College of Fine and Applied Arts* (1968).

Willard Welsh, Ph.D., *Stanford University, Professor of Speech* (1959).

Robert L. Wendel, Ed.D., *University of Northern Colorado, Associate Professor of Education* (1968).



Manfred W. Wenner, Ph.D., *Johns Hopkins University*, Associate Professor of Political Science (1969).

Walter Wernick, Ed.D., *Teachers College, Columbia University*, Professor of Education (1957).

Ruth E. Westlund, Ph.D., *University of Minnesota*, Professor of Education; Associate Dean of Women (1959).

Thomas E. Wheat, Ed.D., *Ball State University*, Assistant Professor of Education (1970).

Wallace J. Wheeler, Ed.D., *Northwestern University*, Professor of Education (1960).

Bruce White, Ed.D., *Teachers College, Columbia University*, Professor of Art (1967).

Conard L. White, Ph.D., *University of Illinois*, Assistant Professor of Industry and Technology (1970).

J. Patrick White, Ph.D., *University of Michigan*, Associate Professor of History; Assistant Chairman, Department of History (1961).

John B. White, Ph.D., *University of Nebraska*, Associate Professor of Library Science (1964).

Thomas C. Wiegele, Ph.D., *University of Pennsylvania*, Assistant Professor of Political Science (1969).

Morris Wiener, Ed.D., *Michigan State University*, Professor of Outdoor Teacher Education, *Lorado Taft Field Campus* (1963).

William L. Wilbur, Ph.D., *University of North Carolina*, Associate Professor of Finance (1968).

Raymond D. Wilderman, Ph.D., *University of Iowa*, Associate Professor of Speech (1955).

Eddie R. Williams, Ph.D., *Columbia University*, Assistant Professor of Mathematics (1970).

J. David Williams, Ph.D., *University of Iowa*, Associate Professor of Speech (1959).

William P. Williams, Ph.D., *Kansas State University*, Associate Professor of English (1967).

Vernon L. Wills, Ed.D., *University of Missouri*, Associate Professor of Education (1968).

Constance Wilson, Ph.D., *Cornell University*, Assistant Professor of History (1967).

David C. Wilson, Ph.D., *Rutgers University*, Assistant Professor of Mathematics (1970).

James Wilson, Ph.D., *Syracuse University*, Associate Professor of Political Science (1966).

Quintus C. Wilson, Ph.D., *University of Minnesota*, Professor of Journalism (1969).

(The date indicates beginning of service to the University.)

Robert S. Wilson, Ph.D., *Brown University*, Assistant Professor of Chemistry (1969).

Carol K. Winkley, Ph.D., *University of Chicago*, Associate Professor of Education (1965).

Jerome E. Winn, P.E.D., *Indiana University*, Associate Professor; Supervising Teacher of Health and Physical Education, *The University School* (1948).

Richard A. Wiste, Ph.D., *University of California*, Assistant Professor of Political Science (1970).

Daniel Wit, Ph.D., *Princeton University*, Professor of Political Science; Director of International and Special Programs (1961).

How-Kin Wong, Ph.D., *University of Hong Kong*, Associate Professor of Geology (1971).

Charles Wood, Ph.D., *London University*, Professor of Physics (1967).

Glenn L. Wood, Ed.D., *Indiana University*, Associate Professor; Counselor, *University Counseling Center* (1967).

Margaret L. Wood, Ph.D., *University of Iowa*, Professor of Speech (1949).

A. Bond Woodruff, Ph.D., *Ohio State University*, Professor of Psychology (1959).

Ruth B. Wooschlager, Ed.D., *Northwestern University*, Professor of Business Education; Coordinator of Off Campus Teaching in Business (1960).

Marvin C. Wunderlich, Ph.D., *University of Colorado*, Associate Professor of Mathematics; Computer Science (1967).

Henry G. Yankow, Ph.D., *Northwestern University*, Professor of Education; Coordinator, *School Business Management* (1958).

Alfred F. Young, Ph.D., *Northwestern University*, Professor of History (1964).

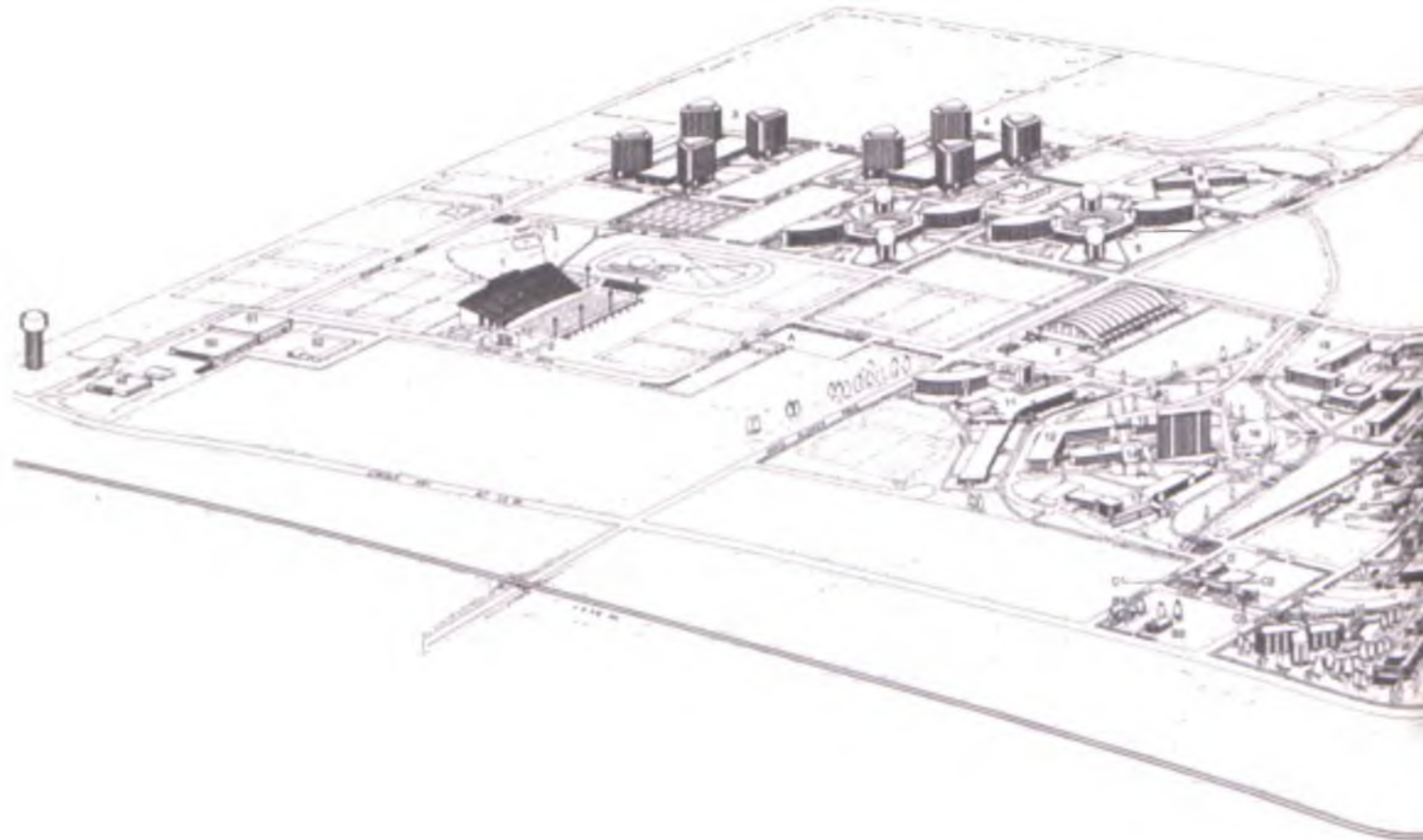
Robert J. Young, Jr., Ph.D., *University of Wisconsin*, Associate Professor of Foreign Languages (1971).

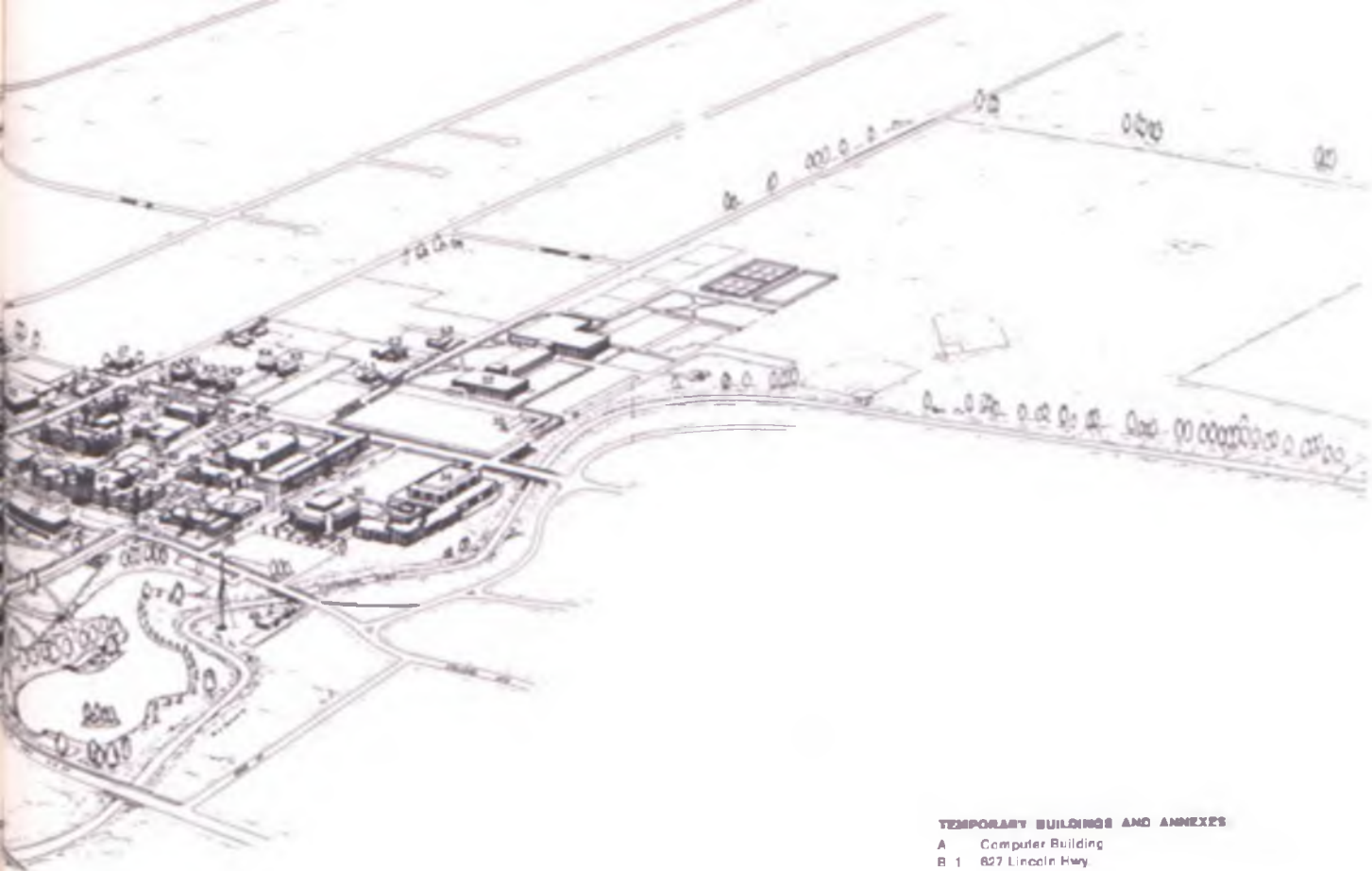
Thomas Zachman, Ph.D., *University of Oklahoma*, Assistant Professor of Speech (1968).

Jerrold H. Zar, Ph.D., *University of Illinois*, Associate Professor of Biological Sciences (1968).

Anton Zettl, Ph.D., *University of Tennessee*, Associate Professor of Mathematics (1969).

M. Nadine Zimmerman, Ph.D., *University of Wisconsin*, Associate Professor of Physical Education for Women (1958).





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- E 224 Carroll
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- L 1 429 Garden Rd. (Music Annex)
- L 2 501 Garden Rd. (Music Annex)
- L 3 515 Garden Rd. (Music Annex)

## **NORTHERN ILLINOIS UNIVERSITY FOUNDATION**

The Northern Illinois University Foundation is a nonprofit corporation formed to assist in developing and increasing the facilities and programs of the University and to encourage gifts of money, property, works of art, or other material having educational and historical value. It receives, holds, and administers such gifts with the primary object of serving purposes other than those for which the State of Illinois ordinarily makes sufficient appropriations.

The Foundation is managed by a Board of Directors consisting of the President of the University, a member of the Board of Regents, the Vice President and Provost, the Vice President for Business Affairs, and eighteen elected representatives drawn from the alumni, from the business, professional and industrial community, and from faculty and staff members. This Board is empowered to transfer to the University any property assigned or conveyed to it. The Director of Development serves as the Executive Director of the Foundation.

The Foundation serves as the educational fund-raising agency for the University.

One of the Foundation's functions is the operation of a loan service for students. This service, which is located in the office of the secretary-treasurer, enables deserving students to borrow, at a low rate of interest, on personal notes.

Additional information may be secured through the Office of Development or from Roy E. France, Secretary-Treasurer, University Controller.

## **NIU ALUMNI ASSOCIATION**

The Northern Illinois University Alumni Association is incorporated under the laws of the State of Illinois and is for purposes exclusively educational and charitable. It furthers the ideals of the University by activities including but not limited to providing financial assistance to needy students and engaging in the promotion of public relations for the University. The principal office of the Association is located on the sixth floor of the University Center. Membership is available to all graduates, former students, faculty, and friends of the University. Active membership includes those persons who contribute annually to the Association. A national board of directors constitutes the trustees and directors of this corporation. Meetings are usually held on or near campus and an annual meeting is held during All-Alumni Weekend in June. Among the various publications supported by the Association is a bi-monthly newspaper. There are alumni clubs and regional representatives in Illinois and several large cities outside the state.



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Inquiries concerning graduate work in specific fields should be addressed according to the following list.

Prospective students seeking information relative to the availability of assistantships, fellowships, and traineeships should also direct their inquiries to the individuals whose names appear below.

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Art .....	Jack Arends, Ed.D.
Biological Sciences .....	James A. McCleary, Ph.D.
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Business Education .....	Lyle Maxwell, Ed.D.
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