

NORTHERN ILLINOIS UNIVERSITY
ARCHIVES

NORTHERN ILLINOIS UNIVERSITY



Graduate Catalog

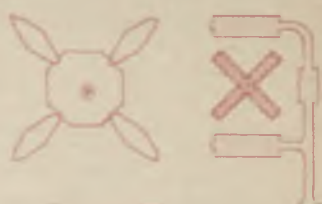
1961-1963

DeKalb

WEST CAMPUS

CENTRAL CAMPUS

EAST CAMPUS



LEGEND
1. Administration Building
2. Academic Building
3. Library
4. Student Union
5. Gymnasium
6. Cafeteria
7. Faculty Office
8. Student Center
9. Athletic Field
10. Swimming Pool
11. Tennis Courts
12. Baseball Field
13. Softball Field
14. Basketball Court
15. Volleyball Court
16. Handball Court
17. Table Tennis
18. Chess
19. Checkers
20. Pool
21. Billiards
22. Bowling
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Volume IX

February, 1961

STATE OF ILLINOIS
OTTO KERNER, GOVERNOR

CATALOG
OF THE
GRADUATE SCHOOL
OF
NORTHERN ILLINOIS
UNIVERSITY



1961-1963
DeKalb, Illinois

(Printed by Authority of the State of Illinois)





Administration Building

STATE OF ILLINOIS
OTTO KERNER, Governor

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(Membership as of January, 1961)

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Northern Illinois University is governed by the Teachers College Board. The Board consists of eleven members: the Superintendent of Public Instruction, the Director of Finance, and nine members appointed by the Governor for a six-year term. The Executive Officer is an employe of the State Teachers College Board and is appointed by the Board for a specific term.



The campus, looking west

Directions for Correspondence

In order to expedite the answering of inquiries, there are listed below the names of the administrative officers, together with the divisions of the University work which come under their supervision.

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George Pritchard, *Registrar*

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Ruth Haddock, *Dean of Women*

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Z. Harold Dorland, *Director of Business Services*

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Dr. Otto Keller, *Director of the Student Health Service*

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Damon D. Reach, *Director of the Summer Session*

Instructional Materials

Robert J. Hunyard, *Director of Instructional Materials*

Evening College

Virgil Alexander, *Dean of the Evening College*

Institutional Research

Charles E. Howell, *Director*

Professional Publications

J. Hal Connor, *Director*

GRADUATE SCHOOL CALENDAR—1961-1963

Summer Session, 1961

Monday, June 19.....	Registration 8:00 A.M.-3:30 P.M.
Tuesday, June 20.....	Class work begins 8:00 A.M.
Thursday, June 22.....	Last day for filing petition for admission to candidacy for August degree candidates
Friday, June 23.....	Last day for filing application to take comprehensive examination for August degree candidates
Tuesday, July 4.....	Holiday
Monday, July 10.....	First day of comprehensive examinations for August degree candidates
Friday, July 21.....	Last day for filing qualifying paper, thesis, research study or field study for August degree candidates
Tuesday, August 1.....	Last day of comprehensive examinations for August degree candidates
Thursday, August 10.....	Commencement 4:00 P.M.
Friday, August 11...	Summer Session closes after regularly scheduled classes
Monday, August 14-Friday, September 1.....	Three week postsession

First Semester, 1961-1962

Saturday, September 16.....Registration for Saturday and evening
classes 8:00 A.M.-12:00 noon
Saturday, September 16Class work begins 9:00 a.m.
Monday, Tuesday, September 18, 19....Registration 8:00 A.M.-6:30 P.M.*
Friday, Saturday and Sunday, October 20-22.....Homecoming
Friday, October 20.....Meeting of Rock River Division of I.E.A.
Wednesday, November 22.....Thanksgiving recess begins at 12:00 Noon
Monday, November 27.....Class work resumes 8:00 A.M.
Saturday, December 16.....Christmas vacation begins after regularly
scheduled classes
Tuesday, January 2.....Class work resumes 8:00 A.M.
Monday-Thursday, January 15-25..Saturday and evening class examinations
Monday-Friday, January 22-26.....Undergraduate examinations
Saturday, January 27.....Close of first semester

Second Semester, 1961-1962

Saturday, February 3.....Registration for Saturday and evening
classes 8:00 A.M.-12:00 Noon

Saturday, February 3.....Class work begins 9:00 A.M.

Monday, Tuesday, February 5, 6.....Registration 8:00 A.M.-6:30 P.M.*

Saturday, April 14....Easter recess begins after regularly scheduled classes

Monday, April 23.....Class work resumes 8:00 A.M.

Thursday, April 26.....Last day for filing petition for admission to
candidacy for June degree candidates

Friday, May 4.....First day of comprehensive examinations for June
degree candidates

*Registration offices remain open late enough during the first week of classes to accommodate evening students. After the first week these offices close at 5:00 P.M. Since registration for evening and Saturday classes closes with the second meeting of each class, late registrants for an evening class must complete registration before 5:00 P.M. of the day when the class meets for the second time.

Friday, May 11.....Last day for filing qualifying paper, thesis, research
study or field study for June degree candidates
Wednesday, May 30.....Holiday
Friday, June 1.....Last day of comprehensive examinations for June
degree candidates
Saturday-Monday, May 26-June 4. Saturday and evening class examinations
Saturday-Thursday, June 2-7.....Undergraduate examinations
Saturday, June 9.....Sixty-third Annual Commencement 10:00 A.M.
Monday, June 11.....Close of second semester

Summer Session, 1962

Monday, June 18.....Registration 8:00 A.M.-3:30 P.M.
Tuesday, June 19.....Class work begins 8:00 A.M.
Thursday, June 21...Last day for filing petition for admission to candidacy
for August degree candidates
Friday, June 22.....Last day for filing application to take comprehensive
examination for August degree candidates
Wednesday, July 4.....Holiday
Wednesday, July 11...First day of comprehensive examinations for August
degree candidates
Friday, July 20.....Last day for filing qualifying paper, thesis, research
study or field study for August degree candidates
Tuesday, July 31.....Last day of comprehensive examinations for August
degree candidates
Thursday, August 9.....Commencement 4:00 P.M.
Friday, August 10...Summer Session closes after regularly scheduled classes

First Semester, 1962-1963

Saturday, September 15.....Registration for Saturday and evening
classes 8:00 A.M.-12:00 Noon
Saturday, September 15.....Class work begins 9:00 A.M.
Monday, Tuesday, September 17, 18....Registration 8:00 A.M.-6:30 P.M.*
Friday, Saturday and Sunday, October 12-14.....Homecoming
Friday, October 19.....Meeting of Rock River Division of I.E.A.
Wednesday, November 21.....Thanksgiving recess begins at 12:00 Noon
Monday, November 26.....Class work resumes 8:00 A.M.
Saturday, December 15.....Christmas vacation begins after regularly
scheduled classes
Wednesday, January 2.....Class work resumes 8:00 A.M.
Tuesday-Thursday, January 15-24. Saturday and evening class examinations
Monday-Friday, January 21-25.....Undergraduate examinations
Saturday, January 26.....Close of first semester

Second Semester, 1962-1963

Saturday, February 2.....Registration for Saturday and evening classes
8:00 A.M.-12:00 Noon
Saturday, February 2.....Class work begins 9:00 A.M.

*Registration offices remain open late enough during the first week of classes to accommodate evening students. After the first week these offices close at 5:00 P.M. Since registration for evening and Saturday classes closes with the second meeting of each class, late registrants for an evening class must complete registration before 5:00 P.M. of the day when the class meets for the second time.

Summer Session, 1963

*Registration offices remain open late enough during the first week of classes to accommodate evening students. After the first week these offices close at 5:00 P.M. Since registration for evening and Saturday classes closes with the second meeting of each class, late registrants for an evening class must complete registration before 5:00 P.M. of the day when the class meets for the second time.

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ADMINISTRATIVE STAFF

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Francis R. Geigle, Ed. D. (New York University)	Executive Vice-President
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C. Norton Coe, Ph. D. (Yale)	Dean of the Graduate School
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George S. Pritchard, Ed. D. (Michigan State)	Registrar
Eugenie Walker, M. A. (Michigan)	Director of Admissions
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Catherine A. Rockwood, Ph. D. (Chicago)	Home Economics
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Ledford J. Bischof, Ed. D. (Indiana)	Psychology
James G. Martin, Ph. D. (Indiana)	Social Sciences
Paul Crawford, Ph. D. (Northwestern)	Speech
C. Norton Coe, Ph. D. (Yale)	Dean of the Graduate School
	Chairman

Department representatives are elected by their departments. The President, the Academic Vice-President, and the Dean of the Graduate School are ex officio members.

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Virgil W. Alexander, Ph. D. (Nebraska)	Professor of Education
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Eleanor M. Anglin, Ph. D. (Cornell)	Professor of Education
	Counselor of the University School
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Orville Baker, Ph. D. (Harvard)	Professor of English
	Head of the Department of English
Edna H. Barbour, Ph. D. (Ohio State)	Associate Professor of
	Business Education

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 for Men
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George L. Terwilliger, Ed. D. (Columbia) Professor of the
 Biological Sciences
 Head of the Department of Biological Sciences

Robert L. Thistlethwaite, Ph. D. (Iowa) . Professor of Business Administration
 Dean of the College of Fine and Applied Arts

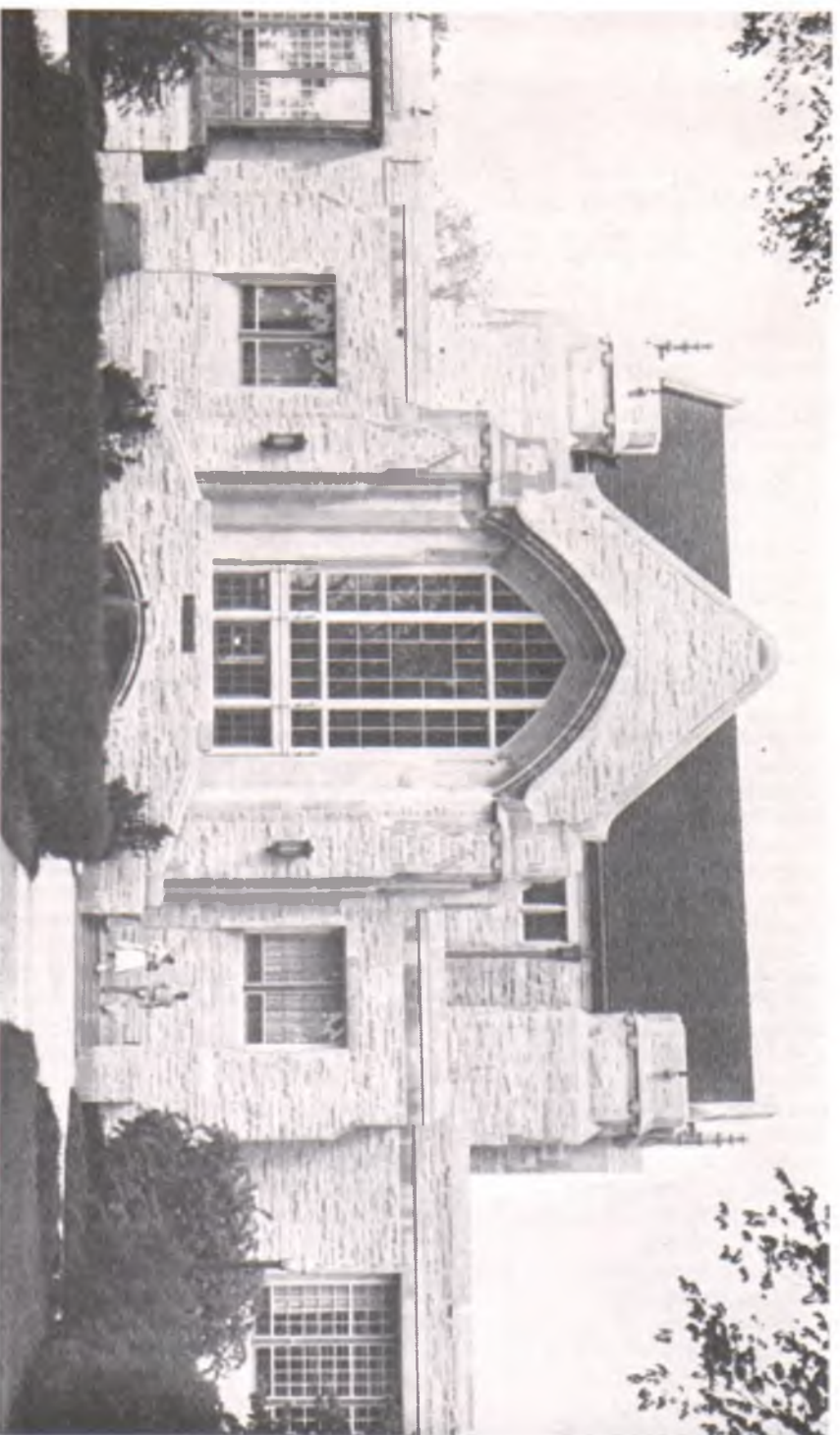
Howard H. Thompson, Ph. D. (Pennsylvania) . Assistant Professor of English

Michael L. Thompson, Ed. D. (Arkansas) Assistant Professor
 of Education

Albert K. Tink, Ph. D. (Northwestern) Assistant Professor of Education

Robert F. Topp, Ph. D. (Colorado) Professor of Education
 Dean of the College of Education

- Angel Manuel Vazquez-Bigi, LL. D. (Cordoba) Associate Professor
of Foreign Languages
Clyde B. Vedder, Ph. D. (Southern California) Professor of Sociology
Eleanor Volberding, Ph. D. (Chicago) Professor of Education
Bruce W. von Zellen, Ph. D. (Duke) Associate Professor of the
Biological Sciences
LaVern A. Walther, Ed. D. (Indiana) Associate Professor of
Library Science
James Merrett Ward, Ed. D. (Texas) Assistant Professor of Education
Allen D. Weaver, Ph. D. (New York) Professor of Physics
Maurice J. Weed, Ph. D. (Rochester) Professor of Music
Dale H. Weeks, Ph. D. (Nebraska) Associate Professor of Economics
George D. Weigel, Ed. D. (Western Reserve) Professor of Education
Acting Head, Department of Education
Philip C. Wells, Ed. D. (Indiana) Associate Professor of Education
Willard Welsh, Ph. D. (Stanford) Associate Professor of Speech
Walter Wernick, Ed. D. (Columbia) Associate Professor of Education
Ruth E. Westlund, Ph. D. (Minnesota) Associate Professor of Education
Assistant Dean of Women
Wallace J. Wheeler, Ed. D. (Northwestern) Associate Professor of Education
William E. Whybrew, Ph. D. (Rochester) Associate Professor of Music
Raymond D. Wilderman, Ph. D. (Iowa) Associate Professor of Speech
Babatunde A. Williams, Ph. D. (Illinois) Assistant Professor
of Political Science
Esther Williams, Ed. D. (Columbia) Professor of Education
J. David Williams, Ph. D. (Iowa) Associate Professor of Speech
Jerome E. Winn, Ph. D. (Indiana) Associate Professor and Supervising
Teacher of Physical Education, The University School
Harold A. Winters, Ph. D. (Northwestern) Assistant Professor of
the Earth Sciences
Margaret L. Wood, Ph. D. (Iowa) Professor of Speech
A. Bond Woodruff, Ph. D. (Ohio State) Professor of Psychology
Head of Department of Psychology
Ruth B. Wooschlager, Ed. D. (Northwestern) Professor of
Business Education
Henry G. Yankow, Ph. D. (Northwestern) Professor of
Business Administration
Wilbur A. Yauch, Ed. D. (Columbia) Professor of Education
Consultant in Educational Problems



The Sven Parson Library

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 (in Art, Economics, English, History, Political Science, Psychology, Sociology and Anthropology, and Speech); Master of Science (in Biological Sciences, Business Administration, Chemistry, Earth Sciences, Home Economics, Industrial Arts, Mathematics, and Physics); and Master of Music. In 1958 a sixth-year program leading to the Certificate of Advanced Study or the degree Master of Fine Arts was authorized.

During the academic years 1961-63 graduate study will be offered in the following subjects: Art, Biological Sciences, Business Administration, Business Education, Chemistry, Earth Sciences, Economics, Education, English, Foreign Languages, History, Home Economics, Industrial Arts, Journalism, Library Science, Mathematics, Music, Philosophy, Physical Education for Men, Physical Education for Women, Physics, Political Science, Psychology, Social Sciences, Sociology and Anthropology, and Speech. Full majors leading to advanced degrees are offered in all these fields except Foreign Languages, Journalism, Library Science, and Philosophy. Students wishing to study one of these four subjects should major in a related field. As described below, area majors which cut across departmental lines are offered by certain groups of departments.

Purpose

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

The University makes available to the graduate student a body of knowledge in his own and related disciplines; it provides the student with opportunities to acquire and apply techniques which will aid him in his pursuit of knowledge; and it encourages the student and the faculty to engage in research for the purpose of discovering truths and establishing previously unknown relationships.

Graduate Programs Offered

Master of Science in Education

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

Art	English	Physical Education for Men
Biological Sciences	History	Physical Education for Women
Business Education	Home Economics	Physics
Chemistry	Industrial Arts	Social Sciences
Earth Sciences	Mathematics	Speech
Education		

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 heads of the departments concerned.

Area majors are offered in the following combinations:

Biological Sciences—Chemistry—Earth Sciences—Physics

Biological Sciences and any one of the following subjects:

Chemistry, Earth Sciences, Physics, Psychology

Earth Sciences—Chemistry

Earth Sciences—Physics

Education and any one of the following subjects:

Art, Biological Sciences, Business Education, Chemistry, Earth Sciences, English, History, Home Economics, Industrial Arts, Library Science, Mathematics, Music, Philosophy, Physical Education, Physics, School Business Management, Social Sciences, Speech

English and any one of the following subjects:

Foreign Languages, History, Journalism, Philosophy, Social Sciences, Speech

History—Journalism

History—Social Sciences

Journalism—Social Sciences

Mathematics—Sciences

Master of Arts

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

Art	English	Political Science	Sociology and Anthropology
Economics	History	Psychology	Speech

Master of Science

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

Biological Sciences	Earth Sciences	Industrial Arts
Business Administration	Home Economics	Mathematics
Chemistry		Physics

Master of Music

A program leading to this degree is offered by the Department of Music.

Master of Fine Arts

A program on the sixth-year level 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:

Biological Sciences	English	Physical Education for Men
Business Administration	History	Physical Education
Business Education	Industrial Arts	for Women
Chemistry	Mathematics	Physics
Earth Sciences	Music	Social Sciences
Education		Speech

Admission Requirements

A candidate for admission to the Graduate School as a classified student must (1) hold a baccalaureate degree 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 that degree from Northern Illinois University.

A student must also hold a baccalaureate degree in order to be admitted as unclassified. An unclassified student may register for any courses which he is qualified to carry. Such courses may or may not be recognized in computing credit required for the degree if a student transfers from unclassified to classified status, as he may with the consent of the Dean of the Graduate School. An unclassified student need not have a departmental adviser or advisory committee.

All entering students enrolled for seven semester hours or more 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 smallpox vaccination at the time of examination is required unless a certificate of successful vaccination during the last three years can be furnished. A tuberculin test or a chest x-ray done during the past year is also required, and 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 Student Health Service at least one week preceding the beginning of that semester in which the student plans to enroll. Registration is not complete until the complete health chart is on file at the Student Health Service.

Application for Admission

Students who wish to register for graduate study should write to the Director of Admissions or the Dean of the Graduate School, requesting a copy of the form "Application for Admission to the Graduate School." This form should be completed and returned to the Director of Admissions no later than two weeks before registration.

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 the institutions which he has attended to send two copies of his transcripts to the Director of Admissions.

Registration

Graduate students are expected to register during the regular registration period at the beginning of each semester (see calendar). Those who register after the specified date are required to pay a "late registration fee" of \$3.00.

Arrangements for registration and for assignment to an adviser are made through the Office of the Dean of the Graduate School. A student must petition the Dean of the Graduate School for permission to take more than 17 hours.

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 \$9.00 per semester hour, with the provision that the total amount of fees paid will not exceed \$115.50 per semester for residents of Illinois.

Grading System

Grades and their honor point values are as follows:

Grade	Honor Points per semester hour
A	3
B	2
C+	1
C	1
C—	1
D	0
F	—1
W (Passing at time of withdrawal from the University) ..	0
WF (Failing at time of withdrawal from the University) —	1
Inc. (Incomplete)	0
Dr. (Dropped)	0
S. (Satisfactory)	0
N.S. (Not-satisfactory)	0

Students are not permitted to repeat for credit any courses in which they have already received a passing grade (C— or better). A course in which a failing grade (D or lower) has been received may be repeated once. If a course is repeated, both grades are computed in the honor point average.

An incomplete may stand for two calendar years from the close of the semester in which it is given, and the student may petition the Dean of the Graduate School for extension prior to the end of the two year period. If no petition is presented or if the petition is denied, the incomplete becomes an "F" at the end of the two year period.

The grade average of all graduate students is computed on a cumulative basis, including the record of all graduate work which has been transferred to Northern Illinois University. 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.

In general, graduate classes meet on the basis of one hour of credit for each class hour. Certain classes, however, are of such nature that they require more than one hour of attendance for each hour of credit; and some courses confer more than one hour of credit for each hour in class. Particular information regarding a specific course may be obtained from the instructor, or from the Office of the Dean of the Graduate School.

Expenses

The average total expenses for room, board, books, and supplies is approximately \$1,000 to \$1,100 for the academic year. The fees for graduate students are as follows:

Full-time students (per semester)	
*Registration fee, Illinois residents.....	\$115.50
*Registration fee, non-residents of Illinois.....	200.50
Part-time students (six semester hours or less)	
Minimum fee	18.00
Per semester hour for residents of Illinois.....	9.00
Per semester hour for non-residents of Illinois.....	23.00
(Minimum fee for non-residents).....	46.00
Extension students	
Minimum fee	18.00
Per semester hour for residents of Illinois.....	9.00
Per semester hour for non-residents of Illinois.....	23.00
(Minimum fee for non-residents).....	46.00
Special fees	
Graduation fee (payable at time of graduation only).....	15.00
Late registration fee charged after scheduled registration day..	3.00
For each change of program after preregistration.....	1.00
Duplicate transcript of record (after the first is issued).....	1.00
Duplicate identification card (after the first is issued).....	1.50

A veteran who entered service as a resident of the State of Illinois and who no longer has educational entitlement under a federal bill or who does not wish to use the GI bill may receive assistance under the Veterans State Scholarship. For full-time students this amounts to \$78.00; for the part-time student (6 semester hours or less) it will pay the entire registration fee.

Transcripts are not issued to persons who are under financial obligation to the University or the University Loan Fund.

Fees are due at the time of registration. No refunds on fees are granted after nine calendar days following the regular registration day.

Changes in class programs will be permitted only with the approval of the student's adviser, and a charge of \$1.00 will be made for each program change after the third day of the semester.

Students registering for a laboratory course in chemistry are required to purchase a \$5.00 "breakage coupon" at the Business Office. Refunds will be made on unused portions of the coupon.

The incidental 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 weekly University newspaper and the University annual.

Veterans Affairs Office

The Veterans Affairs Office, which operates in conjunction with the Office of the Dean of Men, serves as a liaison between student veterans and governmental agencies concerned with educational benefits for veterans. Assistance is given to both undergraduate and graduate students in making necessary reports to the Veterans Administration and in obtaining educational benefits under the various public laws providing for the education and training of veterans. Inquiries concerning educational benefits for veterans should be directed to the Coordinator of Veterans Affairs.

*The hospital-medical-surgical fee of \$7.50 included in these figures is payable at the time of registration by all full-time graduate students except those whose schedule includes only evening or Saturday classes. This fee will be refunded to any student who can submit satisfactory proof that he already has comparable insurance coverage.

Living Accommodations

The Office of the Director of Housing lists rooms that are for rent in private homes but does not make reservations for students. The cost of these rooms varies but averages approximately \$7.00 to \$8.00 per week per person.

Accommodations for approximately 2,400 students are provided on campus in six residence halls. These halls provide comfortably-furnished rooms, study facilities, and recreational, reception, and lounge areas, as well as telephone and mail services. Currently, the residence halls provide housing for 1,000 men and 1,400 women, and additional residence halls are being planned for increasing student enrollments. The residence halls program, under the guidance of full-time staff members and upper-class student counselors, is designed to provide opportunities for academic and social development of the residents.

Because of unsettled conditions in prices of food and labor, the University reserves the right to adjust charges for room and board during the University year. If an adjustment is necessary, an announcement to that effect will be made well in advance of the beginning of the semester during which it will become effective.

Students who plan to live in the residence halls should make room reservations as early as possible before the opening of the academic year. In order to apply for a room in the residence halls, the student must have at least tentative acceptance of admission from the Director of Admissions, and his academic standing must be checked for conformance to the campus housing assignment regulations. There is no need for eligible students to write concerning an application for housing unless they have not heard from the Housing Office within a reasonable length of time after receiving the notice of acceptance from the Admissions Office.

All application cards must be accompanied by the required \$25.00 room deposit which also serves as a breakage and damage fee during the year's residence, and all contracts are made for the full academic year.

In regard to housing on campus in the residence halls, applications from undergraduate students are given preference over those from graduate students.

Meals are served on campus at the University Cafeteria and at the Student Union Building.

The University Apartments

The University has just completed eighty units of modern permanent-type two-story apartments for married students to replace the older temporary wooden barracks. These new units are completely furnished, and rentals include all utilities including electric heat but not telephones. Rentals are \$67.50 per month for the efficiency apartments and \$77.50 for the one-bedroom apartments. There are forty units of each type. Applications and further information may be obtained from the Office of the Director of Housing.

REQUIREMENTS FOR GRADUATE DEGREES ON THE FIFTH-YEAR LEVEL

The following regulations apply to candidates for the degrees Master of Science in Education, Master of Arts, Master of Science, and Master of Music.

For more detailed requirements for specific degrees, the student should consult the statement appearing immediately above the course descriptions of his major department.

Candidacy

Admission to the Graduate School does not necessarily imply admission to candidacy for the master's degree. Upon the completion of eight semester hours of graduate work, and not later than the first month of his final semester, a student shall file application in the Office of the Dean of the Graduate School for admission to candidacy.

A student will not be admitted to candidacy for a degree until he is following a program approved by his adviser or advisory committee.

Deficiencies

A graduate of an approved college or university is presumed to be eligible for advanced work in any department if he presents a major in the area of work of that department. Any 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.

Students who elect the sequence in education for elementary school teachers will be expected to regard as deficiencies those courses necessary for certification as an elementary school teacher in the State of Illinois.

CREDIT REQUIREMENT

A candidate for the master's degree must earn a minimum of thirty-two semester hours of graduate credit and a minimum grade average of B. (This average must be earned in the major field as well as in the total program. Area majors must earn a B average in each of the fields comprising the major.) The minimum required number of semester hours in residence is twenty-two. Graduate credit is given only in those courses in which a grade of C— or better is earned.

Normally, a candidate for the degree Master of Science in Education is expected to earn not less than ten semester hours in courses outside his major field. In exceptional cases, this requirement may be waived by the Dean of the Graduate School. In order for an exception to be considered, the candidate, with the consent of his adviser or advisory committee, must submit a written petition to the Dean of the Graduate School, stating clearly his reasons for desiring waiver.

The requirement of ten semester hours outside the major field is not applicable to candidates for other graduate degrees.

Credits Transferable

Subject to the approval of the Dean of the Graduate School, a student will be allowed to transfer a maximum of six semester hours of graduate credit from another institution, none of which shall be in extension or

correspondence work.* To receive consideration of work done elsewhere, the student must file a petition with the Dean and request the registrar of the other institution to send a transcript of his work to the Office of the Graduate School.

Credit for Extension Work

With the approval of the major department, a student will be permitted to offer for credit a maximum of eight semester hours in extension work taken from this institution.* A list of centers approved for graduate extension work may be secured from the Dean of the Graduate School.

Courses for Which Credit Is Allowed

Only courses which are numbered 400-499, 500-599, and 600-699 and which are taught by members of the graduate faculty carry credit toward the master's degree. Not more than fifty per cent of the credit counted toward a degree may be earned in courses numbered 400-499.

Some courses numbered in the 400's carry only undergraduate credit. Only those courses listed in this catalog or in the supplement for 1962-63 carry graduate credit.

Completion of Graduate Work

All work for the master's degree must be completed within a period of six years unless exception is granted by the Graduate Council.

Advisory System

Each student is assigned, by the head of his major department, to an adviser or advisory committee whose purpose is to guide his selection of a program of studies and to recommend him, when properly qualified, for the degree. The adviser or advisory committee is selected by the head of the department in which the student is majoring.

The program of studies should be formulated by the student in conference with his adviser or advisory committee during the first semester of graduate work. Proper forms may be obtained from the Office of the Dean of the Graduate School and must be completed before a student may be admitted to candidacy. (See p. 23)

Qualifying Paper

Before taking the final comprehensive examination, a candidate must submit a qualifying paper or thesis, which is to be a research study written in the candidate's major field. Its subject must be approved by the chairman of the student's advisory committee or by his adviser, and when completed it must be approved by the professor under whom it was written and the adviser. If the supervisor is also the adviser, a second reader must be appointed by the head of the major department. A minimum of 5,000 words, or its equivalent in studies of a scientific or statistical nature, is required. The paper must follow the recognized standard forms of footnoting and bibliography. The original paper and two carbon copies, together with a one-page abstract, must be submitted in a standard folder to the Office of

*Students who wish credit by transfer and also wish to take courses in extension need keep in mind the requirement that a minimum of twenty-two semester hours' credit must be earned in residence.

the Dean of the Graduate School. A statement showing approval by the staff members involved must be filed in the Office of the Dean of the Graduate School at least one week before the candidate appears for examination.

Examinations

Final written comprehensive examinations are required of all candidates for the master's degree at some time within the latter half of the semester which marks completion of work for the degree, but in any case at least one week before such completion. In some departments an oral examination is required as well. These examinations are given by the department or departments in which the major is taken. Students eligible for an examination must file with their major adviser and the Office of the Graduate School a notice of their intent to present themselves for it.

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

All students must meet the requirements of Senate Bill Number 195 of the 68th General Assembly of the State of Illinois. In brief, this law requires satisfactory completion of an examination on the Constitution of the United States, the Constitution of the State of Illinois, and the proper use and display of the American flag. Students who have not satisfied the requirement at the undergraduate level must satisfy it at the graduate level.

REQUIREMENTS FOR SIXTH-YEAR PROGRAMS

Master of Fine Arts and Certificate of Advanced Study

The purpose of the sixth-year programs leading to the Certificate of Advanced Study and the degree Master of Fine Arts is, in the main, to encourage and enable school administrators, supervisors, and classroom teachers (elementary, secondary, and junior college) to attain greater mastery of their chosen fields than they can attain in five years of formal study. Of secondary importance is the providing of the stimulation which will lead some qualified students through an intermediate stage toward the doctorate.

The Certificate of Advanced Study

The Certificate of Advanced Study is granted students who satisfactorily complete all requirements of the sixth-year program exacted of students whose major department is one of the following: Biological Sciences, Business Administration, Business Education, Chemistry, Earth Sciences, Education, English, History, Industrial Arts, Mathematics, Music, Physical Education for Men, Physical Education for Women, Physics, Social Sciences, or Speech.

Master of Fine Arts

The degree Master of Fine Arts is granted students who satisfactorily complete all requirements of the sixth-year program exacted of students whose major is Art.

Credit Requirement

A candidate for the Certificate of Advanced Study or the degree Master of Fine Arts must earn a minimum of thirty semester hours beyond the

master's degree or its equivalent with at least a B 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 ten semester hours' credit are earned in fields closely related to the major area. Credit for at least twenty-one semester hours must be earned in courses given on the campus of Northern Illinois University. Students enrolled in a Sixth Year Program in Administration (General Educational Administration, The School Principalship, and School Business Management) are required to enroll for full-time study during an eleven-week summer session or during one semester. Twelve semester hours constitutes a full load.

Admission

A candidate for admission to the sixth-year program (as distinct from admission to the Graduate School) must (a) 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 (b) be in the last semester of work leading to that degree from Northern Illinois University.

Students previously in attendance in the Graduate School of Northern Illinois University should request permission of the Graduate Office to continue work leading to the Certificate of Advanced Study or the degree Master of Fine Arts. Students from other institutions should submit completed application forms to the Director of Admissions no later than two weeks before registration. A student who holds a master's degree or equivalent from another college or university should request the registrar of that institution to forward two official transcripts of his academic record to the Director of Admissions.

Admission to Candidacy

Admission to the sixth-year program does not necessarily imply that a student is, or may become, a candidate for the Certificate of Advanced Study or the Master of Fine Arts degree. Upon the completion of twelve semester hours of work at Northern Illinois University and not later than the first month of the final semester a student shall file application in the Office of the Graduate School for admission to candidacy.

A student will not be admitted to candidacy unless he is following a program of courses approved by his advisory committee.

Credits Transferable

If a transfer of graduate credit is desired, applicants should file a petition with the Dean and request the registrar of any institution concerned to send a transcript to the Office of the Graduate School. Subject to the approval of the Dean and the chairman of the advisory committee, a student will be allowed to transfer a maximum of eight semester hours of graduate credit from another institution, none of which shall be in extension or correspondence work. The petition must be presented to the Graduate School at the time of application for admission to candidacy.

Advisory System

Each student is assigned an advisory committee appointed by the Dean of the Graduate School upon recommendation of the head of the major

department. The committee will review the advisee's selection of a major, help the advisee confirm or revise the selection, assist in planning the program of courses, and evaluate his work periodically.

Program of Courses

Early in his first term or, if feasible, before his initial registration, a student shall confer with members of his advisory committee to plan a program of courses leading to the certificate or degree. The original of the program, properly signed, must be filed with the Dean of the Graduate School, a copy being retained by the chairman of the advisory committee and another being given the student. Any changes made necessary in the program shall be by means of a substitution slip, a copy of which shall be filed with the Dean of the Graduate School.

Qualifying Examination

During the first term of his work in the sixth-year program, a student shall successfully complete, at the option of the major department, a qualifying examination. Failure to complete the examination successfully will be considered sufficient cause for drop or probation notice at the discretion of the Advisory Committee, the head of the major department, and the Dean of the Graduate School.

Government Examination

All students must meet the requirements of Senate Bill Number 195 of the 68th General Assembly of the State of Illinois. In brief, this law requires satisfactory completion of an examination on the Constitution of the United States, the Constitution of the State of Illinois, and the proper use and display of the American flag. Students who have not satisfied the requirement at the undergraduate or fifth-year level must satisfy it at the sixth-year level to receive the Certificate of Advanced Study or the degree Master of Fine Arts.

Credit for Extension Work

With the approval of the major department, a student will be permitted to offer for credit at sixth-year level a maximum of six semester hours in extension work taken from this institution. A list of centers approved for graduate extension work may be secured from the Dean of the Graduate School.

Courses for Which Credit Is Allowed

Only courses which are numbered 400-499, 500-599 and 600-699 and which are taught by members of the graduate faculty carry graduate credit. Not more than nine semester hours of the credit counted toward the Certificate of Advanced Study or the degree Master of Fine Arts may be earned in courses numbered 400-499. Credit for at least twenty-one semester hours must be earned in courses numbered 500-699.

Some courses numbered in the 400's carry only undergraduate credit. Only those courses listed in this catalog or in the supplement for 1962-63 carry graduate credit.

Limitation of Time

Students should so plan their programs at sixth-year level that all work beyond the fifth year toward the Certificate of Advanced Study or the degree Master of Fine Arts will be completed within six consecutive years unless exception is granted by the Graduate Council.

Thesis

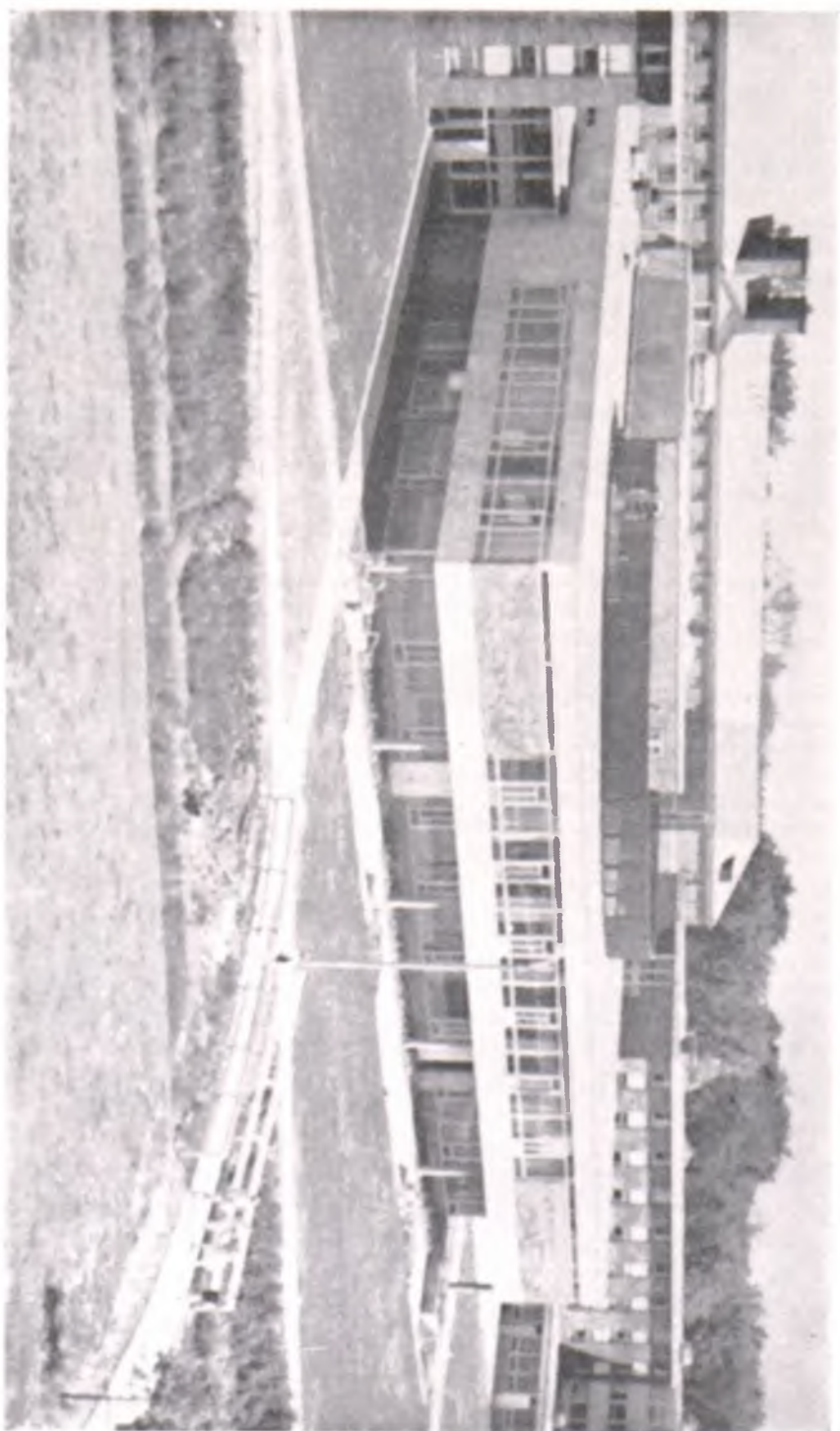
Every candidate shall submit an original and two carbon copies of a significant research study, field study, or thesis, together with an abstract thereof, approved by a departmental committee. The original, the two carbon copies, and the abstract must be submitted in a standard folder to the Office of the Graduate School. A statement showing approval by the staff members involved must be filed in the Office of the Graduate School at least one week before the candidate appears for his final examination.

Final Examination

The final examination of each candidate is administered by the department responsible for the candidate's major area some time within the latter half of the term which marks completion of work for the certificate or degree, but in any case at least one week before such completion. Comprehensive in nature, it is a written and/or oral examination. No later than the end of the first week of the semester during which he plans to take it, the candidate must notify the Graduate Office and the Chairman of his Advisory Committee of his intention to take the examination.

Departmental Requirements

Other than the requirement previously indicated that, unless exception is granted, a candidate for a certificate or degree will be expected to earn a minimum of twenty semester hours' credit in his major department, departmental requirements which govern the structuring of programs of study for individual students shall be flexible rather than rigid. The primary aim of Northern's sixth-year program is to help experienced practicing teachers, supervisors, and administrators improve themselves. It is to help these people become *master* teachers or administrators. Hence emphasis will be placed on individual needs as they are determined by the advisory committee in conferences with the student rather than on adherence to the requirements of a specifically prescribed program.



Neptune Dining and Recreation Center

GENERAL INFORMATION

History of Northern Illinois 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. It offered only a two-year curriculum in teacher education until July, 1921, when legislative enactment gave it the status of the Northern Illinois State Teachers College and empowered it to award the 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.

In January, 1951, the Teachers College Board authorized the offering of a fifth year program leading to the degree Master of Science in Education.

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

As the result of legislation enacted by the Seventieth General Assembly, Northern Illinois State College became Northern Illinois University on July 1, 1957.

Recent action by the State Teachers College Board has authorized the offering of the degrees Master of Arts, Master of Science, and Master of Music; and of a Sixth-Year Program leading to the degree Master of Fine Arts or to the Certificate of Advanced Study.

Plans are underway for extending graduate work at Northern to include the doctorate in some departments. The date for beginning the doctoral program has been set, tentatively, for the summer of 1963.

Accreditation

Northern Illinois University, a member of the Association of American Colleges, is accredited by the North Central Association of Colleges and Secondary Schools, the National Commission on Accrediting, and the National Council for Accreditation of Teacher Education as a baccalaureate and master's degree-granting institution.

The Main Campus

The main campus, covering approximately three hundred forty acres, is situated in the western part of the city. Part of the grounds is heavily wooded with native vegetation, and the remainder has been attractively landscaped with shrubbery and flower gardens. The picturesque lake and the meandering Kishwaukee River contribute to the beauty of the campus. Many believe Northern Illinois University has one of the most beautiful campuses in the country.

Buildings

The Swen Franklin Parson Library is the center of graduate study. In addition to reserve and reference reading rooms, it includes a browsing

room, curriculum laboratory, seminar rooms, art gallery, a small auditorium, music listening rooms, visual education department, and a classroom for instruction in library science. It has approximately 155,000 volumes, 14,400 pamphlets, and 1,200 periodicals. It is a depository for a selected list of United States government documents. Requests for stack privileges are granted to graduate students by the Circulation Librarian. Also available to graduate students are a limited number of carrels.

The Administration Building, easily identified by its castellated towers, is a familiar landmark in DeKalb. This impressive building contains the administrative and business offices, an auditorium, student lounges, classrooms, and offices for faculty members.

The Science Building contains over one hundred rooms, including well equipped laboratories, classrooms, offices and auxiliary rooms designed for special purposes. The Museum of Biology and the Barber Collection of Fossils and Minerals are housed in this building. The four main floors are designed to serve fields as indicated: first floor—physics and earth sciences, including geography; second floor—home economics; third floor—biological sciences; fourth floor—chemistry. The fifth floor and tower, although now largely unfinished, will eventually be converted into classrooms and laboratories.

Williston Hall, a four-story brick residence for 250 women, is located near the Administration Building. The rooms are comfortably furnished and the hall has a homelike atmosphere. On the main floor are dining room facilities, a lounge, offices, and living quarters for residents. A recreation room and kitchenette are located in the basement.

Karl L. Adams Hall, which houses 180 women students, is planned to meet their needs in accordance with recent trends in the housing of women students. Constructed of Illinois limestone, Adams Hall is decorated in bright colors and furnished attractively. Pictures by modern artists add to the interest of the living rooms.

The Celine Neptune residence hall complex, consisting of three residence wings and a central dining hall, accommodates approximately 1,500 students.

Newell D. Gilbert Hall, a residence hall for men, houses 484 students. It includes dining room facilities, lounges, and offices, in addition to completely modern rooms for students.

The William Claude Reavis Classroom Building, located on the Central Campus, houses offices and classrooms for the departments of Education, English, Foreign Languages, History, and Social Sciences. There are 29 offices and 38 classrooms in this new air-conditioned building.

The Home Management House is used by the Home Economics Department as a home for the seniors who wish to satisfy the requirements of high schools that employ vocational home economics teachers.

The new University School is the campus elementary and junior high school which serves as an observation and demonstration center and a laboratory for student teaching.

The Industrial Arts Building, located east of the Administration Building, contains laboratories for graphic arts, woods, metals, electricity, and drawing, as well as classrooms and offices. A laboratory of industry and science which occupies the entire second floor represents one of the modern developments in industrial arts work.

McMurry Hall (formerly the McMurry Laboratory School) now houses the offices and classrooms of the College of Business.

The Student Health Center and Speech Clinic, located on Lucinda Avenue between Adams Hall and the University Cafeteria, was put into use in January, 1959.

The thoroughly modern, air-conditioned Fine Arts Building is designed for the use of the departments of Art, Music, and Speech. It is situated on the Central Campus.

The Northern Field House, located on the central campus, houses the offices and facilities of the Department of Physical Education for Men. All basketball games and indoor track meets are held in this building.

In the Women's Gymnasium (formerly the Men's Gymnasium) are classrooms, locker and shower rooms, and other facilities for conducting a program in Physical Education for Women. East of the Women's Gymnasium are the varsity football field and track. North of the gymnasium and across Lucinda Avenue are the intramural athletic fields, which include facilities for such individual sports as tennis and badminton.

The University Apartments include forty-eight units for married students.

The Cafeteria is conveniently situated on the west side of the drive which extends from Lucinda Avenue to the heating plant. At the east entrance to the campus on College Avenue is the Student Union Building, open for fountain and short-order service and offering facilities for special banquets and parties.

Scheduled for completion in 1962 are two new facilities: the University Center, to be located between Normal Road and Carroll Avenue; and a four-wing residence hall with a capacity of 1,000 students, to be located on the West Campus.

Lorado Taft Field Campus

The Lorado Taft Field Campus is located approximately thirty-five miles west of DeKalb near the city of Oregon. This branch campus, adjacent to the Lowden Memorial State Park, is situated in the hilly and heavily wooded area on the east side of the Rock River. The area is ideal for practical natural laboratory work. Here students have an opportunity to study various aspects of outdoor educational activities not available in the traditional classroom. All buildings on this beautiful campus are equipped for year-around use.

Overlooking the river is spacious Poley Hall. This hall is used for multiple purposes. It has excellent dining facilities, including a very well equipped kitchen. In addition, it can easily be converted into a conference room, classroom, or laboratory.

Taft House, the former home of the famous sculptor Lorado Taft, has a comfortable lounge room, a library, an office, and a craft shop. These rooms can be used for conference purposes.

The Brown House has been converted into a comfortable and well-equipped bunk house for forty persons. The old Dickerson House has been made into a second bunk house. One section houses ten persons and a second section cares for an additional twelve persons.

The Grover House, our most recent addition to the Taft Campus

facilities, is the largest unit yet completed at the University's Field Campus. This building with four units houses a staff apartment, a bunk room for twenty-eight persons, a spacious classroom, and a research laboratory.

The Taft Campus is used during the regular school year for direct experiences in outdoor education for all elementary education majors, industrial arts seniors, advanced biology and earth science majors, and students from the Department of Physical Education for Women. It is also made available to public school systems that wish to give their students and teachers an opportunity to use the out-of-doors in the educational program of children. Student teachers work with the elementary school groups on a twenty-four hour a day basis while they are living at the field campus.

Northern Illinois University Foundation

The Northern Foundation is a non-profit corporation formed to assist in developing and increasing the facilities of the University and to encourage gifts of money, property, works of art and other material having educational, artistic, or 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. Managed by a board of directors consisting of the President of the University, the Chairman of the Teachers College Board, the Business Manager of the University, a faculty member, a member elected by the Alumni Association, and at least two others, it is empowered to transfer to the University any property assigned or conveyed to it.

One of the Foundation's major 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 from the Secretary-Treasurer, Z. H. Dorland.

The National Defense Student Loan Program

Northern Illinois University is participating in the Student Loan Program of the National Defense Act of 1958. College students or prospective college students who are in need of financial assistance to continue or commence their college education may be able to borrow up to \$1,000 a year through this loan program.

The borrower must sign a note for the loan. Repayment of the loan begins one year after the borrower ceases to be a full-time student, with payment being completed within 10 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. Up to 50 percent of a loan (plus interest) may be canceled in the event a borrower becomes a full-time teacher in a public elementary or secondary school. Such cancellation is to be at the rate of 10 percent a year up to 5 years.

Applications for the National Defense Student Loan may be secured by writing to or calling at the Office of the Coordinator of Student Financial Aids, Room 311, Administration Building.

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 Emil A. Anderson Loan Fund, the Bertha Bennett Sawyer Loan Fund, the Lewis V. Morgan Loan Fund, and the Student Loan Fund. Loans are not made to entering students. Applications are made in the Office of the Secretary-Treasurer of the Foundation and must receive the approval of the Dean of the Graduate School.

Rotary Loan Fund. The Rotary Club of DeKalb has presented to the University the sum of five hundred dollars to be used as a loan for students in immediate need of cash. A committee composed of Rotary Club members on the faculty administers the fund. Information concerning the conditions under which loans are made may be secured from the Vice-President for Student Personnel.

N. I. 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 "C" at Northern Illinois University. Small emergency loans may be obtained from this fund in amounts up to approximately \$50. 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.

Associated Women Students Loan Fund. This organization, to which all undergraduate women belong, has funds available for short term loans (not exceeding \$50) to any University woman student. Applications are made in the office of the Coordinator of Student Financial Aids.

Health Service

The Student Health Service, under the supervision of a physician, has headquarters in the new Health Center and Speech Clinic on Lucinda Avenue. It is open during class hours. Students have the privilege of visiting the clinic for consultation, advice and treatment, and also for discussing health problems.

Student Teaching

Since student teaching is required for certification in Illinois, facilities for student teaching will be made available for graduate students. Unless exception is granted, however, they will not be provided before the student completes fifteen semester hours of graduate study in this school.

Internship for Graduate Students

Field work under University supervision may be utilized to develop the required proficiencies and may be substituted for regular course work. Only those who have had student teaching or experience in schools are eligible for internship credit. For further information see course description under Education 595, and inquire at the Student Teaching Office.

Assistantships

Two types of graduate assistantships are offered. For students in the fifth-year program assistantships provide a maximum stipend of \$180 per month for the academic year of nine months. For students with a master's degree enrolled in the sixth-year program they provide a maximum of \$240 per month for the academic year.

Assistants are selected for their ability and are appointed on a part-time basis with the understanding that their academic load may not exceed nine hours each semester if they receive the maximum stipend.

Application forms for graduate assistantships may be procured from the Office of the Dean of the Graduate School.

Speech Rehabilitation Center

During the summer session, Northern Illinois University, in cooperation with the University of Illinois, Division of Services for Crippled Children, offers a six-week residential program for organically handicapped children with associated speech problems. Undergraduate and graduate credit can be earned by participating in this instructional program. Speech correction majors may earn one to three credit hours in clinical practice, Speech 423. In addition, student teachers in elementary education may be assigned to conduct individual and group classes in reading, spelling, handwriting, arithmetic, social studies, creative dramatics, music, art, and physical education. There is also a limited number of staff positions available to qualified individuals.

Placement Bureau

The University maintains a Placement Bureau to aid students in securing positions. Systematically organized records and credentials are available for reference to superintendents, principals, and other prospective employers. The credentials are submitted to these officials as confidential information and supply the following data: 1. Academic record and scholastic standing; 2. Student teaching record; 3. Inventory of special interests and abilities; 4. Record of University activities; 5. Actual teaching or other experience; 6. Personal evaluation by instructors, critic teachers, and former employers. When the number of candidates seeking positions exceeds the number of requests for employment interviews, it is the policy of the Placement Bureau to consider the above factors in bringing the merits of candidates to the attention of employers.

The services of the Placement Bureau are available to all current graduates, and the bureau also promotes the candidacy of alumni who have had several years of successful employment experience. The Northern Illinois University Placement Bureau offers free service to all graduates, to all school administrators, and to personnel representatives in business and industry.

Recreational Facilities

The University sponsors an extensive intramural athletic program each semester. Regular tournaments are held in tennis, handball, playground ball, volleyball, basketball, wrestling, boxing, and golf.

Part of a new 50 acre area has been improved for intramural recreation,

physical education classes, and athletic practice. There are tennis, handball, speedball, and volleyball courts; baseball and softball diamonds; football fields; athletic practice fields; hockey, soccer, and touch football fields; and a golf driving range. The area provides an opportunity for men and women to participate in various sports under excellent conditions.

Picnic areas are readily accessible in the Annie Glidden Woods adjacent to the campus and in Hopkins Park north of the city. The municipal swimming pool is also available to students.

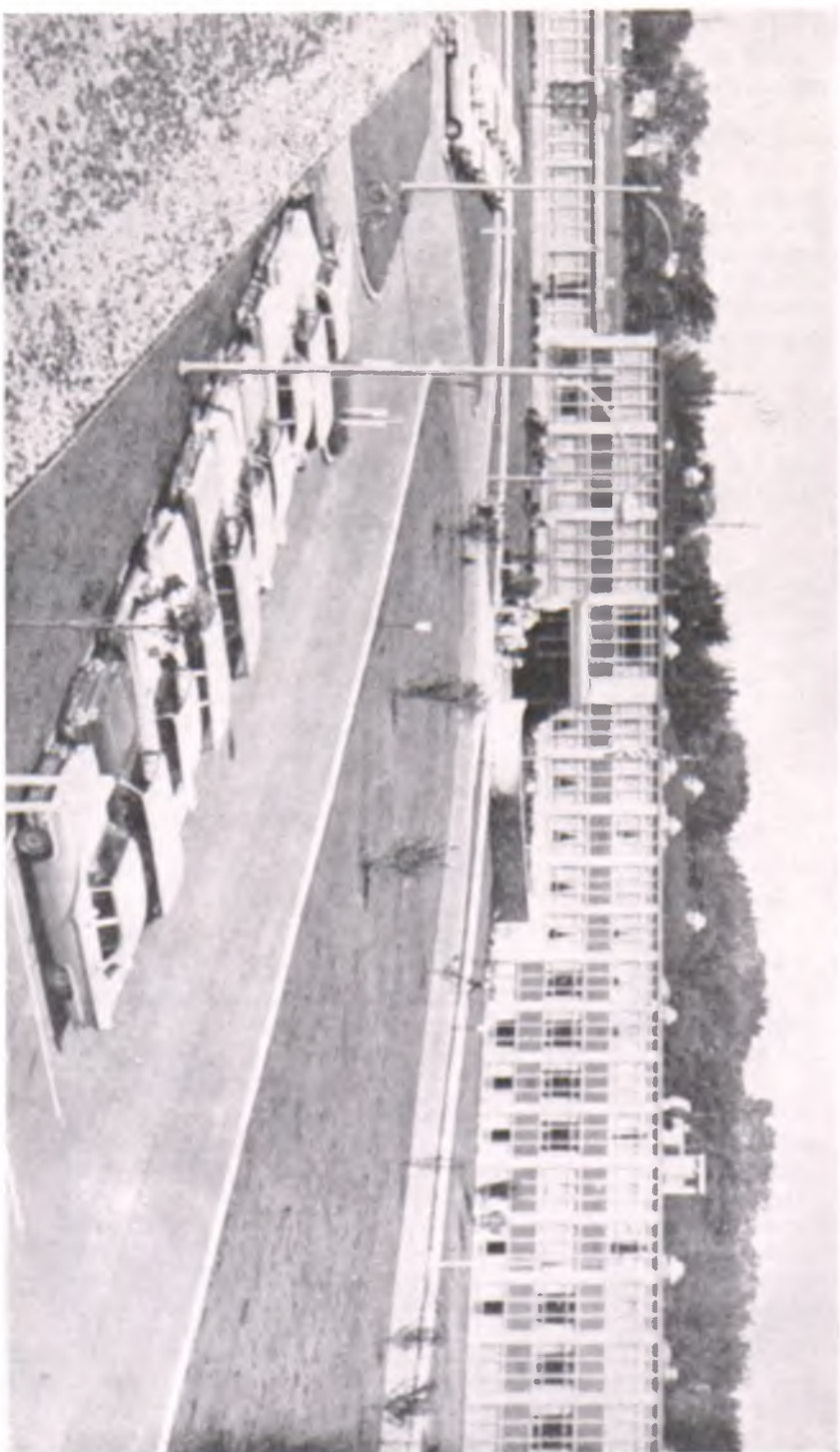
In general, graduate students are invited to participate in undergraduate activities, including band, orchestra, and chorus, which do not involve intercollegiate competition. Information regarding specific organizations may be obtained at the Office of the Dean of the Graduate School.

Planning a Program

When departmental programs are under consideration, the student is advised to consult carefully the section of this catalog devoted to requirements for admission to the Graduate School and requirements for the specific program he wishes to pursue.

Departmental offerings will depend largely on the demand. In accordance with this policy, the University may find it necessary in some cases to withdraw courses designated to be offered in a given semester and in other cases to offer courses not designated for the semester. The numerals I and II indicate the semester (or semesters) designated for a course.





The University School

COURSE OFFERINGS

University Travel Seminar

401 Travel Seminar

A study tour of a selected area of the world. Each tour will be under the supervision of one or more faculty members of Northern Illinois University. The purpose of the tour is to provide students, through personal experience, opportunities to increase their knowledge of the educational, social, cultural, and physical environment of other peoples. Lectures and meetings are arranged with qualified people who will discuss these aspects of life. Visits of sufficient duration to observe important places of interest and activities of special interest will be made.

Variable credit—1 to 9 semester hours. Specific details regarding cost, dates, and countries to be visited will be published in a special announcement. Specific requirements for University credit will be announced for each seminar.

ART

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.

Master of Science in Education

Students intending to receive the Master of Science in Education with a major in art will select course work in the various studio disciplines such as painting, sculpture, or printmaking. The nature and scope of the courses prescribed will be determined by an examination of the student's undergraduate academic record, his general background, and evidence of artistic production. Students who elect this major must satisfy the following course requirements in art.

1. At least two semester hours in course 509.
2. A minimum of six semester hours in the field of art history.
3. It is recommended that the beginning programs be started with courses 504 and 507.

Master of Arts

Students may pursue courses leading to the degree Master of Arts in history and theory of art, painting or sculpture. Excellence of studio or scholarly production is expected of the candidate for this degree. A written thesis will be required of all M.A. candidates, while painting and sculpture majors may, additionally, be required to have one-man shows of their graduate studio work. The candidate's program will vary according to his interest and needs, with the following exceptions:

1. All M.A. candidates must complete a minimum of four semester hours in course 603.
2. Candidates for the M.A. in painting or sculpture will be required to complete a minimum of nine semester hours work in art history.

Master of Fine Arts

The Master of Fine Arts degree will require thirty semester hours of course work and thesis beyond the Master of Science in Education or Master of Arts degree. The requirements will be flexible, with the candidate's background and interests being the determining factors.

Including all work done at fifth year level a suggested schedule calls for twelve to fifteen semester hours in art history, thirty to forty semester hours of studio or work in an allied field, and eight semester hours of seminar and thesis. In addition, the candidate may be required to have a one-man show of his graduate work.

Description of Courses

- | | | |
|---------|---|-------|
| 425,426 | Advanced Prints | I, II |
| | Individual problems with emphasis on creative production.
Two semester hours credit each. | |
| 433,434 | Advanced Sculpture | I, II |
| | Individual problems; carving in wood or stone, modeling in clay or plaster, casting, welding.
Two semester hours credit each. | |
| 437,438 | Advanced Oil Painting | I, II |
| | Individual problems with emphasis on creative production.
Two semester hours credit each. | |
| 454 | Art in the Elementary School | II |
| | Art education in relation to the needs, growth, and developmental patterns of children. An introduction to a variety of art media. Emphasis on methods which classroom teachers can apply. Studio and lecture.
Three semester hours credit. Not open to art majors. | |
| 460 | Creative Photography | I, II |
| | The student is taught the fundamentals of photography with emphasis upon the result as a fine art. Application to such fine arts areas as commercial art, documentation, and the preparation of visual aids for teaching are covered, as well as the use of photography as a new experimental art form. Studio and lecture. Prerequisite: A basic course in photography or consent of instructor. Six periods a week.
Three semester hours credit. | |
| 480 | Independent Research | I, II |
| | This course provides students the opportunity to work on individual problems in specific areas they elect.
Three semester hours credit. | |
| 504 | Drawing | II |
| | 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.
Three semester hours credit. | |
| 507 | Advanced Design | |
| | Varied and comprehensive problems involving two and three dimensional design in various media.
Three semester hours credit. | |

508 **Studies in the Technical Resources of the Artist**
 An examination of the media and processes of the artist and their art historical significance. These studies may be directed toward ceramics, printmaking, art metal, or painting.
 Three or six semester hours credit. (In the summer program this course will be taught as a workshop for six semester hours credit)

509 **Seminar in Art Education and M.S.Ed. Thesis** I, II
 An examination of the philosophy and practice of art and art education. Supervised introduction to the tools of research in preparation for writing the thesis.
 One to three semester hours credit. Must be taken for minimum of two hours.

History of Art

406 **Modern Art** II
 Painting and sculpture from 1900 to the present in Europe and America.
 Three semester hours credit.

408 **History of Prints and Graphic Processes** II
 A survey of the chief works of art in woodcut, engraving, etching, and lithography from the fifteenth century to the present day.
 Three semester hours credit.

510 **Studies in Medieval Art** I
 Architecture, painting, and sculpture from early Christian times to the end of the Middle Ages.
 Three semester hours credit.

511 **Studies in Italian Renaissance** II
 Representative masters in the historical development of Italian painting, sculpture, and architecture from 1350 to 1600.
 Three semester hours credit.

512 **Studies in Northern Renaissance** I
 Painting and sculpture in The Netherlands, Germany, France, and Spain from 1400 to 1600.
 Three semester hours credit.

513 **Studies in Baroque Art** II
 Painting, sculpture, and architecture in Europe from 1600 to 1800.
 Three semester hours credit.

514 **Studies in Nineteenth Century Art**
 Painting and sculpture in Europe and America from the French Revolution until 1900.
 Three semester hours credit.

515 **Studies in American Art** I
 The history of painting in America from 1670 to the present day.
 Three semester hours credit.

523 **Advanced Painting—various media.** I, II
 This course intends to lead the student to a mature studio performance, by means of technical knowledge and significant artistic insights.
 Three semester hours credit.

- 528 **Technical Studies in Printmaking—various media.** I, II
 Amplification of the student's abilities and knowledge of printmaking gained in earlier courses, directed toward a more mature productivity.
 Three semester hours credit.
- 533 **Technical Studies in Sculpture—various media.** I, II
 The apt encouragement of the student in the creation of meritorious works of art within the framework of his individual propensities.
 Three semester hours credit.
- 553 **Principles of Art Education** I
 The contribution which art can make to individual and group development in the school program. Discussion of problems and procedures.
 Three semester hours credit. Open only to art majors.
- 600 **Studies in Primitive Art**
 Prehistoric art; art of the cultures of Africa, Oceania, and the Americas.
 Three semester hours credit.
- 601 **Studies in Oriental Art**
 Art and architecture of India, China, and Japan in their major periods.
 Three semester hours credit.
- 602 **Special Problems in Art History**
 Special problems in historical research for students who wish special guidance in reading, methodology, and research in areas of art history.
 Three semester hours credit.
- 603 **Seminar in Art and M. A. & M.F.A. Thesis.**
 Investigation of the theory, history, and technical procedures of the artist in preparation for the thesis.
 Four to eight semester hours credit. Must be taken for minimum of four hours for M. A.; four to eight hours for M.F.A.

BIOLOGICAL SCIENCES

The Department of Biological Sciences offers graduate programs leading to the degrees Master of Science in Education and Master of Science; and at sixth year level, to the Certificate of Advanced Study. The departments of Biological Sciences, Earth Sciences, Chemistry, 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 BIOLOGY

Students who elect a graduate major in biology toward the degree Master of Science in Education must satisfy the following course requirements in biology:

- (a) 416, 516, or 517; 408 or 540; 542, 561, and 570.
- (b) Eight additional semester hours of credit from courses offered on the 400 or 500 levels.
- (c) A maximum of six semester hours will be devoted to supervised research leading to a qualifying paper.

The prospective graduate student in biology should obtain the "Handbook for the Graduate Student in Biology" from the office of the Department of Biological Sciences. This booklet provides more detailed information about the program of the department, and the student will be held responsible for a knowledge of the material.

The Biological Sciences Department requires that all graduate students must have achieved a satisfactory grade on the "General Advisory Examination for Biology Graduate Students" before they may obtain an approved graduate program, start on their research work, or take the final comprehensive examination. This examination is administered on the first Saturday after the start of classes in each regular semester or summer session.

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 will find that an additional semester or summer session may be essential. If the student has deficiencies, the total number of hours required may exceed 32.

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 as undergraduates a major or the equivalent in at least one of the science fields of Biological Sciences, Chemistry, Earth Sciences, or Physics or have completed an undergraduate general science major.

In those science fields where no undergraduate major or equivalent has been earned, the following graduate courses are required:

1. Biological Sciences: 405, 406, 416 and 542 (choose a minimum of eight hours).
2. Earth Sciences: 453, 465, 520, and 543 (choose a minimum of eight hours).
3. Physical Sciences: Chemistry 500, Physics, 501 or other courses of 400 to 500 rank with advice of department head (choose a minimum of eight hours).

Further information concerning this major may be secured from any of the department heads concerned.

Master of Science

Students who elect a graduate major in biology toward the degree Master of Science will be required to take a proficiency examination prior to arranging a program of courses leading to the degree. Upon satisfactory completion of the examination, the program of courses will be prepared. This program will include a minimum of thirty-two semester hours of work—a maximum of six semester hours being devoted to supervised research leading to a qualifying paper.

Certificate of Advanced Study

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

Description of Courses

General Biology

- 400 **Methods and Materials for High School Biology** I
Aims of biology in the life of the individual and the community and the methods and materials best suited in the development of these aims are considered. Visits to high schools are included. Offered the first nine weeks of each semester. Education 486 should be taken concurrently. Student teaching should be taken in the last half of the same semester.
Prerequisite: One year of botany or zoology or equivalent.
Three semester hours credit.
- 401 **Principles of School Health** I
Principles of planning school health programs. Methods of promoting healthful school environment discussed.
Prerequisite: Courses 255 and 355 or equivalent.
Three semester hours credit.
- 402 **Community Health** II
Community health needs, including environment sanitation and general measures for disease prevention. Role of governmental and voluntary agencies discussed.
Prerequisite: Courses 255 and 355 or equivalent.
Three semester hours credit.
- 405 **Field Course in Natural History** Summer Session
(For teachers in the elementary and secondary schools.)
Discussions, demonstrations, visual aids, the identification and preservation of biological specimens, and study of literature pertaining to the natural history of the Lorado Taft Field Campus and nearby areas.
Prerequisite: Course 305 or equivalent or teaching experience.
Two weeks. Two semester hours credit.

- 406 **Biological Conservation** 11
 The biological basis of conservation practices and the relationship of those practices to human welfare.
 Three semester hours credit.
- 408 **Heredity and Evolution** I, 11
 Principles of heredity and evolution, the field of reproduction, development and heredity of individuals and races are considered.
 Prerequisite: A course in biology.
 Three semester hours credit.
- 409 **Cytogenetics** On Demand
 The study of cell nuclei and the behavior of chromosomes in plants and animals. Chromosome analysis as a tool for the study of evolution and origin of various plant and animal species and varieties.
 Prerequisite: Eight hours of biology; Course 408 recommended.
 Three semester hours credit.
- 416 **General Ecology** 11
 General ecological principles and the structure of various types of plant and animal communities. Includes field trips to representative area. Students will pay own expenses.
 Prerequisites: Courses 211 and 251, or permission of instructor.
 Three semester hours credit.
- 458 **Optical and Instrumental Methods in Biology** On Demand
 Theory and practice of: 1. Optical equipment, especially the microscope; 2. Measuring instruments; 3. Homeostasis devices (incubators, water baths, etc.).
 Prerequisites: A high school course in physics, or equivalent, and permission of instructor.
 One semester hour credit.
- 491 **History of Biology**
 Study of the origin and development of the major ideas and syntheses in biology. Study of the relation between the condition of the other sciences and society, and advances in biological knowledge.
 Prerequisite: A course in biology.
 Two semester hours credit.
- 500a **Science Problems of Elementary Grades** I
 Development of constructive attitudes toward modern science in relation to problems in the elementary school. (Satisfies requirement for Education 584.)
 Prerequisite: Course 305 or permission of instructor.
 Two semester hours credit.
- 500b **Methods and Materials for High School Biology** On Demand
 Survey of problems of teaching biology in high school. Current research in this area studied.
 Prerequisite: Course 400.
 Two semester hours credit.

- 501 **Advanced School Health** **On Demand**
The school health program as it relates to the administrator and the teacher.
Prerequisite: Course 401 or equivalent.
Three semester hours credit.
- °505 **Institute of Science for High School Teachers of Biology 1, II, and
and General Science** **Summer Session**
Emphasis placed upon new information in the fields and upon the interrelationships among the biological sciences usable in the secondary school. Includes field trips, lectures by visiting scientists, and individual student projects.
Prerequisite: Teaching experience in science.
Four semester hours credit.
- 513 **Epidemiology** **On Demand**
Causes, detection, and prevention of approximately forty common communicable diseases.
Prerequisite: Course 313 or equivalent.
Three semester hours credit.
- 530 **Radiobiology** **On Demand**
The effects of radiation upon cells and organisms. The use of radioisotopes in biological problems.
Prerequisite: Zoology 355; Biology 408 or equivalent and one year in chemistry.
Three semester hours credit.
- 540 **Experimental Genetics** **II**
Fundamental principles of genetics and cytogenetics illustrated by laboratory work with fruit fly, mold, or other suitable organisms.
Laboratory fee—\$3.00.
Prerequisite: Course 408 or equivalent.
Two semester hours credit.
- 542 **Evolution** **I**
Theories of evolution; development of concept of evolution; factors in organic evolution.
Prerequisite: Graduate standing.
Two semester hours credit.
- 543 **Cytology and Histology** **On Demand**
Combination study of cell structure and tissue differentiation including both plants and animals.
Prerequisites: Courses 211 and 251 or equivalent.
Three semester hours credit.
- 561 **Introduction to Scientific Literature** **I**
Practical use of biological literature.
Prerequisite: Thirty semester hours of biology.
Two semester hours credit.

*May be repeated to a total of twelve semester hours, eight of which may count toward the master's degree.

- 562 **Aquatic Biology** **On Demand**
 A survey of aquatic environments, physiographic, physical, and chemical, and of aquatic life. Special emphasis will be placed on collecting, preserving, identifying, and recognizing native animals and plants. Five periods per week.
 Prerequisites: Courses 211 and 251.
 Three semester hours credit.
- *570 **Introduction to Research** **I, II**
 Lectures and conferences designed to introduce the student to the problems, techniques and analysis of biological research. Attention is given to the problem of writing the qualifying paper.
 Prerequisite: Permission of the department head.
 One to three semester hours credit. (Maximum six semester hours.)
- *661 **Seminar** **On Demand**
 Special topics in biology.
 Prerequisite: Course 561.
 One semester hour credit. (Maximum four semester hours).
- *670 **Special Problems in Biology** **I, II**
 Independent study of problems under supervision of adviser appointed by department head. Writing of qualifying paper will be part of work.
 Prerequisite: Permission of department head.
 One to three semester hours credit. (Maximum six semester hours.)

Botany

- 410 **Plant Anatomy** **On Demand**
 Structure, development, and kinds of plant tissue. Various types of tissues in their different relations and adaptations considered.
 Prerequisite: One year of botany.
 Two semester hours credit.
- 412 **Mycology** **On Demand**
 Structure and classification of fungi with emphasis on pathological relations. Diagnostic techniques are included.
 Prerequisite: Course 211 or equivalent.
 Three semester hours credit.
- 414 **Fresh-Water Algae** **On Demand**
 Identification, classification, life histories, economic importance, and limnological relations of the algae of the area. Four periods per week.
 Prerequisites: Two laboratory courses in botany or zoology.
 Two semester hours credit.
- 510 **Advanced Plant Physiology** **On Demand**
 Physico-chemical activities of plant growth and development.
 Prerequisites: Course 310, Chemistry 211, or equivalent.
 Three semester hours credit.

*May be repeated.

- 512 **Plant Pathology** **I**
 Specific casual agents or plant diseases, their identification and control measures. Emphasis placed on parasitism and the economy of crop diseases.
 Prerequisite: Course 412 or equivalent.
 Three semester hours credit.
- 514 **Taxonomy** **On Demand**
 Fundamental principles of classification of higher plants. Ecological distribution.
 Prerequisite: One year of botany.
 Three semester hours credit.
- 515 **Plant Histology and Microtechnique** **II**
 Practical laboratory methods in botanical (histochemical) and microtechnique including tests for wall and protoplasmic substances. Offered on demand.
 Prerequisites: Courses 310 and 410 or equivalent.
 Three semester hours credit.
- 516 **Plant Ecology** **I**
 Influence of environmental factors upon plant associations evaluated. Representative communities analyzed in detail. Research techniques used in field and laboratory. Students will pay expenses of field trips.
 Prerequisite: Course 416 or permission of instructor.
 Three semester hours credit.
- 520 **Advanced Plant Morphology** **On Demand**
 Vegetative and reproduction structures and their development. Emphasis on structural relationships between related groups.
 Prerequisite: Course 211 and permission of instructor.
 Three semester hours credit.

Zoology

- 450 **Parasitology** **I**
 Animal parasitism with emphasis on the external and internal parasites of man.
 Prerequisite: Course 251 or equivalent.
 Two semester hours credit.
- 451 **Protozoology** **On Demand**
 A systematic study of the more common free-living potozoa as well as forms pathogenic to man and other animals. Special emphasis will be placed on morphology, life histories, taxonomic characteristics and the relation of protozoa to disease. Five periods per week.
 Prerequisites: Courses 211 and 251.
 Three semester hours credit.

- 454 **Embryology** **II**
 Principles and processes in the development of vertebrates. Detailed study of embryology of chick.
 Prerequisite: Course 251 or equivalent.
 Three semester hours credit.
- 456 **Fish and Wildlife** **I**
 A study of the taxonomy, ecology, distribution, conservation, and utilization of the natural and introduced forms.
 Prerequisites: Courses 210, 211, 250, and 251 or equivalent.
 Two semester hours credit.
- 457 **Mammalogy** **On Demand**
 A study of the mammals of the world, with emphasis on those to be found in Illinois. The work includes characteristics, ecology, economic value, and the preparation of a collection of study skins of small mammals. Four periods per week—two hours lecture, two hours laboratory.
 Prerequisite: Course 251 or permission of instructor.
 Three semester hours credit.
- 461 **Endocrinology** **On Demand**
 A historical and functional study of the endocrine system. Laboratory experience in ablation and hormone extract substitution therapy. Designed for biology majors. Five periods per week—four hours laboratory, one hour lecture.
 Prerequisite: Course 356.
 Three semester hours credit.
- 517 **Animal Ecology** **II**
 Ecology as found in the world of animals; emphasis on application of principles. Includes field trips and a student field problem. Designed for biology majors. Students will pay for field trips. Five periods per week.
 Prerequisite: Course 416 or permission of the instructor.
 Three semester hours credit.
- 553 **Advanced Entomology** **On Demand**
 History of insect classification, rules of nomenclature and procedures in systematic studies, evolutionary origin of basic insect structure, functional morphology, life cycles, systematic review of major insect groups and ecology. Includes Saturday field trips, field trip expenses, and a student problem. Six periods per week.
 Prerequisite: Course 353 or equivalent.
 Three semester hours credit.
- 554 **Advanced Embryology** **On Demand**
 Continuation of Biological Science 454. Detailed study of mammalian development. Assigned experimental work.
 Prerequisite: Course 454 or permission of instructor.
 Three semester hours credit.

- 555 Advanced Physiology** **On Demand**
 Functional interrelations of organ systems. Special topics in physiology. Laboratory consists of experimental techniques and practical demonstrations.
 Prerequisite: Course 355 and a year of chemistry.
 Three semester hours credit.
- 560 Field Zoology** **II**
 Collection, preservation and identification of lower vertebrates and terrestrial and aquatic invertebrates. Detailed study of habits and life histories of selected forms.
 Three semester hours credit.

BUSINESS ADMINISTRATION*

The Department of Business Administration offers the following graduate programs:

- Master of Science degree in Business Administration
- Master of Science in Education degree in School Business Management
- Certificate of Advanced Study in Business Administration
- Certificate of Advanced Study in School Business Management

Master's Degree Programs

MAJOR IN BUSINESS ADMINISTRATION

The purpose of the Master of Science with a major in business administration is to provide an opportunity for specialization in the areas of accounting, finance, management, and marketing as well as to develop a comprehensive understanding at the graduate level of the functions and nature of business.

Students who major in business administration must select a total of 32 semester hours, ten of which may be outside the Department of Business Administration. A qualifying paper is required of all candidates for this degree. The course requirements will be determined by consultation with the candidate's adviser.

AREA MAJOR IN SCHOOL BUSINESS MANAGEMENT

The recommended courses for school business management are:

Business: 461, 490, 495, 503, 504, 541, 542, 545, 546, 602, 603, 604, 610
 Education: 500, 501, 551, 553, 572, 603, 654, 655, 656, 657, 695A

The course sequence will be determined through joint advisement in the Department of Business Administration and the Department of Education, based on the previous preparation and experience of the student. A student in this program may expect to devote about one-half of his time to study in business administration and one-half in education.

*As this catalog was going through the press, the Department of Business Administration was divided into three departments: Accounting, Management and Finance, Marketing.

Certificate of Advanced Study

MAJOR IN BUSINESS ADMINISTRATION

AREA MAJOR IN SCHOOL BUSINESS MANAGEMENT

The Certificate of Advanced Study has been established to provide educational programs beyond the master's degree suited to the needs, interests, abilities, and experiences of qualified candidates for advanced study.

Programs of study are offered leading to the Certificate of Advanced Study in business administration, and school business management in conformity with the general requirements of the Graduate School.

The course sequences for each program of study will be determined through consultation with the candidate's adviser.

Description of Courses

General Business

- 411 **Business Law I** I, II
A study of the law of contracts, agency, negotiable instruments, and related topics. Case materials and problems are used.
Three semester hours credit.
- 412 **Business Law II** I, II
The significant phases of the law dealing with sales, business organizations, real property, and related topics. Problems and case materials are used.
Prerequisite: Course 411.
Three semester hours credit.
- 413 **Business Law III** I, II
This is a study and review of the basic legal concepts of primary concern to businessmen; administrators of small businesses, accountants, and other specialists. Special emphasis on Federal and Illinois regulatory laws.
Prerequisite: Courses 411 and 412, or equivalent.
Three semester hours credit.
- 416 **Life, Accident, and Sickness Insurance** I
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.
Three semester hours credit.
- 417 **Property and Casualty Insurance** II
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.
Three semester hours credit.
- 418 **Real Estate Principles** On Demand
Real estate ownership and interest, contracts, title transfer, deeds, mortgage instruments, and leases. Brokerage, real estate development, property management, and appraising.
Two semester hours credit.
- 503 **Business Research** On Demand
An introduction to business research involving the identification of business problems and the use of appropriate methods, procedures, and techniques of research that may be applicable to business.
Three semester hours credit.

- *504 Independent Research in Business Administration** **I, II**
 With the approval of the major adviser, a qualified student may select a topic for independent study, either in the field or library, and prepare an acceptable research report. Two or three semester hours must be allocated to the writing of the qualifying paper.
 One to three semester hours credit.
- 511 Legal Aspects of Business** **On Demand**
 A general seminar in legal problems affecting business in the areas of contracts, personnel, taxation, property, and government regulation of business.
 Three semester hours credit.
- 561 Programming Business Data** **On Demand**
 A course designed for procedure analysts, auditors, punch card supervisors, managers of finance, and accountants. Topics include: business data processing problems, standard coding techniques, and a critical examination of accounting problems associated with electronic data processing.
 Prerequisite: Course 453 or equivalent.
 Two semester hours credit.
- 603 Seminar in Business Research** **On Demand**
 This seminar is designed for candidates who are writing theses or qualifying papers.
 Prerequisite: Course 503 or equivalent.
 Three semester hours credit.
- *604 Independent Study in Business** **On Demand**
 Open to students qualified to do individual study in business. Two semester hours credit may be allocated to the writing of the thesis.
 Prerequisite: Permission of adviser.
 One to three semester hours credit.
- 670 Seminar in Insurance Problems** **On Demand**
 A graduate seminar for advanced students of insurance dealing with those problems concerned with client-agency and company-agency relations.
 Three semester hours credit.

Accounting

- 421 Advanced Accounting** **II**
 The work consists chiefly of accounting principles applied to receiver accounts, statements of affairs, estates and trusts, and considerable emphasis on consolidated statements.
 Prerequisite: Course 321, 322, 330, or equivalent.
 Three semester hours credit.
- 440 Auditing Theory** **II**
 A study of the principles, practices, and procedures followed in the audit of corporate accounts, preparation of related working papers, and the final audit report.
 Prerequisite: Course 321, 322, 330, or equivalent.
 Three semester hours credit.

*May be repeated for a maximum of six semester hours.

- 441 **Auditing Practice** **On Demand**
The student is required to prepare a complete set of auditing working papers, write a formal audit report, and prepare the income tax return.
Prerequisite: Course 440 or equivalent.
Two semester hours credit.
- 453 **Managerial Accounting and Controllershship** **On Demand**
The purpose of this course is to provide training in managerial accounting, and budgetary control where technical information is utilized for interpreting, coordinating, and formulating policies. The course includes a study of the functions, principles, procedures, and techniques in meeting the objectives of the controller as a business administrator.
Prerequisite: Course 222 or equivalent.
Two semester hours credit.
- 454 **Accounting Systems** **On Demand**
A study of the problems involved in the design and installation of accounting systems, including systematizing the clerical departments of a business. Classification of accounts, account codes, ledgers, financial reports, flow charts and function charts are studied.
Prerequisite: Course 321, 322, 330 or equivalent.
Two semester hours credit.
- 455 **Individual and Business Taxation** **I, II**
A study of Federal taxes as they apply to the individual and to business. Considerable emphasis is placed upon the individual return, including pay-as-you-go, social security, declarations, and payments.
Three semester hours.
- 456 **Advanced Federal Taxes** **II**
Advanced phases of income taxation with particular attention to corporations, partnerships, estates and trusts, and research problems.
Prerequisite: Course 455 or equivalent.
Two semester hours credit.
- 457 **Governmental Accounting** **I**
Includes budgets, general funds, bond funds, sinking funds, trusts and agency funds, working capital funds, and special assessment funds.
Prerequisite: Course 222 or equivalent.
Two semester hours credit.
- 460 **Accounting for Specific Industries** **On Demand**
A study of accounting problems and methods as related to various industries and businesses.
Prerequisite: Course 321, 322, 330 or equivalent.
Two semester hours credit.
- 475 **CPA Problems** **On Demand**
The analysis and review of accounting principles and practices as developed and illustrated in complex selected problems. Discussions of selected problems and theory. Laboratory practice in the solution of typical problems encountered in the CPA examination.
Prerequisite: Approval of instructor.
Three to five semester hours credit.

- 540 **Financial Statement Analysis** **On Demand**
 Analysis and interpretation of financial reports with particular reference to the construction of statements, the meaning of accounts, ratios, and other evaluating indices.
 Two semester hours credit.
- 563 **Advanced Managerial Accounting and Controllershship** **On Demand**
 A course designed to provide training in managerial accounting and budgetary control. The use of technical information in interpretation, coordination, and implementation of policy. A study of functions, principles, procedures and techniques in meeting objectives of the controller.
 Prerequisite: Course 440 or consent of instructor.
 Two semester hours credit.
- 663 **Seminar in Accounting** **On Demand**
 A general seminar providing an opportunity to study 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.
 Three semester hours credit.

Finance

- 419 **Business Statistics** **I, II**
 Collection and presentation of data; introduction to frequency distribution, time series, index numbers and correlation, especially as they apply to business situations.
 Prerequisite: Mathematics 115 or the equivalent.
 Three semester hours credit.
- 420 **Investment Principles** **II**
 Some topics for consideration include: 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: Course 222 or equivalent.
 Two semester hours credit.
- 450 **Money and Banking** **II**
 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 are discussed.
 Three semester hours credit.
- 462 **Managerial Finance** **On Demand**
 A study of the organization, goals, and tools of financial management. Examination of policies on profit maximization, reserve and dividend policies, capital structure problems, and major types of loan arrangements.
 Prerequisite: Course 320 or equivalent.
 Two semester hours credit.

581 **Quantitative Analysis in Business Research** **On Demand**
 The use of statistical measurements in business research, and their applications in the design of surveys and experiments in business research.
 Prerequisite: Course 419, Mathematics 220 or equivalent.
 Two semester hours credit.

582 **Investment Management** **On Demand**
 A study of the theory of valuation of securities, portfolio management, and problems of security analysis.
 Prerequisite: Course 420 or equivalent.
 Two semester hours credit.

662 **Seminar in Business Finance** **On Demand**
 A general seminar which includes financial problems peculiar to business finance, investment management, and bank management. The seminar is intended to improve the student's ability to utilize the principles and methods of financial analysis acquired in introductory courses in the area of finance.
 Three semester hours credit.

Management

432 **Office Management** **II**
 Application of the principles of management to the planning, organization, actuating and controlling of office work; problems of office services, methods, standards, and business forms.
 Two semester hours credit.

433 **Personnel Management** **I, II**
 Basic principles and procedures relating to personnel departments; job analysis and evaluation; incentives; employment, placement and training; employee services.
 Three semester hours credit.

434 **Industrial Management** **On Demand**
 An introductory and survey course in industrial management. Areas of study included are: background of modern industrial management, industrial records, industrial administration, location and equipment, efficiency techniques, and production and stock control.
 Two semester hours credit.

435 **Business and Industrial Psychology** **On Demand**
 A course designed to apply psychological principles to the problems of business administration, including such areas of study as personal efficiency in business, problems involving human relations and morale in business and industry, personnel leadership, and group cooperation.
 Two semester hours credit.

437 **Small Business Management** **I**
 A study of the problems of small business, relative to personnel, control, finance, marketing, management, and administration in manufacturing, distributive, and service firms.
 Two semester hours credit.

- *497 **Seminar for Executives** **Summer Session**
 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. The course will include lectures and discussions on economics, literature, philosophy, art, music, science, history and world affairs.
 Prerequisite: Approval, Head of the Department of Business Administration.
 One semester hour credit.
- 571 **Business Forecasting** **On Demand**
 An analysis of methods of business forecasting as applied to industrial growth patterns, business conditions, and sales.
 Prerequisite: Course 419 or equivalent.
 Two semester hours credit.
- 572 **Business Policies** **On Demand**
 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.
 Two semester hours credit.
- 661 **Seminar in Management** **On Demand**
 A study of management problems at the various levels of business organization, and the role of management in the determination of business policies and procedures.
 Three semester hours credit.

Marketing

- 426 **Purchasing** **On Demand**
 Principles and methods of purchasing materials, supplies, equipment, and parts for producing and distributing businesses. Topics include: purchasing procedures, buying policies, stock planning, market appraisals, and functions of the purchasing agent.
 Two semester hours credit.
- 442 **Principles of Retailing** **I**
 An introduction to the field of retailing which includes a survey of types of retail institutions; store location and organization; buying and merchandising techniques; retail advertising and sales promotion; personnel policies; and vocational opportunities available in retailing.
 Three semester hours credit.
- 445 **Retail Merchandising** **II**
 Techniques and problems of retail merchandising are combined to offer an intensive study of mercantile mathematics, statistics, and control. The contents of the course include determination of prices, mark-ups, and pricing policies; analyses of basic profit elements; methods of inventory evaluation and stock control; sales planning; and expense budgeting.
 Three semester hours credit.

*May be repeated to a maximum of three semester hours credit.

- 448 **Advertising** I
 An introduction to advertising through which students have an opportunity to learn the purposes of advertising, how advertisements are prepared and delivered in media, and how the effectiveness of advertising is measured and evaluated in relation to the selling and marketing processes.
 Three semester hours credit.
- 449 **Principles of Salesmanship** II
 An introduction to salesmanship through a study of the field of selling, knowledges and skills developed in preparing to sell, the sales process, and a survey of methods to improve sales efforts. Selection and training programs and opportunities in sales and sales management will be studied. Cases and practical problems in salesmanship are included.
 Three semester hours credit.
- 452 **Credits and Collections** On Demand
 The organization, management, and functions of consumer and business credit; the administration and operation of the credit department, including methods of handling credit information and collection procedures.
 Two semester hours credit.
- 463 **Marketing Problems** II
 A study of practical marketing problems and cases concerning such aspects of distribution as product promotion, channels of distribution, sales promotion, pricing, and the formulation of marketing policies.
 Three semester hours credit.
- 551 **Sales Management** On Demand
 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.
 Two semester hours credit.
- 555 **Marketing Research** On Demand
 A study of research methods applied to the field of marketing, including methods of gathering and interpreting data; presentation of results; market analyses, consumer surveys, and sales forecasting.
 Three semester hours credit.
- 660 **Seminar in Marketing** On Demand
 A study of the problems involved in the performance of the marketing functions at the various levels of distribution and of the problems of policy determination by the manufacturer, the wholesaler, and the retailer.
 Three semester hours credit.

School Business Management

- 461 **School Office and Personnel Management** On Demand
 Work simplification in office management; administration of non-certificated school personnel; legal and insurance problems of the school business office.
 Two semester hours credit.

- 490 **Management of Auxiliary Enterprises** **On Demand**
 Budgeting, cost analysis, accounting, and other problems related to food service management, transportation, and school store operation.
 Prerequisite: Approval of instructor.
 Two semester hours credit.
- 495 **Maintenance and Operations** **On Demand**
 Budgeting, scheduling, cost analysis, including a study of problems of maintaining buildings and grounds. Custodian relationships, scheduling, purchasing, record-keeping, supply administration.
 Prerequisite: Approval of instructor.
 Two semester hours credit.
- 541 **Accounting, Statement Analysis and Budgeting** **On Demand**
 Principles of accounting, including a study of budgeting, payroll administration, bonded indebtedness, accounting for receipts and expenditures. Special attention to accounting for extracurricular funds and analysis of statements. Accounting for auxiliary enterprises such as cafeteria, store, etc.
 Two to three semester hours credit.
- 542 **Purchasing and Supply Administration** **On Demand**
 Principles and procedures of purchasing supplies, equipment, and services. Includes a study of specifications, quality analysis, sources of information, testing materials and services, determination of standards, inventory control, store management, property accounting, etc.
 Two semester hours credit.
- 545 **School Business Management** **On Demand**
 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.
 Three semester hours credit.
- 546 **Workshop in School Business Management** **On Demand**
 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, boards of education, 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.
 One to six semester hours credit. May be audited for no credit.
- 602 **Research in School Business Management** **On Demand**
 Limited to specific problems in school business management; research to be directed by adviser.
 Prerequisite: Permission of adviser.
 One to three semester hours credit.
- 610 **Seminar in School Business Management** **On Demand**
 A study of 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.
 Two to three semester hours credit.

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, and a sixth-year program leading to the Certificate of Advanced Study in business education.

Master of Science in Education

MAJOR IN BUSINESS EDUCATION

Students who elect a graduate major in business education toward the degree Master of Science in Education must satisfy the following course requirements in business education:

- (a) Courses 500 or 510, 501, 502.
- (b) Additional semester hours of credit to make a total of twenty-two to be selected from courses offered on the 400, 500, and 600 levels in business education and/or business administration.

Certificate of Advanced Study

MAJOR IN BUSINESS EDUCATION

The Certificate of Advanced Study has been established to provide educational programs beyond the master's degree suited to the needs, interests, abilities, and experiences of qualified candidates for advanced study.

Programs of study are offered leading to the Certificate of Advanced Study in business education in conformity with the general requirements of the Graduate School.

The course sequences for each program of study will be determined through consultation with the candidate's adviser.

Description of Courses

- | | | |
|-----|---|-------|
| 401 | Methods of Teaching Bookkeeping | I, II |
| | A critical study of the teaching of bookkeeping is made on the secondary school level through an analysis of objectives, approaches, methods of presentation, testing and materials. Four periods a week for nine weeks.
Two semester hours credit. | |
| 402 | Methods of Teaching General Business Subjects | I, II |
| | A study of content, objectives, materials, and specific methods of presentation as they apply to such non-skill subjects as general business, business law, business economics, salesmanship, business organization, etc. Four periods a week for nine weeks.
Two semester hours credit. | |
| 403 | Methods of Teaching Shorthand | I |
| | Methodology of teaching Gregg Shorthand Simplified presented to the following specific problems: guidance and selection of students, motivation, dictation skills, transcription, standards, testing and grading procedures. Lesson plans and demonstration lessons are included. Four periods a week for nine weeks.
Two semester hours credit. | |

- 404 **Methods of Teaching Typewriting** I, II
 Consideration is given to principles of skill development as applied to typewriting. Special consideration is given to: motivation, error analysis and remedial treatment, standards and grading, equipment, evaluation of textbooks, courses of study, and curriculum problems. Lesson plans and demonstration lessons are included. Required of all teaching majors. Four periods a week for nine weeks. Two semester hours credit.
- 405 **Methods of Teaching Distributive Education** On Demand
 A study of the principles, aims, methods, and materials in distributive education. An opportunity will be provided to plan and prepare course syllabi or to set up high school programs in distributive education. Two semester hours credit.
- 406 **Administration of Distributive Education** On Demand
 A course designed to present an understanding of the organization and administration of distributive education. Topics include: types of programs, organization of distributive education programs; teacher requirements; selection of students; course content; and relationship of federal, state, and local institutions to distributive education. Two semester hours credit.
- 407 **Retailing Practice for Teachers of Distribution** On Demand
 Students in this course are expected to obtain practical retail experience in approved businesses and to present a satisfactory report concerning specific retail practices and procedures based on actual experience and observation. Through case and conference methods, students study problems of coordinating the distributive education program with retail practices. Hours to be arranged. Four semester hours credit.
- 500 **Principles and Problems of Business Education** On Demand
 Designed to develop an understanding of the characteristics of present-day business education in terms of its basic principles and typical practices, problems, and trends. Three semester hours credit.
- 501 **Introduction to Research in Business Education** On Demand
 This course is to acquaint the student with research which has been completed in business education during recent years. In addition, the student will become familiar with the methods, techniques, and procedures of research that may be applied to business education. Three semester hours credit.
- *502 **Independent Research in Business Education** On Demand
 With the approval of the major adviser, a student may select a project on which to work during the term, either in the field or in the library, meet regularly with the adviser for consultation and guidance, and prepare a research paper as a culmination of study. Two semester hours must be allocated to the writing of the qualifying paper. One to three semester hours credit.

*Course may be repeated for additional credit to a maximum of six semester hours.

- 510 Administration and Supervision of Business Education On Demand**
 General managerial problems of business education in the secondary school, designed for in-service business teachers. Administrative and supervisory problems pertaining specifically to business education are: curriculum construction and material, student measurement and evaluation, classroom supervision and rating, physical layout, and administration of supplies, textbooks, and equipment.
 Three semester hours credit.
- 516 Practice and Problems in Cooperative Business Education On Demand**
 Students in this course will obtain practical distributive or office experience in approved businesses and present a satisfactory report concerning specific distributive or office practices and procedures based on actual experience and observation. Through case and conference methods, students study problems of coordinating the cooperative business education program in high schools and collegiate institutions.
 Four semester hours credit.
- 517 Administration of Cooperative Business Education On Demand**
 A course designed to develop an understanding of the organization, administration, and supervision of vocational business programs in the distributive and office occupations. Topics include: types of cooperative business education programs; teacher requirements; selection of students; and relationships of federal, state, and local institutions to cooperative business education.
 Two semester hours credit.
- 518 Methods of Teaching Cooperative Business Education On Demand**
 A study of the aims, methods, and materials employed in the coordinating and teaching of cooperative business courses.
 Two semester hours credit.
- 519 Problems in Business Communications On Demand**
 A study of objectives, subject matter selection, presentation, achievement standards, and evaluation related to various business communication forms in the secondary and collegiate schools. Major problems facing teachers in the subject matter area will be explored.
 Two semester hours credit.
- 520 Improvement of Instruction in Stenography On Demand**
 A study of teaching techniques and an evaluation of research in methodology for the purpose of improving the 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.
 Three semester hours credit.

- 521 **Improvement of Instruction in Typewriting** **On Demand**
 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.
 Three semester hours credit.
- 522 **Teaching Procedures in Bookkeeping and Accounting** **On Demand**
 A study of the problems and techniques in the teaching of bookkeeping. 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 will be discussed.
 Three semester hours credit.
- 523 **Methods and Materials in Teaching General Business** **On Demand**
 Designed primarily to improve 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 will be made through a mutual exchange of ideas and experiences.
 Three semester hours credit.
- 525 **Evaluation and Measurement in Business Education** **On Demand**
 A study of 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.
 Two semester hours credit.
- 530 **Seminar in Consumer Problems** **On Demand**
 Some of the problems considered in this course are: 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.
 Three semester hours credit.
- 550 **Practicum in Office Machines** **On Demand**
 Objectives, organization, equipment and layout, content, standards, and methods of teaching office practice. Operation of common office machines.
 Three semester hours credit.
- 590 **Workshop in Business Education: Principles and Problems** **On Demand**
 The study of principles and problems in business education especially designed for experienced business educators and school administrators of secondary and collegiate institutions. Topics concerned with current practices, administration and supervision in business education are studied through lectures, individual projects, field trips, and laboratory sessions. The course may be repeated once.
 Two or three semester hours credit.

- 591 **Workshop in Methods of Teaching Business Subjects** **On Demand**
 An especially designed course for experienced teachers of business subjects in 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. The course may be repeated once. Two or three semester hours credit.
- 600 **Seminar in Business Education** **On Demand**
 An opportunity to study 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. Three semester hours credit.
- 631 **Seminar in Personal and Family Finance** **On Demand**
 A concentrated, intensive study in the area of personal economic education. Topics covered include financial planning, consumer buying, housing, taxes, insurance, social security, consumer credit, money and banking, and investments. Lectures by experts in each of these areas will be utilized. Attention will be devoted to both personal and professional application. Two semester hours credit.

CHEMISTRY

The Department of Chemistry 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, Earth Sciences, and Physics cooperate in offering an area major in general science leading to the degree Master of Science in Education. (A bulletin describing the details of the chemistry Graduate Program is available from the department on request.)

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 eleven semester hours from the 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 on page 42.

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.

- a. The candidate shall meet the chemistry, physics, and mathematics requirements for the B. S. degree in chemistry at Northern Illinois University.
- b. A minimum requirement is sixteen semester hours in chemistry. The remaining sixteen hours are to be chosen from chemistry and/or closely related fields after consultation with the adviser.
- c. The candidate must pass a reading examination of German or Russian.
- d. Examinations will be administered prior to registration for the purpose of aiding the adviser in the preparation of a course of study for the candidate and counseling the candidate as to the advisability of continuing in the program for the M. S. degree.

Certificate of Advanced Study

The certificate of advanced study may be awarded to students pursuing programs in either chemistry or 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 head or heads or by the assigned adviser.

The program of courses to be taken will be drawn up with consideration being given to the student's interests and background.

Description of Courses

- | | | |
|-----|--|------------------|
| 401 | Advanced Principles of Chemistry | On Demand |
| | A study of fundamental particles, atomic structure, electronic configuration, periodic system, chemical bond, elementary organic and biochemistry. For secondary teachers. Not open to chemistry majors for credit.
Prerequisite: One year of college chemistry.
Four semester hours credit. | |
| 402 | Advanced Principles of Chemistry | On Demand |
| | Energy relations in chemistry, chemical equilibrium, oxidation-reduction, acids and bases, complex ions. Methods of chemical separation and measurement. For secondary teachers. Not open to chemistry majors for credit.
Prerequisite: Course 401.
Four semester hours credit. | |
| 405 | History of Science
(Also listed as Physics 405) | II |
| | Development of physical science from the beginning of recorded history to the present time. Significant past stages and present trends emphasized.
Two semester hours credit. | |

- 406 **Biography of Famous Scientists** II
(Also listed as Physics 406)
Work and personal characteristics of famous scientists. Oral and written reports.
Two semester hours credit.
- 408 **Chemical Literature** On Demand
The use of the chemical literature.
Prerequisites: Course 331 and one year of college German or equivalent.
Two semester hours credit.
- 409 **Science Institute for In-Service Elementary Teachers** On Demand
(Also listed as Physics 409)
Subject matter material in biological sciences, chemistry, earth sciences, and physics necessary for effective science teaching in the lower grades.
One to eight semester hours credit.
- 410 **Inorganic Preparations** On Demand
Application of fundamental principles in inorganic chemistry. Preparation and purification of selected inorganic compounds.
Prerequisite: Course 420 or equivalent.
Three semester hours credit.
- 411 **Inorganic Chemistry** On Demand
The study of advanced concepts of inorganic chemistry and deeper study of the reactions of the more familiar elements and their compounds; correlation of structures and properties.
Prerequisite: Course 440.
Three semester hours credit.
- 420 **Quantitative Analysis** I
Principles and practices of gravimetric and volumetric analysis.
Prerequisites: Course 211 and Mathematics 220 or equivalent.
Five semester hours credit.
- 421 **Advanced Quantitative Analysis** II
Analyses of limestone and brass. Iodimetry and electrolytic determinations.
Prerequisite: Course 420 or equivalent.
Three semester hours credit.
- 425 **Instrumental Analysis** On Demand
Selected experiments utilizing instrumental techniques. Spectrographic, polarographic, and colorimetric analyses; potentiometric and conductometric titrations; others.
Prerequisite: Course 440 or permission of the instructor. Three semester hours credit.
- 430 **Organic Preparations** On Demand
Synthesis of representative organic compounds by application of fundamental organic reactions.
Prerequisite: Course 331 or equivalent.
Three semester hours credit.

- 432 **Qualitative Organic Analysis** On Demand
Organic group reactions. Identification of organic compounds and mixtures by characteristic reactions.
Prerequisite: Course 331 or equivalent.
Three semester hours credit.
- 435 **Biological Chemistry** II
Chemistry of biological processes.
Prerequisite: Course 331 or equivalent.
Four semester hours credit.
- 436 **Advanced Biological Chemistry** On Demand
Detailed study of the intermediary metabolism of certain classes of biologically important compounds.
Prerequisite: Course 435.
Two semester hours credit.
- 437 **Advanced Biochemical Techniques** On Demand
Theory and practice in the use of current biochemical techniques such as microbiological assays, chromatographic techniques, use of radio-isotopes in biological systems.
Prerequisite: Course 435.
Three semester hours credit.
- 440 **Physical Chemistry** II
Study of the gaseous, liquid and solid states, elementary thermodynamics, solutions, chemical equilibrium I.
Prerequisite: Course 420, Mathematics 320, and Physics 250.
Five semester hours credit.
- 441 **Physical Chemistry** I
Thermodynamics, chemical equilibrium II, Kinetics, electrochemistry.
Prerequisite: Course 440 and Physics 251.
Three semester hours credit.
- 442 **Introduction to Radiochemistry** On Demand
Nuclear and isotopic chemistry. Properties, use of radioactive isotopes, health hazards and protection. Application to chemical problems. Detection equipment.
Prerequisite: Course 440 or permission of instructor.
Two semester hours credit.
- 443 **Radiochemistry Laboratory** On Demand
Fundamental counting techniques. Tracer techniques.
Prerequisite: Course 442 or concurrent registration.
Two semester hours credit.

- 490 **Science in the Public Schools** I or II
 (Also listed as **Physics 490**)
 (For teachers, supervisors, and administrators in elementary and junior high schools). Objectives and problems of science teaching in elementary and junior high schools. Principles and applications of science illustrated by simple apparatus constructed by members of the class. (Not open to Physics or Chemistry majors or minors.)
 Prerequisite: Course 110 or Physics 150 or equivalent.
 Three semester hours credit.
- 499 **Teaching of Physical Sciences** I
 (Also listed as **Physics 499**) I
 Objectives of the teaching of the physical sciences in the secondary schools. Classroom and laboratory problems confronting the secondary school teacher.
 Prerequisite: Physics, Chemistry, or General Science major.
 Two semester hours credit.
- 500 **Chemistry for Teachers of General Science** On Demand
 Chemistry for graduate students majoring in general science. Topics selected to furnish background in chemistry for science teaching and advanced study. Lectures, discussion, problems, and laboratory work. Not open to chemistry majors.
 Four semester hours credit.
- 505 **Institute of Chemistry and Physics for High School Teachers of Science** Summer Session
 Emphasis placed on fundamentals of chemistry and physics. Includes field trips, lectures by visiting scientists, and laboratory work designed to meet needs of the student. Open only to persons with three or more years of experience in high school science teaching.
 Eight semester hours credit.
- 506 **Summer Institute for Science Teachers**
 Subject matter in chemistry and topics in physics related to chemistry. Includes lectures, discussions, demonstrations, laboratory work, field trips, and visiting lecturers. Open only to persons with three or more years of teaching experience in high school or junior high school science. Level of material is more advanced than in course 505.
 Eight semester hours credit.
- 510 **Advanced Inorganic Chemistry** On Demand
 Continuation of Course 411.
 Prerequisite: Course 411.
 Two semester hours credit.
- 511 **Chemistry of the Less Familiar Elements** On Demand
 Reactions and properties of the less familiar elements and their compounds; correlation of structures and properties. Application of advanced concepts of inorganic chemistry.
 Prerequisite: Course 411.
 Two semester hours credit.

- 512 Advanced Inorganic Preparations** **On Demand**
 Instruction in advanced techniques.
 Prerequisites: Courses 410 and 411.
 Two to four semester hours credit.
- *515 Chemistry Seminar** **On Demand**
 Discussion of selected topics in chemistry under staff supervision.
 Prerequisite: A minor in chemistry or equivalent.
 One semester hour credit.
- 522 Newer Methods of Quantitative Analysis** **On Demand**
 Introduction to newer reagents and techniques of quantitative analysis.
 Prerequisite: Course 421.
 Two semester hours credit.
- 530 Advanced Organic Chemistry** **On Demand**
 Survey of field of organic chemistry including limitations of generalized group reactions.
 Prerequisite: Course 331 or equivalent.
 Three semester hours credit.
- 531 Theoretical Organic Chemistry** **On Demand**
 The theory of the mechanism of organic reactions, molecular rearrangements; isomerism and stereochemistry.
 Prerequisite: Course 331 or equivalent.
 Three semester hours credit.
- 537 Introduction to Enzyme Chemistry** **On Demand**
 Study of the properties, isolation, activity, and theory of the mechanism of action of enzymes. Laboratory work included.
 Prerequisites: Courses 435, 440, and 441.
 Three semester hours credit.
- 541 Chemical Thermodynamics** **On Demand**
 Fundamental laws of thermodynamics and application to chemical problems. Calculation of thermodynamics quantities.
 Prerequisite: Course 441.
 Two semester hours credit.
- 542 Kinetics** **On Demand**
 Velocity of chemical reactions and the theory of rate processes. Catalysis and photochemistry.
 Prerequisite: Course 441.
 Two semester hours credit.
- 543 Advanced Physical Chemistry I** **On Demand**
 Nature of the chemical bond, elementary quantum theory, absorption spectra.
 Prerequisite: Course 441 and preferably Mathematics 420.
 Three semester hours credit.

*Course may be repeated to a maximum of four semester hours credit.

- 544 **Electrochemistry** On Demand
 Properties of electrolytic solutions. Conductivity. Electrode potentials and EMF. Application of thermodynamics.
 Prerequisite: Course 441.
 Two semester hours credit.
- 547 **Quantum Chemistry** On Demand
 Introduction to quantum mechanics and its application to chemical problems.
 Prerequisite: Course 441.
 Two semester hours credit.
- 590 **Physical Science for Elementary Teachers** On Demand
 (Also listed as Physics 590)
 Principles and applications of physical science illustrated by simple apparatus constructed by members of class. Satisfies requirements for Education 584. (Not open to chemistry majors or minors.)
 Two to five semester hours credit.
- 591 **Physical Science for Elementary Teachers** On Demand
 (Also listed as Physics 591)
 A continuation of Course 590. (Not open to chemistry majors and minors.)
 One to three semester hours credit.
- *600 **A,B,C,D,E Special Topics in Chemistry**
 A—Inorganic; B—Analytical; C—Organic; D—Physical; E—Biological
 Lectures, discussions and reports on topics of special interest in a particular field of chemistry.
 Prerequisite: Permission of instructor.
 One to three semester hours credit as scheduled.
- *619 **Research** I, II
 Individual study of a problem in experimental work under the supervision of appointed staff member.
 Prerequisite: Permission of the instructor involved.
 One to eight semester hours credit.

*May be repeated for additional credit to a maximum of three semester hours under each designation.

**May be repeated for additional credit to a maximum of eight semester hours toward the M.S. degree. An additional eight semester hours may be earned toward the C.A.S.

EARTH SCIENCES

The Department of Earth Sciences 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, in Geology, or in Earth Sciences; and, at the sixth year level, a program leading to the Certificate of Advanced Study. The Departments of Biological Sciences, Chemistry, Earth Sciences, 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

Students who elect a major in the earth sciences toward the degree Master of Science in Education must satisfy the following course requirements in earth sciences.*

- a. Courses 452, 542, 557, and 570, 667 or 668.
- b. Eight additional semester hours of credit from courses offered on the 400, 500, or 600 levels.

MAJOR IN GENERAL SCIENCE

Students who elect an area major in general science will find the requirements listed on page 42.

Master of Science

MAJOR IN GEOGRAPHY

Students who elect a major in geography leading to the Master of Science degree must satisfy the following requirements. Thirty-two semester hours of graduate credit will be required, with at least twenty semester hours from the major field. The courses to be taken will be selected with the advice of the faculty adviser or advisory committee. A candidate for this degree will meet the academic requirements of a comprehensive oral examination, and will write a master's qualifying paper. Admission to the program will be by consent of a faculty advisory committee.

MAJOR IN GEOLOGY

Students who elect a major in geology leading to the Master of Science degree must satisfy the following requirements. Thirty-two semester hours of graduate credit will be required, with at least twenty-four semester hours from the major field. The courses to be taken will be selected with the advice of the faculty adviser or advisory committee. A candidate for this degree will meet the academic requirements of a comprehensive examination, and will write a master's qualifying paper. Admission to the program will be by consent of a faculty advisory committee.

MAJOR IN EARTH SCIENCES

Students who elect a major in earth sciences leading to the Master of Science degree must satisfy the following requirements: Thirty-two semester hours of graduate credit will be required, with at least twenty-four semester hours from the major field. The courses to be taken will be selected with the advice of the faculty adviser or advisory committee. A candidate for this degree will meet the academic requirements of comprehensive examinations and will write a master's qualifying paper. Admission to the program will be by consent of a faculty advisory committee.

*Graduate students not majoring in Earth Sciences may elect graduate courses offered in this major if they meet the prerequisites listed or show credit for Earth Sciences 520.

Certificate of Advanced Study

Candidates for the Certificate of Advanced Study in the area of earth sciences should consult with the Head of the Department.

Description of Courses

Earth Science and Meteorology

- 429 **Field Geology** **Summer Session**
A study of rocks and minerals and the origin with development of local landforms. The course is designed for teachers and laymen. Prerequisite: Permission of instructor.
One to three semester hours credit.
- 439 **Aviation Institute** **Summer Session**
A study of the relations of aviation and space developments to the earth sciences. Basic principles of flight, navigation, meteorology, air traffic control, and airport facilities are investigated. Flight experiences and field trips to commercial and military bases are required. Designed to meet some aviation education needs of elementary and secondary school teachers. Four weeks, full time.
Prerequisites: Junior, senior, or graduate standing.
Four semester hours credit.
- 448 **Meteorology for Secondary School Science Teachers** **II and Summer Session**
A course designed to introduce the secondary school science teacher to some of the basic principles of meteorology such as physical principles governing the atmosphere, weather systems, clouds, and instruments.
Three semester hours credit.
- 449 **Earth Sciences Teaching Procedures in the Elementary and Secondary School** **I**
A study of teaching materials and procedures from the areas of geology and geography in the elementary and secondary school curricula.
Three semester hours credit.
- 453 **Regional Problems in Conservation** **I, II, and Summer Session**
This is a study of the social or human elements in conservation practices as they are related to the scientific aspects of natural resources conservation.
Three semester hours credit.
- 460 **General Research Methods in the Earth Sciences** **II and Summer Session**
A general research course covering the following: definition of research; scientific methods, technical, logical, and quantitative methods and techniques.
Two semester hours credit.
- 465 **Field Mapping and Techniques in Geography** **II and Summer Session**
A study is made of field observations, techniques, record taking, mapping, photographing, and interpreting the geography of a local area.
Two semester hours credit.

- 505 **Institute of Science for High School Teachers of Earth Sciences and General Science** Summer Session
 Emphasis placed upon new information in the fields and upon the interrelationships between the earth sciences usable in the secondary school. Includes field trips, lectures by visiting scientists, and individual student projects.
 Prerequisite: Teaching experience in science.
 One to eight semester hours credit.
- *520 **Earth Science for Public School Teachers** Summer Session
 A study of the principles and applications of earth science by means of discussion and student reports which are usable in the elementary and secondary schools. Course satisfies requirements for Education 584.
 Three semester hours credit.
- 543 **Climatology** II and Summer Session
 A study of the statistical data dealing with past and present climatic elements. This study is based on world-wide information.
 Prerequisite: Course 243 or 248 or permission of Instructor.
 Three semester hours credit.
- 545 **Matter and Energy Relations in Space** II and Summer Session
 A descriptive study of matter and energy in space; a ratio and proportion study of the causal relations between physical and chemical properties and of the forces which bring about changes in our universe.
 Recommended as a free elective.
 Three semester hours credit.
- 547 **Oceanography** I and Summer Session
 Describing and relating the information from the various marine sciences in the study of the chemical, physical, and biological nature of the world's oceans.
 Three semester hours credit.
- *557 **Survey of Literature in the Earth Sciences** I, II, and Summer Session
 Individual reading is directed to those phases of literature which are needed for critical thinking in earth sciences.
 One or three semester hours credit.
- 560 **Procedures and Techniques in Reporting of Research in the Earth Sciences** I and Summer Session
 Designed to prepare earth science graduate students in the procedures and techniques for reporting the results of original investigations.
 Prerequisites: Eligibility to do graduate research in the Earth Science Department.
 Two semester hours credit.

*This course or its equivalent will meet prerequisite requirements for graduate courses in the earth science major.

**May be repeated. A limit of six semester hours may be earned.

- °°570 **Special Problems in Earth Sciences** I, II, and Summer Session
Independent study of problems as made under the supervision of adviser appointed by the department head. Writing of qualifying paper will be a part of work.
One to three semester hours credit.
- °°670 **Independent Research in Geology or Geography** On Demand
Individual investigation of special problems in the fields of either geology or geography under supervision of one or more staff members. Prerequisite: Twenty-two hours of graduate work in the earth sciences.
One to three semester hours credit.

Geography

- 450 **Geography of Illinois** I and Summer Session
An intensive regional study of the state. Also treats the relationship and significance of various regions to each other and to the whole United States.
Two semester hours credit.
- 451 **Political Geography** II
Relating of the physical and social environments of human groups with the political character of the state or nation to which they belong and in which they live. This is a world survey of political geography.
Prerequisite: Course 101 or equivalent.
Three semester hours credit.
- 452 **Advanced Economic Geography** I
Investigation and analysis of special problems dealing with the areal differentiation of the earth's economic life as reflected in the production, movement, and consumption of raw materials, agricultural products, and commodities of industry in national and international trade.
Three semester hours credit.
- 455 **Cartography and Graphics** I
The principles of map construction, techniques of map drawing, reproduction of maps and charts and kinds of materials capable of map presentation in their most effective form.
Two double laboratory periods.
Two semester hours credit.
- 458 **Geography of U.S.S.R.** II
Study based on both a topical and regional approach. An attempt is made to obtain an accurate appraisal of the natural resources base of Russia as well as an estimate of her industrial and agricultural strength.
Prerequisite: Course 101 or equivalent.
Three semester hours credit.

°°May be repeated. A limit of six semester hours may be earned.

- 162 **Urban Geography** **II**
 An application of geography to the interpretation of urban settlement. Deals with the nucleated settlement in regard to its structure, functional base, and as a regional center.
 Two semester hours credit.
- 350 **Vegetation Regions of the World** **II and Summer Session**
 A study of plant physiognomy on an ecologic basis, including climatic, edaphic, and cultural factors that condition vegetation patterns and transitions.
 Prerequisite: Permission of instructor.
 Three semester hours credit.
- 652 **Seminar in Commercial Geography** **I**
 An investigation and analysis of the structure and patterns of world trade with particular reference to commodities, transport means, and transit and terminal facilities.
 Three semester hours credit.
- 657 **Advanced Studies in Geography** **On Demand**
 A seminar devoted to the investigation and analysis of some geographic implications of world current events.
 Prerequisite: Twenty-two hours graduate work in the earth sciences.
 Two semester hours credit.
- *667 **Seminar in Regional Geography** **On Demand**
 Topics pertaining to the nature of the geographic region will be discussed, and students will work on problems concerning a particular area of the world.
 Three semester hours credit.

Geology

- 400 **Sedimentology** **I and Summer Session**
 A quantitative analysis of the properties of sediments and sediment deposition. Methods of analysis of modern sediments are utilized as a basis for classification in recent and ancient environments.
 Prerequisites: Courses 241, 246, Mathematics 220, or equivalents.
 Four semester hours credit.
- 440 **Optical Mineralogy** **II**
 A study of the optical, chemical, and physical properties of rocks and minerals. Emphasis is placed on the critical use of the microscope in the identification of rock minerals. Two lectures, two two-hour laboratories.
 Prerequisite: Courses 241, 246, and Math. 221.
 Four semester hours credit.

*May be repeated once.

- 444 **Economic Geology (Metallic Minerals)** **II**
 Study of the nature, origin, and accepted refinement methods of the metallic minerals reserves of the world. Special reference given to their recovery costs and problems. Classroom work supplemented by hand study of the representative specimens and by field observations.
 Prerequisite: Course 240 or equivalent.
 Two semester hours credit.
- 445 **Economic Geology (Non-Metallic Minerals)** **II**
 Study of the nature, origin, and accepted refinement methods of the non-metallic and fuel mineral reserves of the world. Special reference given to their recovery costs and problems. Classroom work supplemented by hand study of representative specimens and by field observations.
 Prerequisite: Course 240 or equivalent.
 Two semester hours credit.
- 446 **Advanced Geologic Principles.**
 Graduate-undergraduate seminar in advanced principles of physical and historical geology. Stresses the use of geologic principles in the solving of current field and theoretical problems in geology.
 Prerequisite: Senior standing in the department.
 (Field trips required.)
 Three semester hours credit.
- 490 **Field Methods** **I**
 This course is designed to give the student practical experience in the interpretation and construction of specialized geologic maps and in the analysis of descriptive structural geology problems. Surveying and basic geophysical methods will be discussed. Two one-hour lectures. One field trip.
 Prerequisite: Two years of geology or permission of instructor.
 Two semester hours credit.
- 542 **Geomorphology** **I and Summer Session**
 A study of the origin and development of typical landforms throughout the world. Past landforms and processes of formation are included.
 Prerequisite: Course 341 or 342 or permission of instructor.
 Three semester hours credit.
- 544 **Glacial Geology** **I**
 A detailed study of the origin, development and topographical effects of the Pleistocene period in North America. Implications are made relative to the influence of the Pleistocene glacial deposits of the North Central states in the United States upon the agricultural and industrial activities.
 Prerequisite: Course 346 or equivalent.
 Two semester hours credit.

- 546 **Paleontology (Vertebrate and Invertebrate)** **II and Summer Session**
 A study of the history identification, and ecology of past life forms. This includes plant fossils as well as invertebrate and vertebrate animal forms. Major emphasis is placed on the living conditions of vertebrate animal forms.
 Prerequisite: Course 346 or permission of instructor.
 Three semester hours credit.
- 548 **Regional Stratigraphy** **I**
 Principles and methods of biostratigraphy and their application to problems of classification and correlation of the sedimentary record. Three semester hours credit.
- °668 **Seminar in Special Geologic Topics** **II**
 Topics will be selected from the various phases of geology, and each student will have his own areas of study and analysis to perfect. The entire class will have some responsibility relative to each topic. Three semester hours credit.
- 669 **Advanced Studies in Geology** **On Demand**
 A seminar devoted to the investigation and analysis of some of the geologic implications of current research in the field.
 Prerequisite: Twenty-two hours of graduate work in earth science.
 Two semester hours credit.

*May be repeated. A limit of six semester hours may be earned.

ECONOMICS

The Department of Economics offers graduate courses and research opportunities leading to the degree Master of Arts. The department also cooperates with the departments of History, Political Science, and Sociology and Anthropology in offering an area major in the social sciences and history leading to the Master of Science in Education degree and to the Certificate of Advanced Study. Descriptions of these programs will be found on page 169 under the heading "Social Sciences."

Master of Arts

This program is a basic course of study which combines theoretical, historical, and institutional approaches in the major areas, and additional breadth through the requirement of a minor. A minor of eight hours is required. Students are encouraged to minor in one of the social sciences, in history, in business, or in mathematics, and to include at least one course in statistics. Sixteen hours in economics including two courses in theory and the thesis course are required. The additional eight hours may be taken in fields of the student's choice, in consultation with his adviser. The student must also meet the general University requirement of a comprehensive examination in his final semester. Total for the degree, thirty-two semester hours.

Description of Courses

- 422 **Economic History of the United States**
The evolution and expansion of American economic institutions and processes from colonial times to the twentieth century. Stress will be placed upon environmental factors, strategic location of raw materials, the impact of functional technology, and the transition to finance capitalism.
Three semester hours credit.
- 463 **Comparative Economic Development**
Contemporary economies and their development. Particular emphasis is placed on the development of the economies of the Soviet Union, England, China, India, and the United States. In each case economic development is related to the system in existence (viz., communism, welfare state, private enterprise, etc.).
Prerequisite: Econ. 260. Econ. 363 is desirable but is not required.
Three semester hours credit.
- 464 **Public Finance and Public Education**
Local, state, and national tax systems within the total economy; public debt and fiscal policies; public finance and education in Illinois.
Prerequisite: Econ. 261 or permission of instructor.
Three semester hours credit.
- 465 **Government and Business**
Government in economic life; analysis of why government has undertaken certain activities, especially regulatory; how regulatory commissions function and evaluation of effectiveness of regulation.
Prerequisite: Econ. 260 or Pol. Sci. 240.
Three semester hours credit.
- 466 **History of Economic Thought**
The ideas of economics as they have developed through the centuries, and how these ideas are related to the economic conditions of the times. Main emphasis is given to the classical and more recent schools of thought.
Prerequisite: Econ. 261.
Three semester hours credit.
- 467 **The Cooperative Movement**
Theory of cooperative enterprise; the practice of cooperative techniques in the United States and abroad.
Prerequisite: Econ. 260.
Two semester hours credit.
- 468 **International Economics**
International payments, international economic theory, contemporary economic nationalism, international investment and currency problems, and the commercial policies of the major nations.
Prerequisite: Econ. 261.
Three semester hours credit.

- 469 **Workshop in Economic Education**
This course is designed as an in-service contribution to the work of the Illinois Curriculum Program and the Illinois Council on Economic Education. Especially designed for summer and extension offering. Three semester hours credit.
- 560 **Seminar in Money, Income, and Prices**
The role of money in the level of income, employment, and prices. Relationship between monetary and fiscal policies.
Prerequisite: Consent of instructor.
Three semester hours credit.
- 561 **Local Government's Impact on Economic Activity**
History and types of local government intervention in economic activity: regulation, assistance, public ownership. Co-ordination of the activities of governmental and quasi governmental agencies in these areas. An attempt will be made to analyze the effects of local government activities upon local and area growth.
Three semester hours credit.
- 562 **Business Cycles**
Prosperity-recession-depression-recovery patterns of modern economic society presented against a background of earlier attempts to account for the cyclical character of the economy.
Prerequisite: Econ. 360.
Three semester hours credit.
- 563 **Seminar in Modern Economic Systems**
The economic systems of the United States, Great Britain, the Soviet Union, Fascist Italy, and Nazi Germany. This course stresses the actual operation of the respective economies.
Prerequisite: Econ. 360.
Three semester hours credit.
- 564 **Economic Well-Being and Education**
Public education as an agency of social control and its effect on long run economic welfare. Specific aspects of consumption, savings, distribution, and production influenced by education are dealt with.
Prerequisite: Permission of instructor.
Three semester hours credit.
- 565 **Econometrics**
Measurement of supply and demand functions, consumption functions, production functions, cost curves, and systems of economic relations.
Prerequisites: Econ. 261 and consent of instructor.
Three semester hours credit.
- *566 **Independent Study in Economics** I, II
Individually arranged readings for graduate students to complete requirements in economics and to meet student's needs.
Prerequisite: Econ. 360 and written permission of department head.
Two semester hours credit.

*Course may be repeated for additional credit at post-master's level of study.

- 567 Seminar in Transportation and Public Utilities**
 Research in the fields of transportation and public utilities. Emphasis on current problems of the industries. When taken in connection with the Metropolitan Resource Development program, research will be in the area of the problems facing these agencies in metropolitan areas.
 Prerequisite: Beginning course in economics or government.
 Three semester hours credit.
- 568 Seminar in International Economics**
 Recent development in the theory of international trade and finance. Included are international factor pricing, trade and employment, and international economic cooperation.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 569 Seminar in Trusts and Monopolies**
 History of attempts to control large scale enterprise through government regulation. A substantial amount of individual research is required for this seminar.
 Prerequisite: A beginning course in economics or government.
 Three semester hours credit.
- 570 Thesis**
 Six semester hours credit.
- *671 Seminar in Economic Theory**
 Individual research in those areas of economic theory that meet the needs of the students.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 672 Seminar in Economic Growth**
 An analysis of the causes, mechanisms, and patterns of economic growth, with special emphasis on capital formation.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- *673 Seminar in the History of Economic Thought**
 Studies in the development of economic ideas using original source materials.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- *674 Seminar in Labor Economics and Labor Relations**
 A study of the economics of labor and of labor-management relations, with emphasis upon individual research.
 Prerequisite: Consent of instructor.
 Three semester hours credit.

*Course may be repeated once for additional credit at post-master's level of study.

EDUCATION

*Graduate and Advanced Graduate Study in Education**

The Department of Education offers opportunity for study toward the degree Master of Science in Education (Fifth Year) and the Certificate of Advanced Study (Sixth Year). The departments of Education and Business cooperate in offering an area major in school business management for the degree Master of Science in Education.

Students may major in the following areas:

Fifth Year

Elementary Education

Supervision:

Supervision and Curriculum

Supervision and Coordination of the

Reading Program

Guidance and Counseling

Administration:

Educational Administration

School Business Management

Education as a Field of Study

Sixth Year

Educational Administration:

General Educational Administration

The School Principalship

School Business Management

Elementary Education

Supervision and Curriculum

Education as a Field of Study

THE FIFTH YEAR PROGRAM

Master of Science in Education

Students who elect a major in education toward the degree Master of Science in Education must satisfy the following requirements:

- (a) Successfully complete courses 500, 501^{°°}, 503.
- (b) Develop certain proficiencies in one of the areas of specialization listed below.
- (c) Earn not less than 22 semester hours of credit in the Department of Education.^{°°°}

*For procedures and details of the following programs see "Faculty and Student Handbook for Graduate Work, Department of Education, Northern Illinois University."

^{°°}Students who elect to specialize in the area of Guidance and Counseling or whose undergraduate major was psychology need not take course 501. Students with an undergraduate major in social sciences need not take course 500. Students are responsible for contents of these courses in the departmental comprehensive examination.

Course 500 (except for undergraduate social science majors) and course 501 (except for undergraduate psychology majors) are prerequisite for other graduate courses.

^{°°°}Students who elect an area major including Education will be expected to divide their course work about equally between the two departments.

Areas of Specialization

- I. Elementary Education. Designed to acquaint the elementary school teacher with new research in child development, elementary curriculum, and the guidance of learning. An opportunity to gain increased knowledge in special curriculum areas as needed.
- II. Supervision. Two areas of specialization are recognized in the field of supervision:
 - A. Supervision and Curriculum. Preparation in supervisory techniques, curriculum planning, and improvement of instruction for curriculum coordinators, supervisors of instruction, assistant superintendents in charge of instruction, and others whose duties include responsibility for curriculum improvement.
 - B. Supervision and Coordination of the Reading Program. Preparation for the coordinator of the reading program in both the elementary school and high school. Includes diagnosing and remediation of reading difficulties among individual pupils.
- III. Guidance and Counseling. Designed primarily to prepare the student in guidance and counseling for elementary and secondary schools.

(One academic year of practical experience in personnel work and/or teaching prior to graduation is required. It is recommended that candidates have this experience before enrolling in the Guidance and Counseling program. One year of accumulated wage-earning experience as an adult in occupations other than teaching is also recommended.)
- IV. Administration. Programs of study in two areas of educational administration are offered:
 - A. Educational Administration. Designed to provide the beginning student of educational administration with a broad preparatory base that acquaints the student with the areas of responsibility and their allied areas in the other disciplines.
 - B. School Business Management.* Designed to give the student an understanding of educational administration emphasizing the preparation for the management of business affairs in a school system. The course sequence will be determined through joint advisement by the Department of Business and the Department of Education, based on the previous experience and preparation of the student. A student in this program may expect to devote about one-half of his time to study in business and one-half in education.

(Only students employed in some educational administrative capacity or those with teaching experience are eligible to register for study in school administration. Others must have the approval of a Committee appointed by the Head of the Department of Education.)

*This area of specialization is also listed as a program of study in the Department of Business Administration on p. 50.

- V. Education as a Field of Study (General Education). This is a general sequence in education intended for the college graduate who is interested in increasing his professional competencies in the field of education. Candidates may elect this sequence as a means of obtaining a general background in the field.

Students interested in further preparation and increased competencies for teaching in the secondary school (1) may major in a subject matter field, (2) may elect an area major in a subject matter field and education as described on page 18, or (3) may major in education as a field of study as indicated above in V. The student taking the last election and his adviser in the Department of Education will jointly work out a program in terms of the student's individual needs, backgrounds, and professional goals.

In each of the five areas above, the student will, with the help of his adviser, plan a program which will help him to gain the required proficiencies. Courses in the area of specialization will be recommended after careful consideration of the student's background, interests, and purposes. Field work under university supervision may be utilized to develop proficiencies and may be substituted for course work. Some students, because of acquired proficiencies and experience, may be prepared to work in an area upon fulfillment of minimum requirements. Others, however, may have to undertake study beyond the minimum requirements to attain the necessary background.

THE SIXTH YEAR PROGRAM

Certificate of Advanced Study

A candidate for the Certificate of Advanced Study must:

1. Be admitted to the Graduate School.
2. Apply to the Head of the Department of Education requesting admission to the Certificate of Advanced Study Program. Completed admission forms must be filed with the committee no later than registration day of the term which marks formal admission to the sequence.
3. Confer with an adviser assigned to give counsel during the program. The candidate and sponsor will plan a program of graduate study in accordance with the outline of study recommended by the department.
4. The adviser will submit the program of study to the proper committee for approval. The program of study, admission forms, and other pertinent information will be filed with the Office of the Graduate School.
5. Obtain departmental recommendation to pursue study for this degree.

Candidates in the area of Educational Administration must, in addition:

1. Have a minimum of two years of teaching experience.
2. Have a minimum of two years of acceptable and successful administrative experience or satisfy the requirement of the internship (Education 695A).
3. Have a master's degree in educational administration.
(Candidates who have obtained master's degrees in other fields of study must take Education 533, Education 534, and Education 551, or equivalents, as prerequisites to the Professional Certificate in Educational Administration.)
4. Enroll for full-time study during an eleven-week summer session or during one semester. Twelve semester hours constitutes a full load.

Candidates in the area of Elementary Education must, in addition:

1. Have a minimum of two years of teaching experience.
2. Have a master's degree and/or bachelor's degree in elementary education. Candidates who have both degrees in another area must take Education 514-515 prior to admission to candidacy for the Certificate of Advanced Study in Elementary Education.

Candidates in the area of Supervision and Curriculum must, in addition:

1. Have a minimum of two years of successful classroom teaching experience.
2. Present evidence of two years of appropriate and successful supervisory experience or satisfy the requirement of the internship.
3. Have a master's degree in Supervision and Curriculum. (Candidates who have obtained master's degrees in other fields of Education must take Education 533, Education 534, and Education 551, or equivalents, as deficiency prerequisites to the Certificate in Supervision and Curriculum. Individual consideration will be given to candidates who have obtained masters' degrees in fields of study other than Education.)

Candidates for the Certificate of Advanced Study in Education as a Field of Study must, in addition:

1. Have a master's degree. Candidates who have not had Education 460, Education 500, and Education 501 or their equivalents will be required to complete them in addition to the other course requirements listed below.
2. Have a minimum of two years of successful teaching experience in secondary schools.
3. The candidate must appear before his appointed committee and receive its approval prior to pursuing study for this degree.

Areas of Specialization

1. Educational Administration

- A. General Administration. This sequence, which is designed to prepare students for the school superintendency, includes instruction in the guidance, directorship and coordination of personnel, curriculum, finance, school-community relations, and the school plant.
- B. The School Principalship. This sequence, which is designed to prepare students for the school principalship, includes instruction in the fundamentals of educational organization and administration with an emphasis on the principal's responsibility in the improvement of instruction, and in educational leadership.

2. Elementary Education

Designed for those students who are interested in further study of the child and the elementary school. Its purposes are to help elementary school teachers become skilled in using research and in an area of specialization.

3. Supervision and Curriculum

Designed for those students who wish to continue study in the area of supervision and curriculum with emphasis on the relationship to the behavioral sciences, school-community relations, personnel management, and leadership in education.

4. **School Business Management.**
Designed to afford greater and wider opportunity for those students who are serving as school business managers, to better understand the more specific and detailed aspects of school management work of the medium and larger systems.
5. **Education As a Field of Study**
Designed for those students who are interested in increasing their professional competencies in the field of education. Its primary purpose is to serve the needs of those individuals who desire to increase their effectiveness as classroom teachers or those who plan to enter the field of teacher education.

Description of Courses

- | | | |
|-----|---|----------------|
| 400 | Guiding Young Children in School
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.
Three semester hours credit. | I |
| 408 | Educational Statistics
(Also listed as Mathematics 408)
Frequency distributions, measures of central tendency, measures of variability, percentiles, the normal curve, correlation and regression, reliability of measures, sampling, and analysis of variance. For students who have a need for meaning, interpretation, and application of statistical concepts without rigorous mathematical development.
Prerequisite: Mathematics 120 or equivalent.
Three semester hours credit. | On Demand |
| 410 | Introduction to Outdoor Education
A course to acquaint teachers with the concepts and relationships of the natural environment and child learning which may serve as guides to the teaching procedures in outdoor education. This is to be accomplished through direct laboratory experiences in living, learning, and interpreting in outdoor situations. All teachers in the course will live on the field campus during the school week. The instructional staff will be interdepartmental.
Prerequisite: Student teaching or teaching experience.
Three five-day weeks. Three semester hours credit. | Summer Session |
| 411 | Advanced Techniques of Outdoor Education
An advanced course in outdoor education. The subject matter will be determined by the needs of the teachers who enroll. Such problems as initiating a pilot program, financing the operation, insurance, suitable facilities, proper staffing, providing resources, and training the staff will be considered. This course is geared to meet the needs of superintendents, principals, and teachers who are contemplating the initiation of a program of outdoor education in their own school system.
Prerequisite: Course 410 or comparable experience.
Three five-day weeks. Three semester hours credit. | Summer Session |

- 412 Survey Course in Outdoor Education** **I**
 A course to study the opportunities offered and the physical facilities available for various aspects of outdoor education. This includes the meaning and scope of the outdoor school; historical development; the use of federal, state, and community areas for outdoor experiences; and types of organization used in the public schools in outdoor education.
 Prerequisite: Course 410 or previous experience.
 Two semester hours credit.
- 413 Development, Construction, and Maintenance of Outdoor Education Facilities** **II**
 A course in the development and rehabilitation of year-round outdoor education facilities; problems in land acquisition, including legal aspects, financing, physical features, and acreage; advantages of centralized and decentralized housing units; maintenance problems; health and safety features.
 Two semester hours credit.
- 414 Organization and Administration of Outdoor Programs** **On Demand**
 This course will deal with problems in the initiation of outdoor education for short class periods, day camping, and extended periods of school camping. Problems involving the community, school officials, the teaching staff will be explained. Staff training and follow-up activities will be dealt with as well as legal problems and administration of special services.
 One semester hour credit.
- 417 Arts and Crafts in Outdoor Education** **On Demand**
 A course designed to help teachers develop a program of nature crafts. Involved will be experience in the mounting of all types of specimens, leaf prints, plaster casts, terrariums, natural pottery crafts, and carving.
 One semester hour credit.
- 418 Education of Exceptional Children** **I, II**
 An examination of the special educative needs of exceptional children. A study of methods and programs designed to meet these special needs.
 Prerequisite: Permission of the instructor.
 Three semester hours credit.
- 424 Methods of Secondary School Teaching** **On Demand**
 Modern principles of teaching and learning are studied in relation to the guidance of learning activities in the high school class.
 Three semester hours credit.
- 430 Audio-Visual Education** **I, II**
 The selection, evaluation, and utilization of various audio-visual materials and techniques used in the instructional program. Provides understanding of the operation and maintenance of equipment.
 Three semester hours credit.

- 431 **Workshop in Audio-Visual Education** **On Demand**
 Content determined by experience and needs of enrollees. Emphasis may be on the utilization, construction, or selection of materials or equipment; administration of audio-visual programs, and communications.
 Prerequisite: Permission of the instructor.
 Two to four semester hours credit.
- 433 **Junior High School Organization and Problems** **I**
 A survey of the development of the junior high school program, reason for reorganization, administration problems, program making, co-curricular activities, vocational guidance, student participation in school government, and the junior high school plant.
 Three semester hours credit.
- 435 **Contemporary American Public Education** **I, II**
 An overview of the organization of public education in the United States today, stressing school legislation and a professional point of view of the major aspects of organization and administration of public schools.
 Three semester hours credit.
- 437 **Comparative Education** **II**
 A study of foreign educational systems for the purpose of gaining insights into American education through comparison. Political, economic, social, and cultural aspects will be compared. Europe, the Far East, the Near East, Africa, and Latin America will be considered, but each student will study intensively one area of his choice.
 Three semester hours credit.
- 438 **History of American Education** **I**
 Education in relation to the main currents of American history. A survey of educational issues and practices in the United States from early colonial days to the present time.
 Three semester hours credit.
- 444 **Workshop in Kindergarten Education** **Summer Session**
 Study of materials and procedures for kindergarten, including play materials, science experiences, music activities, art materials, literature, and games. Curriculum and program planning. Provision for individual differences within the program.
 Three semester hours credit.
- 460 **Personnel and Guidance** **I, II**
 Introduction to personnel work in elementary and secondary schools. Recognition of needs for guidance, guidance principles, practices, and their application.
 Three semester hours credit.

- 466 **Diagnosis and Treatment of Reading Difficulties** I, II
 Causes of reading difficulties, their diagnosis and correction. Includes current reading tests.
 Three semester hours credit.
- 482 **Reading in the High School** I
 Nature and organization of the high school reading program. Gives consideration to ways of increasing basic reading competencies. Includes the teaching of reading and the various content fields as well as the improvement of interests and tastes.
 Three semester hours credit.
- 486 **Foundations and Evaluation in Secondary Education** I, II
 Evaluation techniques and the history and philosophies of education. Ten periods a week for the first nine weeks of the semester.
 Prerequisite: Approval of Director of Student Teaching.
 Five semester hours credit.
- 490 **Beginning Student Teaching (Elementary School)** I, II
 The first experience in student teaching for elementary majors with approximately three years of college or more. Experiences in guiding learning for both small and large groups of children.
 Prerequisites: See regulations concerning assignment, p. 00.
 One-half day, nine weeks: three semester hours credit or
 One-half day, eighteen weeks: six semester hours credit or
 Full day, nine weeks: six semester hours credit.
- 491 **Advanced Student Teaching** I, II
 Emphasis on preparation and presentation of major teaching units and full classroom responsibility.
 Prerequisite: Course 490 or equivalent.
 One-half day, nine weeks: three semester hours credit or
 One-half day, eighteen weeks: six semester hours credit or
 Full day, nine weeks: six semester hours credit.
- 492 **Advanced Student Teaching (Elementary School Elective)** I, II
 Provides opportunities to earn additional credit in student teaching for students needing or desiring it. Assignment is made only when facilities permit.
 Prerequisite: Course 491 or equivalent.
 One-half day, nine weeks: three semester hours credit.
- 493 **Student Teaching (Elementary School Special Subjects)** I, II
 Experiences in teaching one of the following fields to children: fine arts, home economics, industrial arts, music, physical education, and speech correction. Required of majors in these areas.
 Prerequisite: Adequate background in the field of choice. Teaching assignments must be arranged through the Student Teaching Office.
 One-fourth day, eighteen weeks: three semester hours credit; or
 one-half day, nine weeks: three semester hours credit.
 Speech rehabilitation center, summer session: credit to be arranged.

- 494 **Student Teaching** I, II
(Elementary School Elective)
 Students majoring in the curricula for high school teachers may elect this course for either the first or an additional opportunity to work with elementary children in any phase or phases of the elementary curriculum, depending upon available facilities. Teaching assignments must be arranged through the Student Teaching Office.
 One-half day, nine weeks: three semester hours credit or
 one-half day, eighteen weeks: six semester hours credit or
 Full day, nine weeks: six semester hours credit.
- 495 **Student Teaching** I, II
(High School Special)
 Offered by special permission to graduate students. Teaching assignments must be arranged through the Student Teaching Office.
 One-half day, eighteen weeks: five semester hours credit or
 Full day, nine weeks: five semester hours credit.
- 496 **Student Teaching** I, II
(Elementary or Secondary School)
Elementary School:
 Nine weeks of full-time student teaching to be taken in the same semester as Education 476 and 477.* Either of the following patterns may be selected:
 (a) Nine weeks of full-time student teaching followed by Education 476 and 477.*
 (b) Education 476 and 477 followed by nine weeks of full-time student teaching.*
 Prerequisite: Approval of Director of Student Teaching.
 Five semester hours credit.
- Secondary School:**
 Nine weeks of full-time student teaching to be taken in the same semester as Education 486. Either of the following patterns may be selected:
 (a) Nine weeks of full-time student teaching followed by Education 486 for five semester hours and, in addition, not more than six semester hours to be elected.
 (b) Education 486 for five semester hours and, in addition, not more than six semester hours to be elected, followed by nine weeks of full-time student teaching.
 Prerequisite: Approval of Director of Student Teaching.
 Five semester hours credit.
- 500 **Social Foundations of Education** I, II
 A study of the social forces that influence the American educational system. Attention is focused on specific aspects of the complex social forces that exert pressures upon our public schools. Students are encouraged to investigate problems of special interest within the scope of the course.
 Three semester hours credit.

*Education 476 and 477 do not carry graduate credit.

- 501 Psychological Foundations of Education** **I, II**
 A study of the broad fields of psychology as they relate to and provide foundations for educational practice. The course includes 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. Three semester hours credit.
- 502 The Teaching of Arithmetic in the Elementary School** **II**
 (Also listed as Mathematics 502)
 Consideration of the implications of research for methods of teaching, and the selection and arrangement of concepts and materials. Prerequisite: Mathematics 400 or equivalent or teaching experience. Three semester hours credit.
- 503 Master's Qualifying Paper** **I, II, and Summer Session**
 A seminar and individual instruction to provide necessary research skills and guidance for writing the qualifying paper, followed by library and/or field research under supervision of graduate faculty members. Two semester hours credit. (May be taken in one-hour units.)
- 509 Supervision and Administration of the Music Program** **On Demand**
 (Also listed as Music 509)
 Functions and techniques of music supervision; problems of music consultants; in-service training in music for classroom teachers; administration of school music programs. Three semester hours credit.
- 510 Methods of Evaluation** **II**
 Emphasis on modern concepts of evaluation; construction and validation of evaluative instruments; use of standardized tests and scales; and procedures of evaluating relatively intangible outcomes. Three semester hours credit.
- 511 Understanding and Guiding the Elementary School Child** **Summer Session**
 Study of advanced child development and the role of the teacher in the daily guidance of children. Emphasis on the practical application of child development principles to specific classroom procedures and to the selection of appropriate curriculum experiences. Valuable for educational leaders as well as classroom teachers. Laboratory experiences and group work within the scheduled class period. Six semester hours credit.
- 512 The Elementary School Curriculum** **II**
 A study of basic principles in the construction and administration of modern school curricula, the relation of the curriculum to society, and present practices in the schools. Two semester hours credit.

- 513 Problems in Elementary Education** **On Demand**
 A seminar requiring individual investigations of problems in elementary education culminating in a research project.
 Two semester hours credit.
- 514 Seminar in Elementary Education** **I, II**
 The use of theory in the analysis and interpretation of teaching-learning situations, as observed or recorded from elementary classrooms, kindergarten through sixth grade. Particular attention will be paid 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. Taken concurrently with Education 515.
 Prerequisite: Courses 500, 501, 603, 533.
 Three semester hours credit.
- 515 The Teacher in the Elementary School** **I, II**
 A practicum in elementary education based on teaching-learning situations. Emphasis is directed to the examination of these situations as they suggest means for the improvement of instruction. Taken concurrently with Education 514.
 Prerequisite: Courses 500, 501, 603, 533.
 Two semester hours credit.
- 521 Seminar in Adolescent Behavior** **I, II**
 An analysis of research dealing with the nature of adolescence and the implications of such for the classroom teacher.
 Three semester hours credit.
- 523 Seminar in Secondary Education** **I, II**
 A seminar concerned with professional and classroom problems of secondary schoolteachers.
 Three semester hours credit.
- 530 The Junior College** **I**
 The development of the junior college movement; its present status, purposes, functions, organization and curriculum; and the characteristics of the emerging community college.
 Three semester hours credit.
- 533 Curriculum Theory** **I**
 A study of the assumptions underlying current curriculum proposals. Curriculum theory will be formulated in order to make decisions about such selected questions as what, how, and who shall be taught and how this teaching may be organized and evaluated.
 Three semester hours credit.
- 534 Improvement of Instruction** **II**
 An investigation and analysis of common problems in teaching. Consideration will be given to the principles which apply at all levels of instruction.
 Two semester hours credit.

- 541 The Improvement of Instructional Programs** **II**
 Analysis of supervisory functions, methods, and responsibilities of those who assume educational leadership. Major emphasis is given to the process of planning and directing the functions of the educational staff, evaluating physical and human resources toward the improvement of instructional programs, and improvement of in-service programs.
 Three semester hours credit.
- 542 Fundamentals of Curriculum Development** **I**
 Application of principles and procedures to the development of educational programs in elementary and secondary schools. Particular attention given to the analysis of curriculum materials.
 Three semester hours credit.
- 543 Problems in Curriculum Development** **II**
 Students are required to undertake a major curriculum construction project, to be utilized within a school system or published in pamphlet or article form. School systems are encouraged to send teams of students to develop new or revised curricula.
 Two semester hours credit.
- 551 School Organization and Administration** **I, II**
 A basic course in organization and administration. Develops a philosophy for school administration and understanding of the following areas of school administration: curricula, pupil administration, supervision, public relations, finance, executive efficiency.
 Three semester hours credit.
- 553 Problems in School Administration** **II**
 A seminar requiring individual investigation of fundamental problems in school administration and school business management culminating in a research paper. Problems will be based largely on past or anticipated experience of the students.
 Prerequisite: Courses 551 and 552 or permission of instructor.
 Three semester hours credit.
- 556 School Organization and Administration for Teachers** **Summer Session**
 Emphasis on the development of insight into the role of the teacher in organizational and administrative problems of the school.
 Two semester hours credit.
- 559 Seminar—Nature and Theory of Administration** **II**
 Inquiry into the nature of the school administrative process. Discussion of administration in terms of principles. Research, study, and analysis of the latest thought in the areas of administration. Emphasis will be on the basic concepts rather than practices.
 Prerequisite: Course 553 or permission of the instructor.
 Three semester hours credit.

- 561 The Teacher's Role in Personnel Work II**
 Study of the need for personnel work, including guidance, of ways of meeting needs of elementary and high school pupils by the classroom or homeroom teacher, or specialized services to which teachers may refer individuals needing help.
 Two semester hours credit.
- 562A Counseling Techniques, Theory and Practice I**
 An introduction to counseling theory and practice, with emphasis on interview techniques.
 Two semester hours credit.
- 562B Counseling Techniques, Theory and Practice II**
 Continuation of 562A with more emphasis upon the practical phase.
 Prerequisite: Course 562A and consent of instructor.
 Two semester hours credit.
- 563 Educational and Psychological Measurement II**
 An introductory course dealing with the essential principles of measurement and basic statistical concepts needed for the understanding and use of tests and other measures in educational personnel work. Topics include statistics as applied to educational personnel work, a study of achievement and special aptitude tests, interest and personality inventories, and other measures. Experience in administering, scoring, and interpreting tests is provided.
 Three semester hours credit.
- 564 Techniques in Student Personnel Work II**
 The use of various techniques in educational personnel work. Rating scales, records, autobiographies, anecdotes, sociograms, case studies, and other techniques are studied. Consideration is given to the use of interviews and tests. Emphasis on testing and interviewing is found in other courses.
 Prerequisite: Course 460 and permission of instructor. (Course 563 is strongly recommended.)
 Two semester hours credit.
- 566 Clinical Problems in Teaching Reading Summer Session**
 A practicum providing clinical experience in making diagnosis of reading difficulties. Also involves the application of remedial procedures with selected individual cases.
 Prerequisite: Course 466, Student Teaching, or equivalent.
 Three semester hours credit.
- 567 Information in Guidance II**
 How to obtain, evaluate, and organize materials of occupational, educational, personal and social information. How to use these informational materials in the counseling and group guidance processes.
 Prerequisite: Course 460 or equivalent.
 Three semester hours credit.

- 566 **Guidance in Elementary Education** **I**
 A course dealing with principles and methods and practical problems pertinent to the elementary school. Recognition of early remedial problems in reading and behavior. Emphasis on the use and importance of anecdotal personal data records, parent and teacher interviews and interpretation for referrals. Planning programs for individual pupils with teachers is stressed.
 Two semester hours credit.
- 571 **Organization and Administration of Guidance Services** **II**
 A study of the function, basic elements and effective organization of pupil personnel services. Problems in activating, organizing, and administering personnel services; selection and education of the staff; evaluating the services; utilizing community resources; developing records are considered.
 Prerequisite: Course 460 or consent of the instructor.
 Two semester hours credit.
- 572 **School-Community Relations** **I, II**
 Stress is placed on the responsibility of the school to offer leadership and interpret home-school-community relationships. Consideration is given to the task of surveying and utilizing community resources, studying promising programs and practices, and evaluating educational criticism.
 Three semester hours credit.
- 576 **Clinical Diagnosis of Reading Difficulties** **On Demand**
 Emphasizes case study techniques in the diagnosis of reading problems. Provides for the administration of various formal and informal tests and the interpretation of the test results. Involves making case studies, followed by the preparation of case reports.
 Prerequisite: Course 466 or equivalent.
 Three semester hours credit.
- 580 **Seminar in Guidance and Counseling** **I, II**
 Selected problems in guidance and counseling with emphasis on current issues and individual problems.
 Prerequisite: Minimum of 12 graduate semester hours in guidance and/or permission of instructor.
 Three semester hours credit.
- 581 **The Teaching of Reading in the Elementary School** **II**
 The developmental reading program in the elementary grades. Considers criteria for a desirable reading program in the elementary school. Also gives some consideration to the individualized reading program.
 Three semester hours credit.

- 582 History of European Educational Thought** **I, II**
 Ideas of European philosophers of education who have influenced Western civilization. An examination of such sources as Plato, Aristotle, Comenius, Locke, Rousseau, Pestalozzi, Froebel, Herbart, and others.
 Three semester hours credit.
- 583 Social Learnings in the Elementary School** **On Demand**
 Principles and procedures in the development of social experiences. Child growth and development, democratic values and processes, actual life situations and common life problems are stressed.
 One to three semester hours credit.
- 584 The Teaching of Science in the Elementary School** **On Demand**
 A consideration of techniques used in selecting and providing experiences in elementary school science; includes the study of equipment and materials suitable for elementary school students.
 One to three semester hours credit.
- 585 Teaching Language Arts in the Elementary School** **Summer Session**
 A study of recent trends, materials, principles and methods in the teaching of language arts in the elementary school.
 One to three semester hours credit.
- 586 Related Arts in the Elementary School** **On Demand**
 The functions of the arts in the total elementary school program; an analysis of contemporary trends in the teaching of art, industrial arts, home economics, music, dance, and literature.
 One to three semester hours credit.
- 587 Problems in Audio-Visual Education** **II**
 Individual projects and research in selection and utilization of audio-visual materials and equipment; unit costs, evaluation procedures, and setting up and administering an audio-visual program.
 Prerequisite: Course 430 or permission of instructor.
 Three semester hours credit.
- 588 Corrective Reading in the Elementary School** **Summer Session**
 A course providing an opportunity for graduate students to obtain experiences in applying corrective procedures in teaching the less severe reading disability cases among elementary school children. Involves supervised laboratory practice as well as some classroom study.
 Prerequisite: Course 466 or equivalent.
 Three semester hours credit.

- 589 Corrective Reading in High School Summer Session**
 A course designed to acquaint qualified students with corrective procedures appropriate for the less severe reading disability cases in secondary schools. Involves both an investigation of classroom corrective procedures and the application of these procedures in teaching secondary school students. Attention will also be given to the use of the more recently developed visual aids used in the teaching of reading.
 Prerequisite: Course 482 or equivalent.
 Three semester hours credit.
- 590 Counseling and Guidance Training Institute Summer Session**
 A concentrated institute offered to improve the qualifications of (1) personnel engaged in counseling and guidance of students in secondary schools and/or (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.
 Nine semester hours credit.
- 591 Techniques of Educational Measurement—Applied Statistics I or II**
 Concepts of statistics and measurement as applied to practical school problems. Uses and misuses of measurement.
 Two semester hours credit.
- 592 Philosophical Analysis of Educational Thought I, II**
 Development of methods for systematic examination of assumptions and premises underlying trends in philosophies of education. An analysis of leading conceptual patterns used in interpretations of aims, values, and organizations of education.
 Three semester hours credit.
- 593 Supervision of Student Teachers Summer Session**
 A course designed 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 should bring out a number of valuable techniques in supervising, directing, and evaluating the experience of the student teacher.
 Prerequisite: Permission of the instructor.
 Three semester hours credit.
- 595B Internship I, II**
 An opportunity for those actively engaged in supervisory work to study under the guidance of the university instructor. Individual observation and conferences and a number of Saturday meetings to consider common problems will be provided. Anecdotal records and other materials will be analyzed and evaluated.
 Prerequisite: Courses 543 and 593 and permission of the Student Teaching Office.
 Credit to be arranged.

- 599 **Reading Institute** **Summer Session**
 Reading problems in the elementary, junior high, and senior high school. Basic reading problems presented by guest instructors and regular staff members. An intensive course for one or two weeks.
 Prerequisite: Permission of the instructor.
 One to two semester hours credit.
- 602 **Methods and Techniques of Research** **On Demand**
 A study of the types, devices, and techniques of education research, with attention to the needs of both the consumer and producer of research.
 Two semester hours credit.
- 603 **Independent Research in Education** **I, II, and Summer Session**
 Individual research projects in education under the supervision of graduate faculty members.
 One to three semester hours credit. May be repeated to a maximum of six semester hours credit.
- 605 **Experimental Research** **I, II**
 The purpose of this course is: (1) to develop an understanding of how to set up experimental research, and (2) to conduct an experimental research project. It is recommended that the project be conducted in the student's own teaching situation under the direction of the adviser with the approval of his own school administration.
 Prerequisite: Sixth year standing. Three credits of this course are taken co-requisite with Course 611 and three credits are taken co-requisite with Course 612.
 Three semester hours credit. May be repeated to a total of six semester hours credit.
- 611 **Advanced Child Study** **I, II**
 An advanced course in the scientific study of individual children and groups of children. Emphasis is placed on diagnosis of the matrix of the child's environment and application of principles of child development.
 Co-requisite: Course 605.
 Three semester hours credit.
- 612 **Practicum in Child Study** **I, II**
 A course for those actively engaged in teaching to employ, under guidance, advanced child study principles and techniques. The student will submit a plan of study and will carry out his study under the direction of the instructor.
 Co-requisite: Course 605.
 Three semester hours credit.

- 633 **Seminar in American Educational Thought** I, II
 A critical examination of key ideas leading to the unique educational system in America. An opportunity for advanced students to work intensively with the educational ideas of some leaders in the intellectual history of the United States: Franklin, Jefferson, Mann, Emerson, Whitehead, Dewey, and others.
 Three semester hours credit.
- 651 **The Elementary School Principal** I, II, and Summer Session
 The study of the basic performance patterns of the elementary school principal in the organization and administration of the educational process.
 Prerequisite: Administrative experience or Course 556.
 Two semester hours credit.
- 652 **The Secondary School Principal** I, II, and Summer Session
 Designed for junior high, high school and junior college administrators. Study areas include program construction, staff utilization, pupil records, organizational structures, and plant utilization.
 Two semester hours credit.
- 654 **School Buildings** On Demand
 Problems dealing with school plant planning, the school plant survey, population and utilization studies, and evaluation of existing plant. Laboratory and field work.
 Prerequisites: Course 551 or permission of the instructor. This course is also open, with the permission of the instructor, to students who are members of building planning committees.
 Two semester hours credit.
- 655 **School Finance** On Demand
 Basic educational finance with emphasis on Illinois school finance. Educational budgeting.
 Prerequisites: Course 551 or permission of the instructor.
 Two semester hours credit.
- 656 **School Administration Field Studies** I, II
 Methods of administrative planning in the areas of community background, evaluation of buildings, transportation, scheduling, utilization of staff, and financial analysis.
 Two semester hours credit.
- 657 **Legal Aspects of School Administration** On Demand
 Legal authority, powers, and liability of school personnel. Legal status of public school pupils. Legal control of curriculum, property and finances. Legal character of public school districts and district officers.
 Prerequisites: Course 551 or permission of the instructor.
 Two semester hours credit.

695A Internship

I, II, and Summer

An opportunity for qualified students to work individually or in small groups in a practical school situation under the guidance of a member of the school's administrative staff and the university supervisor. Internships are offered in the areas of elementary teaching, secondary teaching, supervision and curriculum, guidance, school business management, and administration. Graduate students in school business management or in any one of the administrative sequences, engaged in full-time study and with no teaching or administrative experience will be expected to complete the minimum requirements of internship. Assignment only by special arrangement with the Student Teaching Office.
Credit to be arranged.

ENGLISH

The Department of English offers graduate programs leading to the degrees Master of Science in Education and Master of Arts, and to the Certificate of Advanced Study.

Master of Science in Education

Students who elect a graduate major in English toward the degree Master of Science in Education will be expected to do approximately two-thirds of their graduate work in courses prescribed by the Department of English. 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. There are no specific prerequisites for any of the courses in this department. It is advisable, however, for the student to consult with each instructor before enrolling in his class.

Master of Arts

Students who elect a graduate major in English toward the degree Master of Arts must pass a proficiency examination in one of the following languages: French, German, Spanish, Italian, Latin, or Greek. It is recommended that students take all their work in the English Department, but advisers may grant permission for study in other fields.

Comprehensive Examination

All candidates for a master's degree with a major in English will be required to complete satisfactorily a written examination on a list of books selected by the Department of English. This list will be available to each student at the beginning of his candidacy and should be used continuously in preparation for the examination.

Certificate of Advanced Study

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

Description of Courses

NOTE: Graduate students enrolling in "400" courses should check with their adviser to be sure the course does not duplicate work taken at the undergraduate level.

- 400 **Creative Writing** I, II
Practice in developing papers of varying length and character. The class is conducted informally, much of the time being devoted to conferences and to critical evaluation of papers written by the members of the class.
Three semester hours credit.
- 408 **Elizabethan Non-Dramatic Literature** On Demand
The development of Renaissance culture in England as reflected in sonnet cycles, "courtesy books," criticism, fiction, history, essays, and translations. Emphasis on the non-dramatic works of Sidney, Spenser, Shakespeare, and Bacon.
Three semester hours credit.
- 410 **Seventeenth Century English Writers** I
Selected works of such representative writers as Jonson, Bacon, Donne, Herrick, and Herbert, but not including Dryden and Milton.
Three semester hours credit.
- 411 **Neo-Classical English Writers** II
Later seventeenth and early eighteenth century literature, including the works of such representative writers as Dryden, Addison, Swift, and Pope.
Three semester hours credit.
- 450 **Great Books: First Series** On Demand
An opportunity for adult students to read and discuss selected writings from the great minds of the past. Discussions are focused on the human problems dealt with in the works of such authors as Plato, Aristotle, Machiavelli, Smith, Tolstoy, and Marx. Emphasis is on straight thinking through careful reading, constructive criticism, and democratic discussion of ideas.
Two semester hours credit.
- 451 **Great Books: Second Series** On Demand
Continuation of Course 450, with a further examination of Plato and Aristotle, and brief inquiries into such thinkers as Sophocles, Lucretius, Hobbes, Swift, Pascal, Rousseau, Kant, and Mill.
Two semester hours credit.
- 471 **Victorian Prose** I
Main currents of nineteenth century thought as expressed in the writings of Carlyle, Mill, Ruskin, Macaulay, and others whose pronouncements exerted seminal influence.
Three semester hours credit.

- 474 **Victorian Poetry** **II**
 A survey of English poetry from Tennyson to Hardy, with special emphasis upon Tennyson, Browning, Arnold, and Swinburne.
 Two semester hours credit.
- 475 **Modern British Poetry** **II**
 Poetry of leading writers such as Hopkins, Hardy, Yeats, Eliot, Auden, and Thomas, from the point of view of its intrinsic interest and its position in modern literary developments.
 Two semester hours credit.
- 476 **The Continental Novel** **II**
 Trends in European fiction of the nineteenth and twentieth centuries, including such writers as Tolstoy, Turgenev, Dostoyevski, Flaubert, Zola, Mann, and Proust.
 Three semester hours credit.
- 480 **Materials of High School English** **I, II**
 A study of the methods, devices, techniques, and curricular materials useful to the English teacher in the secondary schools of Illinois.
 Prerequisite: Consent of instructor.
 Two semester hours credit.
- 481 **Introduction to Descriptive Grammar** **On Demand**
 A study of the sounds, forms, and structures of contemporary English, intended to acquaint the student with some of the techniques and principles of English linguistics.
 Prerequisite: Course 321 is recommended for background.
 Two semester hours credit.
- 483 **Renaissance Literature** **On Demand**
 A comparative study of works by such continental figures as Petrarch, DaVinci, Erasmus, Cellini, Michelangelo, Montaigne, and Machiavelli.
 Three semester hours credit.
- 485 **English Drama to 1642** **On Demand**
 Miracle and mystery plays, moralities, interludes, imitations of Latin tragedy and comedy, and the plays of such writers as Lyly, Greene, Kyd, Marlowe, Jonson, and Beaumont and Fletcher.
 Two semester hours credit.
- 500 **The Relationship between Society and Literature** **Summer Session**
 A study of literature and the society which produces it. The class will develop four or more core units with considerable emphasis on the materials available in the junior high school.
 Three semester hours credit.

- *501 Independent Study and Research** **I, II**
 Individual research in problems in English and American language and literature, under the supervision of a designated member of the department.
 Prerequisite: Consent of department head.
 Two to four semester hours credit.
- 505 History of Literary Criticism** **On Demand**
 Analytical, judicial, and interpretative functions of criticism considered in their relationship to creative achievement.
 Three semester hours credit.
- 507 Chaucer** **On Demand**
 Detailed readings of Chaucer's principal works, with emphasis on his literary growth and skill in interpreting medieval English life. Intensive study of Chaucer's language.
 Four semester hours credit.
- 513 The Romantic Movement in American Literature** **I**
 Such leading nineteenth century figures as Emerson, Poe, Hawthorne, Lowell, and Melville.
 Three semester hours credit.
- 514 Realism and Naturalism in American Literature** **II**
 Such writers as Whitman, Howells, Twain, James, Crane, Norris, and Dreiser.
 Three semester hours credit.
- 515 American Literature Since 1920** **II**
 Such figures as Lewis, Anderson, Cather, Wolfe, Hemingway, and Faulkner.
 Three semester hours credit.
- 521 Grammar of Modern English** **Summer Session**
 For elementary and high school teachers wishing to develop an understanding of the grammar of English. Emphasis on recent trends in grammar and composition.
 Three semester hours credit.
- 561 Milton** **On Demand**
 Milton's prose and poetry, with emphasis on *Paradise Lost*.
 Three semester hours credit.
- 563 Later Eighteenth Century English Literature** **On Demand**
 Poetry and prose, including such writers as Johnson, Boswell, Goldsmith, Gray, Sterne, and Walpole.
 Three semester hours credit.

*May be repeated. A limit of four semester hours may be earned.

- 570 **The Nineteenth Century English Novel** I
 Concentration on such major figures as Austen, Dickens, Thackeray, Eliot, and Trollope.
 Three semester hours credit.
- 571 **Victorian Prose** On Demand
 Mill, Carlyle, Ruskin, Pater, and others.
 Three semester hours credit.
- 572 **Coleridge and Wordsworth** II
 The philosophy of composition and the practice of these poets, together with revelatory memoirs of the period.
 Three semester hours credit.
- 573 **Shelley and Keats** On Demand
 Emphasis on Shelley as a proponent of political and social reform, with attention to critical opinion regarding this poet. Study of classical, as well as romantic, elements in Keats.
 Three semester hours credit.
- 575 **Studies in Modern Poetry** On Demand
 Intensive readings of selected texts in modern British poetry.
 Two semester hours credit.
- 576 **Studies in the Modern Novel** II
 Intensive reading in selected texts.
 Three semester hours credit.
- 578 **Comparative Medieval Literature** On Demand
 The epic and romantic traditions in Europe, studied through such works as *Chanson de Roland*, *Roman de la Rose*, *Vita Nuova*, *Aucassin and Nicolet*, *Reynard the Fox*, *Tristan and Iseult*, *Parzival*, Provençal lyrics, and the legendary cycles.
 Three semester hours credit.
- 580 **Studies in Shakespeare** On Demand
 Shakespeare's development as a dramatist, studied through representative plays. Consideration of his debt to contemporaries, his use of sources, theories of tragedy, Shakespearean criticism.
 Three semester hours credit.
- 584 **Restoration Drama** On Demand
 A study of the heroic drama, Restoration comedy and farce, classical tragedy, the ballad opera, and the beginnings of middle class theatre.
 Three semester hours credit.

- 586 **Trends in Twentieth Century Drama** On Demand
 An analysis of representative plays of dramatists from Shaw to T. S. Eliot, showing trends in naturalism, realism, romanticism, symbolism, and expressionism. Special attention given to poetic drama. Three semester hours credit.
- °602 **Directed Readings in English** I, II
 A program of library reading and research designed to enable the student to fill in gaps in his previous English studies. The student will be assigned to a supervising instructor in the appropriate field. Periodic quizzes and papers.
 Prerequisite: Consent of department head.
 Two semester hours credit.
- 603 **Bibliography and Methods of Research** Summer Session
 A course designed to acquaint the graduate student with bibliographical resources and research methods.
 Two semester hours credit.

*May be repeated to a maximum of six semester hours credit.

FOREIGN LANGUAGES

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 instructor of the class before enrollment.

Description of Courses

French

- 403-404 **French IV-A Seventeenth Century Literature** I, II
 A survey course of the French literature of the seventeenth century, conducted in French, with work in advanced composition.
 Prerequisite: Course 202.
 Four semester hours credit each semester.
- 405-406 **French IV-B Eighteenth Century Literature** I, II
 A survey course of the French literature of the eighteenth century, conducted in French, with work in advanced composition.
 Prerequisite: Course 202.
 Four semester hours credit each semester.
- 410 **Molière**
 An intensive study of Molière and the theory of comedy. Conducted entirely in French.
 Prerequisite: French 403-404 or special permission.
 Four semester hours credit.

411-412 French IV-C Nineteenth Century Literature 1, 11

A survey course of the French literature of the nineteenth century, coming to contemporary authors. Conducted in French, with work in advanced composition.

Prerequisite: Course 202 or equivalent.

Four semester hours credit each semester.

421 Early French Literature On Demand

A survey course of early French literature with special emphasis on the authors of the sixteenth century. Conducted in French, with work in advanced composition.

Prerequisite: Course 202 or equivalent.

Four semester hours credit.

425 Twentieth Century French Literature

French writers of the twentieth century. Conducted in French, with work in advanced composition. Offered on demand.

Prerequisite: Course 202 or equivalent.

Four semester hours credit.

German

451-452 German IV-A Nineteenth Century Literature I, II

A survey course of nineteenth century literature conducted in German. Work in composition is included.

Prerequisite: Course 252 or equivalent.

Four semester hours credit each semester.

453-454 German IV-B Early German Literature I, II

A survey of German literature before the eighteenth century, conducted in German. Work in composition is included.

Prerequisite: Course 252 or equivalent.

Four semester hours credit each semester.

455-456 German IV-C Eighteenth Century Literature I, II

A survey course of eighteenth century literature conducted in German. Work in composition is included.

Prerequisite: Course 252 or equivalent.

Four semester hours credit each semester.

Spanish

461-462 Spanish IV-A (Siglo de Oro, Drama) I, II

Spanish dramatic literature of the "Siglo de Oro," with work in composition. Conducted in Spanish.

Prerequisite: Course 262 or equivalent.

Four semester hours credit each semester.

463-464 Spanish IV-B (Siglo de Oro)

Don Quixote (463), the writings of the mystics and other non-dramatic literature (464), with work in composition. Conducted in Spanish.

Prerequisite: Course 262 or equivalent.

Four semester hours credit each semester.

- 471-472 Spanish IV-C (Nineteenth Century Literature)** 1, 11
 Spanish literature of the nineteenth century, with work in composition. Conducted in Spanish.
 Prerequisite: Course 262 or equivalent.
 Four semester hours credit each semester.
- 473 The Spanish Novel of the Twentieth Century**
 Special emphasis on Pio Baroja and Perez de Ayala. Conducted entirely in Spanish.
 Prerequisite: Courses 471-472 or special permission.
 Four semester hours credit.
- 478-479 Spanish IV-D (Spanish-American Literature)**
 Spanish-American literature with work in composition, conducted in Spanish.
 Prerequisite: Course 262 or equivalent.
 Four semester hours credit each semester.

Latin

- 431 Latin IV-A**
 Readings from Tacitus.
 Prerequisite: Course 232 or equivalent.
 Four semester hours credit.
- 432 Latin IV-B**
 Survey of Ancient Latin historians.
 Prerequisite: Course 232 or equivalent.
 Four semester hours credit.
- 433 Latin IV-C**
 Cicero. Readings from his works (letters, speeches, philosophical writings).
 Prerequisite: Course 232 or equivalent.
 Four semester hours credit.
- 434 Latin IV-D**
 Readings from Roman poets (e.g. Ovid, Vergil, Horace, Juvenal).
 Prerequisite: Course 232 or equivalent.
 Four semester hours credit.
- 435 Latin IV-E**
 Readings from Roman playwrights (e.g. Plautus, Terence).
 Prerequisite: Course 232 or equivalent.
 Four semester hours credit.
- 436 Latin IV-F**
 Readings from medieval and modern Latin authors (e.g. Einhard, St. Thomas Aquinas, Grotius) and discussion of their work.
 Prerequisite: Course 232 or equivalent.
 Four semester hours credit.

Russian

- 481-482 **Russian IV-A (Pushkin and His Time)** I, II
A study of Pushkin's poetic, dramatic, and historical works and their influence on the literary and social trends of 19th century Russia.
A survey of Russian literature from the beginning till Pushkin.
Conducted in Russian, with work in composition and conversation.
Prerequisite: Course 282 or equivalent.
Four semester hours credit each semester.
- 483-484 **Russian IV-B (19th Century Literature)** I, II
A survey course of Russian Literature of the 19th century, conducted in Russian, with work in advanced composition.
Prerequisite: Course 282 or equivalent.
Four semester hours credit each semester.
- 485-486 **Russian IV-C (Soviet Russian Literature)** I, II
A survey course of Russian literature of the 20th century. Conducted in Russian, with work in advanced composition.
Prerequisite: Course 282 or equivalent.
Four semester hours credit each semester.

Teaching Practices in the Foreign Languages

- 490 **Teaching Practices in the Foreign Languages (2-8)**
The content and focus of this course may vary with each offering. The course will, however, always consider problems of teaching foreign languages at the elementary, secondary, or junior college and college levels. The normal credit for the course when offered during a school semester will be two semester hours. When the work is offered on an intensive basis, such as a summer workshop, the course will carry one semester hour credit per week.
Prerequisite: The basic minimum requirement is two years of a foreign language in college. Other stipulations may apply, depending upon the content and focus of each offering.



Mt. Murray Hall

HISTORY

The Department of History offers two degrees and a certificate at the graduate level: Master of Arts, Master of Science in Education, and the Certificate of Advanced Study. They are sought by persons wishing to enhance 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. Specifically, graduate work in history is undertaken by those persons who desire to improve their competence or to enter upon careers in teaching or administration (in the public schools or in institutions of higher learning), branches of state and Federal government, the arts, literature, journalism, or law. Any individual with a good undergraduate record will be permitted to engage in graduate study as outlined below. The student who has not had much previous work in history may be required to enroll in one or more undergraduate courses to make up deficiencies.

Graduate courses in history are principally of three types: advanced undergraduate courses taken for graduate credit in which lecture and discussion predominate; seminars in which the student prepares papers having to do with a particular historical topic and in the process gains experience in historical methodology and the use of primary and secondary source materials; independent study in which the student, with the help of a member of the history faculty, seeks to acquaint himself with one or more fields of historical literature. Four or five courses each semester constitute a full load.

Each entering student must submit his proposed program of study for the approval of the department's Graduate Counselor. The Graduate Counselor is available on certain evenings and some Saturday mornings to meet off-campus students. Such students are advised to write or telephone for an appointment before coming to the University. Final written and oral examinations are required for each of the degrees described below. The oral examination follows the written and may be waived at the discretion of the faculty members responsible for the written examination.

Master of Arts

The department offers two programs leading to the Master of Arts degree. The first ("A") is intended primarily for the person who wishes to obtain experience in historical scholarship and who hopes ultimately to study for the Ph.D. The student who elects this program and obtains the degree will be permitted to study for the doctorate in history at Northern Illinois University (if and when that degree is offered) without having to pass a qualifying examination. The individual who wishes to teach in a four-year college or university will be well advised to take this degree. The second ("B") is intended chiefly for those persons who wish to acquire as broad a background as possible in graduate course work in history. Additional study for the student who follows this program would ordinarily be not more than that which leads to the Certificate of Advanced Study.

In both programs, students are expected to complete not less than 24 semester hours work in history. The remaining hours necessary to fulfill the 32 hours required for the degree may be taken in history or in some related subject, usually in the social sciences or humanities. Students who seek certification to teach in the public schools and who have obtained a bachelor

of arts degree with a good record in liberal arts subjects may take the remaining hours in professional education courses necessary for certification.

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: European, American, Russian, Asian or British. Students who have not had a course in historiography (such as the department's undergraduate History 420) must enroll in History 624, "Great Historians." Students who intend to teach history in a college or university should enroll in History 625, "Teaching History at the College Level."

A thesis is required. It is usually written in the field of concentration and six semester hours credit earned for the thesis may be counted as part of the 12 to 18 hours in the field. The thesis topic should be carefully chosen, and discussion of possible topics should begin as early as possible. In preparing the thesis the student will be expected to demonstrate his ability to do research in original source material, to evaluate the materials with which he is working, and to organize and present his work in a form both lucid and literary.

Depending on his field of concentration and/or his thesis topic, the student may be required to demonstrate his reading proficiency in one foreign language, usually French, German, or Russian. Another language may be substituted with the approval of the faculty member supervising the thesis. Several works in French, German, and Russian can be recommended to aid the student in preparing for the examination.

B

Of the 24 semester hours required in history, not less than nine hours must be concentrated in each of two of the following fields of history: European, American, Russian, Asian, and British. Students who have not had a course in historiography (such as the department's undergraduate History 420) must enroll in History 624, "Great Historians." A foreign language proficiency and a thesis are not required but a qualifying paper is necessary. The paper is usually written in one of the two fields of concentration. Discussion of possible topics should begin as early as possible. By enrolling in one of the independent study courses, three semester hours credit may be obtained for the paper and may be counted as part of the 9 hours in one field of concentration.

Master of Science in Education (Area Programs)

The History department cooperates with other departments, particularly with the departments of Education, English, Journalism, and Social Sciences to devise area programs leading to this degree. The student does not take less than eight semester hours in history. The actual division of work between departments is, however, determined by the student, the History Department's Graduate Counselor, and the adviser appointed by the cooperating department. The History Department does not require a foreign language proficiency or a thesis, but a qualifying paper is necessary either in history or in the subject matter of the cooperating department. For a description of the Master of Science in Education in History and the Social Sciences, see p. 169.

Certificate of Advanced Study

The Certificate of Advanced Study in History is designed primarily for those persons who wish to broaden their historical perspective through additional course work. Any student with a Master's degree (not necessarily in history) and a good graduate record will be permitted to seek the Certificate. Of the thirty semester hours required for the Certificate, not less than twenty hours must be in history, divided approximately equally between any two of the following fields of history: European, American, Russian, Asian, and British. If the student has the Master's degree in History, at least one of the fields chosen for the Certificate must be different from those studied for the Master's degree.

Foreign language proficiency is not required, but a research paper is necessary. The student will usually write the paper in one of the two fields of concentration. Discussion of possible topics should begin as early as possible. Three semester hours credit may be obtained for the paper and may be counted toward one of the fields of concentration by enrollment in an independent study course.

Certificate of Advanced Study (Area Program in History and the Social Sciences)

The History Department cooperates with the Department of The Social Sciences to offer an area program leading to the Certificate. (see p. 169).

Description of Courses

General

410 European Seminar Summer, 1962

In cooperation with the Department of Social Sciences, offered summer 1962 and every third year, a study-tour that includes one month in residence at Oriel College in Oxford; lectures, by British, on contemporary British life, the Empire and Commonwealth, and Britain's world relations; study trips to places in and near London and a five-day tour of the Southwest of England; a three-week tour of the continent; and about one week crossing the ocean in each direction. Includes advance reading assignments, shipboard lectures, discussions on shipboard returning to America — all under the supervision of two N.I.U. faculty members; and a graduate paper to be prepared by those taking the course for graduate credit, after returning from the tour. Specific information concerning costs and fees will be published in a special announcement about one year in advance of the tour. Carries either graduate or undergraduate credit. May be counted as History, Political Science, Economics, or Sociology credit. About ten weeks.
Eight semester hours credit.

490 Materials and Problems of High School Instruction in the Social Sciences I, II

Offered in cooperation with the Social Sciences.
See p. 170.
Two semester hours credit.

- 491 **Materials and Problems of Elementary School Instruction in the Social Sciences** I, II
Offered in cooperation with the Social Sciences. See p. 170.
Two semester hours credit.
- 526 **Independent Study in American or Latin American History** I, II
Open to the qualified student who wishes to work independently in American or Latin American History. Consent of the faculty member with whom the student seeks to study is necessary. May be repeated for a maximum of nine semester hours credit.
Three semester hours credit.
- 536 **Independent Study in European, Russian, Asian, or British History** I, II
Open to the qualified student who wishes to work independently in any of these fields. Consent of the faculty member with whom the student seeks to study is necessary. May be repeated for a maximum of nine semester hours credit.
Three semester hours credit.
- 538 **Thesis** I, II
Open only to the student engaged in writing a thesis under Master of Arts "A" program. The student enrolls with the faculty member directing the thesis.
Six semester hours credit.
- 624 **Great Historians** I
Designed to acquaint the student with the major works and philosophies of the great historians of the world.
Three semester hours credit.
- 625 **Teaching History at the College Level** II
Lectures and discussions of the problems of university instruction in history.
Two semester hours credit.
- 626 **Advanced Independent Study in American or Latin American History** I, II
Open to the qualified student who wishes to undertake advanced work in American or Latin American history. Consent of the faculty member with whom the student seeks to study is necessary. May be repeated for a maximum of nine semester hours credit.
Three semester hours credit.
- 636 **Advanced Independent Study in European, Russian, Asian or British History** I, II
Open to qualified students who wish to undertake advanced work in any of these fields. Consent of the faculty member with whom the student wishes to study is necessary. May be repeated for a maximum of nine semester hours credit.
Three semester hours credit.

European History

- 430 **The Renaissance** **I, 1961-62**
 Renaissance of the 15th and 16th centuries in Italy and elsewhere. Literary and artistic reawakening. Economic, political, scientific, intellectual, and social forces which have determined the character of "modern" history.
 Three semester hours credit.
- 431 **The Reformation** **II, 1961-62**
 Protestant Reformation, Catholic Reformation, Wars of Religion, concept and practice of "established church," origins of ideas of separation of church and state, and beginnings of modern religious toleration.
 Three semester hours credit.
- 432 **History of Ideas to 500 A.D.** **I**
 Definition and limitation of the field of intellectual history and its relationship to other fields such as science and philosophy. A study of the big questions about which man has always speculated; and an exploration 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.
 Three semester hours credit.
- 433 **History of Ideas, 500-1600 A.D.** **II**
 A continuation of 432, in the periods of the Early Middle Ages, the High Middle Ages, the Renaissance, and the Reformation.
 Three semester hours credit.
- 434 **Eighteenth-Century Origins of Contemporary Thought and Institutions** **On Demand**
 "Old Regime," Intellectual Revolution or "Age of Enlightenment." French Revolution and Napoleonic Era, studied as seedbed of contemporary thought and institutions.
 Three semester hours credit.
- 435 **Twentieth-Century Europe** **I, II**
 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.
 Three semester hours credit.
- 436 **Great Revolutionary Movements of Modern History** **On Demand**
 English Revolutions of the 17th Century, French and American Revolutions of the 18th Century, Russian and Chinese Revolutions of the 20th Century, analyzed and compared as an exercise in historical synthesis and interpretation.
 Three semester hours credit.

- 437 **Revolution and Reaction** On Demand
 The ideas and events characterizing the social and political conflicts of the 19th Century which gave rise to the ideologies of the 20th Century.
 Three semester hours credit.
- 438 **Imperialism** On Demand
 A study of "imperialism," in ancient as well as in modern times, with particular emphasis on its Twentieth-Century forms and problems raised by it in our times.
 Three semester hours credit.
- 462 **European Intellectual History, 1600-1815** I
 A study of key philosophical ideas and the way in which they affected institutional development. Subjects dealt with include the Scientific Revolution, Rationalism, Divine Right versus theories of popular government, Deism and Pietism, Pantheism, Mercantilistic theory versus economic liberalism, and the Enlightenment's theories of Natural Law.
 Three semester hours credit.
- 463 **European Intellectual History, 1815 to the Present** II
 A continuation of 462. Subjects dealt with include Conservatism, Nationalism, Romanticism, Liberalism, Positivism, Scientism, theories of racism and imperialism, and the 20th century forms of anti-rationalist revolt.
 Three semester hours credit.
- *530 **Seminar in Ancient History** I, 1962-63
 Selected problems of European history during the ancient period to 500 A. D.
 Three semester hours credit.
- *531 **Seminar in Medieval History** I
 Selected problems of European history during the medieval period, 500-1500 A. D.
 Three semester hours credit.
- *532 **Seminar in the Renaissance** II, 1961-62
 Selected problems of European history during the Renaissance.
 Three semester hours credit.
- *533 **Seminar in the Reformation** II, 1962-63
 Selected problems of European history during the Reformation.
 Three semester hours credit.
- *534 **Seminar in Modern European History** II
 Selected problems of European history since 1600 A. D.
 Three semester hours credit.

*May be repeated to a maximum of six semester hours credit.

History of the Americas

- 421 **Twentieth Century United States** **I, II**
The United States during its transition from an agricultural character to industrial and financial preeminence and an investigation of the nation's rise to leadership in world affairs.
Three semester hours credit.
- 422 **American Constitutional History** **II, 1962-63**
A study of the colonial backgrounds to the framing of the constitution and a survey of the significant trends in constitutional development from 1789 to the present.
Three semester hours credit.
- 423 **Intellectual and Social History of the United States to 1860** **I**
A survey of the important intellectual developments including such topics as Puritanism, the Enlightenment, Nationalism, Regionalism, Equalitarianism, Science and Technology.
Three semester hours credit.
- 424 **Intellectual and Social History of the United States, 1860 to the Present** **II**
A continuation of History 423. Covers such topics as Utilitarianism, Capitalism, Nationalism and Technology, Evolution, Pragmatism, Social Darwinism, Realism in the Arts, Racism, Mass Education and Prosperity, Disillusionment and Criticism following World War II.
Three semester hours credit.
- 425 **American Culture in the Eighteenth Century** **II, 1961-62**
A study of the eighteenth century background of some of the more important aspects of present day American culture. Topics for intensive study to be selected by the student after consultation with the instructor.
Two semester hours credit.
- 426 **History of Colonial America** **I, 1962-63**
A study of colonial life and institutions.
Three semester hours credit.
- 427 **The Life and Culture of the Mexican Nation** **On Demand**
A study of the Mexican people since the time of independence to the present.
Three semester hours credit.
- 428 **American Social Reform Movements Since 1865** **On Demand**
A study of a number of the important reform movements. Includes those of the farmer, workers, and intellectuals, along with their declarations, platforms, social philosophies, techniques of action, and principal achievements in national and local affairs.
Three semester hours credit.

- 429 History of American Labor From 1787** **On Demand**
 A survey of the role of the working class in American history from the early National Period to the present with emphasis on the growth of organized labor in the 20th century. Special attention will be devoted to the problems of labor and the New Deal and to varying competing forms of labor organization. Organized labor's relation to other classes and interest groups in American society will be carefully explored.
 Three semester hours credit.
- *520 Seminar in Eighteenth Century America** **I**
 Selected problems of American history in the eighteenth century.
 Three semester hours credit.
- *521 Seminar in Nineteenth Century America** **II**
 Selected problems of American history in the nineteenth century.
 Three semester hours credit.
- *522 Seminar in Twentieth Century America** **II**
 Selected problems of American history in the twentieth century.
 Three semester hours credit.
- *523 Seminar in Latin-American History** **On Demand**
 Selected problems in Latin-American history.
 Three semester hours credit.
- *524 Seminar in Western American History** **I**
 An intensive examination of frontier historiography, with emphasis upon the development of the Mississippi Valley, the Great Plains, and the Far West, which will lead to the selection of particular original source problems and the preparation of research papers determined by the interests of the students and the instructor.
 Three semester hours credit.

Russian History

- 442 History of Russia in Asia** **II**
 The growth of the Russian Empire in Asia from its origins to the present. Both internal developments and Russia's relations with Asiatic countries, including relations with the European imperial powers when they are involved, will be treated.
 Three semester hours credit.
- *540 Seminar in Russian History** **I**
 Selected problems in Russian History.
 Three semester hours credit.

*May be repeated to a maximum of six semester hours credit.

Asian History

- 439 **Southeast Asia** II, 1962-63
 An historical introduction to this important region of Asia. Lectures deal with the Hindu, Buddhist and Islamic religions and cultural backgrounds of Southeast Asian peoples, the centuries of European domination, and 20th Century nationalism and communism. Three semester hours credit.
- 440 **Summer Institute in Asian Civilizations** Summer, On Demand
 The purpose of lectures, readings, addresses by guest speakers, films, and exhibits is 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 religion 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. Six semester hours credit.
- 441 **History of Modern India** II, 1962-63
 An introduction to ancient India and the foundations of Hindu society is followed by a survey of Indian history from the beginning of Mogul rule through the British conquest to the attainment of national independence in 1947. Three semester hours credit.
- *535 **Seminar in Asian History** I
 The subject matter of the seminar will vary according to the background and interests of the students and the instructor but usually will deal with some aspect of the political, economic, or social history of Eastern Asia since c. 1500. Three semester hours credit.

British History

- 466 **British Constitutional History** On Demand
 The origins and development of British political and legal institutions from Anglo-Saxon times to the mid-20th century. Three semester hours credit.
- *537 **Seminar in Modern British History** II, 1961-62
 The seminar will deal with selected problems in the political, economic and social history of modern Britain. Three semester hours credit.

*May be repeated to a maximum of six semester hours credit.

HOME ECONOMICS

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. Marriage and Family Life
2. Child Development—Nursery School Education
3. Food and Nutrition
4. 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 certification requirements. Deficiencies in the area of specialization at the undergraduate level will be determined by the advisory committee and must be made up before admission to candidacy.

The graduate student works with an adviser in her major area. Approval of her program is subject to a committee of graduate faculty in the department.

All candidates for Master's degrees are to complete 32 hours of credit, write a qualifying paper, and take a final examination. An oral examination may be given upon request of the Department.

Master of Science

MAJOR IN FOOD AND NUTRITION

This major increases the student's ability to work as a nutritionist with a promotional organization, as a community nutritionist, as a home economist with a public service company, and as a research assistant in test kitchens.

Candidates for a Master of Science degree with a major in Food and Nutrition are required to elect 20 credits in the Department of Home Economics. Ten additional credits should be elected outside the candidate's major field.

Prerequisite to a major in this area is a minimum of 16 hours in Chemistry, including General Organic Chemistry, Biochemistry, or Physiological Chemistry.

Required courses in Home Economics: 408, 504 or its equivalent, and 505.

Recommended courses in Home Economics: 500A, 547, 549, 550, 552.
Additional courses suggested: Home Economics 500 B, C, D.

MAJOR IN MARRIAGE AND FAMILY LIFE

Students in this area, besides increasing their teaching proficiency, prepare to work with family agencies.

Students who elect a graduate major in Marriage and Family Life leading to the Master of Science degree must take a minimum of 20 credits in the Department of Home Economics. Ten additional credits should be elected outside the major field.

Prerequisites to a major in this area include a total of eighteen credits in the fields of Marriage and the Family, Child Development, Psychology, and Sociology.

Required courses in Home Economics: 504 or its equivalent and 505.

Recommended courses in Home Economics: 500D, 509, 512.

Additional courses suggested: Home Economics 430, 500C, 538; Mathematics 408; Psychology 465, 515; Sociology 480, 686E.

AREA MAJOR IN MARRIAGE AND FAMILY LIFE WITH PSYCHOLOGY OR SOCIOLOGY

Students in this area major prepare to work with family agencies or organizations relating to this specialization.

With the approval of the cooperating department students may register for an area major which includes:

Marriage and Family Life and Psychology,

Marriage and Family Life and Sociology.

Prerequisites to a major in this area include a total of eighteen credits in the fields of Marriage and the Family, Child Development, Psychology, and Sociology.

Majors in these areas must elect a minimum of 17 hours in Home Economics. Approval of the adviser in the related department is required when an area program is planned.

Required courses in Home Economics: 504 or its equivalent and 505.

Recommended courses in Home Economics: 500B, 509, 512.

Additional courses suggested: Home Economics 430, 500C, 538; Mathematics 408; Psychology 465, 515; Sociology 480, 686E.

AREA MAJOR IN CHILD DEVELOPMENT— NURSERY SCHOOL EDUCATION AND PSYCHOLOGY

Students in this area major prepare to teach in and operate a nursery school and to teach nursery school education at college level.

Prerequisites to this area major include a total of 18 credits in the fields of Child Development, Nursery School Education, Marriage and the Family, Psychology, and Education.

Majors in these areas must elect a minimum of 16 hours in Home Economics. Approval of the adviser in the related department is required when the area program is planned.

Required courses in Home Economics: 504 or its equivalent and 505.

Recommended courses in Home Economics: 430, 500C, 512, 534, 538.

Additional courses suggested in related areas: Education 460; Home Economics 509, 552; Mathematics 408 or its equivalent; Psychology 465, 515.

Master of Science in Education

MAJOR IN CHILD DEVELOPMENT— NURSERY SCHOOL EDUCATION

Students in this area prepare to teach in and operate a nursery school and to teach nursery school education at college level.

Students who elect a graduate major in Child Development—Nursery School Education leading to the Master of Science degree must take a minimum of 20 credits in the Department of Home Economics. Ten additional credits should be elected outside the major field.

Prerequisites to a major in this area include a total of 18 credits in the fields of Child Development and Nursery School Education, Marriage and the Family, Psychology, and Sociology.

Required courses in Home Economics: 504 or its equivalent and 505.
Recommended courses in Home Economics: 430, 500C, 512, 534, 538.
Additional courses suggested in related areas: Education 460; Home Economics 509, 552; Mathematics 408 or its equivalent; Psychology 465, 515.

AREA MAJOR IN CHILD DEVELOPMENT – NURSERY SCHOOL EDUCATION AND EDUCATION

Students in this area major prepare to teach in and operate a nursery school and to teach nursery school education at college level.

Prerequisites to this area major include a total of 18 credits in the fields of Child Development, Marriage and the Family, Psychology, Sociology, and Education.

Majors in these areas must elect a minimum of 16 hours in Home Economics. Approval of the adviser in the related department is required when the area program is planned.

Required courses in Home Economics: 504 or its equivalent and 505.
Recommended courses in Home Economics: 430, 500C, 512, 534, 538.
Additional courses suggested in related areas: Education 400, 460, 500, 501, 511, 603; Home Economics 509, 552; Mathematics 408 or its equivalent; Psychology 465, 515.

MAJOR IN HOME ECONOMICS EDUCATION

Students in this area increase their teaching proficiency. They also partially fulfill the requirements for supervision of student teachers.

Students who elect a graduate major in Home Economics Education must take a minimum of 20 credits in the Department of Home Economics. These students must elect at least ten hours in graduate courses outside the department.

Required courses in Home Economics: 504 or its equivalent and 505, 520, 521, 525.

Recommended courses in Home Economics: 500D.

Additional courses suggested: Education 460, 500, 501, 562A, 592; Home Economics 500 A, B, C; 509, 512, 547; Mathematics 408.

AREA MAJOR IN HOME ECONOMICS EDUCATION AND EDUCATION

Candidates for a Master of Science in Education degree with an area major in Home Economics Education and Education are expected to acquire a general knowledge of:

- (1) The history and philosophies of education
- (2) Principles of:
 - (a) Curriculum development
 - (b) Educational psychology
 - (c) Evaluation
 - (d) Teaching methods
 - (e) Guidance
 - (f) Research methods in education

Application of this knowledge to the general field of Home Economics is the responsibility of the department.

A major in these areas must elect a minimum of 17 hours in Home Economics. Approval of the adviser in the related department is required when an area program is planned.

Required courses in Home Economics: 504 or its equivalent and 505, 520, 521, 525.

Recommended courses in Home Economics: 500D.

Additional courses suggested in related areas: Education 460, 501, 562A, 592; Home Economics 500A, B, C; 509, 512, 547.

AREA MAJOR IN FOOD AND NUTRITION

This major increases the student's knowledge and proficiency in the field of food and nutrition.

Candidates for a Master of Science in Education degree with an area major in Food and Nutrition and Education or related areas are required to elect 17 credits in the Department of Home Economics.

Approval of the adviser in the related department is required when the area program is planned.

Required courses in Home Economics: 504 or its equivalent and 505.

Recommended courses in Home Economics: 408, 500A, 547, 549.

Additional courses suggested: Education 501, 561, 592; Home Economics 500B, C, D, 550, 552.

Description of Courses

408 Educational Statistics (See Mathematics 408)

Three semester hours credit.

*410 Nutrition and Dietetics

Advanced study of nutrition with laboratory experience in planning and preparation of family dietaries. Special consideration of the influence of such modifying factors as age, sex, and activity of family members. Includes units on school lunch and quantity food service.

Prerequisite: Course 201.

Three semester hours credit.

*430 Participation in the Nursery School

This course will give opportunity for active participation in the nursery school, with responsibility in directing the children in creative activities. The theory will give opportunities to discuss and evaluate activities and experiences for children in the nursery school. Six hours of laboratory to be arranged.

Prerequisite: Home Economics 360 or Psychology 220 and consent of the instructor.

Four semester hours credit.

*441 Family Relationships

A study of interpersonal relationships within the family group as influenced by basic human needs, family member roles, values and attitudes in a changing society. Consideration of problems unique to different stages of the family life cycle. Family crises.

Three semester hours credit.

*Now being taught at the undergraduate level.

- °450 **Workshop in Home Economics**
Advanced techniques and study of various phases of home economics
Nature and length of workshop dependent upon needs of teachers
in field. Number enrolled limited. Additional problem required for
graduate credit.
Variable credit: One, two, or three semester hours.
- 500 **Seminar**
Readings and reports in the areas of Home Economics
A. Food and Nutrition
B. Marriage and Family Life
C. Child Development and Nursery School Education
D. Home Economics Education
Two semester hours credit.
- 504 **Research Methods**
A study of research methods and techniques; characteristics of
research; reference materials; tools of research and the research
report.
Three semester hours credit.
- 505 **Individual Research Problems**
Independent study under supervision of an adviser. Work on qualify-
ing paper included.
Prerequisite: Consent of instructor.
Variable credit: One, two, or three semester hours.
- 509 **Marriage and Family Life**
An analysis of our Western Family System; its present crisis; some
causes and effects. Study of theories underlying these changes occur-
ring in the family system.
Three semester hours credit.
- 512 **Child Development and Nursery School Education**
A study of experimental literature in the field of child development.
It opens up knowledge of how children grow and learn during
their first five years, the stages through which they pass, and the
developmental tasks they accomplish. There is opportunity to observe
and work with children.
Three semester hours credit.
- 520 **Curriculum in Home Economics**
An analysis of a curriculum rationale; study of the development of the
Home Economics curriculum; application of rationale to special
field of study.
Three semester hours credit.
- 521 **Evaluation in Home Economics**
Its functions, methods and application.
Three semester hours credit.

*Now being taught at the undergraduate level.

- 525 Supervision of Student Teaching in Home Economics**
A study of the responsibilities of the supervisor of the prospective teacher. Problems of orientation, guidance, and evaluation. Professional development and communication involved.
Prerequisite: Consent of the instructor.
Three semester hours credit.
- 534 Nursery School Administration and Procedure**
A course in which students have opportunities to discuss and to take part in the management of the nursery school, to visit several types of schools, and to work with parents.
Prerequisite: Permission of the instructor.
Three semester hours credit.
- 538 Parent Education**
Through contacts—both personal and group—the student experiences ways of working with parents of children ranging in age from pre-school through adolescence. The group dynamics approach is used in planning and carrying out meetings, with opportunity to test a variety of types. The use of mass media to educate parents is demonstrated.
Three semester hours credit.
- 547 Advanced Nutrition**
A comprehensive study of major nutrients with emphasis on their metabolisms, interrelationships, and biochemical importance. Recent research.
Three semester hours credit.
- 549 Experimental Foods I**
Application of chemical and physical principles to food preparation. Development of experimental attitudes and techniques. Analysis of certain food products.
Prerequisite: Home Economics 410.
Three semester hours credit.
- 550 Experimental Foods II**
Continuation of Experimental Foods I.
Prerequisite: Home Economics 549.
Three semester hours credit.
- 552 Infant and Child Nutrition**
Nutrition problems in maternal and child feeding.
Two semester hours credit.
- 560 Nutrition Education for Elementary and Secondary School Teachers**
Need for nutrition education. Study of nutrition, diets, current food fads. Techniques for effective nutrition teaching.
Three semester hours credit. Not open to Home Economics teachers.
- 601 Problems in Home Economics**
Prerequisite: Consent of the head of the department.
Variable credit: One, two, or three semester hours.

INDUSTRIAL ARTS

The Department of Industrial Arts offers programs leading to the degrees Master of Science in Education and Master of Science and to the Certificate of Advanced Study.

Master of Science in Education

Students who elect a graduate major in industrial arts toward the degree Master of Science in Education must satisfy the following course requirements in industrial arts:

- (a) Courses 500, 541 and 670.
- (b) Additional semester hours of credit to make a total of 20 selected from courses offered on the 400, 500, and 600 levels.

Master of Science

Students who elect a graduate major in this department toward the Master of Science degree must satisfy the following course requirements:

- (a) Courses 500 and 670.
- (b) Additional credit for a total of 32 semester hours, 12 of which may be outside the department. The course requirements will be determined by consultation with the candidate's adviser.

Certificate of Advanced Study

As the requirements for the Certificate of Advanced Study are flexible, the student will be expected to plan a program in cooperation with a committee assigned by the Head of the Department of Industrial Arts.

Description of Courses

- | | | |
|-----|--|------------------|
| 413 | Design in Industrial Arts
A study of the principles of design and the application of these principles to designing of industrial arts projects.
Three semester hours credit. | On Demand |
| 440 | Laboratory Planning
Experience in planning laboratories and shops for industrial arts and industrial vocational classes. Problems relating to new buildings and new equipment, as well as the problems of redevelopment of present buildings and equipment are considered. Accurate scale layouts of school shops are planned and executed in this course.
Prerequisite: Courses 341 and 344.
Three semester hours credit. | II |
| 476 | Supervision in Industry
Study of principles, methods, and techniques for supervision of people in their work. Designed to aid supervisory personnel and those preparing for supervisory positions.
Two semester hours credit. | On Demand |
| 484 | Teaching Aids in Industrial Arts
The design, preparation, use, and evaluation of teaching aids with emphasis on applications in industrial arts courses.
Three semester hours credit. | On Demand |

- 500 Introduction to Graduate Work in Industrial Arts** **I and Summer Session**
 A study of the methods of research available for use by graduate students in industrial arts, a review of the current research studies in this field, and the application of the findings of these studies to improve the industrial arts programs in junior and senior high schools. Three semester hours credit.
- 501 A-L Technical Problems in Industrial Arts** **On Demand**
 These courses provide an opportunity for the individual student to undertake advanced study of technical problems in the various areas of industrial arts.
 Prerequisite: Consent of instructor. May be repeated. A limit of six semester hours may be earned in any one course. A limit of six hours in all courses may be applied toward advanced degrees.
 501A General 501E Graphic Arts
 501B Crafts 501F Metal
 501C Drawing 501L Woodworking
 501D Electricity and Electronics
 One to three semester hours credit.
- 517 Diversified Occupations Program** **On Demand**
 Problems and procedures in the operation of cooperative parttime programs.
 Two semester hours credit.
- 541 History and Philosophy of Industrial Education** **On Demand**
 A study of the leaders, organizations, and movements that have contributed to the development of industrial education. A study of the philosophies of industrial arts, vocational industrial education, etc., will be made.
 Three semester hours credit.
- 542 Industrial Arts Activities for Classroom Teachers** **On Demand**
 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.
 Three semester hours credit.
- 544 Content and Method of Industrial Arts** **I and Summer Session**
 Designed primarily to improve the techniques of teaching industrial arts subjects generally found in the secondary schools. An evaluation of classroom materials, methods, research, and current trends will be made.
 Three semester hours credit.
- 545 Curriculum Construction in Industrial Arts** **On Demand**
 A study of the principles involved in effective curriculum construction in industrial arts. Courses of study in various areas will be evaluated.
 Two semester hours credit.

- 546 **Evaluation in Industrial Arts** **On Demand**
 A study of objectives and methods for evaluating industrial arts programs, student growth and development in industrial arts, and teaching success.
 Three semester hours credit.
- 547 **Occupational Analysis** **On Demand**
 Techniques and procedures in analyzing occupations to ascertain their basic elements.
 Two semester hours credit.
- 566 **Problems of Adult Education** **On Demand**
 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.
 Three semester hours credit.
- 576 **Administration and Supervision of Industrial Arts** **I**
 The following administrative and supervisory problems pertaining specifically to industrial arts in the secondary school are studied: curriculum construction and materials, student measurement, evaluation, laboratory supervision, and administration of supplies, textbooks, and equipment.
 Three semester hours credit.
- 577 **Conference Leading for Industry** **On Demand**
 Purposes, advantages, and limitations of conference method. Instruction in techniques of conference procedure. Experience in planning, leading, and evaluating conferences and in writing summaries.
 Two semester hours credit.
- 584 **Modern Trends in Industrial Arts** **On Demand**
 Emphasis is placed upon the significance of modern trends from the viewpoint of both theory and practice.
 Two semester hours credit.
- 645 **Technology in Industrial Arts** **On Demand**
 Modern industrial developments such as automation, use of new types of energy and synthetic materials. Application to teaching industrial arts in high schools.
 Three semester hours credit.
- 647 **Occupational Surveys** **On Demand**
 Problems, methods, and procedures involved in planning, organizing, and conducting occupational surveys in local communities and labor market areas.
 Three semester hours credit.
- 658 **Seminar in Industrial Arts** **I**
 Individual and group problems related to the teaching of industrial arts in the junior and senior high school are studied.
 Two semester hours credit.

- °670 **Individual Problems in Industrial Arts** I, II
Open to qualified students who wish to do individual advanced work in industrial arts education. The qualifying paper should be written in this course.
Prerequisite: Consent of instructor.
One to three semester hours credit.

- 690 **Industrial Arts for the In-Service Teacher** On Demand
Problems of in-service education that need to be considered in upgrading programs of industrial arts are studied. Special emphasis will be given to individual problems.
Three semester hours credit.

Safety and Driver Education

These courses do not count in the requirements for the industrial arts major. They may count as elective hours outside the area of the major.

- 485 **Workshop in Driver Education** On Demand
This is an advanced course in driver education planned especially for those who have had experience in this field. The course deals with the principles of traffic engineering, traffic enforcement, and the understanding of legislation affecting driver education; the development of course materials, teaching and aids; and the problems of administering courses in driver education.
Prerequisite: Course 385 or other approved driver education course.
Two semester hours credit.
- 486 **Problems in Safety Education** On Demand
Philosophy and practices in safety education. Organization and methods used in safety programs. Research and reporting a study are emphasized.
Two semester hours credit.
- 487 **Industrial Safety** On Demand
Study of the philosophy and principles of industrial safety and related accident prevention.
Three semester hours credit.
- 488 **School Safety Programs** On Demand
A study of organization for school safety programs. Class work will be concerned with planning, administering, and supervising safety programs in the schools.
Three semester hours credit.
- 585 **Individual Problems in Safety Education** On Demand
Opportunity for individual study and research. Student will choose a problem in the area of safety education.
Prerequisite: Consent of adviser and instructor.
One to three semester hours credit.

*May be repeated. A limit of six semester hours may be earned toward advanced degrees.

JOURNALISM

Though a graduate major in journalism is not offered, properly qualified students may carry the following courses for graduate credit. Students are advised to consult with the department head before enrolling.

Description of Courses

- 400 **History of Journalism** **I**
Development of newspapers and periodicals from beginnings in Europe through the emergence of modern journalism. Current world news gathering agencies are studied.
Three semester hours credit.
- 435 **Publicity Methods** **I, II**
Designed for students who do not plan to become professional journalists, but desire an introduction to writing publicity releases for newspapers and periodicals about their specialized fields. Open to all students except journalism majors.
Three semester hours credit.
- 450 **School Publications** **II and Summer Session**
Designed 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.
Three semester hours credit.
- 451 **Teaching Journalism** **II and Summer Session**
Teaching methods of journalism in secondary schools and junior colleges; courses of study, organization, bibliography; use of journalism courses for school publication production.
Two semester hours credit.
- 460 **Law of the Press** **II**
Study of legal regulations, libel laws, and restrictions on the press, publishing, radio, and television.
Two semester hours credit.
- 470 **The Industrial Press** **I**
Practical work in planning, editing, and producing specialized publications, including reporting, copywriting, picture editing, advertising layout, and business management.
Three semester hours credit.
- 490 **Readings in Journalism** **II**
A selected review of journalism literature including books, research studies, periodicals. Open to students of senior standing or above.
Two semester hours credit.

LIBRARY SCIENCE

The Department of Library Science offers an area major in Library Science and Education leading to the degree Master of Science in Education. A program for a graduate major in library science leading to the degree Master of Arts is not yet complete; however, qualified students may take the following courses for graduate credit.

Description of Courses

- 413 **History of Books and Libraries** I
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.
Two semester hours credit.
- 414 **The American Library Movement** II
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.
Two semester hours credit.
- 421 **Bibliography of the Humanities** I
Intensive study of reference materials in this area of knowledge. Refinement of selection principles and techniques. Evaluation of collections.
Three semester hours credit.
- 422 **Bibliography of the Social Sciences** II
Intensive study of reference materials and the formation of working collections in this field of knowledge. Special emphasis on sources of business information.
Three semester hours credit.
- 424 **Bibliography of the Sciences** On Demand
Intensive study of reference materials, periodicals, and journals as well as popular reading in the field. Special emphasis on the literature search and sources of technological information.
Two semester hours credit.
- 433 **The Library in the Modern School** II
Intensive study of administrative and planning problems of the school library: budget, personnel, physical plant. Development of standards. Special emphasis on coordination of library and curriculum and on the library as laboratory.
Three semester hours credit.
- 434 **The Public Library as a Service Organization** On Demand
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.
Three semester hours credit.

- 500 **Workshop** **Summer Session**
Offered only in summers. Intensive study of problems of the school or public library in the areas of selection, reference and cataloging. One to three semester hours credit.
- 512 **Advanced Cataloging and Classification** **On Demand**
Special problems in classification with emphasis on subject headings and on the cataloging of non-book materials. Part of the course will be devoted to a study of the Library of Congress classification. Three semester hours credit.
- 515 **College and University Libraries** **On Demand**
A survey of problems in the field: administration, personnel, special collection. Special emphasis will be placed upon developments in cooperative buying and storage, buildings, and service to research workers. Three semester hours credit.
- 516 **Special Libraries** **On Demand**
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. Two semester hours credit.
- 520 **Colloquium** **On Demand**
Lectures by University faculty and special guests on problems of librarianship or allied fields. One semester hour credit. Course may be repeated for additional credit.
- 530 **Special Problems in Librarianship** **On Demand**
Research in the field of librarianship. Class will meet one day per week, and students will prepare a research paper for varying credit, dependent upon subject and scope. One to four semester hours credit.

MATHEMATICS

The Department of Mathematics offers graduate programs leading to the degrees Master of Science in Education and Master of Science; and to the Certificate of Advanced Study.

Master of Science in Education

Students who elect a graduate major in mathematics toward the degree Master of Science in Education must satisfy the following course requirements in mathematics:

- (a) Courses 450 and 451 or equivalents if these courses were not included in the undergraduate program.
- (b) Courses 550 and 660.
- (c) At least five courses to be selected from courses 405, 410, 415, 420, 422, 425, 428, 430, 435, 505, 510, 512, 515, 518, 520, 525, 530, 532, 535, 540. At least two of these courses must be on the "500" level.

Master of Science

Students who elect a graduate major in mathematics toward the degree Master of Science must satisfy the following course requirements in mathematics:

- (a) Courses 425 and 430 or equivalents if these courses were not included in the undergraduate program.
- (b) Courses 530, 532, and 660.
- (c) At least five courses to be selected from courses 405, 410, 415, 420, 422, 428, 435, 505, 510, 512, 515, 518, 520, 525, 535, 540, 605, 615, 632. At least three of these courses must be on the "500" level.

Certificate of Advanced Study

The requirements for the Certificate of Advanced Study vary according to the background and needs of individual students. Each program must be approved by the Head of the Department of Mathematics.

Description of Courses

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|-----|---|-------|
| 402 | Teaching Practices in Arithmetic | I, II |
| | A study of the function of arithmetic in the elementary school, selection and organization of material, and good teaching methods as indicated by scientific studies on the teaching of arithmetic. Prerequisite: Course 115E or 120E. Three semester hours credit. | |
| | | |
| 405 | Matrices and Determinants | I |
| | Included are equivalence of matrices and forms; linear spaces, matrix fields, applications. Prerequisite: Course 320 or equivalent. Three semester hours credit. | |

- 408 Educational Statistics** **I or II**
 (Also listed as Education 408)
 Frequency distributions, measures of central tendency, measures of variability, percentiles, the normal curve, correlation and regression, reliability of measures, sampling, and analysis of variance. For students who have a need for meaning, interpretation, and application of statistical concepts without rigorous mathematical development. Offered on demand.
 Prerequisite: Course 120 or equivalent.
 Three semester hours credit.
- 410 Mathematics of Statistics I** **I or II**
 Classification and presentation of data; probability; the normal probability curve; errors and computation; moments; curve fitting, including the graduation of the normal curve; theory of correlation. Offered on demand.
 Prerequisite: Course 320 or equivalent.
 Three semester hours credit.
- 415 Advanced Synthetic Geometry** **I**
 Foundations of the geometric structure; methods of proof and of discovering proof; geometry of the triangle, harmonic section, poles and polar, inversion, cross-ratio, and related topics.
 Prerequisite: Course 130 or equivalent.
 Three semester hours credit.
- 420 Differential Equations I** **I or II**
 Methods of solution of ordinary differential equations of the first order and higher orders. Practical applications of differential equations in solving problems in geometry and in science. Offered on demand.
 Prerequisite: Course 321 or equivalent.
 Three semester hours credit.
- 422 Applied Mathematics** **I or II**
 Complex variables, elementary theory of analytic functions, conformal mappings, Schwarz-Christoffel transformation and applications; operational calculus, Laplace transform methods and applications; numerical differentiation and integration methods. Offered on demand.
 Prerequisite: Course 321 or equivalent.
 Three semester hours credit.
- 425 Introductory Topics in Modern Algebra** **I or II**
 Includes the topics of real and complex numbers, polynomials, groups, rings, fields, matrices, and determinants. Offered on demand.
 Prerequisite: Course 320 or equivalent.
 Three semester hours credit.

- 428 Theory of Finite Groups** **I or II**
 This course includes abstract groups, subgroups, invariant subgroups and the Jordan-Holder Decomposition Theorem, Abelian groups.
 Offered on demand.
 Prerequisite: Course 321 or equivalent.
 Three semester hours credit.
- 430 Advanced Calculus I** **I or II**
 A study of functions, sequences, limits, continuity, differentiation, integration, line integrals, surface integrals.
 Offered on demand.
 Prerequisite: Course 321 or equivalent.
 Three semester hours credit.
- 435 Foundations of Geometry** **I or II**
 Development of postulational systems in geometry, Euclidean geometry, non-Euclidean geometries, projective geometry.
 Offered on demand.
 Prerequisite: Course 320 or equivalent.
 Three semester hours credit.
- 440 History of Mathematics** **(Second 9 Weeks) II**
 Development of each of the several branches of mathematics through the first steps of the calculus and outstanding contributors in the field of mathematics.
 Two semester hours credit.
- 450 Teaching Practices in High School Mathematics I** **I, II**
 Mathematics of the seventh, eighth, and ninth years. Social and mathematical aims, selection and organization of content, methods of presenting topics in the classroom, classroom procedures, supplementary instructional equipment, and means of evaluating instruction.
 Prerequisite: Course 320 or equivalent or consent of instructor.
 Three semester hours credit.
- 451 Teaching Practices in High School Mathematics II** **I, II**
 Mathematics of the tenth, eleventh, and twelfth years. Topics similar to those listed for Course 450.
 Prerequisite: Course 320 or equivalent or consent of instructor.
 Three semester hours credit.
- 502 The Teaching of Arithmetic in the Elementary School** **II**
 (Also listed as Education 502)
 Consideration of the implications of research for methods of teaching, and the selection and arrangement of concepts and materials.
 Prerequisite: Course 402 or equivalent.
 Three semester hours credit.

- 505 Theory of Numbers I or II**
 The course includes Euclid's algorithm, primes, factorization, congruences, quadratic residues, quadratic reciprocity theorem, and Diophantine problems.
 Offered on demand.
 Prerequisite: Course 320 or equivalent.
 Three semester hours credit.
- 510 Mathematics of Statistics II I or II**
 Continuation of Course 410. Probability and statistical theory, frequency curves, partial correlation, multiple correlation, theory of sampling, Chi-square distribution, and interpolation and graduation.
 Offered on demand.
 Prerequisite: Course 410 or equivalent.
 Three semester hours credit.
- 512 Probability I or II**
 Classical definition of probability, theorems of total and compound probability, repeated trials, probabilities of hypotheses, special theorems applicable to probability.
 Offered on demand.
 Prerequisite: Course 321 or equivalent.
 Three semester hours credit.
- 515 Advanced Analytic Geometry I or II**
 Coordinates and cosines, planes and lines, determinants and matrices, surfaces and curves, quadric surfaces, and transformations.
 Offered on demand.
 Prerequisite: Course 221 or equivalent.
 Three semester hours credit.
- 518 Synthetic Projective Geometry I or II**
 Projective transformations, ideal elements, cross ratio, duality; poles, polars, collineations, involutions; the theorems of Desargues, Pascal, Brianchon; the projective theory of conics.
 Offered on demand.
 Prerequisite: Course 321 or equivalent.
 Three semester hours credit.
- 520 Differential Equations II I or II**
 Continuation of Course 420. Further consideration given to ordinary differential equations of the first order and higher order. Partial differential equations of the first and second orders.
 Offered on demand.
 Prerequisite: Course 420 or equivalent.
 Three semester hours credit.

- 525 Modern Algebra** **I or II**
 The number system, groups, rings, integral domains, fields; applications to Galois fields, Boolean algebras; emphasis on linear vector spaces and matrices.
 Offered on demand.
 Prerequisite: Course 425 or equivalent or consent of instructor.
 Three semester hours credit.
- 530 Advanced Calculus II** **I or II**
 Continuation of Course 430. Topics to include: improper integrals, infinite series, power series, uniform convergence, sequences of functions, Bessel functions, implicit functions.
 Offered on demand.
 Prerequisite: Course 430 or equivalent.
 Three semester hours credit.
- 532 Introduction to Complex Variables and Applications I** **I or II**
 Among the topics studied are: point sets, paths, regions, continuity and differentiability, the Cauchy-Riemann differential equations; the integral of the continuous function, Cauchy's Integral Theorem, Cauchy's Integral Formula.
 Offered on demand.
 Prerequisite: Course 530 or equivalent.
 Three semester hours credit.
- 535 Foundations of Mathematics** **I or II**
 The construction of the number system, axiomatics, the algebras of sets and statements; symbolic logic, quantification theory, infinite sets, transfinite cardinals and ordinals; the philosophies of mathematics.
 Offered on demand.
 Prerequisite: Course 321 or equivalent.
 Three semester hours credit.
- 540 Topics in Higher Mathematics for Teachers** **I or II**
 Selected topics from algebra and geometry including the postulational approach to mathematics, theory of numbers, non-Euclidean geometry, and constructions with ruler and compasses.
 Offered on demand.
 Three semester hours credit.
- 550 The Teaching of Secondary School Mathematics** **I or II**
 Intensive study of improvement in the teaching of selected topics in secondary school mathematics. Offered on demand.
 Prerequisite: Consent of the instructor.
 Three semester hours credit.

- 605 Vector Analysis** **I or II**
 Course to include basic vector operations with applications to geometry, also gradient, divergence, and curl; Green's theorem, divergence theorem, Stokes' theorem.
 Offered on demand.
 Prerequisite: Course 420 or equivalent.
 Three semester hours credit.
- 315 Point-Set Topology** **I or II**
 Algebra of sets, topological spaces, limit points, the topology of Euclidean space; transformations, continuity, homeomorphisms. Varieties of topological space; metric spaces and the metrization theorems.
 Offered on demand.
 Prerequisite: Course 525 or equivalent or consent of instructor.
 Three semester hours credit.
- 632 Introduction to Complex Variables and Applications II** **I or II**
 Continuation of Course 532. Topics to include: series, expansion of analytic functions in power series, analytic continuation, Laurent Expansion, various types of singularities, conformal mapping. Riemann Surfaces.
 Offered on demand.
 Prerequisite: Course 532 or equivalent.
 Three semester hours credit.
- *660 Individual Problems in Mathematics and Mathematics Education** **I or II**
 Includes individual problems related to mathematics or to the teaching of mathematics in the elementary or secondary schools. Opportunity for preparation of the qualifying paper is offered.
 Offered on demand.
 Prerequisite: Permission of the instructor.
 Two semester hours credit.

*May be repeated to a maximum of four semester hours credit.

MUSIC

The Department of Music offers programs leading to the degree Master of Music and to the Certificate of Advanced Study.

Master of Music

Students who elect a graduate major leading to the degree Master of Music must hold a baccalaureate degree with a music major from an institution of recognized standing and have a major which represents an amount of work equivalent to that prescribed for the respective degrees by Northern Illinois University.

One hour of individual instruction each week will be required in the student's major performing medium and either one half hour of instruction each week in the student's minor performing medium or membership in two ensemble groups.

All music majors will perform for an examining jury in their major applied music area at the end of each semester. Writing of a thesis, or presentation of a formal public recital with accompanying graduate paper, or a partial recital and qualifying paper, will be required of all graduates. The choice will be subject to the approval of the Graduate Music Faculty.

Students who elect a graduate major in music must satisfy the following course requirements in music:

	Sem. Hrs.
1. Theory, Music Literature, Music History.....	8-10
521 *History and Development of Instrumental Forms.....	2
522 *History and Development of Vocal Forms.....	2
523 *Contemporary Music Trends.....	2
Electives	2
445L History of American Music	2
505 Advanced Orchestration.....	2
507 Advanced Counterpoint.....	2
547 Vocal Arranging.....	2
552 Composition	2
598 Band Arranging.....	2
2. Applied Music.....	8-10
512 *Advanced Choral Conducting or	
513 Advanced Instrumental Conducting.....	2
*Applied Major.....	4-6
*Applied Minor or Ensembles.....	2
3. Music Education	14-16
524 *Techniques in Research in Music Education.....	2
525 *Foundations of Music Education.....	3
Electives	
509 Supervision and Administration of the Music Program....	2
510 Special Music Problems in the Junior High School.....	2
418 Physics of Musical Instruments and Sound.....	2
515 Marching Band Techniques.....	2
519 Measurement, Evaluation, and Guidance in Music.....	3
535 Advanced Piano Pedagogy.....	2
545 Pedagogy in Class Voice.....	2
551 Advanced Pedagogy in Woodwind Instruments.....	2
561 Advanced Pedagogy in String Instruments.....	2
571 Advanced Pedagogy in Brass and	
Percussion Instruments.....	2
511 Workshop in Elementary Vocal Music)	
516 Workshop in Junior High School)	
586 Workshop for Choral Directors).....	only 2
582 Workshop for Orchestra Directors)	
592 Workshop for Band Directors)	
Guided Electives for Vocal Majors.....	3
518 *Special Problems in Music Education.....	2-4
(Thesis, or Recital and Graduate Paper, or Partial Recital and Qualifying Paper)	

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 tailored to the student's individual needs.

Description of Courses

Music History

- 445L **History of American Music** **II**
The development of music in the United States from the Colonial Period to the present; particular emphasis will be placed on pre-Revolutionary War music and contemporary compositions. Offered in even years; second nine weeks, four periods per week.
Two semester hours credit.
- 621 **The History of Dance Music** **On Demand**
A survey of dances and dance music from the Middle Ages. A brief summary of the recent developments. The Renaissance, the Baroque, the Preclassical, and Classical periods, and the Romantic era. Dance forms in instrumental music, opera, and ballet. Records, live music, and contemporary graphics.
Three semester hours credit.
- 622 **Contemporary Music and the Arts** **On Demand**
The relation of music to the other arts in Western Europe and the Americas from 1890 to the present.
Two semester hours credit.
- 626 **Music Criticism and Creative Writing** **On Demand**
A course designed to give (1) insight into the problems, principles, and procedures of descriptive and critical analysis and synthesis; (2) an awareness of the relationship of language to the various phases of description and criticism; (3) experience in the precise and expressive use of language.
Three semester hours credit.
- 627 **Aesthetics of Music** **On Demand**
The principles of the aesthetics of music and of the related arts. A study of the nature of the musical experience and an examination of basic materials and aesthetic appeal of architecture, painting, literature and sculpture.
Three semester hours credit.
- 628 **Music Bibliography** **On Demand**
A systematic survey of the bibliography of music with respect to music research. Reports and term papers.
Three semester hours credit.

Music Literature

- °521 **The History and Development of Instrumental Forms and Styles During the 18th and 19th Centuries** I and Summer Session
Analytical techniques applied to the sonata, the suite, and related forms. Alternates with Music 522 during the summer session.
Two semester hours credit.
- °522 **The History and Development of Vocal Forms and Styles During the 18th and 19th Centuries** I and Summer Session
Analytical techniques applied to the opera, the art song, and related forms. Alternates with Music 521 during the summer session.
Two semester hours credit.
- °523 **Contemporary Music Trends** II and Summer Session
A survey of trends in European and American music from about 1910 to the present day. Particular emphasis placed on music since 1920. Works of Stravinsky, Schoenberg, Bartok, Hindemith, Copland, Piston, Schuman, and others will be performed in class.
Two semester hours credit.
- 603 **The Renaissance** On Demand
An introduction to music in the Renaissance (ca. 1450-1600), with study of representative styles.
Two semester hours credit.
- 604 **The Art Song Emphasizing the German Lied** On Demand
The monodic song, the early Italian cantata, the German lied of the seventeenth and eighteenth centuries. Haydn, Mozart, Beethoven, Schubert, Schumann, Brahms, Wolf, Pfitzner, Mahler, R. Strauss, and others. The French, Spanish, Italian, and Russian song. Late English and American contributions. Live and recorded performance.
Two semester hours credit.
- 605 **Oratorio Literature** On Demand
Survey of oratorio and cantata literature from the beginning to contemporary times. Listening to live and recorded music.
Three semester hours credit.
- 606 **Survey of Operatic Literature** On Demand
The Florentine Camerata, the Roman opera, Monteverdi and the Venetians, English opera, Neapolitans, Handel, opera buffa, French opera. Gluck's opera reforms, Mozart's dramatic works. The Romantic era, Weber, Wagner, Rossini, Bellini, Donizetti, Spontini, Verdi, Puccini. An outline of modern opera. Live and recorded music will illustrate the discussion.
Three semester hours credit.

* Required.

- 607 **Symphonic Literature** On Demand
A survey of orchestral music from its beginning. The Mannheim composers, the Viennese classics, the Romanticists, the National schools, and late European and American developments. Works will be analyzed and their historical, cultural, and philosophical background discussed.
Three semester hours credit.

- 608 **Chamber Music Literature** On Demand
Survey of literature of chamber music, quartet, trio, quintet, etc. in various instrumental combinations. The literature is presented through the analysis of formal structure, and aesthetic values are discussed. The core material will include chamber music of Haydn, Mozart, Beethoven, and Brahms.
Three semester hours credit.

Theory

- 505 **Advanced Orchestration** On Demand
The scoring of original and other works for various combinations of instruments as well as one complete score for full symphony orchestra. Performance of these scores and analysis of representative symphonic works.
Two semester hours credit.

- 507 **Advanced Counterpoint** On Demand
Analysis and use of contrapuntal devices employed in the passacaglia, canon and fugue, and the introduction to contemporary linear counterpoint.
Two semester hours credit.

- 547 **Vocal Arranging** On Demand
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.
Two semester hours credit.

- 552 **Composition** On Demand
Composing in mediums and musical forms from solo through works for symphony orchestra and symphonic band and wind ensemble. Every attempt will be made to assist each student in the best way possible.
Two semester hours credit.

- 598 **Band Arranging** On Demand
A practical exposition of the principles of arranging for various wind instrumental solos and ensembles with particular stress on the band and wind ensemble.
Two semester hours credit.

- 601 **Evolution of Harmonic Theories I-II** On Demand
I. Music theory from antiquity through the Renaissance—Aristoxenus through Cerone and Morley. II. Music theory from Rameau and Fux, through contemporary theory.
Three semester hours credit.

- 602 **Analytical Techniques for Contemporary Music I-II** On Demand
A survey of the theoretical approach of leading contemporary composers. Term paper required.
Three semester hours credit.

Applied Music

ADVANCED CONDUCTING

- *512 **Advanced Choral Conducting and Score Reading** I and Summer Session

A practical exposition of all facets of choral directing, effective rehearsal procedures, score study, and organization of choral ensembles.

Two semester hours credit.

- *513 **Advanced Instrumental Conducting and Score Reading** I and Summer Session

A study of advanced problems in baton technique and score reading and the analysis of graded band and orchestra literature. This course will include conducting by the student of band and orchestra groups from the University or from the University *Music for Youth* summer camp.

Two semester hours credit.

- 430 **Piano** I, II, and Summer Session
a,b,c,d.

This course is designed to furnish the basic piano skills necessary for public school teaching. Students must meet required standards of proficiency. For non-piano majors only.

One ½-hour lesson a week.

Permission of instructor required.

One semester hour credit. (½-semester hour credit in summer.)

- 431 **Piano** I, II, and Summer Session

Continuation of the development of basic piano skills necessary for public school teaching. To be elected upon the completion of 430d or its equivalent.

One ½-hour lesson a week.

Permission of instructor required.

One semester hour credit. (½-semester hour credit in summer.)

- 436 **Piano as Ensemble Instrument** II and Summer Session

This course will afford the piano major practical experience, under supervision, in at least one of a variety of ensemble situations employing piano. Studio or choral accompanying, participation in solo, trio, quartet, quintet, or other vocal or instrumental combinations will be assigned by the instructor according to the abilities and needs of the student.

Prerequisites: Courses 333, 336.

One or one-half semester hours credit.

*One of these courses is required.

- 533 **Piano** **I, II, and Summer Session**
This course stresses artistic performance, with proficiency requirements at each level. For piano majors only. One one-hour lesson per week.
Permission of instructor required.
Two semester hours credit.

- 535 **Piano Pedagogy** **On Demand**
A study of the methods and materials used in teaching piano either in the public schools or privately. Special emphasis is given to class piano methods, organization, and materials, with opportunities provided for observation of and participation in university piano classes.
Two semester hours credit.

VOICE

- 440 **Voice** **I, II, and Summer Session**
This course is designed to furnish the basic vocal needs for public school teaching. Students must meet required standards of proficiency.
For non-vocal majors only.
One ½-hour lesson a week.
Permission of instructor required.
One semester hour credit. (½-semester hour credit in summer.)
- 446 **Vocal Ensemble** **I, II**
A study of choral repertoire as developed through ensemble participation and sight reading of numerous works in the fields of men's and women's and mixed voices. Two meetings per week.
One semester hour credit.
- 447 **Concert Choir** **I, II**
A course stressing the study and performance of musical masterworks from the seventeenth through the twentieth century. Admission by consultation only. Four periods per week.
One semester hour credit.
- 485 **Chorus** **I, II, and Summer Session**
Membership in this organization is open to all students proficient in singing and interested in choral activities. Two meetings per week.
One semester hour credit.
- 543 **Voice** **I, II, and Summer Session**
Advanced private study of vocal literature, stressing interpretation and artistic performance in operatic, oratorio and song repertoire.
Permission of instructor required.
Two semester hours credit.

- 545 Pedagogy in Class Voice** **On Demand**
 A detailed study of the techniques and procedures of teaching vocal production and interpretation in group lessons. Emphasis will also be placed on current materials in the field.
 Two semester hours credit.
- 586 Workshop for Choral Directors** **Summer Session**
 An intensive discussion and demonstration of practical choral techniques with a view to improving choral rehearsal procedures and performance abilities.
 One semester hour credit.

BAND AND ORCHESTRA

- 450 Private Woodwinds** **I, II, and Summer Session**
 This course stresses performance, with proficiency requirements at each level. For non-woodwind majors only.
 One ½-hour lesson a week.
 Permission of instructor required.
 One semester hour credit. (½-semester hour credit in summer.)
- 456 Instrumental Ensemble** **I, II, and Summer Session**
 The course is designed to acquaint the student through performance with the literature for various instrumental combinations. Brass, strings, and woodwind ensembles are offered. Admission through consultation only. Two rehearsals per week.
 One semester hour credit.
- 460 Private Strings** **I, II, and Summer Sessions**
 Private instruction is offered for students whose performing medium is a stringed instrument, or anyone interested in this medium. The course is so organized that a student can begin study at any level of performance. For non-string majors only.
 One ½-hour lesson a week.
 Permission of instructor required.
 One semester hour credit. (½-semester hour credit in summer.)
- 470 Private Brasses** **I, II, and Summer Session**
 Private instruction is offered for students whose performing medium is not a brass instrument. For non-brass majors only.
 One ½-hour lesson a week.
 Permission of instructor required.
 One semester hour credit. (½-semester hour credit in summer.)
- 480 Symphony Orchestra** **I, II**
 Membership in the University Symphony Orchestra is open to all university students proficient in the playing of orchestral instruments. Admission by consultation only. Two rehearsals per week.
 One semester hour credit.

- 491 **Marching Band** **I**
 This course is open to all university musicians. Members are required to play at all home games and one game away from home. Four rehearsals a week.
 One semester hour credit.
- 492 **Concert Band** **II and Summer Session**
 Membership in this course is open to all students proficient in the playing of band instruments. Admission by consultation only. Four rehearsals per week.
 One semester hour credit.
- 551 **Advanced Pedagogy in Woodwind Instruments** **On Demand**
 A comparative analysis and evaluation of the techniques and methods used in the teaching of the various woodwind instruments.
 Two semester hours credit.
- 553 **Private Woodwinds** **I, II, and Summer Session**
 This course stresses performance, with proficiency requirements at each level. For woodwind majors only. One one-hour lesson per week.
 Permission of instructor required.
 Two semester hours credit.
- 561 **Advanced Pedagogy in Strings** **On Demand**
 A study of materials, methods, and special problems in the teaching of private strings, class strings, and string orchestra.
 Two semester hours credit.
- 563 **Private Strings** **I, II, and Summer Session**
 Artistic performance is stressed, with proficiency requirements at each level. For string majors only; primary instrument. One one-hour lesson per week.
 Permission of instructor required.
 Two semester hours credit.
- 571 **Advanced Pedagogy in Brass and Percussion Instruments** **On Demand**
 A comparative analysis and evaluation of the techniques and methods used in the teaching of the various brass and percussion instruments. The study will also include a review of the outstanding instructional, solo, and ensemble literature for each of these instruments.
 Two semester hours credit.
- Private Brasses** **I, II, and Summer Session**
 Artistic performance is stressed, with proficiency requirements at each level. For brass majors only. One one-hour lesson per week.
 Permission of instructor required.
 Two semester hours credit.

- 582 Workshop for Orchestra Directors** **Summer Session**
 A detailed analysis and practical demonstration of the techniques of rehearsal both sectional and full, program building at various performance levels, and the special problems of the string orchestra.
 One semester hour credit.
- 592 Workshop for Band Directors** **Summer Session**
 An intensive review of current practices in the administration and development of the band program with a concentration on the problems of particular interest and need.
 One semester hour credit.

Music Education

- 418 Physics of Musical Instruments** **I or II and Summer Session**
and Sound
 A study of the science of musical sound and the physical principles involved in the production of music by the various instruments and the voice. Includes elements of architectural acoustics of music rooms and acoustical engineering of electronic recorders and reproducers. Open to non-majors by permission of instructor.
 Two semester hours credit.
- 509 Supervision and Administration of the Music Program** **On Demand**
(Also listed as Education 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.
 Two semester hours credit.
- 510 Special Music Problems in the Junior High School** **On Demand**
 Emphasis on modern theory, techniques, and materials.
 Two semester hours credit.
- 511 Workshop in Elementary School Vocal Music** **Summer Session**
 Designed to give classroom teachers, music specialists, and school music administrators experience with the latest techniques, practices, and materials employed in teaching music in the primary and intermediate grades.
 One semester hour credit.
- 515 Marching Band Techniques** **I**
 A study of the various types of marching band presentations for the football, basketball, and street appearances. Includes projects in the development of marching band shows, drills, music and instrumentation.
 Two semester hours credit.

- 516 **Workshop in Junior High School Music** Summer Session
Designed to give school music administrators, vocal specialists, and instrumental specialists firsthand experience with a comprehensive junior high school music program.
One semester hour credit.
- 517 **Understanding the School Music** I, II, and Summer Session
Program
The development of an understanding of the procedures and objectives of a complete school music program, including both vocal and instrumental organizations for grade school, junior high school, and high school. This course is designed to meet the needs of present and prospective elementary and secondary school administrators. Not open to music majors. Open only to elementary and secondary school administrators.
Two semester hours credit.
- 518 **Special Problems in Music Education** I, II, and Summer Session
Independent study of problems as made under the supervision of an advisory committee appointed by the department head. Writing of a thesis, or presentation of a formal public recital with accompanying graduate paper, or a partial recital and qualifying paper will be required of all graduates.
Two to four semester hours credit.
- 519 **Measurement, Evaluation, and Guidance in Music** On Demand
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.
Three semester hours credit.
- *524 **Techniques of Research in Music Education** I and Summer Session
Nature of research and scientific method; application to problems of music education; problem definition; development of a research design; probability and sampling procedure; specialized techniques for the location, collection, quantification, and treatment of data. Required of all students in their first semester's work on the graduate level.
Two semester hours credit.
- **525 **Foundations of Music Education** I and Summer Session
The historical and philosophical basis of music education. The application of learning theories to problems of music teaching.
Three semester hours credit.

*Required of all students in their first semester's work on the graduate level.

**Required.

- 609 **Projects and Problems in Music Education** **On Demand**
 Extensive study of a problem or project chosen by the student for investigation with solution related to practical use in a teaching situation. One or more group projects for study by the class or by committees within the class.
 Three semester hours credit.
- 610 **Psychology of Music** **On Demand**
 A study of the functions of the musical mind and the factors involved in the development of musical skills and maturity.
 Three semester hours credit.
- 612 **Music Teaching Techniques for the Higher Education Level** **On Demand**
 Symposium of contemporary teaching techniques in applied music, theory, music literature, composition, and music education. Detailed study will be made of national institutional plans for achieving educational objectives in these fields.
 Three semester hours credit.
- 613 **The Administration of Music in Higher Education** **On Demand**
 A survey of administrative problems, curricular content, securing of teaching personnel and equipment, the planning of music buildings, and other duties attendant upon the administrator of a music department of a school of music at the higher educational level.
 Three semester hours credit.
- 614 **College Music Teaching** **On Demand**
 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.
 Three semester hours credit.

PHILOSOPHY

A program for a graduate major in philosophy is not yet complete; however, qualified students may take the following courses for graduate credit. Students interested in advanced work in this area should consult with the instructor prior to enrollment.

- | | Description of Courses | I or II |
|-----|---|---------|
| 400 | Esthetics
Theories of the nature of art. A study of the philosophic problems and concepts involved in the understanding and criticism of the fine arts. Selected readings from historical and contemporary sources.
Three semester hours credit. | |

- 412 Symbolic Logic** **I or II**
 An introduction to modern mathematical logic covering such topics as axiomatics, relations, the propositional calculus and the functional calculus.
 Prerequisite: Philosophy 100 or Mathematics 130 or permission of the instructor.
 Three semester hours credit.
- 420 Philosophy of Language** **I or II**
 The nature, scope and importance of certain linguistic problems. A study of representative theories of meaning. The function of symbolism in science, poetry, religion, politics, and morals.
 Prerequisite: Six semester hours in philosophy, including Philosophy 100, or permission of instructor.
 Three semester hours credit.
- 440 Theory of Knowledge** **I or II**
 A philosophical study of the nature of knowledge, the methods by which it is obtained, and the presuppositions of these methods. Special attention will be given to the philosophical problems of memory, perception, truth, belief, and judgment.
 Prerequisites: Six hours of philosophy or permission of the instructor.
 Three semester hours credit.
- 450 Advanced Ethics** **I or II**
 An intensive study of basic ethical problems with special attention to recent developments in ethical theory.
 Prerequisites: Philosophy 200 or permission of the instructor.
 Three semester hours credit.
- 460 Philosophy of Science** **I or II**
 The nature and historical development of the philosophic foundations, problems and implications of modern science. Diverse interpretations of the character of scientific knowledge and its place in culture generally. Problems of operationalism, determinism, causality and the concept of relativity.
 Prerequisite: Three semester hours in philosophy or a major in any of the sciences.
 Three semester hours credit.
- 465 Twentieth Century Philosophy** **I or II**
 An examination of some dominant Twentieth Century movements in philosophy including pragmatism, positivism, logical analysis, and existentialism. Special attention will be given to modern developments in analytical philosophy.
 Prerequisites: Six hours of philosophy or permission of the instructor.
 Three semester hours credit.

488 **Philosophical Issues** **I or II**

An examination of some fundamental issues in theory of knowledge, ethics, and metaphysics and their relation to modern trends of thought. Among the topics discussed will be the mind-body problem, determinism and freedom, the nature of ethical judgments, the nature of meaning, the nature of truth, and the nature of causation. Three semester hours credit.

490 **Seminar in Philosophy** **I or II**

An intensive study of one major figure, problem, or position in historical or contemporary philosophy.

Prerequisite: Nine semester hours in philosophy, or permission of instructor.

Three semester hours credit.

495 **Special Studies** **I or II**

Directed reading on selected topics of an advanced nature. Students will have regular conferences with the instructor and will have the opportunity for detailed discussion of their readings with him. Primarily for philosophy majors and graduate students.

Prerequisites: Nine hours of philosophy *and* permission of the instructor.

Two to four semester hours credit. (May be repeated up to a total of eight semester hours).

PHYSICAL EDUCATION FOR MEN

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

Students working toward the degree Master of Science in Education with a major in the Department of Physical Education for Men must successfully complete a minimum of eighteen semester hours of graduate work in that Department. The following courses or equivalents are prerequisites for admission to candidacy for all majors and area majors in Physical Education: Kinesiology, Anatomy, Tests and Measurements in Physical Education, Administration, and two courses in Theory of Coaching.

Candidates are required to take Physical Education 570 and 671M. They must also take either Physical Education 500 or Physical Education 510 and either Physical Education 520 or Physical Education 613. Physical Education 570 must be taken prior to registering for the qualifying paper.

Certificate of Advanced Study

All students who wish to pursue a program leading to the Certificate of Advanced Study should have a baccalaureate degree or master's degree or its equivalent in physical education. For other requirements, consult with the head of the department.

Description of Courses

- 400M Materials and Problems in Health Education** **I**
 A study of health education programs in elementary and secondary schools. Materials and problems involved in teaching health.
 Two or three semester hours credit.
- 410M Tests and Measurements in Physical Education** **I, II**
 Lectures and laboratory practice in the use of measuring devices in the field of health and physical education. Use of tests and underlying principles of test construction. Practice in the administration of tests and in interpreting results.
 Two or three semester hours credit.
- 442M Organization of Extracurricular Activities** **I**
 Critical analysis of the intramural sports program with a view to its justification from the standpoint of objectives, age level, and contribution to the general welfare of the students participating. Policies and administration of intramural programs in elementary, junior, and senior high schools. Finance, promotion, and co-recreational activities. Active participation in conducting programs.
 Three semester hours credit.
- 500M History and Philosophy of Physical Education** **On Demand**
 Historical development of physical education from primitive to modern times. Philosophy of modern physical education with application to present day educational programs.
 Three semester hours credit.
- 510M Scientific Foundations of Physical Education** **On Demand**
 Background of physical education from the biological, anatomical, and physiological aspects, with stress on past and present procedures.
 Three semester hours credit.
- 511M Psychology of Coaching** **On Demand**
 Study of the application of principles of psychology to learning situations involved in competitive sports. Emphasis both on the general learning situations involved in the mastery of skills and on the special situations involved with individual and group problems of motivation and response.
 Three semester hours credit.
- 520M Mechanical Analysis of Motor Skills** **On Demand**
 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.
 Three semester hours credit.
- 521M Care, Treatment, and Prevention of Athletic Injuries** **On Demand**
 Prevention and correction of accidents in athletic activities. Consideration given to 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.
Three semester hours credit.

537M Public Relations for Physical Education **On Demand**

A study of 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.

Two semester hours credit.

538M Planning and Administration of Social Recreation **On Demand**

A treatment of procedures for determining the needs, outlining the plans, and implementing the program of community and special recreation.

Three semester hours credit.

541M Organization and Administration of Inter-Scholastic Athletics **On Demand**

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 considered.

Three semester hours credit.

542M Advanced Techniques of Coaching **On Demand**

A seminar concerned with current trends in the specific areas of inter-school athletic programs. A detailed study of sport techniques.

One to three semester hours credit.

544M Workshop in Athletic Coaching **Summer Session**

An especially designed course for coaching of interscholastic athletics. New developments in the technique of coaching are studied through the use of lectures, discussion, demonstration, and films. Outstanding specialists in the field of athletics will present material on recent developments in equipment, practice, theory, and philosophy.

One semester hour credit.

570M Seminar in Research Studies in Physical Education **On Demand**

A study of the methods and purposes of research in physical education. Each student will do the preliminary work for an independent research problem.

Three semester hours credit.

613M Advanced Tests and Measurements in Physical Education **On Demand**

Concentration on principles of construction and administration of physical performance tests. Fundamental statistics leading to interpretation of results of testing.

Prerequisite: Course 410 or equivalent.

Three semester hours credit.

- 631M Seminar in Physical Education Curriculum** **On Demand**
 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.
 Two semester hours credit.
- 632M Supervision of Physical Education** **On Demand**
 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; types of conferences.
 Three semester hours credit.
- 634M Planning and Use of Facilities for Physical Education** **On Demand**
 Principles, terminology, and standards for planning, construction, use, and maintenance of facilities for the indicated programs. Standard authoritative references studied and critically evaluated.
 Three semester hours credit.
- 635M Advanced Administration of Physical Education** **On Demand**
 The organizational and administrative problems of physical education on the high school level. Aims and objectives and administrative policies will be studied.
 Three semester hours credit.
- *671M Individual Research Problems** **I, II**
 Individual investigation 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 staff and must have their problems approved before registering.
 One to three semester hours credit.

PHYSICAL EDUCATION FOR WOMEN

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

A program of graduate study leading to the master's degree with a major in physical education is planned with each candidate by a departmental adviser.

Certificate of Advanced Study

Students applying for candidacy for the Certificate of Advanced Study must have completed an undergraduate major in physical education, or the equivalent, and must possess a master's degree in the area of specialization.

*Course may be repeated to maximum of nine semester hours including the qualifying paper.

Description of Courses

- 445 **Elementary Tests and Measurements** I, II
 Construction, use, and administration of skill and knowledge tests in health and physical education. Evaluation of existing measurement tools.
 Two semester hours credit.
- 446 **Health Education Problems** I, II
 Study of 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.
 Two semester hours credit.
- 448 **Organization and Supervision of Co-curricular Programs for Junior and Senior High Schools** II
 Study of functions and contributions of intramural and extramural activities as part of junior and senior high school physical education programs. Consideration given to organization of play days, tournaments, demonstrations, and State G.A.A. program.
 Three semester hours credit.
- 451 **Body Mechanics** II
 Principles and analysis of human motion in everyday and physical education activities. Analysis and procedure in the control of atypical deviations.
 Prerequisite: Kinesiology or permission of instructor.
 Three semester hours credit.
- 452 **Physiology of Activity** I, II
 A study of how the systems of the body function during activity; the physiological adaptations during work; and the lasting changes which result from different levels of performance. Practical experience with selected experimental procedures.
 Prerequisite: Human Anatomy and Physiology.
 Three semester hours credit.
- 453 **Adapted Physical Education Activities** II
 Modification of physical education activities to meet the needs of the physically handicapped. Considers materials, methods, and the development of a program of adapted physical education activities.
 Three semester hours credit.
- 460 **Folk, Square, and Social Dance in Education** On Demand
 Analysis of techniques and materials for schools and recreation as they relate to education.
 Three semester hours credit.
- 465 **Problems in Modern Dance Composition** On Demand
 Dance in the historical development of cultures. Approaches to creative work and production. Trends in dance as an educational medium.
 Three semester hours credit.

- 467 **Dance Notation** I
 Historical survey of movement notation methods used throughout the world. Theory and practice in writing various methods, with concentration on Labanotation.
 Three semester hours credit.
- 468 **Seminar in Rhythmic Activities for Elementary and Junior High Schools** On Demand
 Study of 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.
 Three semester hours credit.
- 500 **History and Philosophy of Physical Education** I, II
 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.
 Three semester hours credit.
- 510 **Applied Anatomy (Kinesiology)** I
 Analysis of joint and muscle action in the balance and movement of the human body in everyday and physical education activities
 Prerequisite: Anatomy.
 Three semester hours credit.
- 512 **Fundamental Basis of Movement** I, II
 A study of the various systems of the body and their application to body movement. Emphasis placed on practical application to physical education activities. Designed primarily for the classroom teacher. Open to physical education majors on approval of instructor.
 Three semester hours credit.
- 532 **Principles of Supervision of Health and Physical Education** II
 Consideration of techniques and procedures of supervision in school health and physical education programs.
 Three semester hours credit.
- 540 **Seminar in Elementary School Physical Education** I
 Study of present day programs and problems related to elementary school physical education.
 Three semester hours credit.
- 543 **Administration of Health and Physical Education** II
 Consideration of methods and procedures of administration in school physical education programs.
 Three semester hours credit.
- 544 **Problems in Curriculum and Program of Physical Education** II
 A seminar concerned with individual investigation of principles and

procedure in developing the physical education program for elementary and secondary schools.
Three semester hours credit.

- 545 Curriculum in Health and Physical Education for Junior High Schools** I
Consideration of principles and procedures applicable to health and physical education programs at the junior high school level.
Three semester hours credit.
- 546 Evaluation in Health and Physical Education** II
Uses and limitations of evaluating devices, construction and administration of tools for evaluations, and interpretation of results.
Prerequisite: Course 445 or permission of instructor.
Three semester hours credit.
- 549 School and Community Recreation** I, II
Study of administrative problems, personnel standards, finance, facilities, and programs. Analysis of organizational plans for cooperative development of school-community programs.
Three semester hours credit.
- 550 Camp Administration** II
Consideration of administrative problems, selection of personnel, organization of programs, selection, maintenance, and supervision of facilities.
Three semester hours credit.
- 555 Seminar in Teaching Skills** II
Practical and theoretical study of methods of teaching physical activities. Emphasis is placed on scientific foundations of education.
Three semester hours credit.
- 560 Seminar in Rhythms and Dance** I
Rhythms and dance as a basic educational technique. Designed to assist in planning, teaching, and supervising the rhythmic program. Experiences in the group process.
Prerequisite: Permission of the instructor.
Three semester hours credit.
- *569 Independent Study in Health, Physical Education, and Recreation.** I, II
Open to qualified students who wish to do advanced study in the areas of health education, physical education, or recreation.
Prerequisite: Permission of adviser.
One to three semester hours credit.
- 570 Methods of Research in Physical Education** I, II
Introduction to methods and materials basic to research in the field. Approved methods of writing term papers and research papers. Required of Physical Education majors prior to registration for the qualifying paper.
Three semester hours credit.

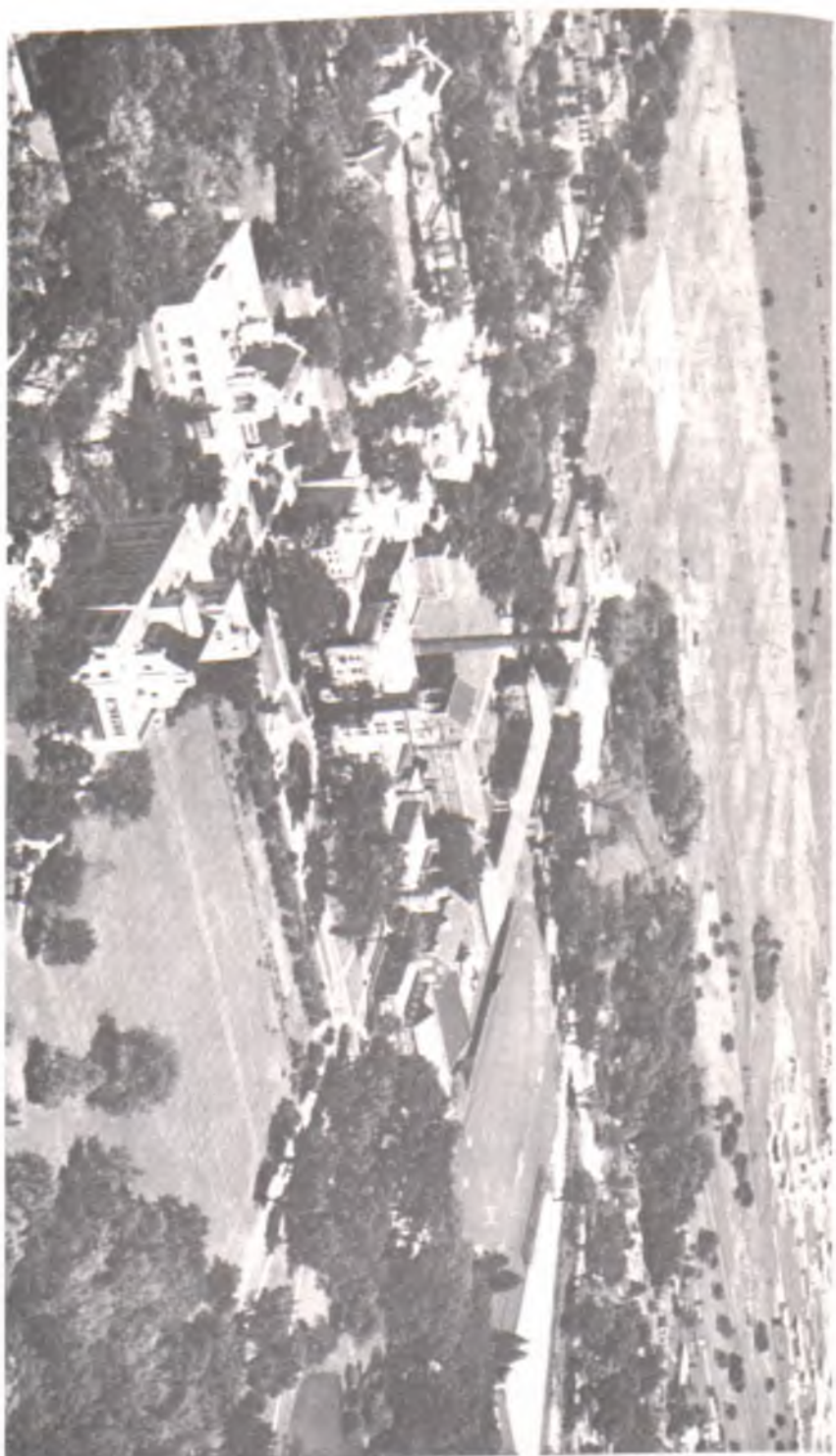
*Courses 569 and 573 may be repeated to a maximum of three semester hours.

- 571 **Source Materials in Physical Education and Related Areas** I, II
 Opportunity for extensive reading in health, physical education, and related areas. Consideration of current instructional materials.
 Two semester hours credit.
- 572 **Current Trends in Physical Education** II
 Consideration of contemporary trends in the field of physical education and related areas.
 Two semester hours credit.
- *573 **Research Problems in Physical Education** I, II
 Opportunity to work individually under guidance. Must be taken by a student doing the research paper.
 Prerequisite: Course 570 or equivalent.
 One to three semester hours credit.
- 575 **Philosophical Bases of Physical Education and Recreation** I
 The object of this course is to develop a better understanding and appreciation of the purposes, values, nature, scope, and significance of physical education and recreation in America.
 Three semester hours credit.
- 612 **Physiological Aspects of Motor Activity** I, II
 Study of the physiological effects of physical activity on the various systems of the human organism. Selected problems for experimentation and research.
 Prerequisite: Anatomy and physiology.
 Three semester hours credit.
- 632 **Advanced Supervision of Physical Education** On Demand
 This course is designed only for supervisors of elementary and secondary school programs, cooperating teachers, and school administrators.
 Three semester hours credit.
- 643 **Seminar in Administration of Physical Education, Health Education, and Recreation Programs** I
 Analysis of problems specifically related to departmental organization in high schools, colleges, and universities. Consideration of individual problems.
 Three semester hours credit.
- **673 **Advanced Research Problems** I, II
 Must be taken by a student doing the research for the thesis. Approval of the research study must be granted prior to registration.
 One to four semester hours credit.

*Courses 569 and 573 may be repeated to a maximum of three semester hours.

**May be repeated to a maximum of four hours.

The campus, looking north



PHYSICS

The Department of Physics offers programs leading to the degrees Master of Science in Education and Master of Science and, at sixth-year level, to the Certificate of Advanced Study. The departments of Biological Sciences, Chemistry, Earth Sciences, 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 leading to the degree Master of Science in Education must take a minimum of eleven semester hours from the offerings of the Department of Physics.

AREA MAJOR IN GENERAL SCIENCE

Students who elect an area major in general science will find the requirements listed on page 42.

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.

- a. The candidate must meet the requirements for the B. S. degree in physics at N. I. U. In some cases deficiencies in courses of "400" level may be made up for credit as part of the twelve semester hours of electives in the M. S. requirements.
- b. A minimum requirement is twenty semester hours in physics. The remaining twelve hours are to be chosen from physics and/or closely related fields after consultation with the adviser.
- c. The candidate must demonstrate a reading knowledge of German or Russian.
- d. Proficiency examinations may be administered at an early stage of the program for the purpose of aiding the adviser in the preparation of a course of study for the candidate and counseling the candidate as to the advisability of continuing in the program for the M. S. degree.

Certificate of Advanced Study

The certificate of advanced study may be awarded to students pursuing programs in either physics or 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 head or heads or by the assigned adviser.

The program of courses to be taken will be drawn up with consideration being given to the student's interests and background.

Description of Courses

405 History of Science

II

(Also listed as Chemistry 405)

Development of physical science from the beginning of recorded history to the present time. Significant past stages and present trends emphasized.

Two semester hours credit.

- 406 **Biography of Famous Scientists** II
 (Also listed as Chemistry 406)
 Work and personal characteristics of famous scientists. Oral and written reports.
 Two semester hours credit.
- 409 **Science Institute for In-Service Elementary Teachers** On Demand
 (Also listed as Chemistry 409)
 Subject matter material in biological sciences, chemistry, earth sciences, and physics necessary for effective science teaching in the lower grades.
 One to eight semester hours credit.
- 450 **Advanced General Physics** On Demand
 Topics selected to furnish thorough background for teaching. Not open to physics majors. Two to six periods a week.
 Prerequisite: General Physics.
 Two to four semester hours credit.
- 451 **Advanced General Physics** On Demand
 Continuation of Course 450. Not open to physics majors. Two to six periods a week.
 Prerequisite: Course 450 or equivalent.
 Two to four semester hours credit.
- 456 **Introduction to Bio-Physics** On Demand
 Topics of special interest treated from bio-physical point of view.
 Prerequisite: One year of college physics and one year of biology.
 Three semester hours credit.
- 460 **Quantum Mechanics I** On Demand
 Schrodinger wave equation, eigen-values and eigen-functions, methods of approximation and simple applications.
 Prerequisite: Course 385.
 Three semester hours credit.
- 462 **X-Ray Crystallography** On Demand
 Production, absorption and scattering of x-rays, x-ray spectra, diffraction and interference phenomena, applications to crystals.
 Four periods per week.
 Prerequisite: Course 360 and 370 or equivalent.
 Three semester hours credit.
- 463 **Kinetic Theory and Statistical Mechanics** On Demand
 Elementary kinetic theory of gases, distribution functions, transport phenomena, Maxwell-Boltzmann, Fermi-Dirac and Bose-Einstein statistics; applications to physical and chemical systems.
 Prerequisite: Courses 360 and 363 or equivalent.
 Three semester hours credit.

- 465 Sound** **On Demand**
 Steady-state and transient vibrations of strings and membranes, radiation and transmission of sound, acoustic impedance, filters and tuned lines, sound waves in rooms.
Prerequisite: Course 285 or equivalent.
 Two semester hours credit.
- 466 Solid State Physics I** **On Demand**
 Thermal and electrical properties of metals, semi-conductors and insulators, crystal structure.
Prerequisite: Course 370 or equivalent.
 Three semester hours credit.
- 467 Solid State Physics II** **On Demand**
 Optical and magnetic properties of solids, theory of metallic conductivity, super-conductivity, para- and ferro-magnetism.
Prerequisite: Course 466.
 Three semester hours credit.
- 470 Electricity and Magnetism II** **I**
 Continuation of Course 370. Magnetic forces, electromagnetic induction, transient current, A-C circuits, magnetic properties of matter; introduction to Maxwell's equation and electromagnetic waves.
Prerequisite: Course 370.
 Three semester hours credit.
- 471 Electrical Measurements** **I or II**
 Laboratory supplement to Courses 370 and 470, including characteristics and calibration of basic electrical instruments. Four periods a week for one semester or eight periods a week for nine weeks.
Prerequisite: Course 370 or equivalent.
 Two semester hours credit.
- 472 Physical Measurements** **On Demand**
 Instrumentation techniques. Topics of special interest selected.
Prerequisite: Course 375 or 471.
 Two semester hours credit.
- 475 Electronics** **I or II**
 Electron ballistics, emission from metals, conduction in vacuum and gases, electron tubes, introduction to semi-conductors. Includes laboratory. Four periods a week.
Prerequisite: Course 370 or equivalent.
 Three semester hours credit.
- 477 Introduction to Astro-Physics** **On Demand**
 Kepler's laws and solar system, analysis of solar radiations, nuclear reactions in the sun, and other selected topics.
Prerequisite: Course 377 and 370 or equivalent.
 Three semester hours credit.

- 480 **Atomic Physics I** **I**
 Evidence for atoms as constituents of matter, electrons, special relativity, light quanta, the nuclear atom, the Bohr atom, and X-rays. Introductory wave mechanics, atomic structure, and optical spectra. Co-requisite: Course 360 and 370 or equivalent. Three semester hours credit.
- 481 **Atomic Physics Laboratory** **I or II**
 Laboratory supplement to Courses 380 and 480. Four periods a week for one semester or eight periods a week for nine weeks. Prerequisite or co-requisite: Course 380 or equivalent. Two semester hours credit.
- 482 **Nuclear Physics I** **II**
 Radioactivity, nuclear structure and reactions. Prerequisite: Course 360 and 370 or equivalent. Three semester hours credit.
- 485 **Methods of Mathematical Physics III** **I or II**
 Continuation of Course 385. Prerequisite: Course 385. Three semester hours credit.
- 490 **Science in the Public Schools** **I or II**
(Also listed as Chemistry 490)
 (For teachers, supervisors, and administrators in elementary and junior high schools). Objectives and problems of science teaching in elementary and junior high schools. Principles and applications of science illustrated by simple apparatus constructed by members of the class. (Not open to Physics or Chemistry majors or minors.) Prerequisite: Course 150 or Chemistry 110 or equivalent. Three semester hours credit.
- 499 **Teaching of Physical Sciences** **I**
(Also listed as Chemistry 499)
 Objectives of the teaching of the physical sciences in the secondary schools. Classroom and laboratory problems confronting the secondary school teacher. Prerequisite: Physics, Chemistry, or General Science major. Two semester hours credit.
- 501 **Physics for Teachers of General Science** **On Demand**
 Physics for graduate students majoring in general science. Topics selected to furnish background in physics for science teaching and advanced study. Lectures, discussion, problems, and laboratory work. Not open to physics majors. Four semester hours credit.
- 505 **Institute of Chemistry and Physics for High School Teachers of Science** **Summer Session**
(Also listed as Chemistry 505)
 Emphasis placed on fundamentals of chemistry and physics. Includes field trips, lectures by visiting scientists, and laboratory work designed to meet needs of the student. Open only to persons with three or more years of experience in high school science teaching. Eight semester hours credit.

- 507 **Institute in Physics for High School Teachers of Science** Summer Session
 Fundamentals of physics. Laboratory, field trips, lectures by visiting scientists. Course designed to meet the needs of the in-service teachers.
 Eight semester hours credit.
- 555 **Physics Seminar** On Demand
 Problems in physics discussed under guidance of staff.
 Prerequisite: One year of college physics or equivalent.
 May be repeated for credit, but total credit is limited to six semester hours.
 One or two semester hours credit.
- 559 **Special Problems in Physics** On Demand
 Special problems in physics under supervision of staff. Problems may be technical in nature or concerned with teaching procedure.
 Prerequisite: One year of college physics or equivalent.
 May be repeated for credit, but total credit is limited to ten semester hours.
- 560 **Quantum Mechanics II** On Demand
 Matrix algebra, perturbation theory, Dirac theory of electron.
 Prerequisite: Course 460.
 Three semester hours credit.
- 563 **Quantum Statistics** On Demand
 Quantum statistics, Fermi-Dirac and Bose-Einstein statistics, applications to atomic and nuclear systems.
 Prerequisite: Courses 460 and 463.
 Three semester hours credit.
- 565 **Theory of Vibrations** On Demand
 Selected topics from optics, acoustics and electromagnetic theory.
 Prerequisite: Course 385 or equivalent.
 Three semester hours credit.
- 570 **Electrodynamics** On Demand
 Maxwell's equations, multiple radiations, Lorentz electron theory, wave guides.
 Prerequisite: Course 470 or equivalent.
 Three semester hours credit.
- 575 **Electronics II** On Demand
 Continuation of Course 475. Oscillators, amplifiers, transmitters and industrial controls. Network theory considered.
 Prerequisite: Course 475 or equivalent.
 Three semester hours credit.
- 580 **Atomic Physics II** On Demand
 Atomic spectra, Zeeman effect, Stark effect, Hyperfine structure.
 Prerequisite: Course 480.
 Three semester hours credit.

- 581 **Nuclear Physics Laboratory** **On Demand**
 Studies of the properties of particles from natural and artificial disintegration of nuclei, study of the corresponding measuring instruments.
 Prerequisite: Course 482.
 Two semester hours credit.
- 582 **Nuclear Physics II** **On Demand**
 Theory of light nuclei, nuclear forces, nuclear reactions, nuclear theories.
 Prerequisite: Course 460 and 482 or equivalent.
 Three semester hours credit.
- 585 **Theoretical Physics I** **On Demand**
 Fields and variational principle, approximate methods, Green's functions, integral equations of physics.
 Prerequisite: Course 485 or equivalent.
 Three semester hours credit.
- 590 **Physical Science for Elementary Teachers** **On Demand**
 (Also listed as Chemistry 590)
 Principles and applications of physical science illustrated by simple apparatus constructed by members of class. Satisfies requirements for Education 584. (Not open to Chemistry majors or minors.)
 Two to five semester hours credit.
- 591 **Physical Science for Elementary Teachers** **On Demand**
 (Also listed as Chemistry 591)
 A continuation of Course 590. (Not open to Chemistry majors and minors.)
 One to three semester hours credit.
- 659 **Research** **On Demand**
 Topic selected with consent of the staff.
 Prerequisites: Courses 460 and 481.
 One to eight semester hours credit.
- 660 **Quantum Mechanics III** **On Demand**
 Relativistic quantum mechanics, the Klein-Gordon equation, Coulomb scattering, Dirac equation, quantization of scalar, electromagnetic and spinor fields.
 Prerequisite: Course 560.
 Three semester hours credit.
- 670 **Quantum Electrodynamics** **On Demand**
 Quantum theory of emission and absorption of radiation, self energy and electromagnetic field of electron, electron scattering, S-matrix, renormalization.
 Prerequisite: Course 560.
 Three semester hours credit.
- 676 **Electron Optics** **On Demand**
 Motion of electrons in electric and magnetic fields, electric and magnetic lenses, electron microscopy.
 Prerequisites: Course 367 and 370 or equivalent.
 Three semester hours credit.

Study of diffusion, scattering and diffraction.

Prerequisite: Course 485.

Three semester hours credit.

POLITICAL SCIENCE

The Department of Political Science offers graduate courses and research opportunities leading to the degree Master of Arts. The department also cooperates with the departments of History, Economics, and Sociology and Anthropology in offering an area major in the social sciences and history leading to the Master of Science in Education degree and to the Certificate of Advanced Study. Descriptions of these programs will be found on page 169 under the heading "Social Sciences."

Master of Arts

Students interested in pursuing a Master of Arts degree with a major in political science should have at least nine undergraduate semester hours in political science. When this is lacking, the student will be required to compensate during the graduate program.

At least twenty-one semester hours are to be taken in political science at the graduate level. These will include research methods (Political Science 640C), at least one course in theory, and a thesis. The candidate must complete an eight hour minor in a closely related field such as economics, history, philosophy, psychology, sociology and/or anthropology. A final written and oral examination is required. Total for the degree, thirty-two semester hours.

Description of Courses

- 440 **Classical Political Thought**
Political thought of ancient Greece, Rome, and Medieval Europe. Plato, Aristotle, and the Church Fathers.
Prerequisite: Pol. Sci. 240.
Three semester hours credit.
- 441 **Modern and Contemporary Political Thought**
Leading political thinkers from Machiavelli to the present. Contract theories, Communism, Democratic Socialism.
Prerequisite: Pol. Sci. 240.
Three semester hours credit.
- 442 **American Political Thought**
Leading American political thinkers from colonial times to the present. Contract theories, Calvinism, Puritanism, Federalism, and Traditional and Modern Liberalism.
Prerequisite: Pol. Sci. 240.
Three semester hours credit.
- 443 **Comparative European Governments**
Development, structure, and functioning of government and politics in the major European states.
Prerequisite: An introductory course in political science.
Three semester hours credit.

- 444 **Government and Politics in the Soviet Union**
Development, structure, and functioning of government and politics in the Soviet Union.
Prerequisite: An introductory course in political science.
Three semester hours credit.
- 445 **American Constitutional Development**
Growth of the American Constitution by judicial interpretation, based on analysis and discussion of leading judicial decisions, with attention to the historical setting of the cases.
Prerequisite: Pol. Sci. 240.
Three semester hours credit.
- 446 **Contemporary Far East**
Contemporary China, Japan, India, and Southeast Asia. Cultural backgrounds, present forms of government, and current political issues are considered.
Prerequisite: An introductory course in political science.
Three semester hours credit.
- 447 **Public Personnel Administration**
Personnel theory and practice in the public setting. The basic methods of personnel administration, from recruitment to retirement, in the context of public administrative organization.
Prerequisite: Pol. Sci. 240.
Three semester hours credit.
- 449 **International Relations**
National power, formulation of foreign policy, world organization, international law, techniques of power politics, and the problems of the major world regions.
Prerequisite: An introductory course in political science. Recommended: European or World History.
Three semester hours credit.
- 541 **International Law**
Principles of International Law of Peace, War and Neutrality.
Prerequisite: An introductory course in political science.
Three semester hours credit.
- 542 **British Government and Politics**
Development, structure and functioning of government and politics in Great Britain.
Prerequisite: Consent of instructor.
Three semester hours credit.
- 544 **Governmental Process**
Interactions and pressures on and between the legislative, administrative, and judicial branches of the National Government.
Prerequisite: Pol. Sci. 240 or equivalent.
Three semester hours credit.
- 547 **Contemporary Africa**
Colonialism and nationalism in Africa; the emergence of independent governments; the trend toward federalism.
Prerequisite: Consent of instructor.
Three semester hours credit.

- 548 **International Organization**
The origins, structure, and functioning of the United Nations and its specialized agencies. Included is a survey of international organizations which existed before 1945.
Recommended: A course in International Relations.
Three semester hours credit.
- 549 **Independent Study in Political Science**
Open to qualified students who wish to do individual advanced work in political science.
Prerequisite: Written permission of department head.
Two to four semester hours credit.
- 640A **Seminar in Political Thought.**
Research and class discussion of selected topics.
Prerequisite: Consent of instructor.
Three semester hours credit.
- 640B **Seminar in International Relations**
Research and class discussion of selected topics.
Prerequisite: Consent of instructor.
Three semester hours credit.
- 640C **Seminar in Scope and Method of Political Science**
Methodology for thesis preparation, research problems, discussions, and criticism.
Prerequisite: Consent of instructor.
Three semester hours credit.
- 640D **Seminar in American Civil Liberties**
Research and class discussion in the field of freedom of speech and religion, citizenship, loyalty, rights of persons accused of crime, and governmental protection of persons against discrimination.
Prerequisite: Consent of instructor.
Three semester hours credit.
- 640E **Seminar in Comparative Government**
Research in government and politics of the major national states.
Prerequisite: A course in Foreign Government or consent of instructor.
Three semester hours credit.
- 640F **Seminar in Public Administration**
Administrative theory and practice; personnel and budgetary processes; theories of organization, bureaucracy, and responsibility.
Prerequisite: Pol. Sci. 240 or consent of instructor.
Three semester hours credit.
- 641 **Theory and Practice of Communism**
The origins of modern communism; the 19th century doctrines; the Russian Revolution; the theories of Lenin, Trotsky, Stalin, Mao Tse-Tung, and Tito; the practice of communism in Soviet Russia, Soviet satellites, and China; the international Communist movement.
Prerequisite: Consent of instructor.
Three semester hours credit.
- 642 **The British Commonwealth of Nations**
The development, structure, and functioning of government and politics in the countries of the Commonwealth.
Recommended: A course in British or foreign political institutions.
Three semester hours credit.

- 643 **Comparative Political Parties**
The organization, programs, and methods of the political parties of the major states of the world.
Prerequisite: Consent of instructor.
Three semester hours credit.
- 649 **Thesis**
Six semester hours credit.

PSYCHOLOGY

Master of Arts

The Master of Arts degree, 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 educational level. There is need for further preparation before one can be regarded as a psychologist, either in the research or applied areas. 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:

Required Core Courses: 500, 501, 502, 503	12 hours
Cognate Courses: To be determined by the student and his adviser	6-9 hours
Area of Concentration in Psychology: To be determined by the student and his adviser	8-11 hours
Thesis: 599	3 hours

	32 hours

Description of Courses

- 405 **Industrial Psychology** I
A study of the functions of psychology as a science and as a profession in contemporary business and industry.
Three semester hours credit.
- 415 **Psychology of Exceptional Children** I, II
Psychology of atypical children—gifted, mentally subnormal, physically handicapped, chronically ill, and socially maladjusted. Study of their needs and dynamics of behavior in home, classes, and institutions.
Three semester hours credit.

- 416 Introduction to Psychopathology** I, II
 An introduction to the study of abnormal behavior with emphasis on the neuroses and psychoses. Includes the dynamics of mental disorders and psychological factors involved in treatment of mental disorders.
 Prerequisite: Course 102 and one additional psychology course.
 Three semester hours credit.
- 426 Interpreting Theories of Personality** I, II
 A systematic study of theoretical contributions of major psychologists to basic understanding of the dynamics of human personality.
 Three semester hours credit.
- 428 History and Systems of Psychology** II
 The major viewpoints in earlier systematic psychology and their relations to contemporary systematic trends.
 Three semester hours credit.
- 435 Theories of Learning** II
 A general study of theories of learning with particular emphasis on theories which have emerged from the psychological laboratory.
 Three semester hours credit.
- 465 Developmental Psychology** I, II
 Studies the span of life from conception to old age, emphasizing the outstanding characteristics of normal individuals of each period.
 Three semester hours credit.
- 500 Pro-Seminar in Psychology** I, II
 Orientation to the world of contemporary psychology. Familiarizes students with major areas, departmental staff, and program at Northern. A common experience in the field for all psychology students.
 Three semester hours credit.
- 501 Foundations of Psychological Research** I, II
 Consideration of philosophy of science, measurement, and inductive logic showing their significance for all kinds of psychological research. Acquaintance with research design and tools.
 Prerequisite: Course 305 or equivalent.
 Three semester hours credit.
- 502 Introduction to Clinical Psychology** I
 Introduction to specific skills, knowledges, and techniques with initial clinical experience.
 Prerequisite: Course 416 (may be taken concurrently.)
 Three semester hours credit.
- 503 Experimental Psychology for Graduate Students** II
 Discussion and demonstration of advanced experimental designs and procedures. Supervised laboratory experiences on problems of significance to the field.
 Prerequisite: Course 410 or equivalent.
 Three semester hours credit.

- 505 **Statistical Problems in Psychology** II
 Applications of complex statistical concepts in the interpreting of psychological data. Emphasis given to complex correlations, tests of significance, and special statistical techniques.
 Prerequisite: Course 305 or equivalent.
 Three semester hours credit.
- 510 **Psychodiagnostics** I
 Introduction to and rationale of various projective tests. Methods of administration and interpretation. Lecture and laboratory.
 Three semester hours credit.
- 511 **Clinical Methods** II
 Interpretation of personality and adjustment through clinical methodology. Diagnosis of maladaptive behavior.
 Prerequisite: Course 510.
 Three semester hours credit.
- 512 **Principles of Psychotherapy** I
 Analysis of the various techniques and theories of psychotherapy and an evaluation of their respective effectiveness.
 Three semester hours credit.
- 513 **Psychological Case Study** II
 Techniques for compiling and interpreting a complete case study. Methods for determining clinical programs for therapeutic purposes.
 Three semester hours credit.
- 514 **Practicum in Clinical Psychology** II
 Application of clinical methodology in a clinical situation. Practice in diagnosis and initial supervised therapy of clinical cases. Open only to candidates for the master's degree in psychology, with permission of instructor.
 Three semester hours credit.
- 515 **Psychology of Personality** I
 The nature and development of personality with a critical study of modern interpretations and research.
 Three semester hours credit.
- 530 **Contemporary Behavioral Theories** II
 Consideration of the theoretical contributions of psychologists publishing today. An examination of historical roots, main emphases, and merits of each theory considered.
 Prerequisite: Course 426 or 435.
 Three semester hours credit.
- 531 **Physiological Bases of Behavior** I
 A detailed study of the behavior of the organism traceable to organic functioning.
 Prerequisite: A course in physiological psychology or a laboratory course in physiology.
 Three semester hours credit.

- 532 **Comparative Psychology** II
 A critical examination of experimental studies using animals as subjects. Emphasis is placed on a comparison of the behavior of the various species. Lecture and laboratory.
 Three semester hours credit.
- 550 **Experimental Studies in Learning** I
 A study of current experimental investigations of the basic learning processes. Examination of the nature of investigative problems, experimental procedures, and theoretical significances. Lecture and laboratory.
 Three semester hours credit.
- 551 **Experimental Studies in Perception** II
 A study of investigations of perception with emphasis on the interrelationships of learning, motivation, and perception. Lecture and laboratory.
 Three semester hours credit.
- 565 **Psychology of the Gifted** I
 An examination of the adaptive problems of the gifted, including self-concept, attitude toward others, and meeting of special needs, with emphasis on research findings.
 Three semester hours credit.
- 566 **Psychology of the Retarded** II
 An analysis of the characteristics of the retarded as they relate to his perceptions of self and others and as they affect his behavior, with emphasis on research findings.
 Three semester hours credit.
- 567 **Psychology of Reading** I
 An examination of the dynamics of reading as it relates to the adaptive behavior of the reader, including the problems of meaning, functional readiness, and individualization.
 Three semester hours credit.
- 569 **Individual Intelligence Testing** II
 Practice in administering and analyzing individual intelligence tests. Emphasis placed on Stanford-Binet and Wechster Scales. Test materials cost approximately \$25.
 Prerequisite: Measurement course and Psychology 465 or 502 (may be taken concurrently) *and* permission of instructor.
 Three semester hours credit.
- 599 **Thesis** I, II
 The student is eligible to register for this course after he has completed Course 501 and has been accepted as a candidate for the master's degree by the Department of Psychology.
 Three semester hours credit.

SOCIAL SCIENCES*

Master of Science in Education

AREA MAJOR IN SOCIAL SCIENCES AND HISTORY

Students who elect this major must have completed by the end of the fifth year a minimum of eight semester hours credit in each of the following fields: economics, history, political science, sociology. At least three semester hours credit in each field must be in graduate level courses (500-600 series). A maximum of six semester hours in independent study may be taken, not more than four semester hours of which may be in any one field. A research paper and final examination, either oral or written, or both, are required. Total for the degree, 32 semester hours.

Certificate of Advanced Study

Sixth Year Program

AREA MAJOR IN SOCIAL SCIENCES AND HISTORY

Prerequisite: Master's Degree. From the four fields comprising the general area (namely, economics, history, political science, and sociology) the student electing the area major shall select one field for concentration and shall complete a minimum of twelve semester hours in that field. In addition, he shall select a second field (a minor) and shall complete eight semester hours in that field. The remaining hours are elective in consultation with the advisory committee. A thesis and a final examination are required. Total, 30 semester hours.

Description of Courses

Social Sciences—Interdisciplinary

These courses may be counted for credit in Economics, Political Science, or Sociology.

492 **Social Science Research**

Principal methods of research in the social sciences; the planning and conduct of a research project; current techniques of collecting, analyzing, interpreting, and reporting data.

Prerequisite: Six semester hours in one of the social science fields.

Not open to sophomores.

Three semester hours.

495 **Seminar in Current Problems**

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

Prerequisite: Senior standing.

Two to four semester hours credit.

Social Sciences—History—Interdisciplinary

410 **European Seminar**

Offered Summer 1962 and every third year.

This course, described on page 109 under History, carries credit as economics, political science, or sociology.

Eight semester hours credit.

*As this catalog was going through the press, the Department of Social Sciences was divided into three departments: Economics, Political Science, and Sociology and Anthropology.

- 490 **Materials and Problems of High School Instruction in the Social Sciences** I, II
 Deals with materials, supplies, equipment, and teaching aids available and usable in a modern high school social science classroom. Affords acquaintance with textbooks, references, fiction, maps, charts, magazines, newspapers, radio programs, visual aids, trips, free materials, and other aids. Individual and group projects. Prerequisite: Senior standing. Two semester hours credit.
- 491 **Materials and Problems of Elementary School Instruction in the Social Sciences** I, II
 Deals with the materials, supplies, equipment, and aids available and usable in the elementary school social studies. Acquaintance with texts, fiction, free materials, and other aids afforded each student through group and individual projects. Aims to help prospective teachers correlate the social studies with other elementary subjects. Two semester hours credit.

SOCIOLOGY AND ANTHROPOLOGY

The Department of Sociology and Anthropology offers graduate courses and research opportunities leading to the degree Master of Arts. The department also cooperates with the departments of Economics, History, and Political Science in offering an area major in the social sciences and history leading to the Master of Science in Education degree and to the Certificate of Advanced Study. Descriptions of these programs will be found on page 169 under the heading, "Social Sciences."

Master of Arts

MAJOR IN SOCIOLOGY

Graduate work in this field is designed to prepare students for teaching and/or research in sociology, for positions in public and private administration, and for further advanced study. Students who elect the master's program with a major in sociology must have had at least ten semester hours in sociology and or anthropology. When this is lacking, they will be required to compensate during the graduate program.

Requirements are as follows: eighteen semester hours in sociology, including at least one course in theory, one course in research methods or statistics, and a thesis; eight semester hours in a minor in a closely related field such as economics, history, political science, psychology, or philosophy; six semester hours in electives in consultation with the faculty adviser. A final examination, either oral or written, or both, is required. Total for the degree, thirty-two semester hours.

Description of Courses

400 Gerontology

The social problems of the aged and the aging.

Prerequisite: Sociol. 180 or equivalent.

Two semester hours credit.

- 480 **Marriage and the Family**
 Perspectives for understanding family relationships; factors affecting success in marriage; marital adjustment; roles of men and women in the family; the modern American family and social change.
 Prerequisite: Sociol. 180 or equivalent.
 Three semester hours credit
- 481 **Marriage and Family Counseling**
 The purpose of this course is to provide the student with the available information for his own needs as an individual, as well as to supply him the necessary aids for counseling in the secondary schools.
 Prerequisite: Sociol. 480.
 Three semester hours credit.
- 483 **Social Disorganization**
 Culture patterns defined by society as undesirable; the sociology of pathological patterns associated with physical and mental ill-health and other patterns resulting in personal disorganization; frames of reference for analyzing social disorganization.
 Prerequisite: Sociol. 180 or equivalent.
 Three semester hours credit.
- 484 **Intergroup Relations**
 Analysis and exposition of cultural and social psychological influences underlying relations among racial, ethnic, and other minority and majority groups. Emphasis upon problems or prejudice and discrimination, and the promotion of harmonious intergroup relations.
 Prerequisites: Sociol. 180 or equivalent.
 Three semester hours credit.
- 485 **Sociological Theory**
 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.
 Three semester hours credit.
- 487 **Population Dynamics and Human Ecology**
 Population growth and distribution, age, sex, ethnic, and other characteristics; national and international migration; forecasts of population.
 Prerequisite: Sociol. 180 or equivalent.
 Three semester hours credit.
- 488 **Juvenile Delinquency**
 Social and psychological factors in delinquent behavior; causation, prevention, and rehabilitation; the role of community agencies; the juvenile court. Visits to juvenile correctional agencies.
 Prerequisite: Sociol. 180, 288.
 Three semester hours credit.
- 489 **Social Stratification**
 Social class and caste systems, with special emphasis on American culture; indexes of social class; interaction among social classes; so-

cial mobility; relationship of class position to behavior in family, economic, religious, political, and other phases of social life.
Prerequisite: Sociol. 180 or equivalent.
Three semester hours credit.

580 Systematic Sociology

The historic patterns of sociological thought as developed by Comte, Giddings, Cooley, Sumner, Thomas, and others, and an attempt to synthesize the current patterns of sociological thought into a coherent system.

Prerequisite: Sociol. 180 or equivalent.
Three semester hours credit.

581 Social Dynamics

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: Sociol. 180 or equivalent.
Three semester hours credit.

582 Social Attitudes

The nature of social attitudes, their importance in modern society, their growth and development, their measurement, and their control. An advanced study of attitude-forming techniques in a special area will be required of the student.

Prerequisite: Sociol. 180 or equivalent.
Three semester hours credit.

583 Community Analysis

Methods of community study for both professional and lay leaders; an overview of the major elements in community life. The student will be expected to make a study of at least one aspect of one community.

Prerequisite: Sociol. 180 or equivalent.
Three semester hours credit.

***584 Independent Study in Sociology**

Open to qualified students who wish to do individual advanced work in sociology.

Prerequisite: Written permission of department head.
Two semester hours credit.

585 Theory of Criminology

Historical and theoretical aspects of academic criminology. Contributions of the great individual thinkers with special emphasis on recognized schools of criminological theory.

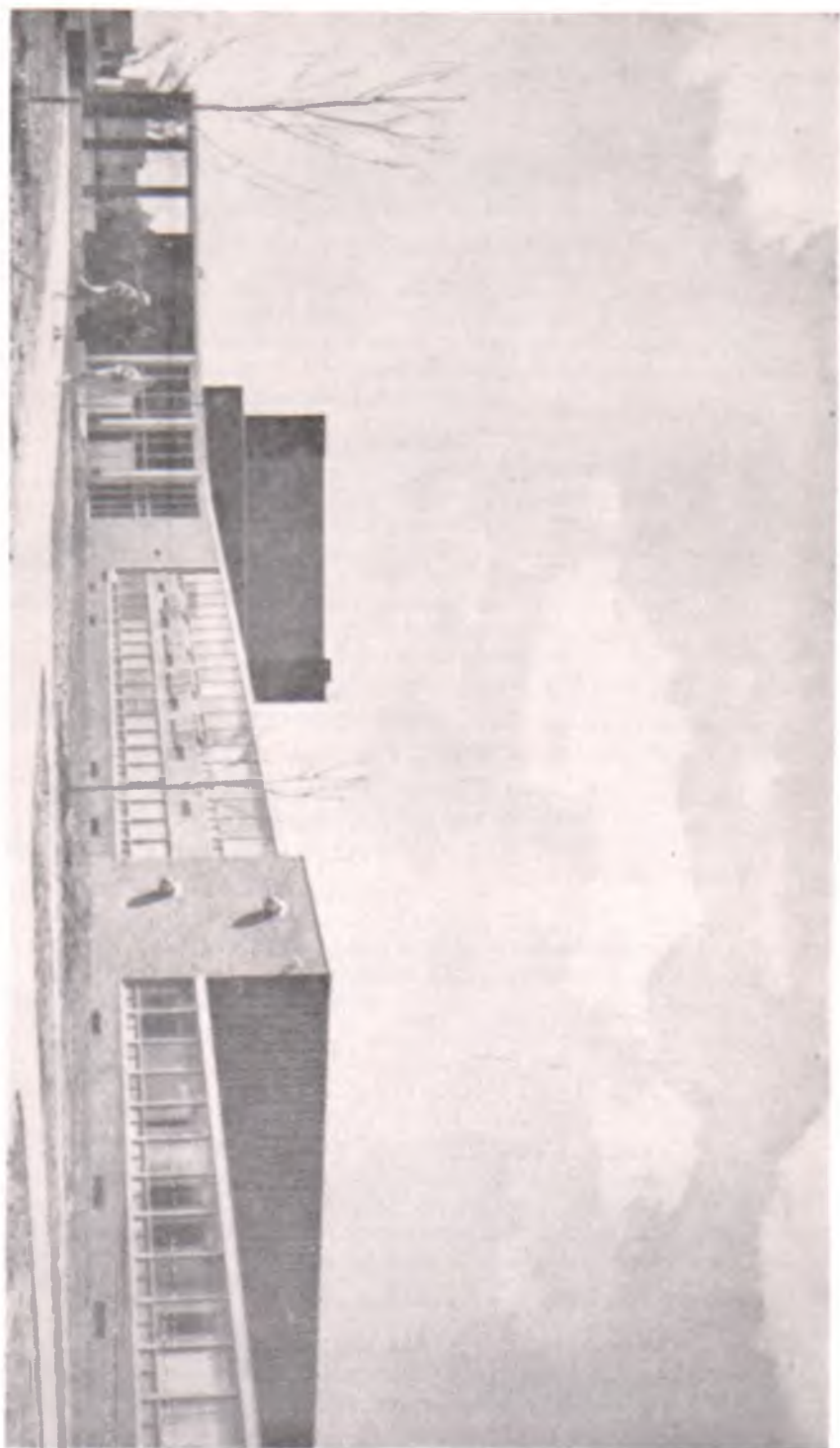
Three semester hours credit.

*Course may be repeated to a maximum of four semester hours credit.

- 586 Industrial Sociology**
 Analysis of social roles and relationships within the occupational structure; formal and informal groups and organizations in industry; the relation of industrial organization to other aspects of the community.
 Prerequisite: Six hours of social science or consent of instructor.
 Three semester hours credit.
- 588 Introduction to Cultural Anthropology**
 The nature of human culture; its growth, patterns, and dynamics; culture and personality; survey of cultural components. Not open to students who have had Anthropology 281.
 Three semester hours credit.
- 680 Thesis**
 Six semester hours credit.
- *686A Seminar in Social Psychology**
 Analysis of advanced topics in social psychology such as collective behavior, personality formation, and social control.
 Prerequisite: Sociol. 315 or equivalent.
 Two or three semester hours credit.
- *686B Seminar in Sociological Theory**
 Intensive analysis of selected theories in sociology.
 Prerequisite: Sociol. 485 or consent of instructor.
 Two or three semester hours credit.
- *686C Seminar in Cultural Anthropology**
 Intensive study of special topics such as marriage and the family, mythology, the arts, linguistics, acculturation, and ethnology.
 Prerequisite: Anthropol. 281 or equivalent.
 Two or three semester hours credit.
- *686D Seminar in Social Disorganization**
 Intensive analysis of selected areas of disorganization such as intergroup conflict, divorce, war, and drug addiction.
 Prerequisite: Sociol. 483 or consent of instructor.
 Two or three semester hours credit.
- *686E Seminar in Marriage and Family**
 Selected aspects of marriage and family behavior, institutional patterns, problems, and adjustment. The modern American family.
 Prerequisite: Sociol. 480 or consent of instructor.
 Two or three semester hours credit.
- *686F Seminar in Research Methodology and Techniques**
 The scientific approach, selection of research problems, study design, methods of analysis, research techniques.
 Prerequisites: Social Sciences—Interdisciplinary 492 or consent of instructor.
 Two or three semester hours credit.

*Course may be repeated to a maximum of six semester hours credit.

Fine Arts Building



SPEECH

The Department of Speech offers graduate programs leading to the degrees Master of Science in Education and Master of Arts; and to the Certificate of Advanced Study.

The graduate program in speech is adapted to the student's individual needs and academic background. When a student elects a major in speech, he must consult with his adviser for the purpose of planning a graduate program.

Master of Science in Education

Students who elect a graduate major in speech toward the degree Master of Science in Education must meet the following course requirements:

- (1) Approximately two-thirds of the graduate study program must be in courses offered by the Department of Speech.
- (2) A student may concentrate his graduate study in the area of drama, public address, or speech pathology and audiology. The student's adviser, however, will reserve the right to require courses in more than one area if the student's academic background is deficient in certain basic courses.
- (3) The seminar course in speech, Speech 591, will be required of all students. If the student's area of concentration is drama, Speech 410 will be required; if the student's area of concentration is public address, Speech 593 will be required. Students who are majoring in speech pathology and audiology will be expected to fulfill the state's requirements for certification as speech and hearing therapists.

Regardless of whether the student's area of concentration is drama, public address, or speech pathology and audiology, the departmental philosophy is that the student should demonstrate a fundamental knowledge of the entire field of speech. The Department of Speech recommends, therefore, that the student elect at least one course from each area other than his major field of concentration. The suggested electives are: **Drama:** 430, 511, 514, 518; **Public Address:** 400, 503, 506, 608; **Speech Pathology and Audiology:** 424, 525, 530, 540.

Master of Arts

The Master of Arts degree may be earned with a concentration in drama and interpretation, in public address, or in Speech Pathology and Audiology but the program of study must be approved by a committee of the department.

A candidate seeking to qualify for the degree Master of Arts in speech shall satisfy the following departmental requirements:

- (1) The student must earn a minimum of 32 graduate credit hours. At least 22 of these credits must be in courses offered by the Department of Speech. With the approval of the major adviser, the student may elect a maximum of 10 credit hours in allied studies.
- (2) The seminar course, Speech 591, will be required of all students.
- (3) The student must pass both *oral* and *written* examinations administered by a graduate faculty committee of the Department of

Speech. These examinations will attempt to assess the candidate's ability in his individual field of study.

- (4) Proficiency in reading a foreign language is recommended.

Certificate of Advanced Study

The candidate for the Certificate of Advanced Study must arrange 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.

The candidate shall pass a basic reading proficiency examination in a foreign language.

Description of Courses

Drama, Oral Interpretation of Literature, Radio and Television

410 History of Theatre I II

Study of Theatre, plays and playwrights from the classical Greek period to the Elizabethan Period in relation to their social, literary, religious, and artistic background.

Three semester hours credit.

411 Directing II

Basic principles of blocking, timing, control of focus, and other fundamentals of directing. Planning the interpretive concept of a production and reporting such plans in prompt book form. Problems of training and directing amateur actors. Procedures of supervising the production from casting to performance. Laboratory experience in directing scenes and one-act plays.

Three semester hours credit.

430 Advanced Oral Interpretation of Literature On Demand

Summary of the literature concerning selecting, arranging, and presenting materials to be read orally. Practice in techniques of oral expression.

Prerequisite: Consent of instructor.

Three semester hours credit.

450 Educational Radio and Television I

A study of the literature in the areas of radio and television programming with an analysis of their pedagogical applications. Composition and delivery of various types of programs and continuity.

Four periods a week for first nine weeks.

Two semester hours credit.

510 History of Theatre II I

The relationship of the play to the theatre, actor, and audience, and to the artistic, literary, and social atmosphere from the Elizabethan Period to the present.

Prerequisite: Course 410 or its equivalent. Consent of instructor.

Three semester hours credit.

- 511 **Advanced Directing** **II**
 Advanced theory of stage direction in regard to composition, picturization and movement. History of the development of the director as the controlling theatre artist. Special problems of directing the classics of dramatic history and experimental styles of drama. Students will undertake practical directing projects.
 Prerequisite: Course 411 or its equivalent.
 Three semester hours credit.
- 512 **Dramatic Theory** **On Demand**
 A study of the major theatrical and critical works on the drama from the Greeks to modern critics.
 Prerequisite: Consent of instructor.
 Two semester hours credit.
- 513 **Development of American Theatre** **On Demand**
 A study of the development of the American drama to the present time.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 514 **Seminar in Advanced Acting** **On Demand**
 Consideration of the theatre as a cultural and recreational outlet in the community and of the problems involved in the production of classics and other dramatic literature, with emphasis on projects in characterization, voice, and movement.
 Prerequisite: Consent of instructor.
 Two semester hours credit.
- 515 **Seminar in Production and Technical Problems** **On Demand**
 A summary of the historical, traditional, and artistic developments of theatre architecture and mechanics and their relationships to the major plays from Greeks to modern times. Practical experience in the technical operations of modern theatres.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 518 **Scenic Design** **On Demand**
 The development of scenic designs through color sketches, plans, and models.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 519 **Oral Interpretation in the Elementary and Junior High Schools** **On Demand**
 Principles and methods of oral interpretation of literature, including storytelling and choral reading and educational dramatics adapted to the programs in the elementary and junior high schools.
 Prerequisite: Consent of instructor.
 Three semester hours credit.

- 503 History and Criticism of American Public Address I On Demand**
 Rhetorical criticism of the speeches of some of the principal American speakers in the period from colonial times to the close of the Civil War, including consideration of the historical setting of the speeches and an analysis of the ideas, structure, style, and presentation of the speeches.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 504 History and Criticism of American Public Address II On Demand**
 Continuation of Course 503 with the focus on the study of the speeches of some of the principal American speakers in the period from the close of the Civil War to the end of the nineteenth century.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 505 The Forensic Program On Demand**
 The organization, direction, and evaluation of intra-school, community, and inter-school activities in debate, discussion, extempore speaking, and oratory.
 Prerequisite: Consent of instructor.
 Two semester hours credit.
- 506 Advanced Public Speaking and Group Discussion On Demand**
 A course designed especially 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.
 Prerequisite: Consent of instructor.
 Two semester hours credit.
- 607 Seminar in Persuasion On Demand**
 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.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 608 Language in Oral Discourse On Demand**
 An approach to the problems in the use of symbols of thought and attitude in speech. Consideration of recent contributions in the fields of linguistics, and notably semantics, the impact of semantics on logic, and the psychology of speech.
 Prerequisite: Consent of instructor.
 Three semester hours credit.

Speech Pathology and Audiology

- 420 Hearing Testing 1, Summer**
 Instruction in the measurement of hearing. Also included in the course are the medical and psychological problems of the hard of

hearing. Students are required to participate in clinical practicum.
Three semester hours credit.

421 Communication Problems of Hearing II

Teaching of speech reading, and auditory training to the hard of hearing. Instructions in hearing aid evaluations and recommendations are included; clinical practicum.

Prerequisite: Consent of instructor.

Three semester hours credit.

422 Clinical Methods in Speech Pathology I

Therapeutic procedures for the correction of speech defective children in the public schools. Problems of surveying, scheduling, and administration of a public school speech correction program are included; clinical practicum. Six periods a week for first nine weeks.

Prerequisite: Consent of instructor.

Three semester hours credit.

423 Clinical Practices in Speech Pathology I, II, and Summer

Clinical practice in the University Clinic, out-patient diagnostic clinic, the DeKalb County Therapy Center and/or the Summer Speech and Hearing Center. Forty-five hours of clinical practicum per semester hour of credit.

Prerequisite: Consent of instructor. May be repeated for credit up to the maximum of three semester hours.

One to three semester hours credit.

424 Stuttering II

The study of modern theories of stuttering. An overview of etiological and concomitant factors in stuttering with emphasis on basic therapy procedures for stuttering children and adults.

Three semester hours credit.

425 Speech Pathology II II

Etiology, symptomatology and pathogenesis of brain injury. Special attention is given to the systematic appraisal and rehabilitation of brain injured children and adults.

Prerequisite: Consent of instructor.

Three semester hours credit.

525 Speech Science On Demand

A consideration of the acoustical, physiological, and psychological foundations of oral communication with laboratory experimentation.

Prerequisite: Consent of instructor.

Three semester hours credit.

530 Speech Handicaps I, II, and Summer

A theoretical consideration of classification, etiologies and symptomatology of speech problems among children and adults with special attention to rehabilitative procedures; clinical observation.

Three semester hours credit.

- 531 Organic Pathologies of Speech I** **On Demand**
 The study of the organic (peripheral) handicaps associated with speech and voice disorders including cleft lip and palate, laryngeal pathologies and other malfunctions; clinical practicum.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 532 Clinical Measurement in Speech Pathology** **On Demand**
 Principles and methods of assessing the significant parameters of normal and defective speech with particular emphasis upon measurement and statistical procedures; laboratory experimentation.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 540 Advanced Audiometry** **On Demand**
 Advanced principles and methods of pure tone and speech audiometry and interpretation of audiometric test results; clinical practicum.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 541 Seminar in Aural Rehabilitation** **On Demand**
 Advanced principles and methods of clinical audiology including programs in hearing conservation and referral procedures; clinical practicum.
 Prerequisite: Consent of instructor.
 Two semester hours credit.
- 544 Seminar in Stuttering** **On Demand**
 Advanced study of the stuttering complex, including an intensive investigation of research with particular emphasis upon theories of behavior and their application to the stuttering problem; clinical practicum.
 Prerequisite: Consent of instructor.
 Two semester hours credit.
- 545 Organic Pathologies of Speech II** **On Demand**
 The study of organic (central) handicaps associated with speech and language handicaps, including cerebral palsy, dysphasia, dysarthria, and other central nervous system malfunctions; clinical practicum.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 632 Experimental Design** **On Demand**
 A survey of research problems and procedures in speech pathology and audiology with considerations of treatments and analyses of experimental data.
 Prerequisite: Consent of instructor.
 Three semester hours credit.

- 640 **Hearing Aids** **On Demand**
 The study of hearing aid construction and function with a presentation of electrical circuits, vacuum tubes and transistors.
 Prerequisite: Consent of instructor.
 Three semester hours credit.

Speech Education

- 440 **The Teaching of Speech** **I**
 A study of the problems confronting the teacher of speech. Includes lectures and collateral reading on the following major subjects: the organization, content, methods of teaching the foundation course in speech and other courses in a balanced speech curriculum.
 Six periods a week for first nine weeks.
 Three semester hours credit.
- 590 **Oral Communication for Teachers** **On Demand**
 Principles and methods of communication applied in oral reports, in lecture-demonstrations, in group discussion, and in book reviews as employed in the curricula of junior and senior high schools.
 Prerequisite: Consent of instructor.
 Four semester hours credit.
- 591 **Seminar in Speech** **On Demand**
 An overview of history and contemporary philosophy in the field of speech with special reference to the cooperative interaction of audiology, dramatics, public address, and speech pathology, and their mutual contributions to the humanities and the sciences.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 592 **Seminar in Oral Interpretation in Senior High School** **On Demand**
 A summary and critical analysis of literature concerning oral interpretation on the senior high school level. Considerations in the planning of a high school program.
 Prerequisite: Consent of instructor.
 Three semester hours credit.
- 593 **Seminar in Problems in the Teaching of Public Speaking, Discussion, and Debate** **On Demand**
 An exploration of the problems and the findings of research in these areas of speech education.
 Prerequisite: Consent of instructor.
 Two or three semester hours credit.
- 599 **Directed Individual Study I** **On Demand**
 Independent study of problems in any area of speech: speech pathology, interpretation, radio and television, public address, speech education, audiology, and related fields. Open only to candidates for the master's degree.
 Prerequisite: Consent of instructor.
 One to three semester hours credit. May be repeated to a maximum of five semester hours.

Directed Individual Study II**On Demand**

Independent pursuit of advanced problems in speech of special concern to qualified graduate students. Open only to candidates enrolled in the sixth year program.

Prerequisite: Consent of instructor.

One to five semester hours credit. May be repeated to a maximum of five semester hours.



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1962

JANUARY	FEBRUARY	MARCH	APRIL
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MAY	JUNE	JULY	AUGUST
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REVISED SUPPLEMENT

To the 1961 - 1963 Graduate Catalogue

NORTHERN ILLINOIS UNIVERSITY

July, 1962

ADDITIONS TO GRADUATE SCHOOL CALENDAR

September 28, 1962

Last day for filing in the Registrar's Office application for graduation in January, 1963.

October 15, 1962

Last day for filing in the Graduate Office graduation clearance Form II for graduation in January, 1963.

CHANGES IN ADMISSION REQUIREMENTS

NOTE: The following changes in admission requirements apply to Graduate Students whose applications for admission reach the Graduate School Office after July 15, 1962.

I. For Unclassified Students:

A student must also hold a baccalaureate degree in order to be admitted as unclassified. An unclassified student may register for any courses which he is qualified to carry. Such courses may or may not be recognized in computing credit required for the degree if a student transfers from unclassified to classified status, as he may upon the recommendation of the department in which he plans to major and with the approval of the Graduate Admission Committee. An unclassified student need not have a departmental adviser or advisory committee.

II. For Classified Students

A student must have at least a 2.5 average in the last two years of undergraduate work at an accredited institution and approval of the department in which he plans to major to be admitted as a classified student.

For admission to programs beyond a master's degree, a student must have at least a 3.2 average in graduate work and approval of the department in which he plans to major; provided, that students undertaking doctoral* work must have at least a 3.5 average in graduate work at the end of their sixth year of graduate work (30 semester hours beyond the master's), or before being admitted to candidacy for the doctorate, whichever comes earlier.

*Admission requirements for doctoral work apply to all students, including those whose applications for admission were received before July 15, 1962.

EXPENSES

The statement relating to the refund of fees (p. 21) should read as follows:

Fees are due at the time of registration. When a student officially withdraws from the University on or before any of the following dates, his registration fee only will be refunded.

1st semester	1962 - 63	Sept. 29, 1962
2nd semester	1962 - 63	Feb. 16, 1963
Summer	1963	June 28, 1963

The activity fee, bond revenue fee, and hospital-surgical-medical fee are not included as part of the registration fee, and are not refundable.

The following statement should appear under the heading "Living Accommodations" (p. 22):

Effective as of September, 1962, Room and Board rates will be:

\$400.00 per semester in residence halls housing two students per room with individual room telephone service.

\$385.00 per semester in residence halls housing four students per sleeping room and without individual telephone service.

MAXIMUM LOADS FOR GRADUATE STUDENTS

Graduate students may not enroll for more than 17 semester hours during a semester. Graduate students holding assistantships are limited to 9 semester hours if their assistantship requires 20 - 24 hours of work per week for the department; they are limited to 12 semester hours if their assistantship requires 10 - 12 hours work per week for the department. Summer school students may not enroll for more than 9 semester hours in an eight-week session or for more than 12 semester hours in an eleven-week session.

DROPS AND WITHDRAWALS

A graduate student who wishes to drop a course or withdraw from the University must write a letter of notification to the Dean of the Graduate School at least three weeks prior to the end of the semester or at least one week prior to the end of a summer session. 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 drop a course or to withdraw from the University, or a student who drops a course or who withdraws from the University after the deadline has expired, will receive "F."

CONTINUATION IN GRADUATE SCHOOL

A student who receives 12 semester hours of graduate credit grades below "B" will be disqualified as a candidate for a degree in the Graduate School.

A student who receives 6 semester hours of graduate credit grades of "D" or "F" will be dropped from the Graduate School.

Exceptions to these rules and readmission of disqualified students must be approved by the Graduate Council.

ADMISSION TO TEACHER EDUCATION

Classified and unclassified graduate students who wish to be certified for public school assignments must make application for admission to teacher education by securing an application form from the Dean of the Graduate School. Admission to teacher education is a selective process since the institution must recommend for certification those who prepare for teaching.

To be admitted to teacher education the student

1. Must have a major and minor in subject matter areas for which student teaching assignments and teaching positions exist.
2. Must not have been rejected for teacher preparation previously by this institution or any other institution.
3. Must be of sufficiently high academic ability (2.5 undergraduate record, 3.0 graduate record) and possess personal qualifications to a degree that will contribute to success in the profession.

The degree M. S. Ed. is conferred only on students who meet Illinois certification requirements and who have the approval of this institution.

Students seeking the M. S. Ed. in Education as a Field of Study, are not required to make application for admission to teacher education as described, since they will meet certification requirements as part of their degree program.

CHANGES IN DEPARTMENTAL OFFERINGS

GENERAL REQUIREMENTS FOR DOCTOR OF EDUCATION AND DOCTOR OF PHILOSOPHY

The doctorate is the highest degree granted by the University. It is conferred only for work of distinction in which the student displays powers of original scholarship. The doctorate will not be conferred merely for accumulating credits.

1. Admission to and Retention in Doctoral Work

- a. **Admission** -- Normally a student will be expected to have bachelor's and master's degrees from Northern Illinois University or from other 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 ability to do work of high quality in his chosen field.

According to Graduate School Regulations, "a student must have at least a 2.5 average in the last two years of undergraduate work at an accredited institution and approval of the department in which he plans to major to be admitted as a classified student.

"For admission to programs beyond a master's degree, a student must have at least a 3.2 average in graduate work and approval of the department in which he plans to major; provided, that students undertaking doctoral* work must have at least a 3.5 average in graduate work at the end of their sixth year of graduate work (30 semester hours beyond the master's), or before being admitted to candidacy for the doctorate, whichever comes earlier."

Two copies of undergraduate and graduate transcripts should be sent to the Dean of the Graduate School as soon as possible. We also require at least two letters of recommendation: one should be from your present employer, the other from one of your teachers who is qualified to judge your 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 and approved by the Graduate Council.

Admission requirements for doctoral work apply to all students, including those whose applications for admission were received before July 15, 1962.

- b. **Retention** -- Retention in doctoral work will depend upon a student's maintaining the honor point average required by Graduate School Regulations: "A student who receives 12 semester hours of graduate credit grades below 'B' will be disqualified as a candidate for a degree in the Graduate School. A student who receives 6 semester hours of graduate credit grades of 'D' or 'F' will be dropped from the Graduate School."

Furthermore, students will be expected to pass whatever qualifying and comprehensive examinations are required and to fulfill the language requirement and other special requirements.

2. **Course Requirement** -- 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 dissertation. When translated into semester hours, this will be approximately the equivalent of 90 semester hours credit. A minimum of 24 semester hours of graduate work must be taken at Northern Illinois University. Transfer credit will be allowed at the discretion of the department concerned and of the Dean of the Graduate School. Not more than 25 semester hours credit shall be in courses numbered 400-499.¹ 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.
3. **Dissertation Requirement** -- Normally the dissertation and research will be equivalent of about two full semesters' work (24-32 hours). The dissertation will be a substantial contribution to knowledge in which the student displays powers of original scholarship. Its subject must be approved by the student's adviser or advisory committee. The dissertation will be microfilmed.
4. **Language Requirement** -- Students working toward a Ph.D. must demonstrate a reading knowledge of two foreign languages. The material on which a student is to be examined may be set by the major department, but the examinations will normally be graded by members of the Foreign Language Department. The language requirement must be met before a student is admitted to candidacy.
5. **Residence Requirement** -- Students working toward a doctor's degree will be expected to spend one academic year of two consecutive semesters in residence.²

¹ This is in keeping with the present regulation that a student may take 16 credits toward a master's degree and 9 credits toward the C.A.S. or M.F.A. in graduate courses numbered 400-499. A student who begins graduate work at N.I.U. with a master's degree will not be permitted to take more than 9 credits in courses numbered 400-499. A student who begins work with a C.A.S., M.F.A., or equivalent will not be permitted to count for credit any additional courses at the 400-499 level.

² In addition to the extension credits allowed at the fifth year level, from one to six additional semester hours in extension work taken at this institution will, with the approval of the major department, be accepted toward the C.A.S. or M.F.A.

6. Qualifying, Comprehensive, and Oral Examinations

- a. After at least one semester (about 12-15 credits) of work beyond the master's degree, the student may be required, at the discretion of his major department, to take qualifying examinations which may be written and/or oral and which will test the background of the student in his major and related fields, and his competence to pursue further graduate work. 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.
- b. 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.¹ This examination will cover work in the student's major department and related fields. A student who successfully completes this examination will be admitted to candidacy for the doctorate. A student who fails this examination may, with the permission of his examining committee, 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.
- c. 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.
- d. Committees to conduct examinations will be nominated by the head of the student's major department and appointed by the graduate dean. Representation on comprehensive and dissertation examining committees will be such as to insure the presence of professors representing appropriate major and minor fields. The size of the committees will normally be 3-5. If a student has taken all his graduate work in one department, the graduate dean will appoint one or more professors in related fields to the examining committee for the oral defense of the doctoral dissertation.

7. **Limitation of Time** -- Students working for a doctor's degree should plan their programs so that all work beyond the master's degree will be completed within seven years unless exception is granted by the Graduate Council.

¹ Any department may also require an oral comprehensive examination of all students who have passed their written comprehensives. If this practice is followed, it is to be part of the department's announced policy. A student who fails this examination may, with the permission of his examining committee, repeat it after a 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.

8. **Extension Work** -- Depending on the number of residence credits transferred from other institutions, from four to eight semester hours in extension work taken at this institution will, with the approval of the major department, be allowed at the fifth year level; but no further extension credits will be counted toward the Ph.D. or Ed.D.¹ No credit will be allowed for extension work taken at other institutions.

More detailed requirements for the doctorate in Business Education, Education, English, and History are listed below under the specific departments.

ACCOUNTING

545. Two - three semester hours credit.
641. Advanced School Fund Accounting and Budgeting (new course) (2-3)
Problems in designing systems and procedures in school fund accounting. Includes the application of data processing systems to payroll, inventories, curriculum, personnel, registration procedures, budget, textbook accounting, and other business office functions.
Prerequisite: Course 541 or approval of instructor.

ART

Candidates for the M. A. in Art History must have a reading knowledge of one modern foreign language.

509. Two semester hours credit.

BIOLOGICAL SCIENCES

408. Genetics (correct title).
410. Three semester hours credit.
414. Three semester hours credit.
418. Human Heredity (new course) (2)
Designed primarily for non-biology majors to understand the principles of human heredity. Not open to Biology majors.
450. Three semester hours credit.
Prerequisites: Courses 250 and 251 or equivalent.
451. Prerequisites: Courses 250 and 251 or equivalent.
453. Entomology (new course) (3)
Arthropods and especially insects, both from a taxonomical and ecological standpoint, emphasized. The economic significance of insects is broadly considered. Offered every other year. Five periods a week.
Prerequisite: Course 250 or equivalent.

¹ A summer session in which a student earns 12 semester hours credit immediately following, or followed immediately by, a semester in which a student earns 12 semester hours credit will be regarded as the equivalent of one academic year of two consecutive semesters.

454. Delete.
463. Invertebrate Zoology (new course) (4)

Lectures, laboratory, and readings illustrative of structure, behavior, and classification of major invertebrate types, with particular reference to their evolution.

Prerequisites: Courses 250 and 251, or equivalent.

BUSINESS EDUCATION

DOCTOR OF EDUCATION

Students desiring to arrange graduate programs at the doctoral level in Business Education are to be 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 following general requirements for doctoral study apply to all applicants.

I. 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 Business Administration areas, such requirements must be fulfilled without graduate credit.
- B. Full-time teaching experience for five years is required for admission to candidacy for a doctor's degree.
- C. For admission to the doctoral program, see Graduate School Policy on page 4 of this revised supplement. The master's degree must have been received prior to admission to candidacy for the doctoral program.
- D. **Residence.** At least two semesters of residence on campus is required. The total program requires the equivalent of three academic years beyond the bachelor's degree. The minimum number of hours, including the dissertation, is 96. It is hoped that financial aid in the form of fellowships will be available for some candidates during their period of residence.

E. Language Requirement.

Candidates are required to take two courses in Statistics (one in Business and one in Education) unless the candidate wishes to present a reading knowledge of one foreign language in lieu of one course in Statistics.

F. Thesis.

A project must be presented which is based on special investigation of a subject of importance to the candidate's professional work. The dissertation may be concerned with a signifi-

icant phase of educational theory or practice, or it may be a scholarly interpretative study in some important area in the subject-matter field. An oral examination will be given on the thesis by the student's committee of at least three persons.

- G. **Examinations.** All candidates will be required to take any psychological examinations prescribed by the University for doctoral candidates. In addition, Business Education candidates will be required to take the Cooperative English test published by the Educational Testing Service (or its equivalent) at the beginning of the first summer or semester on campus. For new students with a master's degree, an achievement test in Business Education will be administered by the Business Education Department.

A written comprehensive examination will be given and read by the student's committee after completion of 75 hours of graduate course work. This examination will cover the major and related fields which the candidate is presenting. A follow-up oral comprehensive examination will then be administered by the student's committee.

II. Specific Requirements

DOCTOR OF EDUCATION with a Major in Business Education
(at least 5 years of teaching experience required)

The student's committee will be composed of three people from the Business Education Department, one from Business Administration, one from Education, and one person at large. The chairman of the committee will be a graduate faculty member from the Department of Business Education.

1. AREA OF CONCENTRATION 60 hours

Major in Business Education	30-40*
Ed.D. Project	10-15 hours
Business Administration (General Business, Finance, Marketing, Management, School Business Management)	12 hours
B.A. 419, Statistics, to be included	

2. EDUCATION 26-28 hours

Graduate Background Courses in Education

Required Courses 17 hours

500 -- Social Foundation of
Education 3

*Electives from Business Administration may be substituted for Business Education, as determined by the student's background and needs.

501 -- Psychological Foundations of Education	3
533 -- Curriculum Theory - or -	
535 -- Secondary School Curriculum	3
561 -- The Teacher's Role in Personnel Work - or -	2
567 -- Information in Guidance	3
591 -- Techniques of Educational Measurement, Applied Statistics	2
521 or 523, or 580, or 633 (Seminar in Education)	3

Electives in Graduate
Education Courses:

9-11 hours

430 -- Audio-Visual Education	3
433 -- Junior High School Organi- zation and Problems	3
530 -- The Junior College	3
542 -- Fundamentals of Curriculum Development	3
562A -- Counseling Techniques	2
562B -- Counseling Techniques	2
563 -- Educational and Psychological Measurement	3
572 -- School-Community Relations	3
589 -- Corrective Reading in High School	3
592 -- Philosophical Analysis of Educational Thought	3
593 -- Supervision of Student Teachers	3
605 -- Experiment Research	3 or 6
655 -- School Finance	2
657 -- Legal Aspects of School Administration	2

(and others according to the student's needs and interests)

3. RELATED FIELDS 10-12 hours

TOTAL 96 hours

415. Consumer Economics (last listed in 1959-61 Graduate Catalog under Business Administration) (3).

515. Guidance in Business Education (new course) (2)
Principles and practices in guidance applied to secondary business education students. Educational and vocational counseling and occupational information pertaining to business.

535. Adult Education Programs in Business Education (new course) (2)
Problems in curriculum, selection and training of instructors, and the promotion of evening school courses for adults. Analysis of con-

tent of course work offered and the methods of developing a coordinated program.

540. Supervision of Student Teachers in Business Education (new course)(2)
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 non-skill courses.
Prerequisite: Twelve credit hours in education and teaching experience.
610. Curriculum Construction in Business Education (new course) (2)
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 (new course) (3)
Issues and problems in business teacher education, curriculum, certification, professional standards, recruiting and selection, experimental programs and research.
640. Business Education in the Post-Secondary School (new course) (3)
Organizational plans, curriculum construction and staffing problems of business colleges, junior colleges, four-year colleges, and universities.
645. Research in Business Education (new course) (3)
Advanced methods and techniques of research involving statistical analysis and data processing employed in investigation of business education problems. Suggested for all doctoral candidates.
650. Independent Study in Business Education (new course) (2-4)
Opportunity to pursue individual study and analysis of problems in business education of particular interest and value to the student. Designed for people who have completed the master's degree requirements.
699. Dissertation (new course) (2-15)

CHEMISTRY

Courses 420, 421, 440, 441 do not carry graduate credit for the M.S. in Chemistry.

EARTH SCIENCES

400. Sedimentation (correct title) (3)
Prerequisite: Mathematics 220.
401. Regional Stratigraphy (new course) (3)
Introduction to principles of stratigraphy and study of selected invertebrate faunas and stratigraphic sections of North America.
Prerequisite: Courses 240, 246.
404. Summer Field Course (new course) (6)
Attendance at a departmentally approved geology field camp.
440. Three semester hours credit.
441. Advanced Petrology (new course) (3)
Classification and origin of rocks based on thin section examination.
Prerequisite: Course 440.
442. Formerly 542.
443. Regional Physiography (new course) (3)
Principal relief features of North America. A systematic textbook and laboratory manual study of the physiographic provinces of North America. Field trip required.
Prerequisite: Course 100 or permission of instructor.

490. Changed to 590.

491. Geostatistics (new course) (3)

The application of statistical designs to problems in geology. Rationale and assumptions of basic statistical procedures are discussed in terms of current research and possible graduate research studies. Prerequisite: Mathematics 320, 410.

541. Studies in Quantitative Geomorphology (new course) (3)

Hydrologic parameters and techniques of landform measurement are discussed as tools in the reclassification and refinement of classical geomorphic systems. Field trip required. Prerequisite: Course 342, 491, or Mathematics 410.

542. Changed to 442.

548. Stratigraphy (correct title)

549. Advanced Structural Geology (new course) (3)

Studies of the origin and the mechanics involved in the formation of various structural features occurring in nature. Source literature, advanced texts, and dynamic models will provide the material content of this course.

Prerequisite: Course 342, 346.

551. Paleomagnetism (new course) (3)

A study of the earth's magnetic field in past geologic time as determined from measurements of remanent magnetism of rocks. Various theories explaining the mechanism of rock magnetism. An extensive study of the literature which pertains to worldwide paleomagnetic studies and their significance.

Prerequisite: Course 342, 346.

552. Sedimentary Petrology (new course) (3)

The classification and origin of sedimentary rocks based on hand specimen and thin section examination. Source literature and laboratory study of rocks and thin sections as the basis for student reports and oral presentations.

Prerequisite: Courses 400, 440.

590. Formerly 490 Field Problems in Geology (correct title) (3)

Use of basic field techniques in studying the geology of a selected area. Field trips required.

Prerequisite: 342 and permission of instructor.

591. Micropaleontology (new course) (3)

The study of microscopic fossils useful in solving stratigraphic problems.

Prerequisite: Course 246.

668. Delete.

669. Delete.

EDUCATION

DOCTOR OF EDUCATION

General Requirements

The degree Doctor of Education, the highest professional degree offered by the Graduate School through the Department of Graduate Programs of the College of Education, may be awarded to those students who clearly demonstrate superior qualities and attainment during their period of study, and exceptional promise in their field.

The Doctor of Education degree is a professional degree intended to prepare for two types of service: (1) Administrative and Educational Services for those who will serve as administrators or service personnel, and (2) Edu-

cation as a field of study for those who wish to continue advanced study with the purpose of becoming superior teachers or teacher educators. Within the first type of service, areas of emphasis may be selected: Administration, Guidance, Supervision and Curriculum, and Educational Psychology. Within the second type only one area of emphasis will be offered at the outset: Elementary Teaching as a field of study. Both (1) and (2) may serve to prepare individuals for teaching at the college level. Preparation for research responsibilities both as a producer and consumer is an integral part of the program.

1. **Residence:** Doctor of Education degree candidates will be required to meet the residence requirements stated in the Graduate Catalog.
 2. **Research Techniques.** All candidates will be required to acquire and apply research tools and techniques.
 3. **Admission to Candidacy**)
 4. **Thesis**) The General Requirements
 5. **Final Examination**) for the doctorate stated
 6. **Graduation**) in the Graduate Catalog
- will be followed.

Department of Graduate Programs in Education Requirements

Admission to the Program: The same requirements as for the master's degree plus additional interviews and testing as stated in the Graduate Catalog. The Graduate Record examination will be administered to all requesting admission to Graduate School.

Departmental Course Requirements: The program will consist of the equivalent of at least three years of full time academic work, and will include a minimum of 90 hours of graduate course work beyond the bachelor's degree plus the dissertation. The 90 hours will be distributed as follows:

1. A 38 hour core of courses will be required of all candidates. This core will include courses in Foundations of Education, Curriculum, Educational Psychology, Educational Administration, Higher Education, Guidance, and Research Methodology.
2. A minimum of 15 hours outside the field of professional education.
3. A minimum of 12 hours in cognate fields and/or professional education.
4. A minimum of 12 hours in the area of emphasis.

Each candidate will be required to present evidence of at least three years of acceptable professional experience.

Research and Thesis: The thesis may be based upon original work or may be related to some field project of high quality. All students must participate in research seminar prior to undertaking a thesis problem.

Tools and Techniques of Research: All candidates will be required to take a 9 hour core on Research Methodology. This will include courses in Educational Statistics, Methods of Evaluation, and Methods of Research.

Preliminary Examinations: Written preliminary examinations covering both the general core and the area of concentration will be scheduled and administered at least twice each year. A graduate student will be eligible to take these examinations, with the permission of his adviser, if he has completed

at least two thirds of his studies including the Research Techniques core. Dates on which application for the examination can be made will be announced by the department or will appear in the Graduate Catalog. These examinations (there will be at least three) will encompass major areas of study. Any student who fails in these may, upon the recommendation of his committee, be granted the opportunity to take a second examination. This second examination will be final.

Final Examination: A general final oral examination, related to the dissertation, will be required. For details see General Requirements of the Graduate School.

CORE OF REQUIRED COURSES

A. Foundations of Education	Semester Hours
Social Foundations of Education	3
Psychological Foundations of Education	3
Philosophical Foundations of Education	3
Historical Foundations of Education	3
Master's Qualifying Research Paper ¹	2
	Total 14
B. Research Techniques	
Educational Statistics	3
Methods of Evaluation	3
Methods and Techniques of Research	3
	Total 9
C. Curriculum	
Curriculum Theory	3
	Total 3
D. Educational Administration	3
	Total 3
E. Higher Education	
Seminar in Higher Education	3
	Total 3
F. Advanced Educational Psychology	3
	Total 3
G. Guidance	3
	Total 3
	<hr/> TOTAL 38

¹ Required for those receiving the master's degree at Northern Illinois University. A comparable research course will be substituted for those who received their master's degree at another University where a thesis or qualifying paper was not required.

408. Changed to Ed 508.
460. Changed to Ed 560.
504. Philosophical Foundations of Education (new course) (3)
Philosophy of education as a field of study through examination of some of its major different orientations, e.g. instrumentalism, idealism, realism, existentialism, Thomism.
505. Historical Foundations of Education (new course) (3)
The major currents in educational thought and institutional practice in Western civilization from classical times to the present. The skills of research in history of education are developed.
508. Formerly Ed 408.
520. Seminar in Research in Child Behavior (new course) (3)
An analysis of research dealing with the nature of child development, and the implications of such for the classroom teacher. Special emphasis in the areas of emotional, intellectual and social development.
535. Secondary School Curriculum (new course) (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.
559. One-three semester hours credit; may be repeated to a maximum of six semester hours.
560. Formerly Ed 460.
599. Two-three semester hours credit.
601. Advanced Educational Psychology (new course) (3)
A 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: Course 501.
616. Teacher Education (new course) (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. Students are encouraged to have internship correlative with this course.
Prerequisite: Courses 514, 515 or permission of the instructor.
617. Curriculum Design in Elementary Education (new course) (3)
Interrelationships of various components of a curriculum design. Specific emphasis upon curricular design as a basis for decision making in constructing an instructional program in elementary education.
Prerequisite: Courses 514, 515 or permission of instructor.
618. Professional Writing (new course) (1)
Guidance in the preparation of professional manuscripts. Presentation of methodology in treatment of material: analytical, descriptive, scientific, historical. Procedures for submitting for publication.
Prerequisite: Courses 514, 515 or permission of instructor.
619. Professional Leadership (new course) (3)
Educational leadership as the implementation of social policy. Selected problems of ethical nature which are common to teachers. Emphasis upon current issues.
Prerequisite: Courses 514, 515 or permission of the instructor.

653. Practicum in School Administration (new course) (12)
Advanced library research in School Buildings, Finance, Demography, and Human Relations culminating in a field survey of a school district.
Prerequisite: Courses 654 and 655.
662. Practicum in Guidance (new course) (3-6)
For students majoring in Guidance, practical experience in guidance functions at elementary, secondary and/or higher educational levels.
Prerequisite: Permission of the instructor.
671. Research Seminar in Educational Psychology (new course) (6)
Students will design at least two studies and carry them through to completion. These studies will deal with major problems in educational psychology. Background to each study will be a major area of discussion.
Prerequisites: Courses 501 and 520 and/or 521.
675. Seminar in Higher Education (new course) (3)
Teaching problems in colleges and universities, including professional schools and community colleges. Problems of course organization, methods and class management. Attention is given to educational problems confronting higher education in connection with the anticipated expansion in the number of students who will demand admission. Particular attention given to experiments and proposals looking toward increasing the "productivity" and efficiency of college teachers.

ENGLISH

DOCTOR OF PHILOSOPHY

Requirements of the Department of English

1. Admission to the Program. For admission to the program leading to the degree Doctor of Philosophy in English, the student must
 - a. Show evidence of his capability of pursuing doctoral work either by passing with distinction his comprehensive examination for the master's degree at Northern Illinois University, or by passing a qualifying examination during his first year of residence.
 - b. Secure departmental approval of a program of study. The program shall include courses in Old English, Chaucer, Shakespeare, and Milton, unless the student has previously taken such courses at the graduate level. The program shall include at least six semester hours of graduate work in each of the following areas. Graduate courses which the student has previously taken in these areas shall count toward fulfilling this requirement.

Linguistics

Medieval English Literature

Renaissance English Literature

17th Century English Literature

18th Century English Literature

19th Century English Literature

20th Century English Literature
 American Literature to 1855 (3 semester hours)
 American Literature, 1855 to the Present
 (3 semester hours)

The student shall have the option of electing a minor field consisting of a program of not more than twelve semester hours of closely related courses in any one of the following fields or in some other field approved by the Department.

American Studies	Linguistics
Comparative Literature	Philosophy
Drama	Psychology
Foreign Languages	Political Science
History	Sociology and Anthropology

2. Admission to Candidacy. For admission to candidacy to the Ph.D. in English, the student must

- a. Demonstrate a satisfactory reading knowledge of two foreign languages, of which at least one shall be a modern language. The choice of languages shall be subject to departmental approval.
- b. Secure departmental approval of a dissertation topic and prospectus.
- c. Pass written examinations demonstrating his mastery of four of the following areas. At least one examination must be taken in each of the following groups:

Group A: Linguistics or Old English
 Medieval English Literature
 Renaissance English Literature (through
 Shakespeare)
 17th Century English Literature

Group B: 18th Century English Literature
 19th Century English Literature
 20th Century English Literature

Group C: American Literature to 1855
 American Literature, 1855 to the Present

3. Dissertation Requirement. The candidate must write a dissertation which shall be an original contribution to literary or linguistic scholarship; the dissertation must be approved by his dissertation committee. This committee shall consist of three members of the graduate faculty of the Department especially qualified in the area of the dissertation, one of whom shall act as dissertation director.

472. The American Novel (new course) (3)

A close reading of selected texts from the early nineteenth century to the present time. Emphasis on the historical development of the novel and on narrative techniques.

477. Contemporary American Poetry (new course) (2)
A close reading of selected texts by such poets as Frost, Cummings, and Stevens. Attention paid to idea, style, and the poet's sense of his place in the modern world.
490. Classical Drama in English Translation (new course) (3)
The development of the Greek and Roman tragic and comic tradition.
502. Literary History of England (new course) (2)
A synoptic view of important English literary movements, intended to define the characteristics of each and to explain the roles of the principal literary figures in each; a study of interrelationship among movements.
503. Literary History of America (new course) (2)
A synoptic view of important American literary movements, intended to define the characteristics of each and to explain the roles of the principal literary figures in each; a study of the interrelationships among movements.
504. Analysis and Interpretation of Literary Texts (new course) (3)
The techniques of close reading. Intensive analysis, interpretation, and assessment of selected critical and imaginative works. Recommended for first-year graduate students.
506. History of the English Language (new course) (3)
Historical development of the sounds, grammar and vocabulary of English from the 10th century to the present.
508. Old English (new course) (3)
The phonology, morphology, and syntax of Old English. Reading and critical study of selected prose and poetry.
509. Beowulf (new course) (3)
Reading and critical study of the oldest English epic and related texts.
510. Middle English Literature (new course) (3)
Piers Plowman, Gawain and the Green Knight, The Pearl, and selections from Wiclif, Gower, Lydgate, Trevisa, James I, Henryson, and others.
511. Descriptive English Linguistics (new course) (3)
Phonemics, morphemics, syntax, and graphics of American English. The methods of structural analysis; an introduction to tagmemics and linguistic transformations.
516. Nineteenth Century American Writers (new course) (3-9)
A comparative study of two major nineteenth century American writers such as Hawthorne and Melville, Whitman and Dickinson, Mark Twain and Henry James. May be repeated with permission of instructor.
517. Twentieth Century American Writers (new course) (3-9)
A comparative study of two major twentieth century American writers such as O'Neill and Arthur Miller, Hemingway and Faulkner, Frost and Stevens. May be repeated with permission of instructor.
520. Chaucer: Troilus and Criseyde and Minor Poems (new course) (3)
Critical study of Troilus and Criseyde and selected poems, excluding the Canterbury Tales.
558. English Drama from 1600 to 1642 (new course) (3)
The plays of such writers as Chapman, Jonson, Beaumont and Fletcher, and Webster.
562. Spenser (new course) (3)
Detailed readings of Spenser's principal works, with emphasis on The Faerie Queene.

581. Studies in Shakespeare: Later Works (new course) (3)
Shakespeare's development, studied from 1600 to the end of his career, including the major tragedies, problem comedies, later historical and romantic plays.
587. Modern British and Irish Writers (new course) (3-9)
Comparative studies of such writers as Yeats and Eliot, Joyce and Woolf, and Shaw and O'Casey. May be repeated with permission of instructor.
601. Doctoral Research and Dissertation (new course) (2-15)
May be repeated for additional credit.
604. Problems in the Teaching of College Composition (new course) (2)
Functional grammar as an aid to writing; reading and discussion as motivation for writing; organization and presentation of material; the research paper; grading standards.
605. Problems in the Teaching of Literature in College (new course) (2)
Methods of approach (critical, historical, and biographical); technical problems connected with assignments, class discussion, the lecture, supplementary reading, reports, testing.
606. Seminar in English Linguistics (new course) (3)
Selected problems involving the historical, comparative, normative or descriptive study of the various periods and dialects of the English language from the earliest records to the present day.
610. Seminar in Medieval English Literature (new course) (3)
A detailed examination of two or three medieval texts, excluding Chaucer.
611. Seminar in Renaissance English Literature (new course) (3)
Close analysis of the development of non-dramatic poetry and prose of the period, excluding Spenser, Shakespeare, and Milton.
612. Seminar in Seventeenth Century English Literature (new course) (3)
A detailed examination of the work of two or three major writers of the period from Donne to Cowley, excluding Milton.
613. Seminar in Eighteenth Century English Literature (new course) (3)
A detailed examination of the work of two or three major writers of the period from Dryden to Johnson.
614. Seminar in Nineteenth Century English Literature (new course) (3)
A detailed examination of the work of two or three major writers of the period.
620. Seminar in the Modern Novel (new course) (3)
An intensive study of two or three modern novelists.
621. Seminar in Contemporary Literature (new course) (3)
Intensive study of dominant movements in recent American or English literature.
650. Seminar in Seventeenth and Eighteenth Century American Literature (new course) (3)
An examination of dominant movements in the thought and writing of Colonial and Early National America.
651. Seminar in the Romantic Movement in America (new course) (3)
An intensive study of two or three writers of early and mid-nineteenth century America.
652. Seminar in Modern American Literature (new course) (3)
Selected figures from late nineteenth and twentieth century American literature.

FOREIGN LANGUAGES

499. Independent Study in a Foreign Language (new course) (2-4)
Individually arranged programs for graduate students; designed to meet special needs.
Prerequisite: Advanced standing in that language and consent of the Foreign Language Department.

HISTORY

DOCTOR OF PHILOSOPHY

The Ph.D. is the highest mark of intellectual achievement obtainable in the United States in the humanities and social sciences. It has traditionally been a research degree and has been awarded only to those who have met rigorous standards, including the demonstration of excellence in scholarship. By common consent, the Ph. D. is also regarded as the indispensable qualification for college and university teachers. The members of the History Department are concerned that the high ideals of excellence associated with the degree be maintained at Northern Illinois University.

Departmental Requirements

A. Fields of Concentration

Each student shall complete approximately 30 credit hours in one major field and approximately 15 credit hours in each of two minor fields. Major and minor fields are listed below. Students majoring in Modern European History must choose one minor in Ancient or Medieval History; students majoring in United States History must choose one minor in British or Modern European History. With the approval of the Department's Graduate Counselor, one minor field may be taken outside of the Department.

Major Fields:

Modern European History
United States History

Minor Fields:

Ancient History
Medieval History
Modern European History
Russian History
Asian History
British History
United States History
Latin American History

Further information regarding major and minor fields may be found in the Graduate Students' Manual of the History Department.

B. Course Requirements

1. History 624, "Philosophies of History"

Designed to acquaint the student with the major works and philosophies of history.

2. A minimum of 12 semester hours credit in History seminars.

C. Language Proficiency

The candidate must pass examinations designed to test his reading proficiency in two foreign languages, usually French and German. With the agreement of the dissertation adviser, another modern or ancient foreign language may be substituted for one of these. The examination will be set by the History Department and graded by the Foreign Language Department; the use of a dictionary is permitted, but passing grades will be given only for literate, idiomatic translations which accurately convey the shades of meaning in the original. One of these language proficiency examinations must be

passed before the candidate sits for the Qualifying Examination. The second must be passed before he sits for the Comprehensive Examination.

D. Dissertation

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 new contribution to knowledge. The candidate must make a satisfactory public defense of his dissertation before an examining board appointed by the Dean of the Graduate School; any holder of an earned doctorate, upon invitation of the Dean of the Graduate School, may attend such an examination and shall have the right to ask questions. Examinations may not be scheduled without the written approval of the dissertation adviser and at least one additional member of the graduate faculty appointed by the Dean as reader.

E. Examinations

1. Qualifying Examination. In order to become a departmental candidate for the degree, every student must pass a Qualifying Examination designed to ascertain the student's ability to pursue advanced graduate study in history. Specifically, the student will be examined on 1) his capacity for critical reading; and 2) his knowledge of significant problems and of bibliography in his proposed field of concentration; and 3) his ability to define and undertake a preliminary investigation of a valid and feasible historical research project which might well serve for a doctoral dissertation. Ordinarily this will be an oral examination conducted by at least two members of the graduate faculty designated by the Department's Graduate Counselor. This examination may be taken at any time after the completion of 15 hours of graduate credit and must be taken before registering for more than 45 hours. Although a student who has successfully completed requirements for the M.A. degree "A" program may claim exemption from the Qualifying Examination, the Chairman of the Department must be satisfied that the student is able to pursue advanced study in history.
2. Comprehensive Examination on Subjects. Subsequent to the Qualifying Examination but prior to submitting the dissertation, every candidate must pass a comprehensive written and oral examination designed to test his knowledge of subject matter in major and minor fields. The questions on the written part of the examination shall be set by an examining committee consisting of the dissertation adviser and two other members of the History Department. The oral part will be conducted by a board appointed by the Dean of the Graduate School and consisting of three members for the major field and two members for the minor fields; the dissertation adviser is the chairman of the examining board. A candidate who fails either the written or the oral part may take that part a second time after the lapse of at least six months; a second failure shall be final. The oral examination may not be taken until the written examination has been passed.

GENERAL

- 601. Doctoral Research and Dissertation (new course) (2-15)
May be repeated for additional credit.
- 624. Philosophies of History (correct title).

EUROPEAN HISTORY

- 461. Diplomatic History of Modern Europe (new course) (3)
The development of the idea of a balance of power and its consequences, especially since the Congress of Vienna.
- 464. History of Modern France (new course) (3)
Surveys the development of French society, government and culture from the end of the Hundred Years War to the present. The Renaissance, the religious wars and the early consolidation of the monarchy briefly treated as an introduction to the Age of Louis XIV, the Enlightenment, the Revolution and Napoleon, the Restoration and the development of democracy in the 19th and 20th centuries.
- 465. History of Germany and Central Europe since 1648 (new course) (3)
Main themes of modern German History, including the age of absolutism, the rise of Prussia, the Napoleonic era, nationalism and unification, power politics, imperialism, two world wars, National Socialism and its aftermath.
- 532. Seminar in Renaissance and Reformation (correct title)
May be repeated to a maximum of six credits.
- 533. Delete.
- 631. Seminar in Modern European Economic History (new course) (3)
Studies in the development of economic institutions and ideas.
- 632. Seminar in European Intellectual History (new course) (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.

HISTORY OF THE AMERICAS

- 425. Three semester hours credit.
- 428. Delete.
- 451. Diplomatic History of the United States (new course) (3)
The history of United States foreign relations from colonial times to the present.
- 452. Illinois and the Old Northwest (new course) (3)
Surveys the settlement of the Northwest Territory and its regional history with primary stress on the history of Illinois.
- 453. The Civil War and Reconstruction (new course) (3)
The struggle is studied against its social and cultural background, and the aftermath of the war is analyzed in terms of its lasting effects on national and regional life both North and South.
- 454. American Agricultural Development, 1815-1900 (new course) (3)
An introduction to the major agricultural developments of the 19th century with emphasis on the social, political and economic aspects of agriculture.
- 623. Seminar in American Intellectual and Social History (new course) (3)
An intensive examination of ideas and preconceptions in American thought on both the popular and scholarly levels during various periods.

BRITISH HISTORY

467. History of the Empire and Commonwealth (new course) (3)
The history of the British Empire and the Commonwealth of Nations from the 16th century to the present.

HOME ECONOMICS

410. Nutrition II (2) (correct title).
Advanced study of nutrition. Special consideration of the influence of such modifying factors as age, sex, and activity of family members. Prerequisite: Course 201.
430. Prerequisite: Home Economics 360 and consent of instructor.
450. Workshop in Home Economics (1-4)
Advanced techniques and study of various phases of home economics. Nature and length of workshop dependent upon needs of students. Number enrolled limited. Additional problem required for graduate credit.
601. Independent study, individual problems, action or other research. (new course description)

INDUSTRIAL ARTS

447. Formerly 547.
477. Formerly 577.
- 542A. Industrial Arts Activities for Classroom Teachers (3).
- 542B. Industrial Arts in Grades K-6 (3).
547. Changed to 447.
577. Changed to 477.
676. Programs and Organization of Industrial Education (new course) (3)
The philosophy, objectives, organization, administration, and significant literature for vocational-industrial all-day, part-time, and evening programs, including apprenticeships and vocational rehabilitation. Special attention given to legislation and standards for state and federal aid to local vocational-industrial and technical programs.

JOURNALISM

450. One-three semester hours credit.
500. Independent Study in Journalism (new course) (1-4)
Open to qualified students who wish to do individual advanced work in journalism or mass communications.
Prerequisite: Consent of instructor.

LIBRARY SCIENCE

MASTER OF ARTS

In addition to the general admission requirements listed in the graduate catalog, candidates for the M.A. in Library Science must have completed the following undergraduate courses or their equivalents unless exempted by examination:

311. Intro. to Selections of Library Material (3)
312. Intro. to Reference Materials (3)
412. Cataloging and Classification (3)

Graduate Course Requirements

1. The following three courses are required of all students:

- 421 -- Bibliography of the Humanities (3)
- 422 -- Bibliography of the Social Sciences (3)
- 424 -- Bibliography of the Sciences (2)

2. The student must elect one of the following four courses:

- 433 -- The Library in the Modern School (3)
- 434 -- The Public Library as a Service Organization (3)
- 515 -- College and University Libraries (3)
- 516 -- Special Libraries (2)

3. The student must have a reading knowledge of one foreign language.

4. The student must take a minimum of ten semester hours credit in graduate courses offered by the College of Liberal Arts and Sciences; or, where the student's special interests require, other graduate courses. The selection of these courses, with the aid and approval of the student's advisory committee, must be integrated with the student's graduate program in Library Science.

5. The student must take sufficient additional courses in Library Science to bring the total credits to a minimum of thirty-two semester hours. These courses are to be selected with the help of the advisory committee.

6. The student will prepare a qualifying paper to meet the requirements of Library Science 530.

415. Library Work with Children and Young People (new course) (3)

The objectives and services of library work with children and young people.

500. May be repeated to a maximum of six semester hours credit.

MANAGEMENT & FINANCE

434. Two-three semester hours credit.

435. Human Factors in Management (correct title) (3).

437. Two-three semester hours credit.

497. One-three semester hours credit.

611. Readings in Management (new course) (1)

May be repeated to a maximum of three semester hours credit.

Special readings useful to a student's individual program and objective, but not available in regular course offerings.

620. Seminar in Personnel Administration (new course) (3)

Management's problems, opportunities and policy alternatives in personnel management, and labor relations. Study of the ramifications labor organizations have on management decision-making.

650. Seminar on Current Business Problems (new course) (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.

661. Three-six semester hours credit.

MARKETING

552. Retail Management (new course) (3)
Retail distribution and the problems of retail management under current conditions. Problems involving decision-making are considered in the following areas: general retail policies, pricing, merchandise management, control, personnel, and store operation.
553. Public Relations in Business (new course) (2)
Public relations as a marketing tool to supplement the advertising efforts of management; includes such topics as business-community relations, customer-company relations, and business-media relations as integrated with business management policies.
554. Marketing Management (new course) (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.
558. Advertising Management (new course) (3)
The uses of advertising by business which gives emphasis to the patterns of marketing strategy and its various functions; problems in developing and evaluating advertising programs; and management's relationship to advertising agencies.
612. Readings in Marketing (new course) (1)
May be repeated to a maximum of three semester hours credit.
Special readings useful to a student's individual program and objective, but not available in regular course offerings.

MATHEMATICS

408. Delete. (Replaced by Ed. 508.)

MUSIC

Master of Music Degree with Piano Major

Master of Music Degree with Voice Major

These options offer an opportunity to specialize intensively in a single area of performance, culminating in a recital which exhibits a high level of artistic and technical competence.

The completion of the degree Bachelor of Music, with a performance major is the normal prerequisite for pursuit of this option. However, students holding the B.S., B.A., or B.M.E. Degree may be eligible if in the opinion of the music faculty, they have reached the necessary level of proficiency in the major performance area.

*Music performance, major area	10
Music History and Literature	6
Recital	4
**Graduate electives.	<u>12</u>
Total	32

*Enrollment in the major performance area is required for each semester or summer session in residence. However, no more than 16 hours may be applied towards the 32-hour total.

**All electives must be chosen in consultation with the adviser. If chosen from offerings outside the department, they must embrace a single cognate area totaling at least six hours.

437. Piano Literature (new course) (2)

A survey of clavier and piano literature to the mid-nineteenth century. Graduate students enrolled in this course will be required to do a significant amount of additional research. Two periods a week. For piano majors, or by permission of instructor.

438. Piano Literature (new course) (2)

A survey of late romantic and contemporary piano literature. Two periods a week. Graduate students enrolled in this course will be required to do a significant amount of additional research. For piano majors, or by permission of instructor.

490. Organ (new course) (1)

Artistic performance stressed, with proficiency requirements. Open to seniors and graduate students by permission. One semester hour credit during regular school year; one-half semester hour credit in summer.

509. Two semester hours credit.

533. Two-four semester hours credit.

543. Two-four semester hours credit.

571. Advanced Pedagogy in Brass Instruments (correct title).

593. Organ (new course) (2)

Artistic performance stressed, with proficiency requirements at each level. For only those students whose major medium of performance is organ. Permission of instructor is required. Two semester hours credit during regular school year; one semester hour credit in summer.

PHYSICAL EDUCATION FOR MEN

Course numbers in this department should no longer be followed by "M."

PHYSICAL EDUCATION FOR WOMEN

565. Seminar in Motor Development in Childhood (new course) (2-3)

Survey of research on acquisition of motor skills with emphasis on findings pertaining to growth pattern, modifiability and specificity. Application to methods and principles of teaching physical education in pre-school and elementary school. Development of special study topic for third hour of credit.

Prerequisite: Course 521 or equivalent.

566. Seminar in Movement Education (new course) (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: Courses 302 or 343 or equivalent.

620. Teaching Physical Education at the College Level (new course) (3)
 Discussion and evaluation of problems of instruction in physical education on the college level.
 Prerequisites: Teaching experience and course 396 or equivalent.
636. Program and Facilities for Physical Education (new course) (3)
 The special facility requirements for physical education programs for girls and women. Principles and standards, functional lay-out, design and construction features for indoor and outdoor facilities. Maintenance, use, scheduling, and supervision of facilities in terms of functional program needs. Individual projects.
 Prerequisite: Course 440 or 543 or equivalent.

PHYSICS

Candidates for the degree M.S. in Physics must demonstrate a reading knowledge of French, German, or Russian.

PHILOSOPHY

500. Advanced Logic (new course) (3)
 A more intensive study of special problems in logical semantics, modal logics, pragmatics or in 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. The writings of R. Carnap, W.O. Quine, Tarski, P.F. Strawson, Von Wright, and B. Russell or articles from Symbolic Logic will serve as guides and texts.
 Prerequisites: Courses 100 and 412 or permission of the instructor.
540. Philosophy of Mind (new course) (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.
 Prerequisite: Two courses in philosophy or permission of the instructor.
550. Contemporary Political and Social Philosophy (new course) (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.
 Prerequisite: Two courses in philosophy or permission of the instructor.

POLITICAL SCIENCE

The Department of Political Science offers graduate programs leading to the degrees of Master of Arts, Master of Science in Education, and a Sixth-Year Certificate of Advanced Study. An area major leading to a Master of Science in Education is also offered in cooperation with such other departments as Economics, History, Journalism, and Sociology and Anthropology. Five fields of concentration are available in Political Science: American Government and Politics, International Affairs, Foreign and Comparative Government, Political Theory and Political 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. Individual programs are related to the student's career objectives by the departmental adviser.

Master of Arts

Students interested in pursuing a Master of Arts degree with a major in Political Science normally should have had at least nine undergraduate semester hours in Political Science. When this is lacking, the student may be required to compensate during the graduate program.

Of the thirty-two semester hours required for the degree, at least twenty-four semester hours are to be taken in Political Science at the graduate level, including:

- (1) Not less than 9 semester hours in one, and 6 semester hours in a second of the five fields of concentration listed above.
- (2) Pol. Sci. 550 (Scope and Method of Political Science - 3 hours)
- (3) Pol. Sci. 649 (Thesis - 6 hours)

The remaining hours may be taken in Political Science or some closely related field in accordance with the recommendations of the departmental adviser and the student's committee. A final written and oral examination is required. Reading knowledge of a foreign language also may be required, depending upon the student's areas of concentration and or thesis subject.

Master of Science in Education (Area Programs)

The Department of Political Science cooperates with such other departments as Economics, History, Journalism, and Sociology and Anthropology to devise area programs leading to this degree. The actual division of course study is determined by the student with advisers representing the departments concerned. A minimum of 8 hours in Political Science is necessary and approximately 16 hours normally will be recommended. Foreign language proficiency or a thesis is not required, but a qualifying paper must be written. Pol. Sci. 549 (Independent Study) may be used for the writing of the qualifying paper and 2-4 credits earned.

Certificate of Advanced Study

Any student with a master's degree and a good graduate record will be permitted to pursue the Certificate. Of the thirty semester hours required, not less than twenty hours must be in Political Science, divided approximately equally between any two of the five fields: American Government and Politics, International Affairs, Foreign and Comparative Government, Political Theory and Political Behavior, Public Administration. A research paper in one of the fields of concentration is required, and three semester hours credit may be obtained for work on the paper in an independent study course. These three hours may be counted in the relevant concentration field. Reading knowledge of a foreign language may also be required.

Certificate of Advanced Study (Area Programs)

The Department of Political Science cooperates with other departments to devise area programs leading to this degree. For further information, see page 169.

402. Administration in Government (new course) (3)

The general organization of the federal administration and its role in the political process. Relation to executive political leadership, the Congress, judiciary, pressure groups, and public opinion.

405. Municipal Government and Administration (new course) (3)
The organization, politics, problems, and administration of urban government in the United States.
415. Public Policy Formulation (new course) (3)
The dynamics of public policy formulation in the executive branch of government.
420. Political Opinion and Behavior (new course) (3)
The nature and formation of political opinion, techniques for its measurement, political and electoral behavior.
440. Delete.
443. Government and Politics in Western Europe (new title) (3)
An analysis of governmental institutions, political processes, and environmental factors which affect political behavior in such countries as France, Germany and Italy.
446. Governmental Systems in the Far East (new title) (3)
A study of political and administrative institutions, processes and politics in such countries as contemporary China, Japan, and India in terms of their cultures, traditions, and current problems.
448. Government and Politics in Eastern Europe (new course) (3)
The development, structure and functioning of government and politics in the East European Societies other than the U.S.S.R.
449. Delete.
450. Governmental Systems in Southeast Asia (new course) (3)
A comparative study of governmental and administrative institutions, processes and politics in such countries as contemporary South Vietnam, Malaya, Cambodia, Laos, Thailand, and Indonesia in terms of their culture, traditions, current aspirations, and problems.
451. Far Eastern Political Thought (new course) (3)
Major political concepts which have influenced Japanese, Chinese, Indian, and Southeast Asian societies.
452. Governmental Systems in Latin America (new course) (3)
An analysis of governmental and administrative institutions, processes and politics in selected countries of Latin America in terms of their cultures, traditions, current aspirations, and problems.
453. Formerly 542.
457. Fiscal Administration (new course) (3)
Basic concepts and practices in government budget and finance administration.
458. Organization and Methods in Public Administration (new course) (3)
Basic concepts and techniques in connection with management analysis.
460. Formerly 548.
461. Foreign Policies Abroad (new course) (3)
The traditional and contemporary foreign policies of such major countries as Great Britain, France, Germany, India, Communist China, and Japan.
520. Administrative Law (new course) (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.
521. Jurisprudence (new course) (3)
The nature and source of law, law and the state, law and justice, principal schools of legal theory, the role of law in political behavior.
542. Changed to 453.
544. Legislative Behavior (new title) (3)

546. Soviet Foreign Policy (new course) (3)
A discussion of the traditional objectives of Russian foreign policy and the contemporary policies of the Soviet Union.
547. Governmental Systems in Africa (new title) (3)
A study of colonialism and nationalism in Africa; the emergence of independent governments, contemporary political and administrative problems.
548. Changed to 460.
550. Scope and Method of Political Science (formerly 640C) (3)
Methodology for thesis preparation, research problems, discussions, and criticism.
Prerequisite: Consent of instructor.
560. The Commonwealth of Nations (formerly 642) (3)
The development, structure and functioning of the Commonwealth as an international organization.
640. Seminar in Political Thought and Behavior (formerly 640A) (3)
Research and class discussion of selected topics.
644. Seminar in International Politics (formerly 640B) (3)
Research and class discussion of selected topics.
645. Seminar in American Government and Politics (I) (II) (to replace 640D) (3)
Research and discussion of selected topics. May be repeated for a maximum of 6 semester hours.
646. Seminar in Comparative Government (formerly 640E) (3)
Research and class discussion of selected topics in government and politics of various national states.
647. Seminar in Public Administration (formerly 640F) (3)
Research and discussion of selected topics.
648. Seminar in Comparative Public Administration (new course) (3)
Research and discussion of administrative problems, processes and methods in various governments. (May be counted in Public Administration or in Foreign and Comparative Government concentration.)
651. Seminar in Governmental and Administrative Problems of Underdeveloped Countries (new course) (3)
Research and discussion of selected topics.
655. Foreign Study and Internship (new course) (3-9)
Individual research, study and work abroad.
656. Internship in Public Administration (new course) (2-6)
May be repeated. Individual work in a government agency.
Prerequisite: Written permission of department head.

SOCIAL SCIENCES

For descriptions of area majors involving the social sciences, see the Graduate Catalogue under Social Sciences, pp. 169-170; also under Economics, p. 75; History, pp. 108-109; Political Science, above, and under Sociology and Anthropology below.

SOCIOLOGY AND ANTHROPOLOGY

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

Master of Arts

MAJOR IN SOCIOLOGY

No change.

Master of Science in Education

AREA MAJOR

The Department of Sociology and Anthropology cooperates with other departments in the University in offering an area major leading to the Master of Science in Education degree. Students who elect this program will be expected to complete at least half the work for the degree in Sociology. The program of courses will be selected in conference with the graduate adviser and will include at least one course in theory (470, 485, 580, 585, 686B) and one course in research methods (492, 686F). Students who elect to write their qualifying papers in Sociology may earn 2 to 4 semester hours of credit for the paper by enrolling in Sociology 584, Independent Study.

Certificate of Advanced Study

Sixth Year Program

MAJOR IN SOCIOLOGY

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 nine semester hours in a closely related field is acceptable. A comprehensive examination, either written or oral, or both, and a thesis are required. Total for the degree, 30 semester hours.

420. Cultural Evolution (new course) (3)

A historical and critical examination of evolutionary theories of culture. Relationships between biological and cultural evolution.

421. Kinship and Social Structure (new course) (3)

Cross-cultural examination of social institutions with special attention to kinship in primitive and peasant societies. Functional requisites of various kinship systems and their development.

471. Probation and Parole (new course) (3)

A systematic study of the early development, types of service, administrative organization, investigative and supervisory aspects of probation and parole within the legal structure of society.

Prerequisite: Course 288.

520. Cultural Systems (new course) (3)

Organizing principles and theories currently used in Anthropology: culture areas; culture patterns; themes and models.

Prerequisite: Course 220 or consent of instructor.

Special Problems in Anthropology (new course) (3)

Supervised readings and field work in special problem areas of Anthropology.

Prerequisite: Written permission of department head.

Delete.

- 620. Formerly 686C.
- 670. Seminar in the Sociology of Religion (new course) (3)
 Intensive study of selected aspects of religious behavior.
 Prerequisite: Course 386 or consent of instructor.
- 686C. Changed to 620.

SPEECH

- 516. Voice and Diction in the Educational Theatre (new course) (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.
 Prerequisite: Consent of instructor.
- 617. Seminar in Theatre Research (new course) (3)
 May be repeated to a maximum of six semester hours.
 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.
 Prerequisite: Consent of instructor.

