

NORTHERN ILLINOIS UNIVERSITY  
ARCHIVES

# Northern Illinois University

*Graduate Catalog*  
*1959 - 1961*



## DeKalb





Administration Building

STATE OF ILLINOIS  
WILLIAM G. STRATTON, Governor  
**THE TEACHERS COLLEGE BOARD**

**Appointed Members**

MR. LEWIS M. WALKER, Chairman.....	Gilman
MR. ROYAL A. STIPES, JR., Vice Chairman.....	Champaign
MR. ALEXANDER A. SUMMERS, Secretary.....	Mattoon
MR. CARL DUNBAR.....	Macomb
MR. J. A. HOULE, JR.....	Chicago
MRS. HARRIET LOWDEN MADLENER.....	Oregon
MR. WILLIAM REED.....	Oak Park
MR. CLARENCE R. ROPP.....	Normal
MR. CHAUNCEY B. WATSON, SR.....	DeKalb

---

**Ex Officio Members**

MR. GEORGE T. WILKINS, Superintendent of Public Instruction.....	Springfield
MR. MORTON H. HOLLINGSWORTH, Director of Department of Finance.....	Springfield

---

DR. RICHARD G. BROWNE, Executive Officer.....Springfield

---

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 employee of the State Teachers College Board and is appointed by the Board for a specific term.





Swen Person Library

# GRADUATE SCHOOL CALENDAR—1959-1961

## Summer Session, 1959

Monday, June 22.....Registration 8:00 A.M.-3:30 P.M.  
Tuesday, June 23.....Class work begins 8:00 A.M.  
Thursday, June 25.....Last day for filing petition for admission  
to candidacy for August degree candidates  
Friday, June 26.....Last day for filing application to take  
comprehensive examination for August degree candidates  
Saturday, July 4.....Holiday  
Monday, July 13.....First day of comprehensive examinations for  
August degree candidates  
Friday, July 24.....Last day for filing qualifying paper, research study,  
field study, or thesis for August degree candidates  
Tuesday, August 4.....Last day of comprehensive examinations for  
August degree candidates  
Thursday, August 13.....Commencement 4:00 P.M.  
Friday, August 14.....Summer Session closes after regularly scheduled classes

## First Semester, 1959-1960

Saturday, September 19.....Registration for Saturday and evening  
classes 8:00 A.M.-12:00 Noon  
Saturday, September 19.....Class work begins 9:00 A.M.  
Monday, Tuesday, September 21, 22...Registration 8:00 A.M.-6:30 P.M.\*  
Friday, Saturday and Sunday, October 16-18.....Homecoming  
Friday, October 23.....Meeting of Rock River Division of I.E.A.  
Wednesday, November 25.....Thanksgiving recess begins at 12:00 noon  
Monday, November 30.....Class work resumes 8:00 A.M.  
Saturday, December 19.....Christmas vacation begins after regularly  
scheduled classes  
Monday, January 4.....Class work resumes 8:00 A.M.  
Monday-Thursday, January 18-28...Saturday and evening class examinations  
Monday-Friday, January 25-29.....Undergraduate examinations  
Saturday, January 30.....Close of first semester

## Second Semester, 1960

Saturday, February 6.....Registration for Saturday and evening  
classes 8:00 A.M.-12:00 Noon  
Saturday, February 6.....Class work begins 9:00 A.M.  
Monday, Tuesday, February 8, 9.....Registration 8:00 A.M.-6:30 P.M.\*  
Wednesday, February 10.....Class work begins 8:00 A.M.  
Saturday, April 9.....Easter recess begins after regularly scheduled classes  
Monday, April 18.....Class work resumes 8:00 A.M.  
Thursday, April 21.....Last day for filing petition for admission to  
candidacy for June degree candidates  
Friday, April 29.....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 6 . . . . . Last day for filing qualifying paper, thesis, research study or field study for June degree candidates  
Monday, May 30 . . . . . Holiday  
Wednesday, June 1 . . . . . Last day of comprehensive examinations for June degree candidates  
Saturday-Monday, May 28-June 6 . . Saturday and evening class examinations  
Saturday-Thursday, June 4-9 . . . . . Undergraduate examinations  
Saturday, June 11 . . . . . Sixty-first Annual Commencement 10:00 A.M.  
Monday, June 13 . . . . . Close of second semester

### **Summer Session, 1960**

Monday, June 20 . . . . . Registration 8:00 A.M.-3:30 P.M.  
Tuesday, June 21 . . . . . Class work begins 8:00 A.M.  
Thursday, June 23 . . . Last day for filing petition for admission to candidacy for August degree candidates  
Friday, June 24 . . . . . Last day for filing application to take comprehensive examination for August degree candidates  
Monday, July 4 . . . . . Holiday  
Monday, July 11 . . . . . First day of comprehensive examinations for August degree candidates  
Friday, July 22 . . . . . Last day for filing qualifying paper, thesis, research study or field study for August degree candidates  
Tuesday, August 2 . . . Last day of comprehensive examinations for August degree candidates  
Thursday, August 11 . . . . . Commencement 4:00 P.M.  
Friday, August 12 . . Summer Session closes after regularly scheduled classes

### **First Semester, 1960-1961**

Saturday, September 17 . . . . . Registration for Saturday and evening classes 8:00 A.M.-12:00 Noon  
Saturday, September 17 . . . . . Class work begins 9:00 A.M.  
Monday, Tuesday, September 19, 20 . . . Registration 8:00 A.M.-6:30 P.M.\*  
Friday, Saturday and Sunday, October 7-9 . . . . . Homecoming  
Friday, October 21 . . . . . Meeting of Rock River Division of I.E.A.  
Wednesday, November 23 . . . . . Thanksgiving recess begins at 12:00 Noon  
Monday, November 28 . . . . . Class work resumes 8:00 A.M.

Saturday, December 17 . . . . . Christmas vacation begins after regularly scheduled classes  
Tuesday, January 3 . . . . . Class work resumes 8:00 A.M.  
Tuesday-Thursday, January 17-26 . . Saturday and evening class examinations  
Monday-Friday, January 23-27 . . . . . Undergraduate examinations  
Saturday, January 28 . . . . . Close of first semester

### **Second Semester, 1961**

Saturday, February 4 . . . . . Registration for Saturday and evening classes 8:00 A.M.-12:00 Noon  
Saturday, February 4 . . . . . 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.

Monday, Tuesday, February 6, 7.....Registration 8:00 A.M.-6:30 P.M.  
Wednesday, February 8.....Class work begins 8:00 A.M.  
Saturday, March 25...Easter recess begins after regularly scheduled classes  
Monday, April 3.....Class work resumes 8:00 A.M.  
Thursday, April 13.....Last day for filing petition for admission to  
candidacy for June degree candidates  
Friday, April 28.....First day of comprehensive examinations for June  
degree candidates  
Friday, May 5.....Last day for filing qualifying paper, thesis, research  
study or field study for June degree candidates  
Saturday-Tuesday, May 27-June 6..Saturday and evening class examinations  
Tuesday, May 30.....Holiday  
Wednesday, May 31.....Last day of comprehensive examinations for June  
degree candidates  
Saturday-Thursday, June 3-8.....Undergraduate examinations  
Saturday, June 10.....Sixty-second Annual Commencement 10:00 A.M.  
Monday, June 12.....Close of second semester

## 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

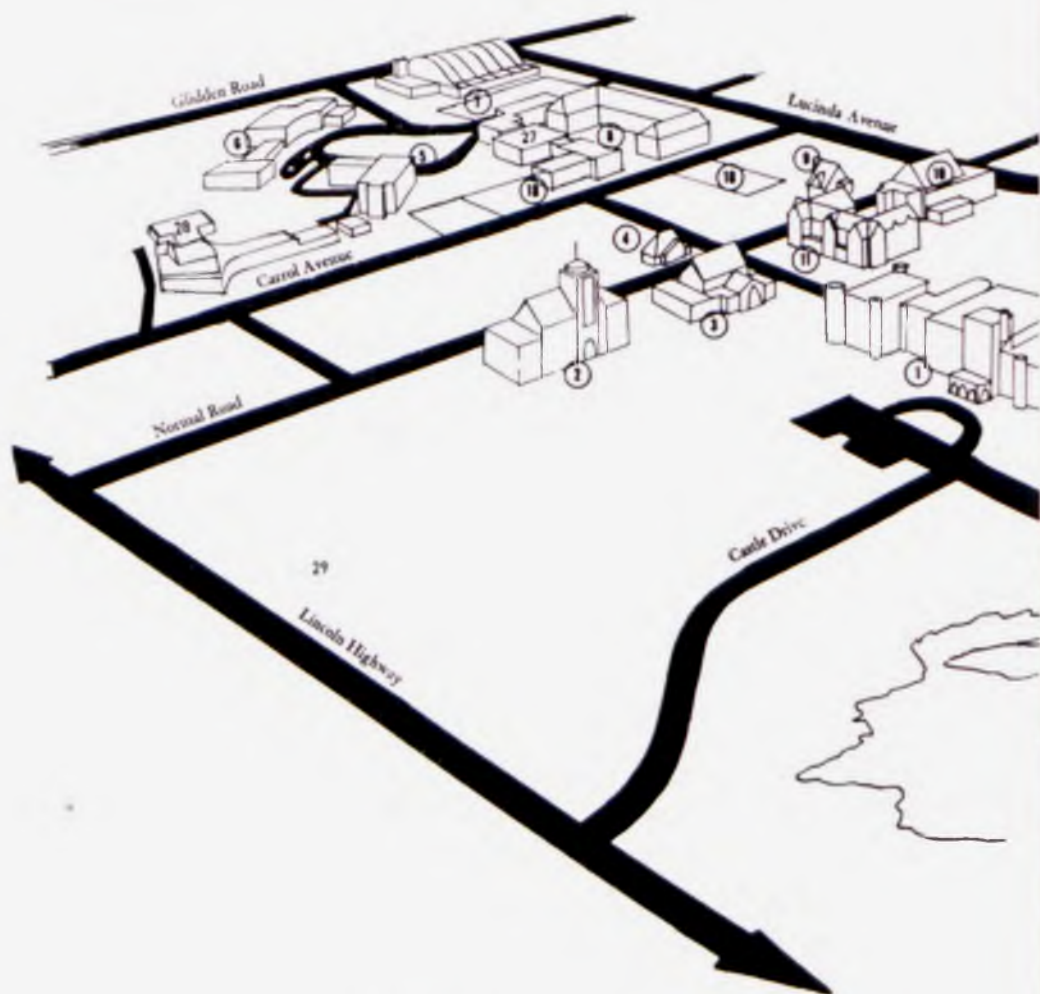
\*Registration offices remain open late enough during the first week of classes to accommodate evening students. After the first week these offices close at 5:00 P.M. Since registration for evening and Saturday classes closes with the second meeting of each class, late registrants for an evening class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

This catalog describes course offerings for the academic year 1959-1960 and, within limits, for the academic year 1960-1961. For a listing of the courses added for 1960-1961 see the supplement to this catalog. For a listing of courses offered in the summer sessions of 1959 or 1960 see the Summer Session Bulletin.



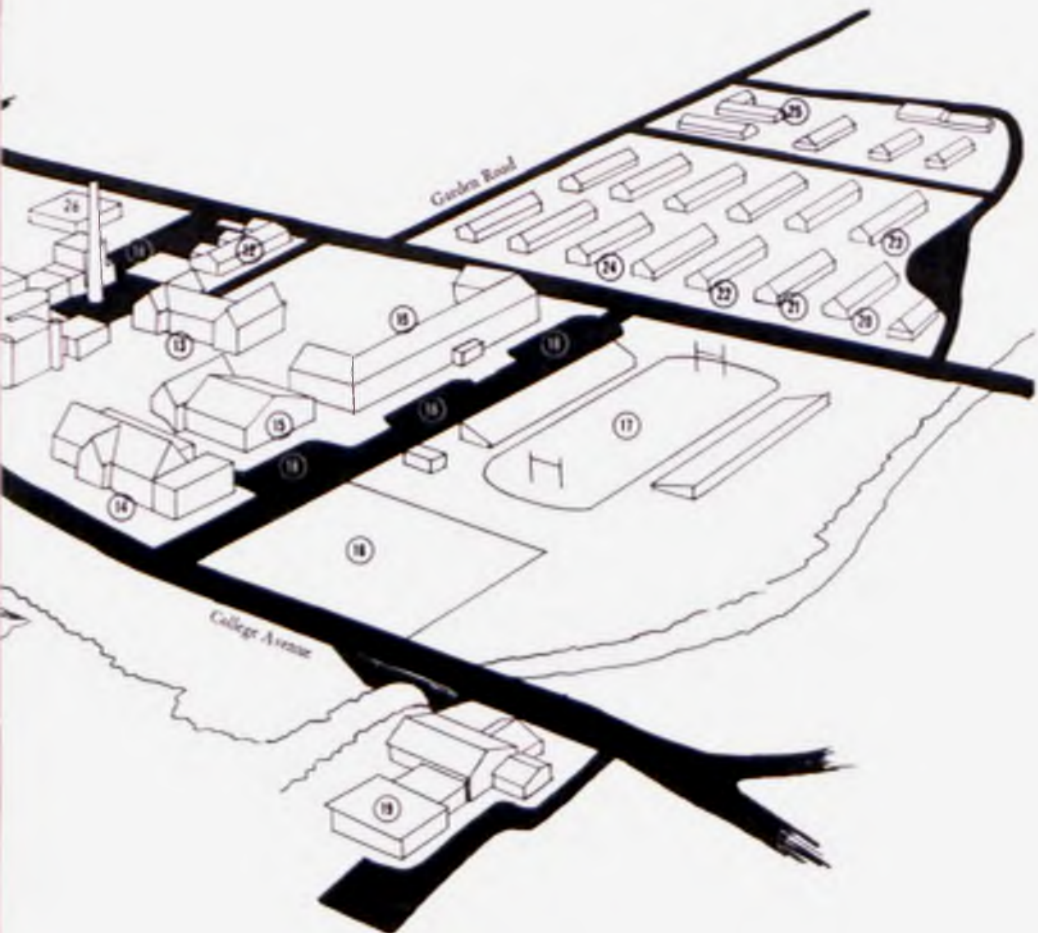
## *Key to Campus Map*

- |                              |                                  |
|------------------------------|----------------------------------|
| 1. Administration Building   | 9. Instructional Office Building |
| 2. Science Building          | 10. Adams Hall (Women)           |
| 3. Parson Library            | 11. Williston Hall (Women)       |
| 4. Home Management House     | 12. Cafeteria                    |
| 5. Reavis Classroom Building | 13. McMurry Hall                 |
| 6. University School         | 14. Industrial Arts Building     |
| 7. Northern Field House      | 15. Women's Gymnasium            |
| 8. Neptune Hall (Women)      | 16. Gilbert Hall (Men)           |



## *N.I.U. DeKalb, Illinois*

- |                               |  |
|-------------------------------|--|
| 17. Glidden Field             | 24. Veterans' Housing                          |
| 18. Parking                   | 25. Duplicating Services                       |
| 19. Student Union             | 26. Student Health Center and<br>Speech Clinic |
| 20. Music Annex               | 27. Women's Residence<br>Hall Group            |
| 21. Regional Services Offices | 28. Fine Arts Building                         |
| 22. Classroom Building        | 29. Montgomery Arboretum                       |
| 23. Office Building           |  |



## ADMINISTRATIVE STAFF

Leslie A. Holmes, Ph. D.	President of the University
Francis R. Geigle, Ed. D.	Vice-President of the University
J. R. Hains, Ph. D.	Dean of Instruction and Dean of the Graduate School
George S. Pritchard, Ed. D.	Registrar
Eugenie Walker, M. A.	Director of Admissions
Betty Patterson	Secretary to the Dean of the Graduate School

## GRADUATE COUNCIL

J. R. Hains, Ph. D., Chairman	Dean of the Graduate School
Leslie A. Holmes, Ph. D.	President of the University
James S. Storey, Ed. D.	Department of Art
Charles J. Rohde, Jr., Ph. D.	Department of Biological Sciences
J. Howard Nelson, Ph. D.	Department of Business
Edwin Shykind, Ph. D.	Department of Earth Sciences
George D. Weigel, Ed. D.	Department of Education
Arnold B. Fox, Ph. D.	Department of English
Otho J. Quick, Ph. D.	Department of Industrial Arts
James W. Beach, Ph. D.	Department of Mathematics
R. Vernon Fay, Ph. D.	Department of Music
William Healey, Pe. D.	Department of Physical Education for Men
Margaret M. Duncan, Ed. D.	Department of Physical Education for Women
John E. Bower, Ph. D.	Department of Chemistry
Earl W. Hayter, Ph. D.	Department of Social Sciences
Paul Crawford, Ph. D.	Department of Speech

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

## GRADUATE FACULTY

Leslie A. Holmes, Ph. D.	President of the University
Francis R. Geigle, Ed. D.	Vice-President of the University
J. R. Hains, Ph. D.	Dean of the Graduate School and Dean of Instruction
Harold E. Aikins, Ph. D.	Professor of History
Virgil W. Alexander, Ph. D.	Professor of Education, Director of Evening College, and Director of Instructional Materials
Eleanor M. Anglin, Ph. D.	Professor of Education
S. Orville Baker, Ph. D.	Professor and Head of Department of English
Edna H. Barbour, Ph. D.	Associate Professor of Business
Martin H. Bartels, Ph. D.	Director of Placement and Professor of Education
James W. Beach, Ph. D.	Professor of Mathematics
Jess R. Beard, Ed. D.	Assistant Professor of Education
Mary M. Bell, Ph. D.	Assistant Professor of Physical Education for Women
Bertha M. Bellis, Ph. D.	Professor of Education
Ralph A. Belnap, Ed. D.	Associate Professor of Education
John S. Benben, Ph. D.	Professor and Head of Department of Education
C. Jackson Bennett, Ph. D.	Assistant Professor of Biological Sciences
Ledford J. Bischof, Ed. D.	Professor of Education
W. Darrel Black, Pe. D.	Associate Professor of Physical Education for Men
John E. Bower, Ph. D.	Professor of Chemistry

Mabel Brantley, Ed. D. . . . . Associate Professor of Education  
 Robert D. Brown, Ph. D. . . . . Assistant Professor of Industrial Arts  
 Robert R. Brown, Ed. D. . . . . Associate Professor of Education  
 Robert A. Bullington, Ph. D. . . . . Professor of Biological Sciences  
 Waldo W. Burchard, Ph. D. . . . . Associate Professor of Sociology  
 Roy O. Burke, Ed. D. . . . . Assistant Professor of Art  
 Paul S. Burtness, Ph. D. . . . . Associate Professor of English  
 Loren T. Caldwell, Ed. D. . . . . Professor and Head of Department of  
     Earth Sciences  
 Charles Canon, Ed. D. . . . . Associate Professor of Art  
 John T. Carey, Ph. D. . . . . Professor and Head of Department of Art  
 Margaret L. Carroll, Ph. D. . . . . Professor of Education  
 V. Eleanor Casebier, Ph. D. . . . . Associate Professor of Business  
 John G. Christiano, Ph. D. . . . . Associate Professor of Mathematics  
 Kenneth L. Cleland, Ed. D. . . . . Associate Professor of Education  
 Joseph Clettenberg, Ph. D. . . . . Director of Extension and Associate  
     Professor of Education  
 Silas Clifton, Ed. D. . . . . Associate Professor of Education  
 Birchard Coar, Ph. D. . . . . Professor of Music  
 Lillian Cobb, Ph. D. . . . . Professor and Head of Department of  
     Foreign Languages  
 Paul Crawford, Ph. D. . . . . Professor of Speech  
 Robert E. Day, Ph. D. . . . . Associate Professor of Art  
 Mark Dean, Ph. D. . . . . Associate Professor of Physical Education for Men  
 Robert H. DeZonia, Ph. D. . . . . Assistant Director of Research and  
     Assistant Professor of Education  
 Margaret M. Duncan, Ed. D. . . . . Professor and Head of Department  
     of Physical Education for Women  
 Thomas D. Eliot, Ph. D. . . . . Professor of Sociology  
 Robert V. Esmond . . . . . Assistant Professor of English  
 Peter W. Everett, Ph. D. . . . . Associate Professor of Physical Education for Men  
 R. Vernon Fay, Ph. D. . . . . Professor of Music  
 Harvey A. Feverherm, Ph. D. . . . . Professor of Biological Sciences  
 Clinton M. File, Ed. D. . . . . Professor of Business  
 Stuart D. Fink, Ph. D. . . . . Professor of Education; Director of The University  
     School; Principal of The University Elementary School  
 Arnold B. Fox, Ph. D. . . . . Associate Professor of English  
 William P. Froom, Ed. D. . . . . Director, Regional Services; Professor of English  
 O. J. Gabel, Ph. D. . . . . Professor of Education  
 Gynith C. Giffin, Ph. D. . . . . Assistant Professor of Chemistry  
 Harold G. Gilbert, Ph. D. . . . . Professor of Industrial Arts  
 Oswald Goering, Ed. D. . . . . Assistant Professor of Education  
 Howard W. Gould, Ph. D. . . . . Professor and Head of Department of Chemistry  
 Eugene B. Grant, Ed. D. . . . . Professor of Education  
 Anne Greene, Ph. D. . . . . Associate Professor of English  
 Gwynn A. Greene, Ed. D. . . . . Coordinator of Student Teaching and  
     Professor of Education  
 Edith H. Grotberg, Ph. D. . . . . Associate Professor of Education  
 B. Ross Guest, Ph. D. . . . . Associate Professor of Earth Sciences  
 Jeannette J. Gund, Ph. D. . . . . Associate Professor of Physical  
     Education for Women





W. V. O'Connell, Ed. D. . . . . Professor of Speech  
 Henry A. O'Connor, Ed. D. . . . . Assistant Professor of Education  
 William K. Ogilvie, Ed. D. . . . . Assistant Professor of Education  
 Ruben L. Parson, Ph. D. . . . . Associate Professor of Earth Sciences  
 Carroll M. Pike, Ed. D. . . . . Dean of Men and Associate Professor of Education  
 George S. Pritchard, Ed. D. . . . . Registrar and Associate Professor of Education  
 Otho J. Quick, Ph. D. . . . . Associate Professor of Industrial Arts  
 Damon D. Reach, Ed. D. . . . . Director of the Summer Session and  
    Associate Professor of Education  
 Martin Rienemann, Ph. D. . . . . Professor of Earth Sciences  
 S. Alexander Rippa, Ed. D. . . . . Assistant Professor of Education  
 Robert M. Rodney, Ph. D. . . . . Associate Professor of English  
 Charles J. Rohde, Jr., Ph. D. . . . . Professor of Biological Sciences  
 Frederick W. Rolf, Ph. D. . . . . Professor of Chemistry  
 Danton B. Sailor, Ph. D. . . . . Assistant Professor of History  
 Martha Schreiner, Ph. D. . . . . Professor of Foreign Languages  
 William R. Seat, III, Ph. D. . . . . Associate Professor of English  
 Marietta E. Sedlock, D. Mus. . . . . Assistant Professor of Music  
 George W. Senteney, Ed. D. . . . . Assistant Professor of Industrial Arts  
 William M. Shearer, Ph. D. . . . . Associate Professor of Speech  
 Edwin B. Shykind, Ph. D. . . . . Assistant Professor of Earth Sciences  
 Harold E. Smith, Ph. D. . . . . Associate Professor of Sociology  
 Wilbur Smith, Ph. D. . . . . Associate Professor of Music  
 Sonya F. Spiesmann, Ph. D. . . . . Associate Professor of Political Science  
 Roy Steinbrook, Ed. D. . . . . Associate Professor of Education  
 James S. Storey, Ed. D. . . . . Associate Professor of Art  
 George L. Terwilliger, Ed. D. . . . . Professor and Head of Department  
    of Biological Sciences  
 Robert L. Thistlethwaite, Ph. D. . . . . Associate Dean of Instruction and  
    Professor of Business  
 Merton B. Utgaard, Ed. D. . . . . Associate Professor of Music  
 Angel Manuel Vazquez-Bigi, LL. D. . . . . Associate Professor, Foreign Languages  
 Eleanor Volberding, Ph. D. . . . . Professor of Education  
 Morton Waimon, Ed. D. . . . . Assistant Professor of Education  
 Allen D. Weaver, Ph. D. . . . . Associate Professor of Physics  
 Maurice J. Weed, Ph. D. . . . . Professor and Head of Department of Music  
 Dale H. Weeks, Ph. D. . . . . Associate Professor of Economics  
 George D. Weigel, Ed. D. . . . . Professor of Education  
 Philip C. Wells, Ed. D. . . . . Associate Professor of Education  
 Walter Wernick, Ed. D. . . . . Assistant Professor of Education  
 Raymond D. Wilderman, Ph. D. . . . . Associate Professor of Speech  
 Esther Williams, Ed. D. . . . . Professor of Education  
 J. David Williams, Ph. D. . . . . Associate Professor of Speech  
 Babatunde A. Williams, Ph. D. . . . . Assistant Professor of Political Science  
 Jerome E. Winn, Pe. D. . . . . Associate Professor and Supervising Teacher  
    of Physical Education, The University School  
 Margaret L. Wood, Ph. D. . . . . Professor of Speech  
 Henry G. Yankow, Ph. D. . . . . Professor of Business  
 Wilbur A. Yauch, Ed. D. . . . . Associate Dean of Instruction and  
    Professor of Education

## 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. In 1958 the following additional degrees at the fifth-year level were authorized: Master of Arts (in English, History, Social Sciences, and Speech); Master of Science (in Biological Sciences, Business Administration, Chemistry, Earth Sciences, Mathematics, and Physics); and Master of Music. A sixth-year program leading to the Certificate of Advanced Study or the degree Master of Fine Arts was also authorized at this time.

During the academic years 1959-1961 graduate study will be offered in the following subject matter fields: Art, Biological Sciences, Business Administration, Business Education, Chemistry, Earth Sciences, Education, English, Foreign Languages, History, Industrial Arts, Mathematics, Music, Philosophy, Physical Education for Men, Physical Education for Women, Physics, Social Sciences, and Speech. Full majors leading at fifth year level to a master's degree and at sixth year level to the Certificate of Advanced Study or, for majors in Art, the degree Master of Fine Arts are offered in all these subject matter fields except Foreign Languages and Philosophy; and inter-departmental majors which cut across departmental lines are offered by certain groups of departments.

### Purpose

The graduate program of Northern Illinois University aims

1. to provide an atmosphere conducive to the development of independent thought, informed judgment, and the spirit of free inquiry;
2. to improve the competence of qualified students in their chosen fields; and
3. to furnish a sound base for further scholarship and research on the part of those students who aspire to more advanced degrees.

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

Area majors leading to the degree Master of Science in Education are offered in the following combinations:

Biological Sciences—Chemistry	Education—Biological Sciences
Biological Sciences—Earth Sciences	Education—Business
Biological Sciences—Chemistry—	Education—Chemistry
Earth Sciences—Physics	Education—Earth Sciences
Biological Sciences—Physics	Education—English
Earth Sciences—Chemistry	Education—History
Earth Sciences—Physics	Education—Industrial Arts
Education—Art	Education—Mathematics

Education—Music  
 Education—Philosophy  
 Education—Physical Education  
 Education—Physics  
 Education—Social Sciences  
 Education—Speech  
 English—Foreign Languages

English—History  
 English—Philosophy  
 English—Social Sciences—Speech  
 English—Social Sciences  
 English—Speech  
 Mathematics—Sciences

Information regarding area majors may be obtained by communicating with the heads of the departments concerned.

#### **Master of Arts**

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

English	History	Social Sciences	Speech
---------	---------	-----------------	--------

#### **Master of Science**

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

Biological Sciences	Business Administration	Mathematics
Chemistry	Earth Sciences	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:

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

#### **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 full-time students 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. The report of 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.

### **Areas of Specialization**

The student may select a major from any of the subject matter fields named above except Foreign Languages and Philosophy; or he may select an inter-departmental or "area" major. Such combined majors are offered in Biological Sciences-Earth Sciences, Biological Sciences-Chemistry-Physics, Biological Sciences-Earth Sciences-Chemistry-Physics, Educational-Biological Sciences, Education-Business, Education-Earth Sciences, Education-English, Education-Industrial Arts, Education-Mathematics, Education-Philosophy, Education-Physical Education, Education-Physical Sciences, Education-Social Sciences, Education-Speech, English-Foreign Languages, English-Philosophy, English-Social Sciences-Speech, English-Social Sciences, English Speech, Mathematics-Sciences, and Social Sciences-Philosophy.

### **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 transcripts of his academic record 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.

### **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 \$8.00 per semester hour in 1959-'60 or \$9.00 in 1960-'61, with the provision that the total amount of fees paid will not exceed \$95.00 per semester for residents of Illinois in 1959-'60 or \$105.00 in 1960-'61.

## 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:

	1959-1960	1960-1961
Full-time Student (per semester)		
Registration fee, Illinois residents .....	\$ 95.00	\$105.00
Registration fee, non-residents of Illinois .....	180.00	190.00
Part-time students (six semester hours or less)		
Minimum fee .....	16.00	18.00
Per class hour for residents of Illinois .....	8.00	9.00
Per class hour for non-residents of Illinois .....	22.00	23.00
(No activity privileges extended)		



### Special fees

Matriculation fee (payable upon initial registration only).....	\$ 5.00
Graduation fee (payable at time of graduation only).....	10.00
Late registration fee.....	3.00
Change of program fee.....	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 takes care of \$65.00 of the \$95.00 in 1959-60 and \$75.00 of the \$105.00 in 1960-'61; 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.

### **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 per week per person.

\* Approximately nine hundred women students are housed on campus in three residence halls—Adams Hall for seniors; Neptune Hall for freshmen; and Williston Hall for upperclassmen. Gilbert Hall houses approximately five hundred men students. All students living in the residence halls furnish their own towels, bed linens, and blankets. The rate for room and board in the halls is \$315.00 per semester, payable in advance.

The new Women's Residence Hall Group, scheduled for occupancy in the autumn of 1959, will accommodate approximately 1,000 students.

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. Application cards and required forms are sent from the Housing Office automatically upon the completion of the admission procedure in the Admissions Office. 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.

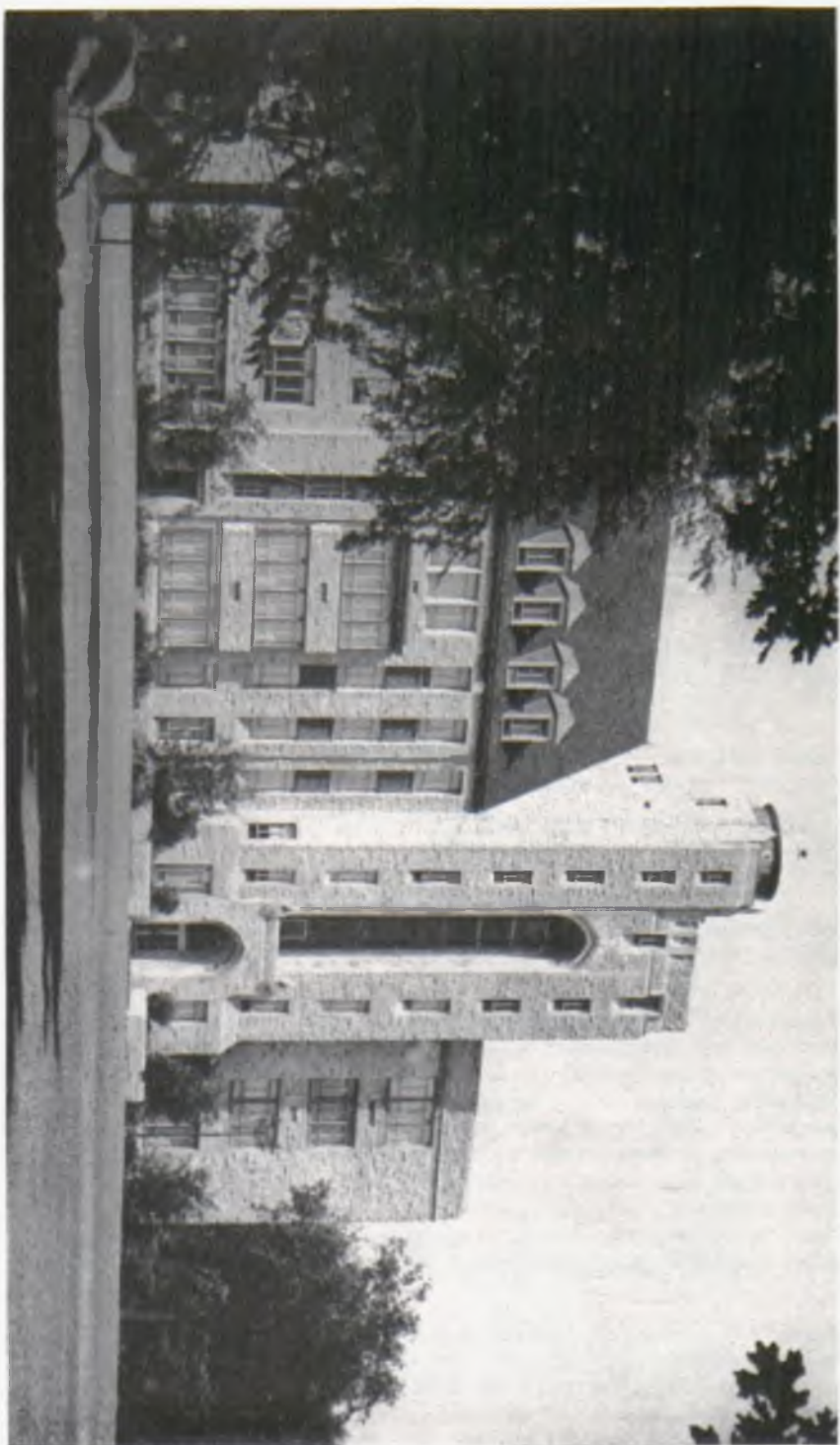
In regard to housing on campus in the residence halls, applications from undergraduate students are given preference over those from graduate students.

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

Married students with families may be assigned to the barracks in the Housing Project on campus. To qualify for this housing, students must carry at least twelve semester hours of credit through each of the two semesters of the academic year and at least six semester hours of credit during the summer session. There are twenty-four units with two bedrooms and twenty-four one-bedroom units. All subletting must be approved by the University Housing Office and is limited to those students who would be eligible for an apartment themselves. Students may sublet their accommodations only during the summer session.



Field House



Science Building

## **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 1960-1961 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. 21)

### **Qualifying Paper**

Before taking the final comprehensive examination, a candidate must submit a qualifying paper, 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 must be submitted in a standard folder to the Office of the Dean of the Graduate School. A statement showing approval by the staff members involved must be filed

\*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.



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, Chemistry, Earth Sciences, Education, English, History, Industrial Arts, Mathematics, Music, Physical Education for Men, Physical Education for Women, Physics, Social Sciences, or Speech.

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.

### **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 a transcript 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 college courses numbered in the 400's carry only undergraduate credit. Only those courses listed in this catalog or in the supplement for 1960-1961 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.



## **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 of work 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.

### **Accreditation**

Northern Illinois University 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 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 houses approximately 130,000 volumes, 12,000 pamphlets, and 1,000 periodicals. 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 unfurnished, 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.

Celine Neptune Hall, located on the central campus, houses 484 freshmen women. Completely modern rooms for students, dining room facilities, lounges, and offices are included in it.

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 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 Department 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 Women's Residence Hall Group, scheduled for occupancy in September, 1959, consists of two wings, each of which will provide living quarters for over 500 students. A central dining hall will accommodate 1,000 persons at one sitting.

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 Housing Project includes forty-eight apartments 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.

### **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 small clinic. These rooms can be used for conference purposes.

The Brown House has been converted into a comfortable and well-equipped bunk house for twenty-six 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 recently completed bunk house, has bunk space for thirty students and their teacher, as well as a small apartment for staff.

The Taft campus is used during the regular school year for direct experiences in outdoor education for all elementary education majors. 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 college 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 college 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.

### 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, the Eula B. O'Connell 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 Dean of Students.

**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 in the Office of the Dean of Men.

**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 Dean of Women or the Dean of Men.

**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 Dean of Women.

## **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.

Hospitalization service for full-time students, in either of the two hospitals in DeKalb, is furnished by the University, upon the recommendation of the college physician, for a period not to exceed seven days a year. The service provides room and board for seven days in a semi-private room and laboratory fees up to \$15.00. Physicians', surgeons', and private nurses' fees are extra and are paid by the student.

## **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**

A limited number of graduate assistantships are offered. They provide a maximum stipend of \$150 per month for the nine months of 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 Placement Bureau not only arranges for the placement of current graduates, but also promotes the interests of those who have had several years of successful employment experience. In short, it is ready to serve all graduates of Northern Illinois University, as well as all school administrators and personnel representatives of 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 college 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**

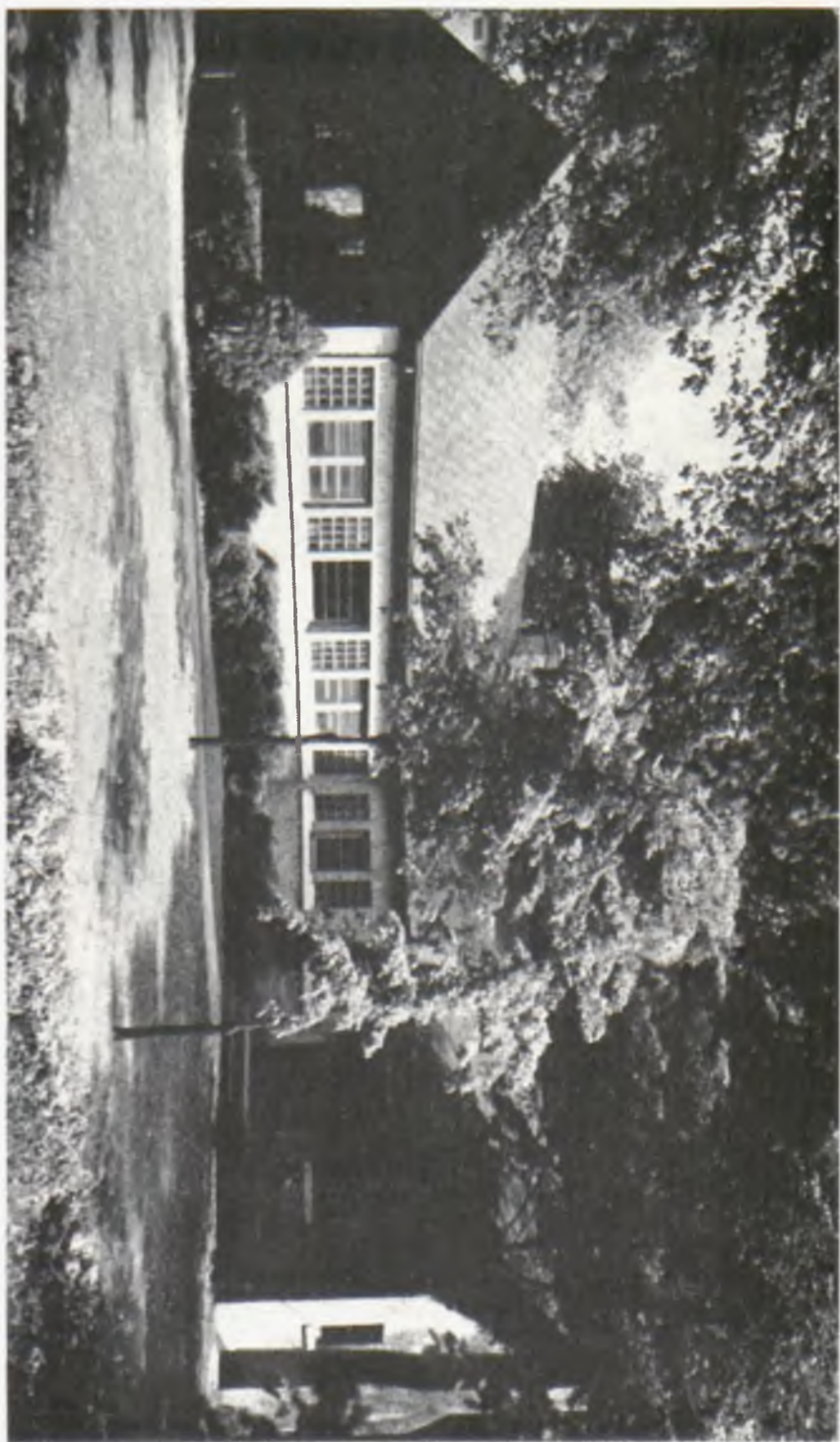
When departmental programs are under consideration, the student is advised to consult carefully the section of this catalog devoted to requirements for admission to the Graduate School and requirements for the specific program he wishes to pursue.

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.





Campus Lagoon



Student Union Building

## **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 country 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 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 print making. 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 three semester hours in course 509.
2. A minimum of five semester hours in the field of art history.

### **Master of Fine Arts**

The Master of Fine Arts degree will require thirty-two 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, six semester hours of seminar, and six semester hours of thesis or, with faculty approval, a one-man-show in lieu of thesis.

### **Description of Courses**

#### **423a,b,c Painting**

Individual problems with emphasis on creative production.  
Three semester hours credit. (Maximum nine semester hours.)

**I, II**

#### **428a,b,c Printmaking**

Individual problems with emphasis on creative production.  
Three semester hours credit. (Maximum nine semester hours.)

**I, II**

- 433a,b,c **Sculpture** I, II  
Individual problems; carving in wood or stone, modeling in clay or plaster, casting, welding.  
Three semester hours credit. (Maximum nine semester hours.)
- 452 **Modern Art** II  
Painting and sculpture from 1900 to the present in Europe and America.  
Two semester hours credit.
- 453 **Principles of Art Education** *PRIN 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.
- 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.
- 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.
- 503 **Research in Design** I  
Individual problems with emphasis on creative production.  
Three semester hours credit. (Maximum nine semester hours.)
- 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.
- 505 **Printmaking** II  
Individual problems with emphasis on creative production.  
Three semester hours credit. (Maximum nine semester hours.)
- 506 **Painting** I  
Individual problems with emphasis on creative production.  
Three semester hours credit. (Maximum nine semester hours.)
- 507 **Advanced Design** On Demand  
Varied and comprehensive problems involving two and three dimensional design in various media.  
Three semester hours credit. (Maximum nine semester hours.)
- 508 **Studies in the Technical Resources of the Artist** On Demand  
An examination of the media and processes of the artist and their art historical significance.  
Three semester hours credit.



- 509a, b, c **Seminar in Art and Art Education** I, II  
An examination of philosophy and practice of Art and Art Education. Supervised introduction to the tools of research in preparation for writing the qualifying paper.  
One to three semester hours credit.
- 510 **Medieval Art** I  
Architecture, painting, and sculpture from early Christian times to the end of the Middle Ages.  
Three semester hours credit.
- 511 **Italian Renaissance** II  
Representative masters in the historical development of Italian painting, sculpture, and architecture from 1350 to 1600.  
Three semester hours credit.
- 512 **Northern Renaissance** I  
Painting and sculpture in The Netherlands, Germany, France, and Spain from 1400 to 1600.  
Three semester hours credit.
- 513 **Baroque Art** II  
Painting, sculpture, and architecture in Europe from 1600 to 1800.  
Three semester hours credit.
- 514 **Nineteenth Century Art** *NINETEENTH CENT ART* On Demand  
Painting and sculpture in Europe and America from the French Revolution until 1900.  
Three semester hours credit.
- 515 **American Art** I  
The history of painting in America from 1670 to the present day.  
Three semester hours credit.
- 516 **History of the Prints and Graphic Processes** *HIST PRINT+GRAPH PR* 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.
- 586 **Related Arts in the Elementary School** *REL ARTS IN ELEM SCH* 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.  
Two semester hours credit.
- 600 **Primitive Art** On Demand  
Prehistoric art; art of the cultures of Africa, Oceania, and the Americas.  
Three semester hours credit.
- 601 **Oriental Art** On Demand  
Art and architecture of India, China, and Japan in their major periods.  
Three semester hours credit.
- 602 **Special Problems in Art History** *SPEC PROB ART HIST* On Demand  
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.



## **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) Courses 416 or 516, 408 or 540, 542, 661 and 670.
- (b) Eight additional semester hours of credit from courses offered on the 400 or 500 levels.

#### **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: 500, 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 thirty-two semester hours of work, approximately two-thirds of which will be in the student's major field—a maximum of six semester hours being devoted to supervised research leading to a thesis.

### **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.

## 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.  
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** II  
The biological basis of conservation practices and the relationship of those practices to human welfare.  
Three semester hours credit.
- 408 **Heredity and Evolution** I, II  
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** II  
General ecological principles and the structure of various types of plant and animal communities. Includes field trips to representative areas.  
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.
- 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.
- 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, Earth Sciences, and General Science** **Summer Session**  
 Emphasis placed upon new information in the fields and upon the interrelationships between the biological and earth 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.

- 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.
- 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.
- 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**  
 Discussion of scientific literature. Special topics assigned to students. Prerequisite: Thirty semester hours in biology. Two semester hours credit.
- \*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.)

\*Course may be repeated for additional credit.

## 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, Physical Science 105, 165, or equivalent.  
 Three semester hours credit.
- 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 micro-technique including tests for wall and protoplasmic substances.  
 Offered on demand.  
 Prerequisites: Courses 310 and 410 or equivalent.  
 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 protozoa 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.
- 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: a major in business administration leading to the degree Master of Science; an area major in school business management leading to the degree Master of Science in Education; and sixth-year programs leading to the Certificate of Advanced Study in business administration, or school business management.

### **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: 411, 417, 420, 432, 433, 501, 502, 541, 542, 545, 546;  
Education: 500, 501, 551, 553, 572, 595, 603, 654, 655, 657.

The course sequence will be determined, however, 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 and one-half in education.

### **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**

## **BUSINESS ADMINISTRATION**

### **411 Business Law I**

**I, II**

A study of the law of contracts, agency, negotiable instruments and related topics. Some attention is given to court systems, with special emphasis on the courts of Illinois. 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, or equivalent.  
 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.
- 415 **Consumer Economics** I, II  
 A study of the economics of consumption with particular attention given to analysis of the factors and forces underlying consumer demand.  
 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.  
 Two 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.  
 Two semester hours credit.
- 418 **Real Estate Principles** On Demand  
 Land as an economic factor; taxation, valuation, transfer of titles; financing, merchandising. Emphasis will be evenly divided between studying problems of real property ownership and leasing, and studying problems of the real estate broker.  
 Two semester hours credit.
- 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 110 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 deter-

mination of the qualities of securities based on an analysis of financial statements.

Prerequisite: Course 222, or equivalent.

Two semester hours credit.

**421      Advanced Accounting      II**

The work consists chiefly of accounting principles applied to receiver accounts, statements of affairs, estates and trusts, and places considerable emphasis on consolidated statements.

Prerequisite: Course 330, or equivalent.

Three semester hours credit.

**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.

**430      Business Organization and Finance      I**

Financial considerations in choosing a form of organization and organizing a business; sources of financing; tools of financial analysis; financial planning, financing of a business, and controlling the finances of a business.

Prerequisite: Course 222, or equivalent.

Two semester hours credit.

**431      Principles of Management      I**

Fundamental considerations, planning, organizing, actuating and controlling in management; application of principles and techniques to all activities; including those of business, government, and schools.

Three semester hours credit.

**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.

Prerequisites: Courses 330 and 431, or equivalent.

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.  
 Prerequisite: Education 102 or equivalent.  
 Two semester hours credit.
- 437     **Small Business Management** **I**  
 A study of the problems of small business management relative to factors concerned with finance, marketing, and administration in the manufacturing, distributive, and service industries.  
 Two 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 322, or equivalent.  
 Three semester hours credit.
- 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.
- 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.  
 Prerequisite: Course 349, or equivalent.  
 Three semester hours credit.
- 443     **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.  
 Prerequisite: Course 349, or equivalent.  
 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.

Prerequisite: Course 349, or equivalent.

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.

Prerequisite: Course 349, or equivalent.

Three 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.

**451 Sales Management II**

The application of principles of sales and marketing management to the solution of problem situations, and a study of the work of sales managers and their role in the marketing process.

Prerequisite: Course 449, or equivalent.

Two 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.

**453 Managerial Accounting and Controllership 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 330, or equivalent.

Three 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 322, 330, or equivalent.

Two semester hours credit.

- 455     **Individual and Business Taxation** I  
 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 credit.
- 456     **Advanced Federal Taxes** On Demand  
 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.
- 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 430, or equivalent. Two semester hours credit.
- 463     **Marketing Problems** I  
 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. Prerequisite: Course 349, or equivalent. Two semester hours credit.
- 501     **Introduction to Research in Business**  
 This course is to acquaint the student with research which has been completed in business during recent years. In addition, the student will become familiar with the methods, techniques, and procedures of research that may be applied to business. Three semester hours credit.
- \*502     **Independent Research in Business**  
 With the approval of the major advisor, 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 advisor 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.

---

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

- 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.  
Three semester hours credit.
- 541 Accounting: School Business Management** **On Demand**  
This course is designed to give school business managers and other school administrators an understanding of the principles of accounting, including a study of the balance sheet, profit and loss statement, accounting for interest, voucher system, valuation of assets. Special attention to accounting for extra-curricular funds will be given.  
Not open to students with previous college training in accounting.  
Three semester hours credit.
- 542 Purchasing and Supply Administration: School Business Management** **On Demand**  
Principles and procedures of purchasing supplies, equipment, and services for schools. Includes a study of specifications, quality analysis, sources of information, testing materials and services, determination of standards, inventory control, stores 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 or two 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.  
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.
- 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.
- 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.
- 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.



Home Management House



## **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**

The purpose of this program is to provide educational preparation for the teaching and supervision of business education courses in secondary and post-secondary schools.

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

- (a) Course 500 or 510.
- (b) At least six semester hours credit in courses 520, 521, 522, and 523.
- (c) 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. At least two semester hours must be in 502.

### **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

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

semester hours must be allocated to the writing of the qualifying paper.

One to three semester hours credit.

- 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     **Techniques for 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     **Techniques for 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**  
 Fundamentals of operating the dictaphone and transcription machines, key driven and rotary calculators, adding and listing machines, and duplicating 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 business educators and school administrators of second-

ary 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 teachers of business subjects in secondary and collegiate institutions. New developments in the teaching of various business subjects are studied through discussion, demonstration, and practice supplemented by presentations from specialists in the field. 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.



Campus Lake



## CHEMISTRY

The Department of Chemistry 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 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 38.

### Master of Science

#### MAJOR IN CHEMISTRY

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 must meet the chemistry, physics, and mathematics requirements for the B. S. degree in chemistry at Northern Illinois University. In some cases deficiencies in courses of "400" level may be made up for credit as part of the sixteen semester hours of electives in the M. S. requirements.
- 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 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 chemistry or physical sciences 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 | <b>Advanced Principles of Chemistry</b><br>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.<br>Prerequisite: One year of college chemistry.<br>Four semester hours credit. | <b>On Demand</b> |
| 402 | <b>Advanced Principles of Chemistry</b><br>Energy relations in chemistry, chemical equilibrium, oxidation-reduction, acids and bases, complexions. Methods of chemical separation and measurement. For secondary teachers. Not open to chemistry majors for credit.<br>Prerequisite: Course 401.<br>Four semester hours credit.               | <b>On Demand</b> |
| 408 | <b>Chemical Literature</b><br>The use of the chemical literature.<br>Prerequisites: Course 331 and one year of college German or equivalent.<br>Two semester hours credit.  | <b>On Demand</b> |
| 409 | <b>Summer Science Institute for In-Service Elementary Teachers</b><br>Subject matter material in biological sciences, chemistry, earth sciences, and physics necessary for effective science teaching in the lower grades.<br>Eight semester hours credit.  | <b>Summer</b>    |
| 410 | <b>Inorganic Preparations</b><br>Application of fundamental principles in inorganic chemistry. Preparation and purification of selected inorganic compounds.<br>Prerequisite: Course 420 or equivalent.<br>Three semester hours credit.   | <b>On Demand</b> |
| 411 | <b>Inorganic Chemistry</b><br>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.<br>Prerequisite: Course 441 or concurrent registration in 441.<br>Three semester hours credit.                             | <b>On Demand</b> |
| 420 | <b>Quantitative Analysis</b><br>Principles and practices of gravimetric and volumetric analysis.<br>Prerequisites: Course 211 and Mathematics 220 or equivalent.<br>Five semester hours credit.   | <b>I</b>         |
| 421 | <b>Advanced Quantitative Analysis</b><br>Analyses of limestone and brass. Iodimetry and electrolytic determinations.<br>Prerequisite: Course 420 or equivalent.<br>Three semester hours credit.   | <b>II</b>        |

- 424     **Microanalysis** **On Demand**  
 Quantitative determination on the micro chemical scale.  
 Prerequisite: Course 421.  
 Two semester hours credit.
- 425     **Analytical Chemistry** **On Demand**  
 Selected experiments including instrumental analysis.  
 Prerequisite: Course 420 or equivalent.  
 Three semester hours credit.
- 426     **Food Analysis** **On Demand**  
 Analytical analysis of food constituents.  
 Prerequisites: Courses 330 and 420.  
 Two semester hours credit.
- 430     **Organic Preparations** **On Demand**  
 Synthesis of representative organic compounds by application of  
 fundamental organic reactions.  
 Prerequisite: Course 331 or equivalent.  
 One to 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 330 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.  
 Prerequisites: Courses 435 and 420.  
 Three semester hours credit.
- 440     **Physical Chemistry** **II**  
 Study of the gaseous, liquid, and solid states. Atomic structure,  
 elementary thermodynamics, colligative properties.  
 Prerequisites: Course 420 and Mathematics 320 or equivalent.  
 Five semester hours credit.

- 441 **Physical Chemistry** **I**  
 Thermodynamics, chemical equilibrium, kinetics, and electrochemistry.  
 Prerequisites: Course 440 and Mathematics 320 or equivalents.  
 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.  
 Two semester hours credit.
- 443 **Radiochemistry Laboratory** **On Demand**  
 Fundamental counting techniques. Tracer techniques.  
 Prerequisite: Course 442.  
 Two semester hours credit.
- 505 **Institute of Chemistry and Physics for High School Teachers of Science** **Summer**  
 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.
- 510 **Advanced Inorganic Chemistry** **On Demand**  
 Continuation of Course 411.  
 Prerequisite: Course 411.  
 Two or three 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.
- \*519 **Research** **On Demand**  
 Individual study of a problem in experimental work, teaching procedure, or professional training under supervision of appointed staff member.  
 Prerequisite: Permission of departmental head.  
 One to five semester hours credit.

---

\*Course may be repeated for additional credit

- 521     **Chemical Microscopy** **On Demand**  
 Application to the analysis of the more common cations and anions.  
 Prerequisite: Course 420.  
 Two semester hours 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.
- 529     **Quantitative Organic Analysis** **On Demand**  
 A laboratory course in modern methods used in the quantitative analysis of organic compounds.  
 Prerequisites: Courses 331 and 420 or equivalent.  
 Three 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.
- 534     **The Chemistry of Natural Products** **On Demand**  
 A study of the chemistry of organic compounds found in nature.  
 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     **Colloid and Surface Chemistry**     **On Demand**  
 Physical chemistry of colloid systems. Properties of surfaces and interfaces. Adsorption. Large molecules.  
 Prerequisite: Course 441.  
 Two 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.
- 546     **Phase Rule**     **On Demand**  
 Applications to chemical problems.  
 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.
- 613     **Special Topics in Inorganic Chemistry**     **On Demand**  
 Lectures, discussions, and reports on special topics in inorganic chemistry.  
 Prerequisite: Course 411.  
 One to three semester hours credit.
- 619     **Research**     **I, II**  
 Individual study of a problem in experimental work under the supervision of appointed staff member.  
 Prerequisite: Permission of department head.  
 One to eight semester hours credit.
- 625     **Special Topics in Analytical Chemistry**     **On Demand**  
 Lectures, discussions and reports on topics of special interest in analytical chemistry.  
 Prerequisite: Course 420 or equivalent.  
 One to three semester hours credit.
- 635     **Special Topics in Organic Chemistry**     **On Demand**  
 Lectures, discussions and reports on topics of special interest in organic chemistry.  
 Prerequisite: Course 331 or equivalent.  
 One to three semester hours credit.

## On Demand

**Prerequisite:** Course 435.

645 Special Topics in Physical Chemistry

## On Demand

Prerequisite: Course 440 or equivalent.

PHYSICAL SCIENCE AND PROFESSIONAL EDUCATION

These courses are listed under *Physics*. For descriptions, see page 131.



Industrial Arts Building

## 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, Master of Science with a major in Geography, and Master of Science with a major in Geology; and, at sixth year level, 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 38.

### Master of Science

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 be required to meet the academic requirements of a comprehensive oral examination, and to write a master's qualifying paper. Admission to the program will be by consent of a faculty advisory committee.

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 be required to meet the academic requirements of a comprehensive examination, and to write a master's qualifying paper. Admission to the program will be by consent of a faculty advisory committee.

### 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

- |     |   |   |
|-----|---|---|
| 449 | <b>Earth Sciences Teaching Procedures in the Elementary and Secondary School</b><br>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. | 1 |
|-----|---|---|

\*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.

- 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.
- 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 Biology, Earth Sciences, and General Science** Summer Session  
Emphasis placed upon new information in the fields and upon the interrelationships between the biological and earth 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.
- \*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  
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 equivalent.  
Three semester hours credit.
- 547 **Oceanography** I  
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** On Demand  
Individual reading is directed to those phases of literature which are needed for critical thinking in earth sciences.  
One or two semester hours credit.
- \*570 **Special Problems in Earth Sciences** On Demand  
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.

\*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.

## **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.
- 550 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.



- \*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.
- 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.
- 542 **Geomorphology** I  
 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 equivalent.  
 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.

\*May be repeated once.

- 546 Paleontology (Vertebrate and Invertebrate) II**  
 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 equivalent.  
 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.

\*May be repeated once.



**Campus Drive**



Williston Hall—Residence Hall for Women

## 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

Teaching in the Elementary School  
Supervision and Curriculum  
Supervision of the Beginning Teacher  
Guidance and Counseling  
Educational Administration  
School Business Management  
Education as a Field of Study

#### Sixth Year

General Educational Administration  
The School Principalship  
Teaching in the Elementary School  
Supervision and Curriculum  
School Business Management

### 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\*, 603.
- (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.

#### Areas of Specialization

- I. Teaching in the Elementary School. Designed to acquaint the elementary school teacher with new developments in child development, elementary curriculum, and the guidance of learning. An opportunity to gain increased knowledge in special curriculum areas as needed.
- II. Supervision. Three 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,

---

\*Students who elect to specialize in the area of Guidance and Counseling or whose undergraduate major was psychology should not take course 501. Students with an undergraduate major in social sciences should not take course 500.

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

- and others whose duties include responsibility for curriculum improvement.
- B. Supervision of the Beginning Teacher. Preparation for classroom teachers who supervise student teaching or other supervisory personnel who are responsible for the orientation and guidance of beginning teachers in the field.
  - C. Supervision and Coordination of the Reading Program. Preparation for the coordinator of the reading program in both the elementary school and high school, including diagnosing and remediation of reading difficulties.
- 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 education 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 a thorough understanding of education coupled with preparation for 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.)
- 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 pages 14-15, or (3) may major in education as a field of study as

\*This area of specialization is also listed as a program of study in the Department of Business on p. 45.



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** **Areas of Specialization**

#### 1. Educational Administration

A. General Educational 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. Teaching in the Elementary School

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 masters of their craft both as classroom instructors and resource teachers.

#### 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.

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 accord-

- ance 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 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 successful classroom 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 deficiency prerequisites to the Professional Certificate in Educational Administration.)

### Description of Courses

- |     |  |                |
|-----|--|----------------|
| 400 | <b>Guiding Young Children in School</b>  | I              |
|     | 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.<br>Three semester hours credit.  |                |
| 408 | <b>Educational Statistics</b>  | I or II        |
|     | (Also listed as <b>Mathematics 408</b> and as <b>Physical Education 408</b> )<br>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.<br>Prerequisite: Mathematics 120 or equivalent.<br>Three semester hours credit.  |                |
| 410 | <b>Introduction to Outdoor Education</b>   | Summer Session |
|     | 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.<br>Prerequisite: Student teaching or teaching experience.<br>Three five-day weeks. Three semester hours credit. |                |
| 411 | <b>Advanced Techniques of Outdoor Education</b>  | Summer Session |
|     | 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: Education 410 or comparable experience.

Three five-day weeks. Three semester hours credit.

**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.

**415 Psychology of Exceptional Children I, II**

Psychology of atypical children—gifted, mentally subnormal, physically handicapped, socially maladjusted, educationally retarded. Ways of meeting their needs in special or regular classes, and in institutions.

Three semester hours credit.

**416 Abnormal Psychology 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 disorder.

Prerequisite: Course 102 or equivalent.

Three semester hours 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.

- 428 **History and Systems of Psychology** II  
The major viewpoints in earlier systematic psychology and their relations to contemporary systematic trends.  
Prerequisite: Course 102 or equivalent.  
Three semester hours credit.
- 430 **Audio-Visual Education** I, II  
A study of 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.
- 433 **Junior High School Organization and Problems** I  
A survey of the development of the junior high school idea, 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 **American Public Education** II  
An overview of the organization of American public education, stressing school legislation and a teacher's 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 America is traced from the earliest colonial forms to the present with emphasis upon the cultural and intellectual forces which have influenced the theory and practice of education at the various levels. A thorough treatment of issues and educational practices of the several historical periods of American history.  
Three semester hours credit.
- 460 **Personnel and Guidance** I, II  
Introduction to the study of personnel work in elementary and secondary schools. Principles, practices, recognition of needs for guidance. Emphasis upon group activities in orientation, vocational, educational, and social guidance programs and upon the methods of studying individuals.  
Three semester hours credit.

- 465 **Developmental Psychology** II  
 Studies the span of human life from conception to death, emphasizing the outstanding characteristics of normal individuals in each period. Designed to show how all experiences of previous stages leave their mark on following stages. Treatment of each stage shows how changes in interest, attitudes, and behavior occur as the individual develops and then declines with advancing age.  
 Two semester hours credit.
- 466 **Diagnosis and Treatment of Reading Difficulties** I, II  
 A study of the causes of reading difficulties, their diagnosis and treatment.  
 Prerequisite: Course 361 or equivalent.  
 Three semester hours credit.
- 480 **Foundations of Secondary Education** I, II  
 A study of the history and philosophies of education and curriculum patterns.  
 Prerequisite: Approval of Director of Student Teaching.  
 Three semester hours credit.
- 482 **Reading in the High School** I  
 (Also listed as English 482)  
 A study of reading problems of high school students. Some attention also given to special problems of retarded readers.  
 Three semester hours credit.
- 486 **Foundations and Evaluation of Secondary Education** I, II  
 A study of evaluation techniques and of 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.
- 488 **Contemporary Philosophy** I, II  
 (Also listed as Philosophy 488)  
 Lays the foundations for understanding the meaning of philosophy. Develops reflective thinking about the relations of contemporary man to his many worlds. Relates the results of reflective thinking about experience to basic issues in philosophy and significant solutions as presented by systematic philosophies in the past and present. Stimulates development of an attitude of critical and synoptic understanding in the student.  
 Three semester hours credit.
- 490 **Beginning Student Teaching** I, II  
 (Elementary School)  
 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. 31.  
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** I, II  
          **(Elementary School Elective)**  
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** I, II  
          **(Elementary School Special Subjects)**  
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. See regulations concerning assignment, p. 31.  
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.  
Prerequisite: See regulations, concerning assignment, p. 31.  
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.  
Prerequisite: See regulations, concerning assignment, p. 31.  
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 three semester hours and, in addition, not more than six semester hours to be elected.  
           (b) Education 486 for three 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.
- 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, emotions, etc.  
           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.

\*Education 476 and 477 do not carry graduate credit.

- 509 **Supervision and Administration of Vocal Music** **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.  
 Two 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.
- 521 **Understanding Youth in the Secondary School** **I**  
 Laboratory course with emphasis on direct experiences with secondary school youth. Intensive study of research materials that deal with understanding the nature of adolescents and techniques of guidance.  
 Three semester hours credit.
- 523 **Problems in Secondary Education** **On Demand**  
 A seminar requiring individual investigation of problems in secondary education culminating in a research paper.  
 Two 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.

- 531 **The Curriculum of the Junior College** II  
 A study of the programs of instruction in the junior college and the emerging community college, including processes of curriculum development at this level.  
 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 and the key role of the educational leader in helping teachers improve the quality of instruction. Consideration is given to the improvement of in-service programs for teachers.  
 Two semester hours credit.
- 541 **The Improvement of Instructional Programs** II  
 An analysis is made 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 and evaluating physical and human resources toward the improvement of instructional programs.  
 Three semester hours credit.
- 542 **Fundamentals of Curriculum Development** I  
 A critical appraisal of principles and procedures applicable to development of educational programs in elementary and secondary schools. Particular attention given to theory and practice in the field of curriculum development and educational human relations.  
 Three semester hours credit.
- 543 **Problems in Curriculum and Supervision** II  
 A seminar offering opportunity for intensive investigation of curriculum problems of concern to individual students. Study will be summarized in a research paper. Should be taken after Education 542.  
 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.
- 552 **The School Principalship** I, II  
 A study of the basic duties of elementary and secondary school principals in school organization and administration as well as the supervision of instruction.  
 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: Course 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**  
 Study of prevailing types of counseling with techniques used in each. Training in actual counseling of individuals by students.  
 Prerequisite: Course 560 and permission of instructor. (Course 560  
 Prerequisite: Course 553 or permission of the instructor.  
 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 560 and permission of instructor. (Course 563 is strongly recommended.)  
 Two semester hours credit.
- 566 Clinical Problems in Child Study Summer Session**  
 A course providing clinical experiences in diagnosis of reading difficulties and the application of remedial procedures.  
 Prerequisite: Course 466, Student Teaching or equivalent.  
 Three semester hours credit.
- 567 Occupational Information and Guidance II**  
 How to obtain, evaluate, file, and use occupational and educational information in the vocational counseling process. Some experience provided in conducting local vocational surveys.  
 Prerequisite: Course 560 or equivalent.  
 Two semester hours credit.
- 568 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, behavior, etc.; 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.
- 569 Individual Intelligence Testing I**  
 Analysis of individual intelligence tests in present-day use. Administration of Stanford-Binet and of Wechsler-Bellevue tests.  
 Prerequisite: Course 563 and 416 or 465, and permission of instructor.  
 Text materials cost approximately \$40.00.  
 Three 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 560 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.
- 581 **The Teaching of Reading in the Elementary School** II  
 A study of the developmental reading program in the elementary grades. Consideration is given to this program from the language arts point of view.  
 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 semester hour 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 semester hour 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.  
 Two 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.
- 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—** **I or II**  
**Applied Statistics**  
 Concepts of statistics and measurement as applied to practical school problems. Uses and misuses of measurement.  
 Two semester hours credit.
- 592 Philosophies of Education** **II**  
 Development of method and tools for systematic examination of assumptions and premises underlying principal philosophies of education, and critical examination of their respective interpretations of aims, values, and organization of education. Individual students investigate and report on important related topics such as professional ethics, politics and education, the economic order and education, school and social progress, religious and moral education.  
 Three semester hours credit.
- 593 Supervision of Student Teaching** **Summer Session**  
 A study of the orientation, guidance, and evaluation of the prospective or beginning teacher in the classroom. Areas to be considered include induction procedures, analysis and evaluation of teaching-learning situations, cooperative teaching, conferences, and participation in the range of the professional responsibilities of the teacher. Should be taken with Education 543.  
 Prerequisite: Permission of instructor.  
 Six 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.
- \*603 Independent Research in Education** **I, II**  
 A seminar and individual instruction to provide necessary research skills and guidance for writing the qualifying paper, followed by field and/or library research work under supervision of graduate faculty members. Opportunity is given for additional research credit.  
 One to three 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: Courses 551 and 552 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.  
 Three semester hours credit.

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

- 655 School Finance** **On Demand**  
 Basic educational finance with emphasis on Illinois school finance. Educational budgeting.  
 Prerequisites: Courses 551 and 552 or permission of the instructor. Three semester hours credit.
- 657 Legal Aspects of School Administration**  
 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: Courses 551 and 552 or permission of the instructor. Three 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, core curriculum, 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.



Gilbert Residence Hall for Men

## 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.

### 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

- |     |  |       |
|-----|--|-------|
| 400 | <b>Advanced Writing</b><br>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.<br>Three semester hours credit.   | I, II |
| 410 | <b>Late Renaissance English Writers</b><br>A study of selected works of such representative writers as Ben Jonson, Francis Bacon, John Donne, Robert Herrick, George Herbert, and John Milton.<br>Three semester hours credit.   | I     |
| 411 | <b>Neo-Classical English Writers</b><br>A study of selected works of such representative writers as John Dryden, Daniel Defoe, Joseph Addison, Jonathan Swift, Alexander Pope, Lord Chesterfield, Oliver Goldsmith, Samuel Johnson, and James Boswell, with special attention to the intellectual temper of the age.<br>Three semester hours credit. | II    |

- 450      **Great Books: First Series** II  
 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.
- 470      **The English Novel** I  
 Study and discussion of many novels of the eighteenth and nineteenth centuries. Emphasis upon the novel as a type of literature which has developed from simple early forms to highly finished later forms.  
 Three semester hours credit.
- 471      **Victorian Prose** I  
 A study of the 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.
- 473      **Romantic Poetry** I  
 A study of Romantic themes and tendencies as they arose in the eighteenth century and came to flower in Coleridge, Wordsworth, Byron, Shelley, and Keats.  
 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      **Contemporary British Poetry** I  
 A study of contemporary poetry both from the point of view of its intrinsic interest and of its position in modern literary developments. Representative British poets are stressed.  
 Two semester hours credit.

- 476     **The Contemporary European Novel** II  
 A study of modern fictional trends, with emphasis upon the development of various movements on the European continent and their impact upon the twentieth century English and American novel.  
 Three semester hours credit.
- 480     **Materials of High School English** I  
 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** II  
 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.
- 482     **Reading in the High School** I  
 (Also Listed as Education 482)  
 A study of the reading problems of high school students.  
 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.
- 486     **Modern Drama** II  
 Trends in British, Continental, and American drama from Ibsen to the present day, as illustrated by representative plays.  
 Three 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 instructor.  
 Two to four semester hours credit.

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



- 505 History of Literary Criticism** **On Demand**  
Analytical, judicial, and interpretative functions of criticism considered in their relationship to creative achievement. Attention will be given to the exponents of the New Criticism.  
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. There will be intensive study of Chaucer's language.  
Four semester hours credit.
- 512a Studies in American Literature** **I**  
The Puritan period and "The Age of Reason," with extensive reading in such authors as Cotton Mather, Edwards, Winthrop, Franklin, and Freneau.  
Three semester hours credit.
- 512b Studies in American Literature** **II**  
"The Romantic Movement" with reading in such leading nineteenth century figures as Emerson, Poe, Hawthorne, Lowell, and Melville.  
Three semester hours credit.
- 512c Studies in American Literature** **II**  
Realism and Naturalism and their manifestations in the writings of Whitman, Twain, Harte, James, Howells, and others.  
Three semester hours credit.
- 521 Grammar of Modern English** **Summer Session**  
A study of grammar intended as an introductory course for non-specialists and as a refresher course for teachers of English. (Closed to students with credit in English 481.)  
Three semester hours credit.
- 560 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.
- 561 Milton and His Contemporaries** **On Demand**  
The Renaissance-Puritan conflict in Milton as seen in the longer poems and plays. Three revolutions—scientific-humanist, political, and theological—are studied in works of writers from 1630 to 1670.  
Three semester hours credit.
- 563 Eighteenth Century Studies** **On Demand**  
This course will cover figures from a group including Addison, Steele, Pope, Swift, Gray, Thomson, Johnson, Reynolds, Burke, and Gibbon.  
Three semester hours credit.

- 571 Studies in Victorian Prose** **On Demand**  
 Examination of the works of two or more important writers of non-fictional prose of the period.  
 Three semester hours credit.
- 573a Studies in Coleridge and Wordsworth** **II**  
 The philosophy of composition and practice of these poets, together with revelatory memoirs of the period. The Prelude will be studied as a prophetic introduction to psychoanalysis.  
 Three semester hours credit.
- 573b Studies in Shelley and Keats** **On Demand**  
 Emphasis on Shelley as a proponent of political and social reform, with attention to critical opinion regarding him. Study will be made of classical, as well as romantic, elements in Keats.  
 Three semester hours credit.
- 574 Studies in Victorian Poetry** **On Demand**  
 The works of two or more important poets of the period and their relation to the literary, intellectual, and social movements of their age.  
 Three semester hours credit.
- 576 Trends in the Twentieth Century Novel** **On Demand**  
 Consideration of kaleidoscopic form, Biblical narrative as basis for fiction, patterns of decadence, war's impact on civilization, negations of Utopia, and disruptions of traditional form.  
 Four 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.
- 582a Problems in the Teaching of English in the Junior High School** **On Demand**  
 Study of recent research in the teaching of literature and communication skills in the later elementary and junior high school years.  
 Three semester hours credit.
- 582b Problems in the Teaching of English in the Senior High School** **On Demand**  
 Methods of teaching language and literature in the senior high school. Emphasis is placed on objectives, materials, and current trends in language education.  
 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.

- 585 **English Drama of the Nineteenth Century** On Demand  
 Spread of lower-class drama (especially melodrama and farce); the literary theatre of Byron, Shelley, Coleridge, Browning, and Tennyson; the revival of Shakespeare, his great interpreters, and his great romantic critics.  
 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.  
 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.



Adams Hall

## 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.

**411-412 French IV-C Nineteenth Century Literature I, II**

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.

**421-431 French IV-D I, II**

**French 421**

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.

Four semester hours credit.

**French 431**

**On Demand**

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

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 and conversation is included.

Prerequisite: German II.

Four semester hours credit each semester.

- 453-454 German IV-B** **I, II**  
A survey of German literature before the eighteenth century. This course is conducted in German. Work in composition and conversation is included.  
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 and conversation is included.  
Prerequisite: German II.  
Four semester hours credit each semester.

## **SPANISH**

- 461-462 Spanish IV-A Siglo de Oro – Dramatic Literature** **I, II**  
Spanish dramatic literature of the “Siglo de Oro,” with work in composition. Conducted in Spanish.  
Prerequisite: Spanish II or equivalent.  
Four semester hours credit each semester.

- 463-464 Spanish IV-B Siglo de Oro – Non-Dramatic Literature** **I, II**  
Spanish non-dramatic literature of the “Siglo de Oro,” with work in composition. Conducted in Spanish.  
Prerequisite: Spanish II.  
Four semester hours credit each semester.

- 471-472 Spanish IV-C**  
**Nineteenth and Twentieth Century Literature** **I, II**  
Spanish literature of the nineteenth and twentieth centuries with work in composition. Conducted in Spanish.  
Prerequisite: Spanish II.  
Four semester hours credit each semester.

- 481-482 Spanish IV-D Spanish-American Literature** **I, II**  
Spanish-American literature with work in composition. Conducted in Spanish.  
Prerequisite: Spanish II.  
Four semester hours credit each semester.

## HISTORY

There are four programs open to a graduate student interested in history. Either the program leading to the Master of Arts degree, or the Sixth-Year Program leading to the Certificate of Advanced Study may be elected with a major in history. Either the program leading to the Master of Science in Education or the Sixth-Year Program leading to the Certificate of Advanced Study may be elected with an area major in history and social sciences (offered in collaboration with the Department of Social Sciences).

### Master of Arts

#### MAJOR IN HISTORY

A student must declare a major in either American history or in European history; the remaining field shall constitute his minor.

A total of thirty-two semester hours will be required. At least sixteen semester hours must be taken in the major; eight semester hours in the minor; and the remaining eight semester hours may be distributed either in the major or minor fields, or in such cognate fields as political science, economics, sociology, anthropology, English, foreign languages, philosophy, or the history of the fine arts, music, or science. No cognate course may be elected without the approval of the student's adviser. Not more than half of the thirty-two hours may be taken at the four-hundred level.

A written, final, comprehensive examination will be arranged by the student's adviser, normally based on the principal courses taken in the major and minor. A qualifying paper will be required.

### Master of Science in Education

#### AREA MAJOR IN HISTORY AND SOCIAL SCIENCES

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 fields which follow: economics, history, political science, sociology. At least three semester hours credit in each field must be at the graduate level. 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.

### Certificate of Advanced Study (Sixth-Year Program)

#### MAJOR IN HISTORY

A student entering the sixth-year program with a major in history must have earned the Master of Arts degree from Northern Illinois University, *with a major in history*, or its equivalent from another institution from which graduate credits are transferable. Students with other types of master's degrees may be admitted, but an examination of their preparation may indicate that additional work will be required to meet the minimum requirements for the Certificate of Advanced Study, as indicated below.

A candidate for this certificate must declare a major in either American history or in European history; the remaining field shall constitute his minor.

Including work done for the master's degree, at least thirty semester hours must be taken in the major, and fifteen semester hours in the minor. The remaining seventeen hours may be distributed either in the major or minor fields, or in such cognate fields as political science, economics, sociology, anthropology, English, foreign languages, philosophy, or the



history of the fine arts, music, or science. No cognate course may be elected without the approval of the student's adviser.

A research paper must be prepared which must be somewhat more comprehensive in character and based upon more thorough handling of primary materials than is required for the preparation of a qualifying paper by the master's degree candidates.

The candidate will write a final examination, arranged by his adviser, in five of the following fields: 1. Ancient History to 500 A. D.; 2. Medieval History, 500-1500 A. D.; 3. The Renaissance and Reformation; 4. Modern Europe (17th to 19th Centuries); 5. Twentieth Century World; 6. English History to 1485; 7. English History since 1485; 8. Colonial American History; 9. Nineteenth Century America; 10. Twentieth Century America; Latin America.

Following this final written examination, the candidate will also be examined orally by the examiners who set his written questions. The oral examination will include the research paper written by the candidate.

Foreign language proficiency *may* be required of a student for work in some areas of history. Seminar work and the research paper may require reading ability in an ancient or modern language. Students will be advised individually by the instructor concerned, when foreign language proficiency is requisite.

## AREA MAJOR IN HISTORY AND SOCIAL SCIENCES

For requirements, see page 134 under "Social Sciences."

### Description of Courses

## HISTORY

- |     |   |                  |
|-----|---|------------------|
| 420 | <b>Historiography</b><br>A study of the history of historical writing, rather than of history as a discipline. A comprehensive examination of the literature, with stress upon documentary and personality factors, and the effect of historical theories.<br>Two semester hours credit.  | <b>On Demand</b> |
| 421 | <b>Twentieth Century United States</b><br>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.<br>Prerequisites: History 220 and 221.<br>Three semester hours credit.   | <b>I, II</b>     |
| 422 | <b>Economic History of the United States</b><br>The evolution and expansion of American economic institutions and processes from colonial times to twentieth century prominence. Stress will be placed upon environmental factors, strategic location of raw materials, the impact of functional technology and the transition to finance capitalism.<br>May be used to meet departmental requirement in Economics.<br>Three semester hours credit. | <b>On Demand</b> |

- 423 **Intellectual and Social History of the United States, 1807-1860** **On Demand**  
Survey of the important intellectual developments.  
Two semester hours credit.
- 425 **American Culture in the Eighteenth Century** **On Demand**  
A study of the eighteenth century background of some of the more important aspects of present day American culture. The particular topics for intensive study to be selected by the student after consultation with the instructor.  
Two semester hours credit.
- 426 **History of Colonial America** **On Demand**  
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.  
Prerequisite: History 325.  
Three semester hours credit.
- 430 **The Renaissance** **On Demand**  
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.
- 432 **History of Ideas I** **I, II**  
Designed to give some first-hand knowledge of what men throughout the ages have thought about the big questions which puzzle mankind. This course covers ancient and medieval ideas, to about 1500.  
Prerequisite: Senior or graduate standing.  
Two semester hours credit.
- 433 *History of Ideas II 3*  
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.
- 436 **Great Revolutionary Movements of Modern History** **On Demand**  
English Revolutions of seventeenth century, French and American Revolutions of eighteenth century, Russian and Chinese Revolutions of twentieth century, analyzed and compared as an exercise in historical synthesis and interpretation.  
Three semester hours credit.

- 437 **Revolution and Reaction** **On Demand**  
 The influence of eighteenth-century revolutions on the "reactionary" or conservative, the liberal, and the radical trends of the past century and a half.  
 Three semester hours credit.
- 438 **Imperialism** **On Demand**  
 A study of "imperialism," both in its ancient forms and more particularly in its modern manifestations since the fifteenth century, with particular interest in its twentieth-century forms and problems raised by it in our times.  
 Three semester hours credit.
- \*520 **Seminar in Eighteenth Century America** **On Demand**  
 Selected problems of American history in the eighteenth century.  
 Prerequisite: Consent of instructor.  
 3 ~~Two~~ semester hours credit.
- \*521 **Seminar in Nineteenth Century America** **On Demand**  
 Selected problems of American history in the nineteenth century.  
 Prerequisite: Consent of instructor.  
 3 ~~Two~~ semester hours credit.
- \*522 **Seminar in Twentieth Century America** **On Demand**  
 Selected problems of American history in the twentieth century.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- \*523 **Seminar in Latin American History** **On Demand**  
 Selected problems in Latin-American history.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- \*530 **Seminar in Ancient History** **On Demand**  
 Selected problems of European history during the ancient period to 500 A. D.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- \*531 **Seminar in Medieval History** **On Demand**  
 Selected problems of European history during the medieval period, 500-1500 A. D.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- \*532 **Seminar in the Renaissance** **On Demand**  
 Selected problems of European history during the Renaissance.  
 Prerequisite: Consent of instructor.  
 3 ~~Two~~ semester hours credit.

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

- °533 **Seminar in the Reformation** **On Demand**  
 Selected problems of European history during the Reformation.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- °534 **Seminar in Modern European History** **On Demand**  
 Selected problems of European history since 1600 A. D.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- °536 **Independent Study in European History** **I, II**  
 Open to qualified students who wish to do individual work in history.  
 Must be taken by a student doing his qualifying paper in history, but  
 may be taken also for other purposes.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- °624 **Great Historians** **On Demand**  
 A comprehensive reading course designed to acquaint the advanced  
 student with the major classics of American or European history, and  
 the background, as well as aims and methods, of the great historians.  
 Lectures, discussions, and reports.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- °626 **Advanced Independent Study in American History** **I, II**  
 Open to qualified students who wish to do individual advanced work  
 in American history. Must be taken by a student doing his research  
 paper in American history, but may be taken also for other purposes.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- °636 **Advanced Independent Study in European History** **I, II**  
 Open to qualified students who wish to do individual advanced work  
 in European history. Must be taken by a student doing his research  
 paper in European history, but may be taken also for other purposes.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.

### **History and Social Sciences—Interdisciplinary**

- 410 **European Seminar** **Summer**  
 (To be Offered Summer 1962 and every third year)  
 A study-tour that includes one month in residence at Oriel College,  
 Oxford; lectures by British leaders, on contemporary British life, the  
 Empire and Commonwealth, and Britain's relations with the rest of  
 the world; 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 ship-  
 board returning to America—all under the supervision of two N. I. U.

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

History or Social Science staff members; and a graduate paper to be prepared by those taking the course for graduate credit, after returning from the tour. Specific details concerning costs, fees, etc., will be published in a special announcement about one year in advance of the tour. Carries graduate or undergraduate credit. For departmental requirements, this course may be counted as history, political science, economics, or sociology.

About ten weeks. Eight semester hours credit.

490 **Materials and Problems of High School Instruction  
in the Social Sciences**

I, II

(This course, described under Social Sciences, on page 142, may be counted as history credit.)

Two semester hours credit.



A Nook in the Parson Library

## INDUSTRIAL ARTS

The Department of Industrial Arts offers programs leading to the degree Master of Science in Education 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.

### 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 an adviser assigned by the Head of the Department of Industrial Arts.

### Description of Courses

- |     |   |                  |
|-----|---|------------------|
| 413 | <b>Design in Industrial Arts</b>  | <b>On Demand</b> |
|     | A study of the principles of design and the application of these principles to designing of industrial arts projects.<br>Two semester hours credit.   |                  |
| 440 | <b>Laboratory Planning</b>  | <b>II</b>        |
|     | 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.<br>Prerequisite: Courses 341 and 344.<br>Three semester hours credit.  |                  |
| 484 | <b>Teaching Aids in Industrial Arts</b>   | <b>I</b>         |
|     | A review of the available teaching aids for industrial arts will be made. Proper use of teaching aids will be discussed and opportunities for their construction will be given.<br>Two semester hours credit.   |                  |
| 485 | <b>Workshop in Driver Education<sup>1</sup></b>   | <b>On Demand</b> |
|     | 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 aids, etc.; and the problems of administering courses in Driver Education.<br>Prerequisite: Course 385 or other approved Driver Education course.<br>Two semester hours credit. |                  |

<sup>1</sup> The courses in Safety Education may not be taken to satisfy any of the major requirements for the master's degree.



- 486 **Problems in Safety Education<sup>1</sup>** Summer Session  
 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<sup>1</sup>** Summer Session  
 Study of the philosophy and principles of industrial safety and related accident prevention.  
 Three semester hours credit.
- 488 **School Safety Programs<sup>1</sup>** 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.
- 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 **Technical Problems in Industrial Arts** Summer Session  
 This course provides an opportunity for the individual student to undertake advanced study of technical problems in industrial arts. Prerequisite: Consent of instructor.  
 One to three semester hours credit.
- 541 **History and Philosophy of Industrial Education** II  
 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 in Elementary Education** Summer Session  
 A study of industrial arts in the modern elementary school program. Problems will emphasize the use of a wide variety of tools and materials and encourage the planning and organization of an activity program in the elementary grades. (Six periods each week.)  
 Prerequisite: Course 342 or consent of instructor.  
 Three semester hours credit.

<sup>1</sup>The courses in Safety Education may not be taken to satisfy any of the major requirements for the master's degree.

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

- 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.  
 Two 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.
- 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.
- 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.
- 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.

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

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

## **JOURNALISM**

- 435      **School Publicity** **I**  
This course is aimed at preparing prospective teachers to interpret  
the school to the public through such media as press, radio, and  
bulletin and pamphlet materials. It gives the student practice in  
preparation of news and other materials about the school and its  
problems and requires preparation of at least one paper in a form  
for publication.  
Three semester hours credit.



Between Classes

## 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, 425, 510, 515, 520, 530, 535, and 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) Course 660.
- (b) At least seven courses to be selected from courses 405, 410, 415, 420, 425, 510, 515, 520, 530, 535, 540. 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

- |     |   |                |
|-----|---|----------------|
| 402 | <b>Teaching Practices in Arithmetic</b><br>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.<br>Prerequisite: Course 115E or 120E.<br>Three semester hours credit.  | <b>I, II</b>   |
| 405 | <b>Theory of Equations</b><br>Solution of the cubic and quartic equations by radicals, Descartes' rule of signs, Sturm's theorem, solution of numerical equations, determinants, systems of linear equations, and matrices.<br>Prerequisite: Course 320 or equivalent.<br>Three semester hours credit.  | <b>I</b>       |
| 408 | <b>Educational Statistics</b><br>(Also listed as Education 408 and Physical Education 408)<br>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 | <b>I or II</b> |

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.
- 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 405 or equivalent or consent of the instructor.  
 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 Mathematics 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.
- 510 **Mathematics of Statistics II** I or II  
 Continuation of Mathematics 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.
- 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.
- 520 **Differential Equations II** I or II  
 Continuation of Mathematics 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.
- 530 **Advanced Calculus I** I or II  
 Further development of foundations of differentiation, partial derivatives, definite integrals, multiple integrals, and line integrals. Offered on demand.  
 Prerequisite: Course 321 or equivalent.  
 Three semester hours credit.
- 535 **Advanced Calculus II** I or II  
 Introduction to vector analysis and functions of a complex variable.  
 Offered on demand.  
 Prerequisite: Course 530 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.  
 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.
- \*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.  
 Prerequisite: Permission of the instructor.  
 Two semester hours credit.

\*May be repeated for additional 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. Those graduate music students who are not giving a formal public recital as part of their graduation requirements will, at the discretion of the music faculty, perform a partial program on a departmental recital.

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

	Sem. Hrs.
1. <b>Theory, Music Literature, Music History</b> . . . . .	8
°History and Development of Vocal and Instrumental Forms with Analytical Techniques . . . . .	4
°Contemporary Music Trends . . . . .	2
Electives . . . . .	2
History of American Music . . . . .	2
Advanced Orchestration . . . . .	2
Advanced Counterpoint . . . . .	2
Vocal Arranging . . . . .	2
Composition . . . . .	2
Band Arranging . . . . .	2
2. <b>Applied Music</b> . . . . .	8
°Advanced Conducting . . . . .	2
°Applied Major . . . . .	4
°Applied Minor or Ensembles . . . . .	2
3. <b>Music Education</b> . . . . .	16
°°Techniques in Research in Music Education . . . . .	2
°Foundations of Music Education . . . . .	2
Electives . . . . .	8-10
Supervision and Administration of Vocal Music . . .	3
Supervision and Administration of Instrumental Music . . . . .	3
Special Music Problems in the Junior High School . . . . .	1
Physics of Musical Instruments and Sound . . . . .	2
Marching Band Techniques . . . . .	2
Advanced Piano Pedagogy . . . . .	2
Pedagogy in Class Voice . . . . .	1
Advanced Pedagogy in String Instruments . . . . .	2
Advanced Pedagogy in Woodwind Instruments . . .	2
Advanced Pedagogy in Brass and Percussion Instruments . . . . .	2
Workshop in Elementary Vocal Music )	
Workshop in Junior High School	
Workshop for Choral Directors ) . . . only	1
Workshop for Orchestra Directors )	
Workshop for Band Directors )	
Guided Electives for Vocal Majors . . . . .	3
°Special Problems in Music Education . . . . .	2-4
(Thesis or Recital and Graduate Paper)	

32

### 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.

\*Required.

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

## 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** On Demand  
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.  
Three 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 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.

\*Required.

- °522 **The 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  
The relation of music to the other arts in Western Europe and the Americas from 1890 to the present.  
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.
- 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.

\*Required.

## **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.

\*One of these courses is required.

**°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.

**PIANO**

**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.

**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.

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**

**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**

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.

\*One of these courses is required.



- 543 **Voice** **I, II, and Summer Session**  
 Advanced private study of vocal literature, stressing interpretation and artistic performance in operatic, oratorio and song repertoire. 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**

- 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.
- 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**  
 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. 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.  
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.
- 573 **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.  
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 and Sound** **II and Summer Session**  
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 Vocal Music** **On Demand**  
(Also listed as Education 509)  
Functions and techniques of music supervision; problems of music consultants; in-service training in music for classroom teachers; administration of school music program.  
Three 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.
- 514 Supervision and Administration of the Instrumental Music Program On Demand**  
A study of the organizational and administrative problems of the instrumental music director, such as: curriculum; budgeting; programming; scheduling; testing; instrumentation; library management; award systems; and selection, care and handling of uniforms and instruments.  
Three semester hours 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 Program I, II, and Summer Session**  
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 On Demand**  
Independent study of problems, as made under the supervision of an adviser appointed by the department head. Writing of a qualifying paper and/or presentation of a recital will be a part of the work.  
Two to four 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.

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

- \*525 Foundations of Music Education** **I and Summer Session**  
 Basic concepts of music education and their application to problems of music teaching; a study of the functions of the musical mind and the factors involved in the development of musical skills and maturity; music tests and measurements.  
 Two semester hours credit.
- 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.
- 611 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.
- 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 an advanced degree in this area should consult with the instructor prior to enrollment.

## Description of Courses

- |     |  |                |
|-----|--|----------------|
| 400 | <b>Esthetics</b>   | <b>I or II</b> |
|     | 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.   |                |
| 420 | <b>Semantics and the Philosophy of Language</b>  | <b>I or II</b> |
|     | 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.<br>Prerequisite: Six semester hours in philosophy, including Philosophy 100, or permission of instructor.<br>Three semester hours credit.  |                |
| 460 | <b>Philosophy of Science</b>   | <b>I or II</b> |
|     | 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.<br>Prerequisite: Three semester hours in philosophy or a major in any of the sciences.<br>Three semester hours credit. |                |
| 488 | <b>Contemporary Philosophy</b>   | <b>I or II</b> |
|     | (Also listed as Education 488)<br>The characteristic role of philosophy today. The nature and range of philosophical analysis, including problems in science, art, religion, metaphysics, and epistemology. An examination of dominant movements; e. g., pragmatism, positivism, existentialism.<br>Three semester hours credit.   |                |
| 490 | <b>Seminar in Philosophy</b>   | <b>I or II</b> |
|     | An intensive study of one major figure, problem, or position in historical or contemporary philosophy.<br>Prerequisite: Nine semester hours in philosophy, or permission of instructor.<br>Three semester hours credit.  |                |

## 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 who elect a major in physical education toward the degree Master of Science in Education must successfully complete a minimum of eighteen semester hours of graduate credit in physical education. The courses prescribed will be determined by an examination of the individual student's undergraduate academic record and his general background.

Students must take Physical Education 570 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 Summer Session

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.



- 511 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.  
 Three semester hours 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.

---

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

## 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.

Thirty-two semester hours of graduate credit are required for the master's degree, of which a minimum of sixteen to eighteen semester hours must be successfully completed in physical education courses.

### 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.

### Description of Courses

- |     |   |           |
|-----|---|-----------|
| 408 | <b>Educational Statistics</b><br>(Also listed as Mathematics 408 and Education 408)<br>Frequency distributions, measures of central tendency, measures of variability, percentiles, the normal curve, correlation and regression, etc.<br>Prerequisite: Mathematics 120 or equivalent.<br>Three semester hours credit.  | On Demand |
| 440 | <b>Physical Education Organization and Administration</b><br>Problems of organization and administration for health and physical education in the elementary and secondary schools.<br>Three semester hours credit.   | II        |
| 446 | <b>Health Education Problems in Public Schools</b><br>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.<br>Two semester hours credit.   | I, II     |
| 448 | <b>Organization and Supervision of Co-curricular Programs for Junior and Senior High Schools</b><br>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.<br>Three semester hours credit. | II        |
| 450 | <b>Adapted Physical Education Activities for Atypical Individual</b><br>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.<br>Three semester hours credit.   | II        |

- 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.
- 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 Compositions** 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  
 Consideration of the structure and function of the human skeletal and muscular systems. Emphasis placed on practical application to physical education in everyday activity. Designed primarily for the classroom teacher.  
 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.
- 541 **Organization and Administration of Athletics** I  
 Organization and administration of athletics with reference to national, state, and local levels. Considers staff, program, budget, health, safety, and facilities. Relationship of athletics to education and to 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.  
 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.
- 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.
- 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 **Individual Study of Problems in Physical Education** I, II  
 Opportunity to work individually under guidance on a problem of special concern. May be carried on in local situation. Two hours credit given for research paper. Course may be repeated to a maximum of three semester hours.  
 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     **Individual Research Problems**     **I, II**  
 Individual investigation of a selected problem in physical education, health education, or recreation that will involve one of the techniques of research. Student will work under an assigned adviser and must have received approval of the problem prior to registration.  
 One to three semester hours credit.



Diploma Time

## 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 38.

## 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 satisfy the following departmental 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 physical sciences 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

## 409 Summer Science Institute for In-Service Elementary Teachers

Subject matter material in biological sciences, chemistry, earth sciences, and physics necessary for effective science teaching in the lower grades.

Eight semester hours credit.

- °450 **Advanced General Physics** **On Demand**  
 Topics selected to furnish thorough background for teaching. Not open to undergraduate 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 undergraduate 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 485.  
 Three semester hours credit.
- 461 **Quantum Mechanics II** **On Demand**  
 Matrix algebra, perturbation theory, Dirac theory of electron.  
 Prerequisite: Course 460.  
 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 480.  
 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.  
 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 462.  
 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.

---

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

- 470 Electricity and Magnetism** **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 General Physics and permission of instructor.  
 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 470.  
 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 480.  
 Three semester hours credit.
- 480 Atomic Physics** **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 470.  
 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 480.  
 Two semester hours credit.
- 482 Nuclear Physics** **II**  
 Radioactivity, nuclear structure and reactions. Four periods a week.  
 Prerequisite: Course 480.  
 Three semester hours credit.

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

- 485     **Methods of Mathematical Physics** I or II  
Continuation of Course 285. Four periods a week.  
Prerequisite: Course 285. Co-requisite: Course 470.  
Three 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 de-  
signed 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.
- 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.
- 563     **Thermodynamics** On Demand  
Laws of thermodynamics and their application to various thermal  
systems.  
Prerequisite: Course 463.  
Two semester hours credit.
- 565     **Theory of Vibrations** On Demand  
Selected topics from optics, acoustics and electromagnetic theory.  
Prerequisite: Course 485.  
Three semester hours credit.
- 570     **Electrodynamics** On Demand  
Maxwell's equations, multiple radiations, Lorentz electron theory,  
wave guides.  
Prerequisite: Course 485.  
Three semester hours credit.
- 575     **Electronics II** On Demand  
Continuation of Physical Science 475. Oscillators, amplifiers, trans-  
mitters and industrial controls. Network theory considered.  
Prerequisite: Course 475 or permission of instructor.  
Three semester hours credit.
- 580     **Atomic Spectra and Atomic Structure** On Demand  
Atomic spectra, Zeeman effect, Stark effect, Hyperfine structure.  
Prerequisite: Course 480.  
Three semester hours credit.

- 582     **Advanced Nuclear Physics**     **On Demand**  
 Theory of light nuclei, nuclear forces, nuclear reactions, nuclear theories.  
 Prerequisite: Course 460.  
 Three semester hours credit.
- 585     **Introduction to Theoretical Physics**     **On Demand**  
 Continuation of Course 485.  
 Prerequisite: Course 485 or equivalent.  
 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.
- 664     **Advanced Physical Statistics**     **On Demand**  
 Quantum statistics, Fermi-Dirac and Bose-Einstein statistics, applications to atomic and nuclear systems.  
 Prerequisites: Courses 480 and 563.  
 Three semester hours credit.
- 676     **Electron Optics**     **On Demand**  
 Motion of electrons in electric and magnetic fields, electric and magnetic lenses, electron microscopy.  
 Prerequisites: Courses 367 and 470.  
 Three semester hours credit.

## PHYSICAL SCIENCE AND PROFESSIONAL EDUCATION

- 405     **History of Science**     **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**  
 Work and personal characteristics of famous scientists. Oral and written reports required.  
 Two semester hours credit.
- 490     **Science in the Public Schools**     **I, II**  
 (For teachers, supervisors, and administrators.) Principles and applications of science illustrated by simple apparatus constructed by members of the class. (Not open to physical science majors or minors.)  
 Three semester hours credit.



- 499     **Teaching of Physical Sciences** (Second 9 Weeks) I  
 Classroom and laboratory problems confronting the high school teacher.  
 Prerequisite: Physical science major or permission of instructor.  
 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.
- 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.
- 590     **Physical Science for Elementary Teachers**     **On Demand**  
 Principles and applications of physical science illustrated by simple apparatus constructed by members of class. Satisfies requirements for Education 584. (Not open to physical science majors or minors.)  
 Two to five semester hours credit.
- 591     **Physical Science for Elementary Teachers**     **On Demand**  
 A continuation of Course 590. (Not open to physical science majors and minors.)  
 One to three semester hours credit.
- 595     **Orientation of College Science to Public School Teaching**     **On Demand**  
 Adaptation of content of physical science courses to classroom teaching in primary and secondary schools.  
 Prerequisite: Major or minor in physical sciences.  
 Two semester hours credit.

## PSYCHOLOGY

Just before this catalog went to press, the Teachers College Board authorized Northern Illinois University to institute a department of psychology. During the first semester, 1959-1960, this department will schedule the first of its offerings leading toward an undergraduate major in psychology. At the outset a graduate major will not be instituted, but several courses carrying graduate credit will be scheduled.

Information concerning the department and its offerings may be secured from the head of the department or the Office of the Graduate School.

## **SOCIAL SCIENCES**

Graduate courses and research opportunities in the social sciences are offered leading to the degree of Master of Arts (with a major in economics, political science, or sociology); Master of Science in Education (with a major in sociology or an area major in history and social sciences); and the Sixth-Year Program leading to the Certificate of Advanced Study (with an area major in history and social sciences).

### **Master of Arts**

#### **MAJOR IN ECONOMICS**

This program is a basic course of study which combines theoretical, historical and institutional approaches in the major area, and additional breadth through the requirement of a minor and additional free election. Students are encouraged to take their minor in one of the social sciences, in history, in business, or in mathematics, and to include at least one course in statistics. The required core is Economics 662 (3), Economics 671 (2), Economics 673 (3), and eight semester hours additional to be elected from offerings in economics. Group total, 16 semester hours. A minor of eight semester hours will be completed and an additional eight semester hours of free election. Total for the degree, 32 semester hours.

#### **MAJOR IN POLITICAL SCIENCE**

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

At least eighteen semester hours are to be taken in political science. These will include a course in research methods (Political Science 640C), at least one course in theory (Political Science 440 or 441), and a research paper (2 semester hours credit) or a thesis (4 semester hours credit). The remaining hours are to be taken in one or two related minor fields (economics, history, philosophy, sociology and or anthropology) after consultation with the student's adviser. A final comprehensive written examination, covering the major and minor fields, is required. Total for the degree, 32 semester hours.

#### **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 should be prepared 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, a graduate course in anthropology (other than 588), and a research paper (2 semester hours) or a thesis (6 semester hours); 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 adviser. A final examination is required. Total for the degree, 32 semester hours.

## Master of Science in Education

### MAJOR IN SOCIOLOGY

The requirements are essentially the same as those for the Master of Arts degree (see above), but must conform to the general University requirements for the Master of Science in Education degree.

### AREA MAJOR IN HISTORY AND SOCIAL SCIENCES

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 fields which follow: economics, history, political science, sociology. At least three semester hours credit in each field must be at graduate level. 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.

### Certificate of Advanced Study (Sixth-Year Program)

### AREA MAJOR IN HISTORY AND SOCIAL SCIENCES

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 courses of the thirty required in the sixth year are elective.

### Description of Courses

#### ECONOMICS

- 422    **Economic History of the United States**  
(Also listed as History 422. See p. 96.)
- 464    **Public Finance and Public Education** On Demand  
Local, state, and national tax systems within the total economy; public debt and fiscal policies; public finance and education in Illinois. Prerequisite: Course 261 or permission of instructor. Two semester hours credit.
- 465    **Government and Business** On Demand  
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** On Demand  
The ideas of economics as they have developed through the centuries, and how these ideas are related to the economic condition 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** On Demand  
 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** On Demand  
 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** On Demand  
 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.
- 562 **Business Cycles** On Demand  
 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.  
 Two semester hours credit.
- 563 **Modern Economic Systems** On Demand  
 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: Course 360.  
 Two semester hours credit.
- 564 **Economic Well-Being and Education** On Demand  
 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** On Demand  
 Measurements of supply and demand functions, consumption functions, cost curves, production functions, 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.  
 Two semester hours credit. (Maximum four semester hours.)

\*Course may be repeated for additional credit.

- \*666 **Advanced Independent Study in Economics**  
Individually arranged readings for graduate students.  
Prerequisite: Consent of instructor.  
Two semester hours credit.
- \*671 **Seminar in Economic Theory** On Demand  
Individual research in those areas of economic theory that meet the needs of the students.  
Prerequisite: Consent of instructor.  
Two semester hours credit.
- \*672 **Seminar in the Economics of Growth** On Demand  
An analysis of the various causes of economic growth with major emphasis on output.  
Prerequisite: Consent of instructor.  
Two semester hours credit.
- \*673 **Seminar in the History of Economic Thought** On Demand  
Studies in the development of economic ideas using original source materials.  
Prerequisite: Consent of instructor.  
Two semester hours credit.
- \*674 **Seminar in Labor Economics and Labor Relations** On Demand  
A study of the economics of labor and of labor-management relations, with emphasis upon individual research.  
Prerequisite: Consent of instructor.  
Two semester hours credit.

## POLITICAL SCIENCE

- 440 **Classical Political Thought** I  
A survey of the political thought of ancient Greece, Rome, and Medieval Europe.  
Prerequisite: A college course in European or world history (up to 1500 A.D.).  
Three semester hours credit.
- 441 **Modern and Contemporary Political Thought** II  
A survey of the leading political thinkers from Machiavelli to the present.  
Prerequisite: A college course in European or world history (after 1500 A.D.).  
Three semester hours credit.
- 444 **Government and Politics in the Soviet Union** On Demand  
A study of the development, structure and functioning of government and politics in the Soviet Union.  
Prerequisite: An introductory course in political science.  
Recommended: Contemporary European or world history.  
Two semester hours credit.

\*May be repeated to maximum of four semester hours.

- 445 **American Constitutional Development** I  
 The growth of the American Constitution by judicial interpretations 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 **The Far East** On Demand  
 The impact of the Western nations on Eastern Asia since the opening of the Orient. Development of political and social institutions in China, Japan, and the Philippines.  
 Advisable prerequisite: A previous college course in European or world history.  
 Two semester hours credit.
- 449 **International Relations** II  
 National power, formulation of foreign policy, world organization, international law, techniques of power politics, and the problems of the major world regions.  
 Prerequisite: Pol. Sci. 240 or introductory course in political science.  
 Recommended: European or world history.  
 Three semester hours credit.
- 495 **Seminar in Current Problems** On Demand  
 Issues and policies in government, politics, and economics in their historical and sociological perspectives.  
 Prerequisite: Consent of instructor.  
 Four semester hours credit.
- 541 **International Law** On Demand  
 Principles of International Law of Peace, Law of War and Neutrality.  
 Prerequisite: Pol. Sci. 240 or an introductory course in political science.  
 Recommended: Pol. Sci. 449 and/or Modern World History.  
 Three semester hours credit.
- 542 **British Government and Politics** On Demand  
 A study of the development, structure and functioning of government and politics in Great Britain.  
 Recommended: A course in comparative European governments or contemporary European history.  
 Three semester hours credit.
- 544 **Legislative Process** On Demand  
 The organization and functioning of the United States Congress, the state legislatures, and the forces influencing them.  
 Prerequisite: Pol. Sci. 240 or equivalent.  
 Three semester hours credit.
- 546 **Foreign Governments** On Demand  
 The development, structure, and functioning of government and politics in Great Britain, France, the U.S.S.R., and Germany.  
 Prerequisite: Course 240 or equivalent.  
 Three semester hours credit.



- 547 **Contemporary Africa** **On Demand**  
 A study of colonialism in Africa; the emergence of independent governments; the trend toward federalism.  
 Recommended: Contemporary European or world history.  
 Three semester hours credit.
- 548 **International Organization** **On Demand**  
 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: Pol. Sci. 449. A course in contemporary European or world history.  
 Three semester hours credit.
- 549 **Independent Study in Political Science** **I, II**  
 Open to qualified students who wish to do individual advanced work in political science.  
 Prerequisite: Consent of instructor.  
 One to four semester hours credit.
- 640A **Seminar in Political Thought** **On Demand**  
 Research and class discussion of selected topics.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- 640B **Seminar in International Relations** **On Demand**  
 Research and class discussion of selected topics.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- 640C **Seminar in Political Science and Public Law** **I, II**  
 Methodology, theses, special problems, reports, discussions, and criticism.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- 640D **Seminar in American Civil Liberties** **On Demand**  
 Research and class discussion in the fields of freedom of speech and religion, citizenship, loyalty, rights of persons accused of crime, and governmental protection of persons against racial and religious discrimination.  
 Prerequisite: Consent of instructor.  
 Three semester hours credit.
- 640E **Seminar in Comparative Government** **On Demand**  
 Research in government and politics of the major countries.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- 641 **Theory and Practice of Communism** **On Demand**  
 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      On Demand**

The development, structure, and functioning of government and politics in the countries of the Commonwealth.

Prerequisite: Consent of instructor.

Three semester hours credit.

**643      Comparative Political Parties      On Demand**

A study of the organization, programs, and methods of the political parties of the major countries of the world.

Prerequisite: Consent of instructor.

Three semester hours credit.

## **SOCIOLOGY AND ANTHROPOLOGY**

**480      Marriage and the Family      I, II**

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.

Three semester hours credit.

**481      Marriage and Family Counselling      On Demand**

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 counselling in the secondary schools.

Two semester hours credit.

**482      Criminology      On Demand**

Study of crime; crime in relation to physical and psychological factors; crime in relation to cultural areas, to the family and to social institutions; control of crime, punitive policies and the treatment of offenders; prevention of crime and delinquency.

Prerequisite: Sociol. 180 or equivalent.

Three semester hours credit.

**483      Social Disorganization      On Demand**

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.

Two semester hours credit.

**484      Intergroup Relations      On Demand**

Analysis and exposition of cultural and social psychological influences underlying relations among racial ethnic and other minority and majority groups. Emphasis upon problems of prejudice and discrimination, and the promotion of harmonious intergroup relations.

Prerequisite: Sociol. 180 or equivalent.

Three semester hours credit.

- ✓ 485 **Sociological Theory** **On Demand**  
 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.
- ✓ 486 **Social Investigation** **On Demand**  
 Principal methods of social research are examined; the planning and conduct of a research project; current techniques of collecting, analyzing, interpreting, and reporting data.  
 Prerequisite: Five semester hours in sociology.  
 Three semester hours credit.
- ✓ 487 **Population Dynamics and Human Ecology** **On Demand**  
 Population growth and distribution; age, sex, ethnic and other characteristics; national and international migration; forecasts of population.  
 Two semester hours credit.
- ✓ 580 **Systematic Sociology** **On Demand**  
 An examination of the historic patterns of sociological thought as developed by Comte, Giddings, Coolidge, Sumner, Thomas, and others, and an attempt to synthesize the current patterns of sociological thought into a coherent system.  
 Prerequisite: Sociol. 180 or equivalent.  
 Two semester hours credit.
- 581 **Social Dynamics** **I**  
 A study of some of 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.  
 Two semester hours credit.
- ✓ 582 **Social Attitudes** **On Demand**  
 A study of 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.  
 Two semester hours credit.
- ✓ 583 **Community Analysis** **On Demand**  
 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** **I, II**  
 Open to qualified students who wish to do individual advanced work in sociology.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit. (Maximum four semester hours.)
- 587 Educational Social Psychology** **On Demand**  
 Application of social psychology principles to behavior and problems (learning, attitudes, collective behavior, intergroup and interpersonal relations, etc.) in school context.  
 Prerequisite: Sociol. 315 or equivalent.  
 Two semester hours credit.
- 588 Introduction to Cultural Anthropology** **On Demand**  
 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.  
 Two semester hours credit.
- \*684 Advanced Independent Study in Sociology** **On Demand**  
 Individual research projects and arranged readings.  
 Prerequisite: Consent of instructor.  
 Two to four semester hours credit.
- \*686A Seminar in Social Psychology** **On Demand**  
 Analysis of advanced topics in social psychology, such as collective behavior, personality formation, social control, etc.  
 Prerequisite: Sociol. 315 or equivalent.  
 Two or three semester hours credit.
- \*686B Seminar in Sociological Theory** **On Demand**  
 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** **On Demand**  
 Intensive study of special topics such as marriage and the family, mythology, the arts, linguistics, acculturation, and ethnology.  
 Prerequisite: Anthropology 281 or equivalent.  
 Two or three semester hours credit.
- \*686D Seminar in Social Disorganization** **On Demand**  
 Intensive analysis of selected areas of disorganization, such as inter-group conflict, divorce, war, drug addiction, etc.  
 Prerequisite: Sociol. 483 or consent of instructor.  
 Two or three semester hours credit.
- \*686E Seminar in Marriage and Family** **On Demand**  
 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.

\*Course may be repeated for additional credit.

**\*686F Seminar in Research Methodology and Techniques      On Demand**

The scientific approach, selection of research problems, study design, methods of analysis, research techniques.

Prerequisite: Social. 486 or consent of instructor.

Two or three semester hours credit.

**HISTORY AND SOCIAL SCIENCES—INTERDISCIPLINARY**

**410      European Seminar      Summer**

(To be offered Summer 1962 and every third year.)

This course, described above, under History, on page 99, carries graduate or undergraduate credit. For departmental requirements, it may be counted as history, political science, economics, or sociology. About ten weeks. Eight semester hours credit.

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

Deals with materials, supplies, equipment, and teaching aids available and usable in a modern high school, social science or history classroom. Affords acquaintance with textbooks, references, fiction, maps, charts, magazines, newspapers, radio programs, visual aids, trips, free materials, etc. Individual and group projects. Two semester hours credit.

**✓ 491      Materials and Problems of Elementary School Instruction  
in the Social Sciences      I, H**

Deals with the materials, supplies, equipment, and aids available and usable in the elementary school social studies. Acquaintance with texts, fiction, free materials, etc., 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.

---

\*Course may be repeated for additional credit.

## 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.

Since the graduate curriculum in speech is adapted to the student's individual needs and academic background, the only prerequisite for enrolling in any graduate course offered by the Department of Speech is the consent of the instructor.

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 450 will be required; if the student's area of concentration is public address, Speech 541 will be required. Students who are majoring in speech pathology and audiology will be expected to fulfill the state's requirements for certification as a speech correctionist.

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:** 410, 430, 518, 540; **Public Address:** 400, 503, 506, 608; **Speech Pathology and Audiology:** 424, 520, 524, 527.

### Master of Arts

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

A candidate seeking to qualify for the degree of 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 departments.
- (2) The candidate shall pass a basic reading proficiency examination in a foreign language.



- (3) The seminar course, Speech 591, will be required of all students.
- (4) 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.

### 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.

### Description of Courses

#### **Drama, Oral Interpretation of Literature, Radio and Television**

- |   |     |  |           |
|---|-----|--|-----------|
| ✓ | 410 | <b>History of Theatre I</b><br>Study of theatre, plays, and playwrights in relation to their religious, social, literary and artistic backgrounds from the Greeks to the Elizabethan period.<br>Prerequisite: Consent of instructor.<br>Three semester hours credit.   | I         |
| ✓ | 416 | <b>Practical Theatre Production (Advanced)</b><br>Advanced practical experience in theatre techniques through participation in some phase of the preparation and presentation of one full length dramatic production. Six periods a week for six weeks.<br>Prerequisite: Consent of instructor.<br>One semester hour credit. | I, II     |
| ✓ | 430 | <b>Advanced Oral Interpretation of Literature</b><br>Summary of the literature concerning selecting, arranging, and presenting materials to be read orally. Practice in techniques of oral expression.<br>Prerequisite: Consent of instructor.<br>Three semester hours credit.   | On Demand |
| ✓ | 450 | <b>Radio Speaking</b><br>A study of the research and literature in the areas of radio and television programming and an analysis of their pedagogical application.<br>Prerequisite: Consent of instructor.<br>Two semester hours credit.   | On Demand |
| ✓ | 510 | <b>History of Theatre II</b><br>The relationship of the play to the theatre, actor, and audience, and to the artistic, literary, and social atmosphere from the Elizabethan period to modern day.<br>Prerequisite: Course 410 or its equivalent. Consent of instructor.<br>Three semester hours credit.                      | On Demand |

- ✓ 511 **Dramatic Theory** **On Demand**  
 A study of the major theatrical and critical works on the drama from the Greeks to modern day.  
 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 day. 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.
- ✓ 530 **Development of American Theatre** **On Demand**  
 A study of the development of the American drama to modern day.  
 Prerequisite: Consent of instructor.  
 Three semester hours credit.
- ✓ 534 **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 on characterization, voice, and movement.  
 Prerequisite: Consent of instructor.  
 Two semester hours credit.
- ✓ 540 **Directing** **II**  
 Advanced theory and problems of the director's art in interpreting the play. Practical experience in directing the production of plays.  
 Prerequisite: Consent of instructor.  
 Three semester hours credit.
- ✓ 581 **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.
- ✓ 611 **Educational Television Programming** **On Demand**  
 Preparation, presentation and evaluation of educational television programs.  
 Prerequisite: Consent of instructor.  
 Three semester hours credit.

- 616 **Playwriting for the Educational Theatre** **On Demand**  
A laboratory production and evaluation of creative dramatic writings for the educational theatre.  
Prerequisite: Consent of instructor.  
Three semester hours credit.

## **PUBLIC ADDRESS**

- 400 **Introduction to Rhetorical Criticism** **II**  
Introduces the student to basic concepts, terminology, and methods of rhetorical criticism, both classical and modern, and emphasizes the historical continuity in the evolution of public speaking from the ancient Greeks to the present age, thus providing a frame of reference for subsequent graduate study.  
Prerequisite: Consent of instructor.  
Three semester hours credit.
- 401 **Contemporary Public Address** **II**  
An application of the logical, historical, aesthetic, and scientific disciplines to the study of the speeches of representative spokesmen of twentieth century thought.  
Prerequisite: Consent of instructor.  
Three semester hours credit.
- 500 **Ancient and Medieval Rhetoric and Public Address** **On Demand**  
The contributions of Plato, Aristotle, Cicero, Quintilian, Augustine, and others to rhetorical theory and analysis of the speeches of some of the principal ancient and medieval orators.  
Prerequisite: Consent of instructor.  
Two semester hours credit.
- 501 **Critical Studies in Oratorical Theory** **On Demand**  
The contributions of Bacon, Wilson, Campbell, Blair, Whately, John Quincy Adams, and others to rhetorical theory, with its adaptation to modern conditions. Together, this course and Speech 500 examine the theory of public speaking from the earliest times to the present.  
Prerequisite: Consent of instructor.  
Two semester hours credit.
- 502 **History and Criticism of British Public Address** **On Demand**  
The application of the principles of rhetorical criticism in the study of the speeches of some of the principal eighteenth and nineteenth century British speakers.  
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 High School 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** **I**  
Instruction in the measurement of hearing. Also included in the course is the anatomy of the ear, medical, surgical, and psychological problems of the hard of hearing; clinical practicum.  
Prerequisite: Course 320 or consent of instructor.  
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: Course 420 or 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.  
Prerequisite: Course 322 or consent of instructor.  
Three semester hours credit.
- 423 **Clinical Practices in Speech Pathology** On Demand  
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: Course 321 or 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.  
Prerequisite: Consent of instructor.  
Three semester hours credit.
- ✓ 425 **Speech Pathology II** I  
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.
- ✓ 520 **Speech Handicaps** On Demand  
A theoretical consideration of classification, etiologies and symptomatologies of speech problems among children and adults with special attention to rehabilitative procedures; clinical observation.  
Prerequisite: Consent of instructor.  
Three semester hours credit.
- ✓ 521 **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.
- ✓ 522 **Public School Speech Correction** On Demand  
The role and responsibilities of the speech correctionist in the elementary, junior and senior high schools with stress upon problems of surveying, scheduling, parent counseling, report writing, referrals and public relations.  
Prerequisite: Consent of instructor.  
Three semester hours credit.

- ✓ 523 **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.
- ✓ 524 **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.
- ✓ 525 **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.
- ✓ 526 **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.
- ✓ 527 **Advanced Audiometry** **On Demand**  
Advanced principles and methods of pure tone and speech audiometry, interpretation of audiometric test results, programs in hearing conservation and referral procedures; clinical practicum.  
Prerequisite: Consent of instructor.  
Three semester hours credit.
- ✓ 528 **Seminar in Aural Rehabilitation** **On Demand**  
A critical survey of research related to the rehabilitation of hard of hearing children and adults including speech reading, auditory training, and other therapeutic procedures. Clinical practicum.  
Prerequisite: Consent of instructor.  
Two 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.



## Note to Students Who Wish to Qualify as Speech Correctionists

Listed below are the special requirements of the State of Illinois for speech correctionists. (These should not be confused with requirements for the major or minor in Speech which qualify one to teach speech in an Illinois high school.)

Within the general statement concerning qualifications of speech correction teachers in the Illinois Plan booklet, Circular Series E, No. 12, revised 1952, are the following specific requirements for a teacher of speech correction in the State of Illinois:

- A. Valid teacher's certificate.
- B. Possession of personal speech habits which meet an acceptable standard in both voice and diction.
- C. A background of courses which will insure an adequate preparation in subject matter and techniques of the field, including:
  1. Twenty-three semester hours in speech correction courses, including phonetics, anatomy and physiology of speech and hearing mechanism, speech correction, speech science, speech pathology, and student teaching in speech correction, 200 clock hours,\* at least half of which are in the school situation.
  2. Six semester hours in the field of the hard of hearing and deaf, including hearing testing techniques and interpretation, and communication problems of hearing (speech, speech reading, auditory training).
  3. Six semester hours of background area courses in pupil evaluation, including tests and measurements, a course in the field of guidance or clinical psychology (abnormal, personality), teaching of reading, and student teaching of academic subjects.

## SPEECH EDUCATION

- |       |  |           |
|-------|--|-----------|
| ✓ 440 | <b>The Teaching of Speech</b><br>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 foundational course in speech and other courses in a balanced speech curriculum.<br>Prerequisite: Consent of instructor.<br>Three semester hours credit.                              | I         |
| ✓ 541 | <b>Seminar in Problems in the Teaching of Public Speaking, Discussion, and Debate</b><br>An exploration of the problems and the findings of research in this area of speech education, and, for the student with a special interest in this area, guidance in the selecting and conducting of his major graduate investigation.<br>Prerequisite: Consent of instructor.<br>Two or three semester hours credit. | On Demand |

\*This is to be interpreted as a minimum requirement.

- 582 **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.
- 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.
- 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 three semester hours.
- 699 **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.

# INDEX

Accreditation .....	27
Administrative Staff .....	10
Admission Requirements .....	15, 24
Advisory System .....	22, 24
Application for Admission .....	16, 24
Area Majors .....	16
Art .....	35
Assistantships .....	31
Auditors .....	16
Biological Sciences .....	38
Buildings and Campus .....	27
Business Administration .....	45
Business Education .....	53
Calendar .....	5
Campus Map .....	8
Candidacy .....	21, 24
Certificate of Advanced Study and Master of Fine Arts .....	23
Chemistry .....	58
Completion of Graduate Work .....	22, 25
Credit, Courses for which Allowed .....	22, 25
Credit Requirement .....	21, 23
Credits Transferable .....	21, 24
Deficiencies .....	21
Earth Sciences .....	65
Education .....	71
English .....	87
Examinations .....	23, 26
Expenses .....	17-18
Extension Courses .....	22, 25
Faculty .....	10
Fees .....	17-18
Field Campus .....	29
Foreign Languages .....	93
General Information .....	27
General Science .....	38
Grading System .....	17
Graduate Council .....	10
Health Service .....	31
History .....	95
Incompletes .....	17
Industrial Arts .....	101
Internships .....	31
Journalism .....	104
Living Accommodations .....	18
Loans .....	30
Major, Selection of .....	16
Masters Degrees, Requirements for .....	21
Mathematics .....	105
Music .....	108
Northern Foundation .....	30
Philosophy .....	118
Physical Education for Men .....	119
Physical Education for Women .....	122
Physical Science and Professional Education .....	131
Physics .....	127
Placement Bureau .....	31
Program of Courses .....	21, 22, 24, 32
Psychology .....	132
Purpose .....	14
Qualifying Examination .....	25
Qualifying Paper .....	22
Recreational Facilities .....	32
Registration .....	16
Residence Requirement .....	21, 23-24
School Business Management .....	45, 72
Social Sciences .....	133
Speech .....	143
Speech Rehabilitation Center .....	31
Student Teaching .....	31
Thesis .....	25
Travel Courses .....	35, 142
Veterans' Benefits .....	18





# S U P P L E M E N T

To the 1959-61 Graduate Catalog

## N O R T H E R N I L L I N O I S U N I V E R S I T Y

### C H A N G E S I N F E E S

Under the heading "Expenses" (p. 17), the following changes should be made in the schedule of fees:

Full-time student (per semester)	1960-61
Registration fee, Illinois residents	\$108.00
Registration fee, non-residents of Illinois	\$193.00

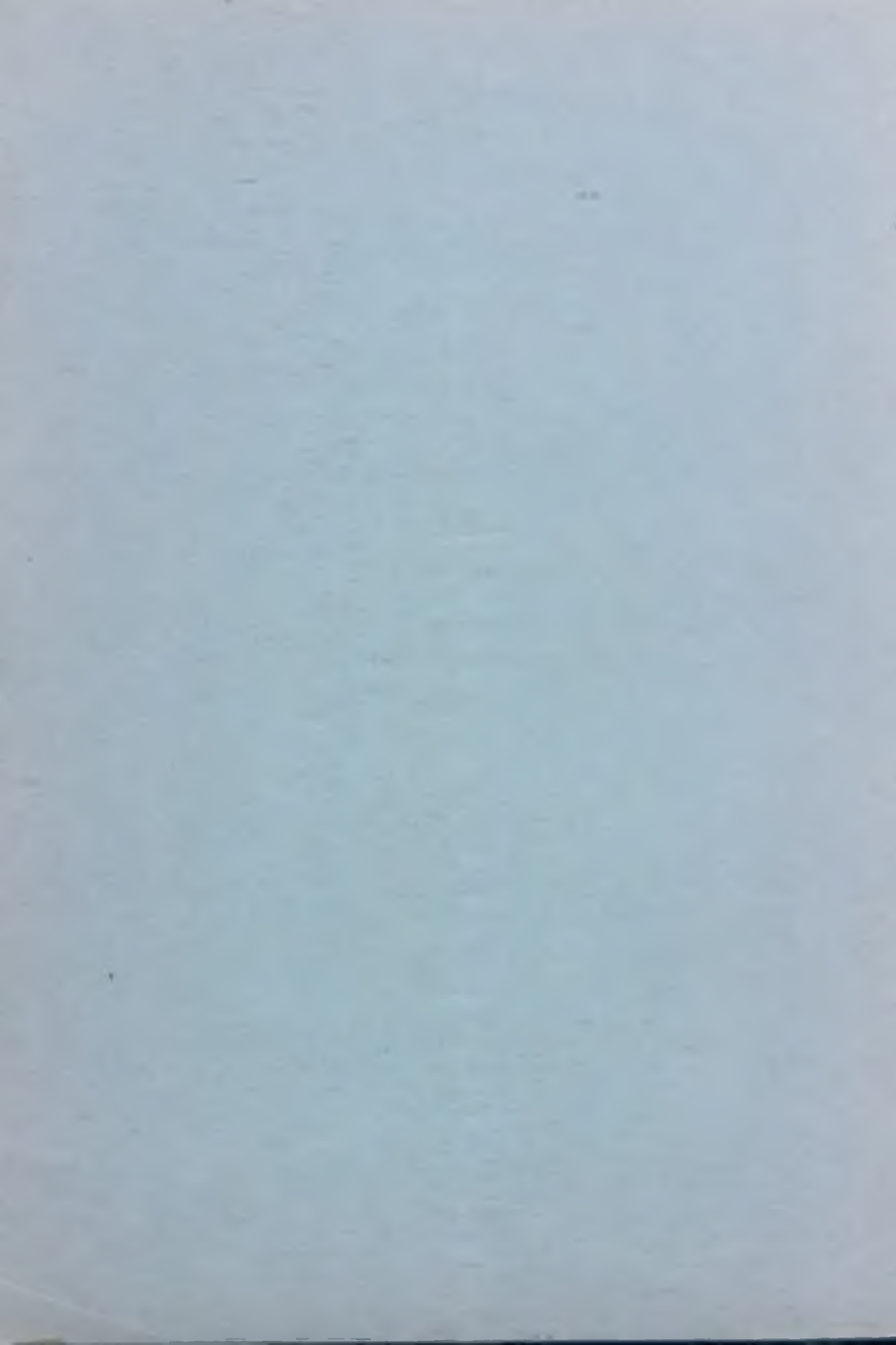
Under the subheading "Special fees" (p. 18), the graduation fee (payable at time of graduation only) should be \$15.00.

The second sentence of the full paragraph following the listing of special fees (top of p. 18) should be corrected as follows: The amount of the fees covered by the Veterans State Scholarship for the academic year 1960-61 will be \$78.00 of the total fees of \$108.00.

The paragraph relating to changes in class programs (fourth full paragraph, p. 18) should read:

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 preregistration.





## CHANGES AFFECTING LIVING ACCOMMODATIONS

The following statement should be substituted for the first three paragraphs under the heading "Living Accommodations" (p. 18):

The University's newest residence halls project has recently been completed on campus. This project includes two separate living units, four floors each, separated by a central air-conditioned dining and recreation unit. Each living unit accommodates approximately five hundred students; currently, one unit is being occupied by women and the other unit by men.

The rates for room and board in the University residence halls were increased as of September, 1960, to \$345.00 per semester payable in advance. Room rental rates for off-campus housing have also increased and now are averaging about \$7.50 per week for room only, without board.

The following should be substituted for the last paragraph under "Living Accommodations" (p. 19):

The University's new Married Student Housing Project is scheduled for completion early this spring. This project, consisting of forty one-bedroom units plus forty efficiency units, will house eighty families. All units are furnished, and rentals will include utilities. Students using these facilities are required to carry at least twelve semester hours of credit throughout each of the two semesters of the academic year and at least six semester hours during the summer session. The barracks units will not be used after June, 1960. Further information and application may be obtained from the Office of the Director of Housing.



## CHANGES IN DEPARTMENTAL OFFERINGS

### ART

To the course offerings of the department (pp. 35-37) add: 480 - Independent Research (1-3).

### BIOLOGICAL SCIENCES

The following paragraphs should appear under the heading "MAJOR IN BIOLOGY" (p. 38):

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.

Add to the description of course 400 (p. 39): "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."

Under the description of course 416 (p. 39), the sentence "Includes field trips to representative areas" should be followed by "Students will pay own expenses."

The correct title of course 505 (p. 40) is "Institute of Science for High School Teachers of Biology and General Science." The course offers 4 or 8 semester hours of credit, and it may be repeated to a maximum of 12 semester hours, 8 of which may count toward the master's degree.

### BUSINESS ADMINISTRATION

The course "Financial Statement Analysis," which carried the number 540 (p. 51), has been re-numbered 439. It now yields 2 semester hours of credit instead of 3.

The course "Advertising," which was formerly numbered 348, has been re-numbered 448. It carries three semester hours of graduate credit.

The course "Marketing Research," which was numbered 443 (p. 48), has been re-numbered 555.

The scope of course 541, "Accounting: School Business Management" (p. 51), has been broadened and the title changed to "Accounting, Statement Analysis, and Budgeting." The credit designation should be "2 or 3 semester hours."

The title of course 546 (p. 51) should be "Workshops in School Business Management." It now carries 1 to 6 semester hours of credit. It may be audited for no credit.

The credit allowed for certain other courses has been changed as follows: 453 - change from 3 semester hours to 2; 463 - change from 2 semester hours to 3; 545 - change from 3 semester hours to 2 or 3 semester hours; 610 - change from 3 semester hours to 2 or 3 semester hours.

The following new courses have been added to the graduate offerings: 460 - Accounting for Specific Industries (2 semester hours); 461 - School Office and Personnel Management (2); 475 - CPA Problems (3 to 5); 490 - Management of Auxiliary Enterprises (2); 495 - Maintenance and Operations - Buildings and Grounds (2); 602 - Research in School Business Management (1 to 3); 603 - Seminar in Business Research (3); 604 - Independent Study in Business (1 to 3 semester hours and may be repeated to a maximum of 6 semester hours); 653 - Advanced Managerial Accounting and Controllorship (2).

## EARTH SCIENCES

The title of course 505 (p. 66) has been changed to "Institute of Science for High School Teachers of Earth Sciences and General Science." It may offer from 1 to 8 semester hours of credit and may be repeated to a maximum of 12 semester hours, 8 of which may count toward the master's degree.

The following courses have been added to the graduate offerings of the department.

A. Under the General group (pp. 65-66): 429 - Field Geology (3 semester hours. May not be applied toward a major or minor in the Department of Earth Sciences.); 439 - Aviation Institute (4); 490 - Field Methods (2); 560 - Procedures and Techniques in the Reporting of Research in the Earth Sciences (2); 670 - Independent Research in Geology or Geography (1-3 semester hours and may be repeated to a maximum of 6 semester hours).

B. Under "Geography" (pp. 67-68): 462 - Urban Geography (2); 657 - Advanced Studies in Geography (2 semester hours and may be repeated to a maximum of 4 semester hours).

C. Under "Geology" (pp. 68-69): 440 - Optical Mineralogy (4); 446 - Historical Geology (3); 669 - Advanced Studies in Geology (2).



## EDUCATION

The scope and titles of several courses (pp. 74-86) have been changed. New course titles: 415 - Education of Exceptional Children; 435 - Contemporary American Public Education; 521 - Seminar in Adolescent Behavior; 523 - Seminar in Secondary Education; 592 - Philosophical Analysis of Educational Thought; 603 - Research in Education.

The credit allowed for certain courses (pp. 74-86) has been changed as follows: 510 changed from 2 to 3 semester hours; 654 from 3 to 2; 655 from 3 to 2; 657 from 3 to 2.

Two changes should be made in the description of course 496 (p. 79). In paragraphs (a) and (b) under "Secondary School," course 486 should be shown as carrying 5 semester hours of credit instead of 3 semester hours.

The course listed as a prerequisite for courses 564 and 567 (p. 83) should be 460 instead of 560.

The following courses should be deleted from the departmental listings: 465 and 569.

The following courses have been added to the graduate offerings of the department: 424 - Guidance of Learning (3); 514 - Seminar in Elementary Education (3); 515 - The Teacher in the Elementary School (2); 580 - Seminar in Guidance and Counseling (3); 582 - History of European Educational Thought (3); 599 - Reading Institute (1 or 2); 605 - Experimental Research (3 semester hours and may be repeated to a maximum of 6 semester hours); 611 - Advanced Child Study (3); 612 - Practicum in Child Study (3); 633 - Seminar in American Educational Thought (3); 656 - School Administration Field Studies (2).

## ENGLISH

The following statement should appear immediately before the paragraph captioned "Certificate of Advanced Study" (p. 87):

### Comprehensive Examination

All candidates for a master's degree with a major in English who enter the Graduate School after September, 1959, 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.

## HISTORY

The credit allowed for each 500 and 600 course in the department (pp. 98-99) has been increased from 2 to 3 semester hours.

The correct title of course 423 (p. 97) is "Intellectual and Social History of the United States, 1607-1860."

The following courses have been added to the graduate offerings of the department: 424 - Intellectual and Social History of the United States, 1860 to Present



(3 semester hours); 428 - American Social Reform Movements Since 1865 (3); 431 - The Reformation (3); 433 - History of Ideas-II (2); 435 - Twentieth Century Europe (3); 439 - Southeast Asia (3); 440 - Summer Institute in Asian Civilizations (6); 524 - Seminar in Western American History (3 semester hours and may be repeated to a maximum of 6 semester hours); 526 - Independent Study in American History (3 semester hours and may be repeated to a maximum of 6 semester hours); 535 - Seminar in Asian History (3 semester hours and may be repeated to a maximum of 6 semester hours).

## HOME ECONOMICS

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.

Following is a summary of the programs offered to students who wish to pursue work leading to a master's degree in Home Economics. Detailed information regarding the requirements in specific areas may be obtained from Dr. Catherine A. Rockwood, Head of the Department of Home Economics.

### Master of Science

Majors offered: Food and Nutrition, Marriage and Family Life. Area majors: Marriage and Family Life with Psychology or Sociology; Child Development with Psychology or Education.

### Master of Science in Education

Majors offered: Child Development and Nursery School Education; Home Economics Education. Area majors: Food and Nutrition; Home Economics Education.

### Graduate Course Offerings

408 - Educational Statistics (3 semester hours); 410 - Nutrition and Dietetics (3); 430 - Participation in the Nursery School (4); 438 - Parent Education (3); 441 - Family Relationships (3); 450 - Workshop in Home Economics (1-3); 500 A, B, C, D, - Seminars: Readings and Reports in the Areas of Home Economics (2); 504 - Research Methods (3); 505 - Individual Research Problems (1-3); 509 - Marriage and Family Life (3); 512 - Child Development and Nursery School Education (3); 520 - Curriculum in Home Economics (3); 521 - Evaluation in Home Economics (3); 525 - Supervision of Student Teaching in Home Economics (3); 534 - Nursery School Administration and Procedure (3); 547 - Advanced Nutrition (3); 549 - Experimental Foods I (3); 550 - Experimental Foods II (3); 552 - Infant and Child Nutrition (2); 560 - Nutrition Education for Elementary and Secondary School Teachers (3); 601 - Problems in Home Economics (1-3 semester hours and may be repeated to a maximum of 6 semester hours).

## JOURNALISM

The title of course 435 (p. 104) has been changed from "School Publicity" to "Publicity Methods."

The following courses have been added to the graduate offerings of the department: 400 - History of Journalism (2 semester hours); 450 - School Publications (3); 451 - Teaching Journalism (2); 460 - Law of the Press (2); 470 - The Industrial Press (3); 490 - Readings in Journalism (2).

## **LIBRARY SCIENCE**

The department does not offer a master's degree. However, its courses are available as a minor in graduate study, as well as a source of further training for teacher-librarians.

### **Graduate Course Offerings**

413 - History of Books and Libraries (2 semester hours); 414 - The American Library Movement (2); 421 - Bibliography of the Humanities (3); 422 - Bibliography of the Social Sciences (3); 424 - Bibliography of the Sciences (2); 433 - The Library in the Modern School (3); 434 - The Public Library as a Service Organization (3); 500 - Workshop (1-3); 512 - Advanced Cataloging and Classification (3); 515 - College and University Libraries (3); 516 - Special Libraries (2); 520 - Colloquium (1 semester hour and may be repeated to a maximum of 2 semester hours); 530 - Special Problems in Librarianship (1-4).

## **MUSIC**

The following courses have been added to the graduate offerings of the department: 430 A, B, C, D - Piano (1 semester hour each); 431 - Piano (1); 440 - Voice (1); 450 - Private Woodwinds (1); 460 - Private Strings (1); 470 - Private Brasses (1).

## **PHILOSOPHY**

The scope of courses 420 and 488 (p. 118) has been modified, and the course titles have been changed accordingly. The correct title of 420 is now "Philosophy of Language" and of 488, "Philosophical Issues."

The following courses have been added to the graduate offerings of the department: 440 - Theory of Knowledge (3 semester hours); 450 - Advanced Ethics (3); 465 - Twentieth Century Philosophy (3); 495 - Special Studies (2-4 semester hours and may be repeated to a maximum of 8 semester hours).

## **PHYSICAL EDUCATION FOR MEN**

One course has been added to the summer session graduate offerings of the department: 544 M - Workshop in Athletic Coaching (1 semester hour).

## **PHYSICAL EDUCATION FOR WOMEN**

One course has been added to the graduate offerings of the department: 569 - Independent Study in Health, Physical Education, and Recreation (1-3 semester hours).

## PHYSICS

The number for the course titled "Quantum Mechanics II" (p. 128) has been changed from 461 to 560.

The title of course 470 (p. 129) has been changed to "Electricity and Magnetism II."

The title of course 480 has been changed to "Atomic Physics I."

The title of course 482 has been changed to "Nuclear Physics I."

The title of course 485 has been changed to "Methods of Mathematical Physics II."

The title of course 563 has been changed to "Quantum Statistics."

The title of course 580 has been changed to "Atomic Physics II."

The title of course 582 has been changed to "Nuclear Physics II."

The title of course 585 has been changed to "Theoretical Physics I."

The listing of course 664 should be deleted. The contents of this course are being included in 563.

The following courses have been added to the graduate offerings of the department: 463 - Kinetic Theory and Statistical Mechanics (3 semester hours); 581 - Nuclear Physics Laboratory (2); 660 - Quantum Mechanics III (3); 670 - Quantum Electro-dynamics (3); 685 - Theoretical Physics II (3).

## PSYCHOLOGY

The Department of Psychology does not offer a graduate degree. However, the following courses may be taken for graduate credit and may provide a minor for students majoring in other fields: 415 - Psychology of Exceptional Children (3 semester hours); 416 - Introduction to Psychopathology (3); 428 - History and Systems of Psychology (3); 465 - Developmental Psychology (3); 569 - Individual Intelligence Testing (3).

## SOCIAL SCIENCES

The following course has been added to the offerings in Political Science: 443 - Comparative European Governments (3).

The credit designation for Political Science 495 (p. 137) should be 2-4 semester hours.

Delete Political Science 546 (p. 137).

