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FALL QUARTER, 1943

September 7, Tuesday .......... Freshman Registration and Payment of Fees
September 8, Wednesday, Upper Class Registration and Payment of Fees
September 9, Thursday ........ Classes Begin, First Convocation
October 9 ................................ Homecoming Day
October 25, 26, 27, 28, 29, 30, inclusive,
    Monday to Saturday Noon .......... Preregistration
November 19, 20, 22, 23, Friday, Saturday, Monday, Tuesday ....
    .................................... Final Examinations
November 23, Tuesday (5:10 p.m.) .......... Fall Quarter Ends

WINTER QUARTER, 1943-1944

November 29, Monday .......... Registration and Payment of Fees
November 30, Tuesday .......... Classes Begin
December 17, Friday (5:10 p.m.) ..... Christmas Vacation Begins
January 3, Monday .......... Classes Resume
January 31, February 1, 2, 3, 4, 5, Monday to Saturday Noon,
    inclusive .......... Preregistration
February 22, 23, 24, 25, Tuesday to Friday, inclusive . Final Examinations
February 25, Friday (5:10 p.m.) .......... Winter Quarter Ends

SPRING QUARTER, 1944

February 28, Monday .......... Registration and Payment of Fees
February 29, Tuesday .......... Classes Begin
April 8, Friday .......... Founder's Day
May 1, 2, 3, 4, 5, 6, Monday to Saturday Noon, inclusive, Preregistration
May 12, 15, 16, 17, Saturday to Wednesday .......... Final Examinations
May 20, Saturday .......... Alumni Day and Class Day
May 21, Sunday (2:00 p.m.) .......... Commencement Exercises

SUMMER SESSION, 1943

First Term, June 14, Monday, to July 17, Saturday
Second Term, July 20, Tuesday, to August 21, Saturday
BOARD OF TRUSTEES

ROBERT WILLIAMS, President of the University
(Ex-Officio)

MR. JOHN H. CLARK, President
MR. E. J. BROOKHART, Vice President
MR. CHARLES R. WILSON, Secretary

ELECTED BY THE CONFERENCE

BISHOP H. LESTER SMITH
(Ex-Officio)

Initus | Exitus
-------|-------
1905 Mr. John H. Clark, LL. B., LL. D. | Marion 1943
1942 Rev. B. F. Reading, D. D. | Toledo 1943
1918 Mr. E. J. Brookhart, LL. B., LL. D. | Celina 1944
1919 Mr. W. W. Morral, D. Eng. | Morral 1945
1939 Mr. E. S. Matthias, LL. D. | Columbus 1945
1922 Mr. E. C. Edwards | Toledo 1946
1941 Rev. D. Finley Wood | Fostoria 1946
1922 Rev. E. L. Motter, D. D. | Columbus 1947

ELECTED BY THE NORTH EAST OHIO CONFERENCE

1930 Mr. Jay P. Taggart, LL. B., LL. D. | Cleveland 1944
1938 Rev. Howard W. Peterson, D. D. | Mansfield 1943
1942 Rev. J. E. Priestley, D. D. | Wooster 1945

ELECTED BY THE ALUMNI

1933 Mr. Charles R. Wilson, Ph. G. | Ada, 1943
1939 Mr. Harry R. Meredith, LL. B. | Lima 1944
1940 Mr. D. D. Ewing, D. Eng. | Lafayette, Ind. 1945
1941 Mr. William J. Hazeltine, C. E. | Mansfield 1946
1942 Mr. Bert R. Mull, Ph. G. | Indianapolis, Ind. 1947

AT LARGE, ELECTED BY THE TRUSTEES

1934 Mr. James J. Pilliod, D. Eng. | New York, N. Y. 1942
1935 Mr. Charles H. Lewis, LL. D. | Harpster 1943
1935 Mr. Benjamin F. Fairless, D. Eng. | Pittsburgh, Pa. 1943
1937 Mr. Donald S. Hoskins, LL. B. | Columbus 1943
1934 Mr. Ben R. Conner | Ada 1944
ADMINISTRATIVE OFFICERS AND FACULTY*

ROBERT WILLIAMS, M. A., D. D., LL. D.
President
B. A., Wesleyan University; M. A., Boston University; D. D., Albion College; LL. D., Ohio Wesleyan University; LL. D., Boston University.

DEMASS ELLSWORTH BARNES, M. A.
Assistant to the President
A. B., Ohio Northern University; M. A., Harvard University.

**Z. LAVERNE EWING, M. A.
Treasurer
B. S. in Bus. Adm., M. A., Ohio State University.

ELIZABETH MAY LEWIS, M. S.
Treasurer
B. Ed., Illinois State Normal University; M. S., University of Illinois; University of Chicago, one summer.

MAE McADOW FIDDLE, M. A.
Registrar
B. S., Hiram College; M. A., Ohio State University.

AGNES AUTEN, B. A.
Librarian
B. A., Bluffton College; Drexel Institute School of Library Science.

HARVEY EVERT HUBER, M. A.
Dean of George Franklin and Sarah Catherine Getty
College of Liberal Arts and Professor of Biology
B. A., Ohio Northern University; M. A., Yale University; Yale University, one year; University of Wisconsin, one summer.

JOHN ALFRED NEEDY, M. S. in M. E., M. E.
Dean of the College of Engineering and
Professor of Mechanical Engineering
B. S. in M. E., M. E., University of Kentucky; M. S. in M. E., Purdue University; Ohio State University, one summer.

RUDOLPH HENRY RAABE, PHAR. D.
Dean of the College of Pharmacy and
Professor of Pharmacy
B. S., Ph. G., Ph. C., Ohio Northern University; Phar. D., University of Havana.

* Professors and instructors arranged according to seniority.
** Resigned January 1, 1943.
CLAUDE WESTCOAT PETTIT, B. A., LL. M.

Dean of the College of Law and
Professor of Law

B. A., Ohio State University; LL. B., Western Reserve University; LL. M., George Washington University; Old Trinity, Dublin, Ireland, one quarter.

307 Union Street

JOHN AUSTIN POTTER, B. D., D. D.

Dean of Men and
Professor of Biblical Literature

B. S., Ohio Northern University; B. D., Northwestern University (Garrett); University of Chicago, two summers; Columbia University, one summer; Union Theological Seminary, one summer; D. D., Ohio Northern University.

228 East North Avenue

ALVA TOLF, M. A.

Dean of Women and Director of
Women's Health and Physical Education

B. S., Coe College; M. A., University of Chicago.

506 South Main Street

FRANK LEWIS LOY, M. A.

Director of the Division of Teacher Training and
Professor of Education

B. S. in Ed., Ohio Northern University; M. A., Columbia University; University of Chicago, one summer; Columbia University, one summer.

414 South Main Street

CLYDE ALBERT LAMB, M. A.

Director of the Department of Health and Physical Education and
Professor of Health and Physical Education

B. S., Coe College; M. A., Columbia University; Columbia University, two summers.

805 South Simon Street

CLIFFE DEMING, M. A.

Professor of Speech

B. O., B. A., M. A., Ohio Normal University; Emerson College of Oratory.

601 South Main Street

CHILDE HAROLD FREEMAN, B. S., LIT. D.

Professor of English Literature

B. S., Ohio Normal University; Lit. D., Taylor University; University of Chicago, one summer.

317 West University Avenue

FRANK LEWIS BERGER, M. S.

Professor of Physics

B. A., Ohio Northern University; B. S., University of Chicago; M. S., Ohio State University.

121 East Lehr Avenue
WILLIAM PETER LAMALE, M. A.

*Professor of Piano and Organ* 312 West Buckeye Avenue

Bus. B., Oberlin College Conservatory; Student with Tobias Matthay and Matilda Verne, London, one year; Student, Piano, Ernest Hutcheson, Lake Chautauqua, one summer; Piano Student with Edwin Hughes, two summers; Student in Piano with Scionti, American Conservatory, one summer; M. A., Ohio State University.

WILFRED ELLSWORTH BINKLEY, PH. D.

*Professor of History and Political Science* 803 Union Street

B. S., Ohio Northern University; B. A., Antioch College; M. A., Ph. D., Ohio State University.

EDWIN VERGON SMITH, B. A., LL. B.

*Professor of Law* 803 South Main Street

B. A., LL. B., Ohio Northern University; Columbia University, two summers.

ALEXANDER RAFFEN WEBB, M. S. E., C. E.

*Professor of Civil Engineering* 316 South Johnson Street

B. S. in C. E., Armour Institute of Technology; M. S. E., University of Michigan; C. E., Armour Institute of Technology.

WINONA PEARL GEETING, M. A.

*Professor of Education* 528½ South Main Street

Normal Diploma, Teachers' College, Miami University; B. S. in Ed., Miami University; M. A., Ohio State University; Ohio State University, one summer; University of Illinois, one summer.

LOUIS ROWELL HERRICK, PH. D.

*Professor of Modern Languages* 304 South Gilbert Street

B. S., Amherst College; M. A., Ph. D., University of Wisconsin; University of Paris, one summer.

*HAYDN OWENS, M. MUS., M. A.

*Professor of Voice* 718 South Main Street

M. M., American Conservatory of Music, Chicago; B. S. in Ed. and M. A., New York University. Private work, Eduardo Sacedote, Chicago; Richard Hageman, New York; Albert Wolf, Paris (Operatic coaching and conducting); Michael Raucheison (German Lieder) and Arthur Rosenstein (Opera), Berlin, Germany; Conductor, Haydn Choral Society, Chicago; Assistant Conductor Boston Opera Company; Coach and accompanist with leading artists on tour.

GEORGE HORACE MCFADDEN, PH. D.

*Professor of Chemistry* 927 South Main Street

B. S., Muskingum College; B. S. in Phar., M. S., Ph. D., Ohio State University.

*Deceased, July 13, 1942.*
DONALD STUART PEARSON, M. S. IN E. E.
Professor of Electrical Engineering
B. S. and M. S. in E. E., Case School of Applied Science.

325 West University Avenue

Dawson Gerald Fulton, Ph. D.
Professor of Mathematics
B. A., Acadia University; M. Sc., Ph. D., University of Michigan; University of Michigan, one semester and one summer; Nova Scotia Summer School for Teachers, one summer.

805 South Main Street

Raymond Anson Dobbins, Ph. D.
Assistant Professor in Biology
B. S., Ohio Northern University; B. A., M. S., Ph. D., Ohio State University.

620 Union Street

Lawrence Freeman, M. A.
Assistant Professor of English
B. A., Ohio Northern University; M. A., University of Michigan; University of Cambridge, England, one summer.

724 South Gilbert Street

George Willard Patton, M. A.
Assistant Professor of Economics and Business Administration
B. Ph., Emory University; M. A., University of Kentucky; Graduate Student and teaching fellow, five years, Northwestern University.

327 West University Avenue

Donn Willard Watson, B. P. S. M., M. Sc. in Ed.
Assistant Professor of Violin and Public School Music
B. P. S. M., M. Sc. in Ed., Indiana University; University of Michigan, one summer. Private work, Violin study with Emil Baren, Robert Perutz, and Jean ten Have at Cincinnati Conservatory. Principal Viola with Indianapolis Symphony, 1912-18 and 1932-34.

520 North Main Street

*Milton Louis Neuroth, B. S. in Phar., M. S.
Assistant Professor of Pharmacy
B. S. in Phar., M. S., Purdue University.

327 West University Avenue

Dorance Rex Lowman, M. S.
Assistant Professor of Industrial Arts
B. Sc. in Ed., M. A., Ohio State University.

307 Turner Avenue

**Thomas Newell Ewing, Ph. D.
Assistant Professor of Psychology
B. A., DePauw University; M. A., Syracuse University; Ph. D., Duke University.

307 South Gilbert Street

* Resigned January 4, 1943.
** Entered U. S. Army, September 21, 1942.
Ella Irick
Instructor in Junior Music Department
521 South Gilbert Street
Music Student in Ohio Northern University; Lake Chautauqua, four summers; Normal training with Miss Woods and Miss Robyn; Course in Dunning System with Miss Eddy; one summer, American Conservatory, Chicago.

*Harold Gibson Davidson, M. A.
Instructor in Music
424½ South Main Street
Academic Diploma, Cincinnati Conservatory of Music; B. A., M. A., Ohio State University; Teachers' College, Columbia University, one year.

**John Alan Kramer, M. D.
Physician in Charge of Health Service and Instructor in the Department of Health and Physical Education
310 North Main Street
B. A., Miami University; M. O., Ohio State University.

Mary Margaret Gillespie, M. A.
Instructor in Latin and Assistant Librarian
528 South Main Street
B. Ed., Illinois State Normal University; M. A., University of Chicago; University of Wisconsin, three summers.

George W. Klein, B. S. in E. E.
Instructor in Department of Mechanical Engineering
216 East Montford Avenue
B. S. in E. E., Michigan State College.

***Hazel E. Landeen, M. S.
Instructor in Pharmacy
716 South Johnson Street
Ph. C., B. Sc., University of Minnesota; M. S. in Phar., State University of Montana.

Mildred Lee Youngs, M. A.
Instructor in Physical Education
Bryn Mawr Apartment No. 5
B. S., Michigan State College; M. A., Ohio State University; Kingswood Institute, one summer; American Red Cross Motor Corps.

****Alfred Paul Koch, M. S.
Instructor in Economics and Business Administration
Bryn Mawr Apartment No. 3
B. S. in Bus. Ed., State Teachers' College, Bloomsburg, Penna.; M. S. in Commerce and Finance, Bucknell University; State Teachers' College, Louisburg, Penna., one summer; State University of Iowa, one summer.

* Resigned December 1, 1942.
** Entered U. S. Army, September 11, 1942.
*** Resigned September 18, 1942.
**** Resigned September 8, 1942.
*Charles Elmer Fiddler, M. A., LL. B.*
Instructor in Law
A. B., M. A., Ohio University; LL. B., Ohio State University.

**Elmer Benjamin Wixom, M. S.**
Instructor in Chemistry
B. S., Cornell University; M. S., Purdue University; Purdue University, two years.

**Millard E. Murphy, B. S.**
Instructor in Health and Physical Education
B. S., Ohio Northern University; Columbia University, three summers.

**Margaret Hughes Lamale, B. Mus.**
Instructor in Voice

**Sturgiss Brown Davis, Ph. D.**
Instructor in Mathematics
A. B., Ohio Wesleyan University; A. M., Ohio State University; Ph. D., University of Pennsylvania; Yale University, one year.

**Raymond O. Clymer, B. P. S. M.**
Director of Choral Music
B. S., Otterbein College; B. P. S. M., Otterbein College; Ohio State University, seven months. Studied one year with Frank LaForge, New York City, New York.

**James Harold McHugh, A. B., LL. B.**
Instructor in Law
A. B., LL. B., Ohio Northern University.

**Margaret Dorothy Eamberger, M. A.**
Instructor in Economics and Business Administration
A. B., Bowling Green College of Commerce; M. A., University of Kentucky.

**Phyllis June Scholl, B. S. in Phar.**
Instructor in Pharmacy
B. S. in Phar., Purdue University.

**Eleanor Messerly, R. N.**
Nurse
R. N., St. Luke's Hospital, Cleveland, Ohio.

* Entered United States Army, August 31, 1942.
MARY MARTHA KOCH, R. N.
Nurse
R. N., Lima Memorial Hospital, Lima.

ILO RUTTER
Secretary in the Alumni Office
118 West Montford Avenue
Graduate in Stenography, Ohio Northern University; Actual Business College, one year.

IRENE POUNDS
Secretary to the President
620 Union Street
Ohio Northern University, three years.

DORIS MESSENGER, A. B.
Secretary to the Business Office
415 North Johnson Street
A. B., Ohio Northern University.

HELEN LOUISE ARNOLD
Secretary to the Director of Teacher Training,
Dean of Men and Dean of Women
723 Union Street
B. S. in Ed., Ohio Northern University.

*ANNA FRANCES BENTLEY
Secretary to the Registrar
245 West Buckeye Avenue
Ohio Northern University, two years; Office Training School, one year.

ELLEN WIBBELER
Secretary to the Dean of Engineering
620 Union Street
Ohio Northern University, two years.

* Resigned, January 1, 1943.
COMMITTEES OF THE FACULTY

1942-1943


ARTIST-LECTURE: Deming, Tolf, L. Freeman, Lamale, Lewis.

ADMISSION: Fiddler, Huber, Raabe, Needy, Pettit.

CATALOGUE: L. Freeman, Editor; Huber, Needy, Pettit, Raabe.

CHAPEL: Potter, Tolf, Deming, Lamale.

CLASSROOM ASSIGNMENTS: Pearson, McFadden, Patton.

COMMENCEMENT: Loy, Deming, Watson, Fiddler.

DISCIPLINE: Binkley, Geeting, Smith, Deming, Lamb.

GRADUATE INTERESTS: Binkley, Herrick, Webb, Auten, McFadden.

HEALTH SERVICE: Lamb, Raabe, Potter, Tolf.

PLACEMENT BUREAU: Loy, Pettit, Huber, Needy, Raabe.

LOAN COMMITTEE: Lewis, Potter, Tolf.

STUDENT PUBLICATIONS: L. Freeman, Berger, Lamale, Smith, Lewis.

STUDENT WELFARE AND SOCIAL CALENDAR: Potter, Tolf.

ORIGIN AND DEVELOPMENT

HISTORICAL SKETCH

On August 14, 1871, in a three-story building where the Lehr Memorial now stands, the Northwestern Ohio Normal School was formally opened. Henry Solomon Lehr, the founder and president, stated in his first catalogue that the purpose of the school was "the instruction and training of teachers in the science of education and the art of teaching and the best methods of governing schools." For many years the school was one of the outstanding private institutions offering professional training to elementary and high school teachers.

On May 19, 1885, the State of Ohio issued a charter to the institution under the name of the Ohio Normal University. In 1898, the Central Ohio (now the Ohio) Conference of the Methodist Church purchased the school from Doctor Lehr and his associates. In 1904, the University was renamed the Ohio Northern University, and in December, 1907, the charter was amended. Throughout the years the institution continued to grow and to enlarge its field of activities.

In 1880, the Department of Civil Engineering was established and when the demand for engineers increased this department was organized as the College of Engineering with additional departments in electrical and mechanical engineering.

In 1884, the laws of Ohio required that all pharmacists should be registered. To meet the demand for trained and qualified pharmacists the Department of Pharmacy was established. Later this department was organized as the College of Pharmacy.

The College of Law was established in 1885. Not only have its graduates been successful as practitioners but they have also distinguished themselves in the field of public affairs; at the same time four of its graduates were members of the United States Senate—two from Ohio, one from Indiana, and one from Kentucky. Two of the graduates of the College of Law were members of the Ohio Supreme Court.
The College of Liberal Arts was reorganized in 1910. The College of Liberal Arts not only offers well organized curricula in pre-medicine, pre-law, pre-dentistry, and pre-theology but also through its various divisions (1) Language, Literature, and Art, (2) Natural Sciences, (3) Social Sciences, and (4) Teacher Training, it provides strong curricula leading to the degree of Bachelor of Science in Education or Bachelor of Arts.

Location

Ohio Northern University is located in Ada, an attractive and enterprising town in Northwestern Ohio. Situated on the Pittsburgh, Fort Wayne and Chicago division of the Pennsylvania railroad, and on State Route 69, two miles north of the Harding Highway (Route 30S), and four miles south of the Lincoln Highway (Route 30N), and nine miles south of the Dixie Highway (Route 25), the University is easily accessible by railway or motor bus.

Organization Features

The University year is divided into three quarters of approximately equal length, designated as Fall, Winter and Spring. Early in the Fall quarter, the Freshman, Sophomore, Junior and Senior classes are formally organized under the direction of a member of the faculty. Student classification is based upon credit hours and quality points. Each student is required to present a certificate from the Registrar showing his eligibility to participate in class organization and honors.

Summer Session

Ohio Northern University has been one of the pioneer institutions in maintaining a summer session which has been readily adapted to the accelerated program of education and training for war work. The Summer Session is composed of two terms of five weeks each, six days a week in the College of Liberal Arts and one term of ten weeks each in the Colleges of Engineering, Pharmacy and Law. The first term of the 1943 Summer Session opens June 15 and closes July 18; the second term begins July 21 and closes August 22.

The purpose of the Summer Session is to provide opportunity for regular college students to work towards a college degree or other professional goals and thus shorten the time required for the completion of their program. By continuing in residence during summers, many students complete their four-year course in three years.
All departments in the College of Liberal Arts offer academic courses for those desiring courses in their field of major interest. The Division of Teacher Training offers an extensive program of professional courses for elementary teachers, high school teachers, and teachers and supervisors of health and physical education, public school music, commerce, and industrial arts.

For many years the Summer Session has been popular with teachers who have come from many sections of the country to acquire information and knowledge essential to success and to gain inspiration for future service. The spirit that prevails on the campus throughout the Summer Session has proved a lasting influence in the lives of many teachers.

**Aims and Objectives**

The University has as its aims and objectives the development of curricula for professional training in the fields of Education, Engineering, Law, and Pharmacy, and for instruction in the Arts and Sciences. Each curriculum, as well as the institutional life, comprises activities of such scope, variety and intensiveness, as will provide for the student:

(a) Adequate background courses in the major fields of human endeavor represented by the principal divisions of subject matter which constitute a liberal school education;

(b) Intensive preparation in the specific field in which the student plans to work;

(c) Opportunities contributing to good health, ethical insight, moral conduct, and fundamental Christian character;

(d) The efficient control and use of his mentality and the development of such scholarly interests as will stimulate life-long intellectual growth;

(e) Opportunities for participation in such activities as will strengthen the social and cultural equipment of the student;

(f) Such an understanding of the development and nature of modern society, that he may approach critically the solution of its problems.

**Affiliations**

Ohio Northern University holds membership in the Ohio College Association. The College of Pharmacy belongs to the American Association of Colleges of Pharmacy. The College of Law is a member of the League of Ohio Law Schools and is provisionally approved by the American Bar Asso-
CAMPUS BUILDINGS AND EQUIPMENT

The University owns over 100 acres of ground in and around Ada, providing ample room for present needs and future expansion.

The Central Campus lies a few blocks south of the railroad. Here in this central quadrangle, easily accessible from any part of the village, are located the following buildings:

Lehr Memorial, a modern three-story fire-proof building, housing the offices of the administration, the Lehr Auditorium, Young Women’s Christian Association, Alumnae Hall, and the Northern Review office, is located in the center of the quadrangle. Lehr auditorium, with a seating capacity of 1,237, provides an ample lecture and concert hall. The building was erected in 1915 and dedicated to Henry Solomon Lehr, the founder of the University.

Hill Memorial, a two-story fire-proof building, named in honor of John Wesley Hill, Sr., contains the College of Engineering, the laboratories for Electrical Engineering and the Departments of Physics and Mathematics.

Dukes Memorial, located at the south end of the campus, contains the College of Pharmacy, the Department of Chemistry, the Health Service Dispensary, and a departmental library and reading room.

Brown Memorial, situated at the north end of the front campus, houses the laboratories and equipment of the Department of Industrial Arts.

The Power Plant in back of Hill Memorial is a unit of modern design, including a large, well-lighted laboratory for mechanical engineering students.

The College of Law, named in honor of Warren G. Harding, occupies a splendid building north of the Central Campus on the corner of Main Street and University Avenue. It contains class rooms, together with the Law library and study room, and the General Library and reading room. This building was erected and dedicated in 1925.

The Department of Biology occupies a two-story structure located at the corner of Gilbert street and College avenue. Nearby is an experimental Greenhouse.
Presser Music Hall, bearing the name of Theodore H. Presser, is a modern three-story structure with splendid auditorium, sound-proof practice rooms, class rooms, and studios.

Taft Gymnasium, named in honor of John H. Taft, the principal donor, is situated at the corner of Union street and West University avenue. It contains twenty-six rooms. In addition to the main basketball court with its galleries and bleachers, having a seating capacity of 1,800, there are a volley ball court, two auxiliary playing courts, a fencing room with bleachers, examination rooms with first aid equipment, a running track, faculty club room, offices for coaches and members of the faculty of physical education, and the physical education classrooms. The cluster lights at the entrances are the memorial gift of the Class of 1928. The building is erected on ground purchased in part as a memorial gift by the Classes of 1926 and 1927.

Laboratories

The various laboratories of the University have modern equipment. Special laboratories are located in the following buildings: Dukes Memorial, Hill Memorial, Biology Building, and Power Plant.

Athletic Field

Adjacent to the Taft Gymnasium is the University Athletic Field containing a well-drained and heavily sodded football gridiron, encircled by a cinder running track with 120-yard straightaway. There are also two auxiliary gridirons, a baseball diamond, and tennis courts.

Residences for Women

All non-resident freshmen women are required to live in Turner Hall or in one of the other approved residences for first-year women. (This regulation does not apply to a woman who is commuting or to one who is doing work in exchange for her room). The Terrace is reserved for upper-class women. A list of other approved residences will be furnished upon application to the Office of the Dean of Women. No agreement between student and housemother is recognized by the University until arrangements have been approved by the Dean of Women.

Turner Hall

Turner Hall, a stately residence, rich in its university associations, is assigned to freshmen women. This home, which was built by Henry Solomon Lehr, recently came into the possession of the University from Mr. and
Mrs. Perry W. Turner, in whose honor it is named. Throughout it has been furnished so as to make an attractive, comfortable home, all equipment being selected to meet the social and intellectual needs of the students.

**THE TERRACE**

The Terrace, built by S. M. Johnson, a pioneer resident of Ada, and acquired by the University in 1939, is assigned to upper-class women. The second floor of this colonial residence accommodates sixteen girls and a house director. An attractive lounge and kitchenette complete the house plan.

The fraternities for women rent their own residences and maintain them under the supervision of the Dean of Women and an approved resident housemother. Freshmen women are not permitted to live in the fraternity houses.

**GENERAL INFORMATION**

**Assemblies**

Convocations are held twice weekly, Tuesday and Thursday. The aim is not only to recognize the duty and privilege of regular devotions, but to foster a university spirit by bringing together in one assembly the students of the several departments to listen to practical addresses and talks from members of the faculty and others, and to be entertained by those connected with the Departments of Music and Speech. Attendance is compulsory.

**CLASS PERIODS**

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Following the description of each course offered in the University the
days and periods of class assemblies are indicated.

MORAL AND RELIGIOUS CULTURE

Much attention is given to awakening and fostering an aspiration to
attain the highest type of Christian manhood and womanhood.

Although the University is the property of the Ohio Conference of
the Methodist Church, it is in no sense sectarian. Students of all religious
denominations are received on equal terms and treated with equal consid-
eration. They are urged to identify themselves with the work and partici-
pate regularly in the services of the church of their choice. The six churches
of the city cordially welcome students to their religious and social meetings
and Bible classes. The following denominations are represented: Method-
dist, Presbyterian, Lutheran, Church of Christ, Baptist, Roman Catholic
and a Grace Gospel Tabernacle.

The Department of Religion and Philosophy affords an opportunity
to those who wish to take up the study of religious problems to fit them-
selves for life’s work.

THE YOUNG MEN’S CHRISTIAN ASSOCIATION has an enthusiastic or-
ganization in the University and wields a most wholesome influence on the
lives and habits of the students.

THE MINISTERIAL ASSOCIATION, composed of young men studying
for the ministry of various denominations, holds weekly meetings. Its pur-
pose is to aid in developing a spiritual and practical outlook on the Chris-
tian ministry through contacts with men already in active service in the
church.

WOMEN’S ORGANIZATIONS

THE ASSOCIATION OF WOMEN STUDENTS. Under a grant of powers
from the University Administration, the Association of Women Students
was organized to further social and intellectual cooperation among the wo-
en students. Each woman student is a member of the Association and is
directly represented on the House Council and Legislative Board by the
president of her residence unit. The Executive Board endeavors to co-ordi-
nate the activities of all women’s groups on the campus and to plan a con-
structive social program. The Dean of Women is adviser for A. W. S.
THE YOUNG WOMEN'S CHRISTIAN ASSOCIATION. It is the purpose of the Y. W. C. A. to strengthen and develop the spiritual life of its members and to furnish fellowship by a varied type of weekly meetings, by its social affairs, and by its contact with state and national conferences. Each fall the Y. W. C. A. arranges the details of the Big-Little Sister program during Freshman week. An Advisory Board, composed of faculty women and the Dean of Women, assists the organization with its program.

THE WOMEN'S ATHLETIC ASSOCIATION. For those women interested in constructive opportunity for organized sports, the Women's Athletic Association offers a well-rounded and interesting program of intramural competition, sport clubs, and social affairs. The Director of Physical Education for Women is adviser to the group.

OMEGA PHI KAPPA. This group is sponsored by the World Fellowship Group of the Y. W. C. A. Its aim is “Every woman of the University world today a leader of the Church of Tomorrow.”

ROUND TABLE FOR FRESHMEN WOMEN
As an aid in adjustment to campus life a weekly Round Table for freshmen women is held under the direction of the Dean of Women. At these meetings various guest speakers talk informally on those problems of orientation most frequently presented to first-year women students.

MUSICAL ORGANIZATIONS

CHORAL SOCIETY. The Ohio Northern University Choral Society is made up of both University students and townspeople, and membership is open to all singers who love and appreciate good music. They present “The Messiah” every December.

A CAPPELLA CHOIR. A vested chorus of approximately sixty-five carefully selected and trained men and women sing the highest type of music, mostly of sacred character. Frequent appearances in the immediate vicinity of the University are made each year.

UNIVERSITY ORCHESTRA. An orchestra is organized each year to take up standard works of the great composers and to play at concerts of the Choral Society and on other occasions.

UNIVERSITY BAND. Ohio Northern has long been proud of its fine band, which is one of the oldest organizations on the campus. During the Fall quarter the band appears at all home football and basketball games.
The annual concert is presented during the Winter quarter; only music of the highest quality is used.

A Music Festival, including leading choral and orchestral works, with well known vocal and instrumental soloists, is given each spring.

Recitals. Faculty and student recitals are held each quarter. An artists’ course is maintained by the University, and additional soloists and ensembles are introduced.

DEBATING AND DRAMATICS

The Ohio Northern Debating Association is a member of the Ohio Intercollegiate Debate Conferences for both men and women. There are other intra and inter-state forensic contests for either men’s or women’s teams. Membership is open to any student interested in the object of the association. Teams are selected and assisted in their training by a faculty committee.

The Northern Players, a dramatic club sponsored by the Department of Speech, present several plays each year. Enrollment in this club is open to all students of the University, except Freshmen, who pass the try-outs. The following major productions were given public presentation during the year 1941-42:

The Eve of St. Mark
What a Life
Charlie’s Aunt
Outward Bound

The Freshman Players is an organization composed of Freshmen who secure a preliminary training and experience in public presentations.

TECHNICAL ORGANIZATIONS AND LITERARY CLUBS

Among the technical organizations and literary clubs are the following: The American Institute of Electrical Engineers, The American Society of Civil Engineers, The American Society of Mechanical Engineers, Biology Club, Commercial Club, Junior Bar Association, The Pharmaceutical Association, Student Affiliates of the American Chemical Society, and Radio, Press, French, Toastmasters’, and Onesia Club.
HONORARY SOCIETIES

ALPHA PHI GAMMA. Students who have shown ability in journalism as evidenced by meritorious work on the student publications are eligible to membership in this national society.

THETA ALPHA PHI. A national honorary dramatic organization to which students showing promise of histrionic ability are eligible.

KAPPA KAPPA PSI. A national honorary band organization to encourage study in this phase of musical endeavor. A gold key is given to those who have completed four years' service in the band.

SIGMA KAPPA PI. An honorary foreign language society open to superior students from all language fields, who have done very good work in the language in which they major and above average in all subjects, and who hold a standard of 1.75 quality points per hour.

PHI LAMBDA PI. An honorary fraternity whose purpose is to create greater interest in the study of biology and to promote high scholarship in this department.

NU THETA KAPPA. An honorary society for men in the College of Engineering. Students in the junior and senior years who have made 1.7 quality points per hour and who stand well in class and campus activities are eligible.

FRATERNITIES

This group comprises seven national social fraternities: Alpha Epsilon Pi, Alpha Kappa Pi, Delta Sigma Phi, Phi Mu Delta, Sigma Phi Epsilon, Sigma Pi, and Theta Kappa Phi, all member of the National Interfraternity Conference; three national professional fraternities, Kappa Psi (Pharmacy), Sigma Delta Kappa (Legal), and Delta Theta Phi (Legal). The Interfraternity Council is composed of representatives from each fraternity except the two legal fraternities.

There are also three local fraternities for women. Representatives from each form the Panhellenic Association.

A certificate of eligibility must be obtained from the Dean's office as a prerequisite to initiation into any fraternity. One quarter in residence with a scholastic average of at least one quality point per credit hour is required of all candidates for initiation.
GENERAL INFORMATION

STUDENT PUBLICATIONS

The *Northern*, the annual yearbook published by the students of the University, contains a record of student activities for the year. Each student receives a copy of the book at the close of the Spring quarter as a part of the University activity program.

The *Northern Review* is a biweekly newspaper published throughout the regular year by the students of the University. Positions on the staff of the newspaper are open to all students on a competitive basis. Scholarships are awarded annually to the editor-in-chief and business manager.

The *Northern Handbook* is published annually by a staff comprised of members of the Y. M. C. A. and Y. W. C. A. and is the gift of these organizations to the freshman class.

The chairman of the Faculty committee on Student Publications serves as adviser to these publications.

ATHLETICS

Ohio Northern is a member of the Ohio Athletic Conference and is represented by strong teams in football, basketball, tennis, and track. A well-rounded program of intramural sports is carried out, under proper direction, which aims to provide some form of activity for each student.

HEALTH SERVICE

The University employs the services of a physician and two registered nurses for the purpose of providing efficient health service to the student body. It maintains its own infirmary and dispensary. Each student is entitled to this health service which includes a yearly medical examination, office consultation and treatment by a physician, medicines from the University dispensary and the use of the infirmary in case of illness. Each student is entitled to ten days treatment in the infirmary without charge except for meals, special medicines, and treatment. The Department of Health and Physical Education keeps an accurate record of the physical condition of each student and provides instruction in personal health care.

The Department of Health and Physical Education, in addition to being a service department for the entire University, is accredited by the State Department of Education for the training of teachers of physical education.
ENDOWED SCHOLARSHIPS

1. The Mr. and Mrs. Serge F. Edwards Scholarship ($2,500.00). The beneficiary to be chosen by the donors from the graduates of the Leipsic High School.

2. The Mrs. J. H. Edwards Scholarship ($2,500.00). The beneficiary to be a student preparing for the ministry or some other special work of the church.

3. The George Franklin Getty Scholarship ($1,000.00).

4. The James E. and Caroline Purvis Scholarship ($1,000.00).

5. The Ralph Parlette Scholarship ($1,000.00).

6. The Pleasant Hill Society of the Roundhead Circuit of the Methodist Church Scholarship ($1,000.00).

7. The Justin Brewer Scholarship ($1,000.00).

8. The Rutter-Taggart Scholarship ($2,500.00). Students who are in need of financial assistance, and who have attained scholastic standing in the upper third of their college class are eligible for the income from this scholarship. Preference in awarding this scholarship will be given to students in the College of Law.

9. The Ralph Sealand Scholarship, established by Mrs. Arabella Canfield Sealand, in memory of her son, of $2,415.20, the income of which may be awarded by the president of the University to any undergraduate beyond the freshman year in any college of the University on the basis of need, character, ability, promise of usefulness, and scholastic attainment.

10. The David and Catherine Kegerreis Albright Scholarship, ($5,000.00).

LOAN FUND

A limited number of worthy students who are members of the Methodist Church may secure loans from the Student Loan Fund administered by the Board of Education of that Church. Christian character, satisfactory scholarship, promise of usefulness, financial responsibility, and the recommendation of the church to which the applicant belongs are essential to a loan. Each borrower must sign an interest-bearing promissory note.

ALUMNAE LOAN FUND FOR WOMEN

The National Alumnae Association in 1935 established a loan fund for women students. Senior women are given preference by the committee on awards. Details and blanks may be secured from the Dean of Women.
General Information

Self-Help

It is strongly recommended that every student entering the University should arrange to finance at least one quarter's expenses before entering. This will afford the student an opportunity to come in personal touch with the employers of Ada and provide ample time to begin his academic or professional work. For information concerning scholarships, loans, employment, etc., make application at the offices of the Dean of Men or the Dean of Women.

General and Departmental Honors for Scholarships

The names of recipients of general and departmental honors are announced publicly each year on University Recognition Day.

Lehn and Fink, Inc., New York, gives a gold medal to the pharmacy student accomplishing the most toward the advancement of pharmaceutical science.

Mrs. Avanell Stambaugh of Ada, Ohio, gives $20.00 a year for winners in the song contest.

Two prizes of $12.50 each are awarded to the man and woman who excel in scholarship, campus activities, and personal qualities.

Dr. Walter F. Rittman gives $25.00 to the senior engineer having the highest number of quality points.

Hon. Arthur D. Tudor gives $25.00 to the senior having the highest number of quality points in the College of Law.

A prize of $25.00 is awarded to the senior having the highest number of quality points in the College of Liberal Arts.

Mr. C. R. Wilson gives $25.00 to the senior having the highest number of quality points in the College of Pharmacy.

An endowment for a Pharmacognosy prize provides a medal to be awarded annually to the senior in the College of Pharmacy having the highest number of quality points in Pharmacognosy.

Government

Students of the University are expected to possess qualities of character and to maintain certain levels of scholarship. The rules and regulations of the University pertaining to conduct and scholarship are enforced. Students may be dismissed for moral delinquencies and for continued low scholarship. Students who obviously are at variance with the spirit and ideals of the institution may be dismissed for the good of the University, even though no specific offense be charged against them.
The opportunities and advantages of the University are offered to all sincerely desiring to develop the best in themselves and aiming at a broad culture and a thorough preparation for useful service.

The University aims to develop a wholesome type of physical, social, intellectual, moral, and religious life. It believes the best preparation for life is that which furnishes opportunity during college days for students to come in contact with men and women of high ideals, broad culture, and sympathetic understanding of life. All the activities of the University therefore are devoted to the development of men and women so that they may find places of real happiness and usefulness in the modern world.

With this objective in mind the University does not seek to impose burdensome restrictions, but it does seek and expect full cooperation on the part of the faculty and students in the achievement of these ideals.

Warning and Probation

It should be the aim of each student to maintain a scholarship rating equivalent to at least one quality point for each credit hour for which he is registered. This is the minimum graduation standard throughout the University.

The average scholarship rating in terms of quality points is found by dividing the total number of scheduled hours for which the student has registered into the total number of quality points earned. For example, 50 scheduled hours and 75 quality points indicate a scholarship rating of 1.5; 16 scheduled hours and 8 quality points indicate a scholarship rating of 0.5.

Freshmen making a scholarship rating of less than 0.5 quality point per scheduled hour, sophomores and juniors making less than 0.7 quality point per scheduled hour, and seniors making less than 1.0 quality point per scheduled hour during the quarter are sent a notice of warning from the office of the Dean. If the student should again fail to meet the standards in the quarter for which he is warned, he is placed on probation for the following quarter of residence, with the request that his scholarship be brought up to at least one quality point average for each hour scheduled. Failure to meet this academic requirement will subject the student to the action of the Academic Council.

Grade Marks and Quality Points

The credit value of a course is expressed in hours, an hour of credit being given for the satisfactory completion of work requiring one class exer-
should be sent with application. The deposit will be kept as a fee to cover breakage until the end of the college year or until the expiration of residence. No room will be leased for less than one quarter.

Immediately upon arrival, women should report to the Dean of Women and men to the Dean of Men for an official list of recognized householders.

ADMINISTRATION

Admission

Application for admission should be made on the blank which will be found at the back of this catalogue. This should be filled out in full and mailed to the office of the registrar.

All necessary information not contained in this catalogue will be mailed to the prospective student.

Graduates of first grade high schools, approved academies, or preparatory schools, who present fifteen certified and properly distributed units will be admitted to any of the colleges of the University except the College of Law. (See individual college section for proper distribution of units and other entrance requirements).

Only men and women of good moral character are admitted to the University. Students submitting transcripts from other colleges or universities must furnish evidence of honorable dismissal. Work from other schools will be evaluated by the Committee on Admissions. Students transferring from another school will not be granted admission in the absence of official transcript.

The credited statement of entrance units sent by the principal of the school directly to the University must be in the office of the University Entrance Examiner at least ten days prior to the opening of the quarter, to avoid delay in registration.

Students who are deficient in credits may take entrance examinations the first day of the quarter if they make application in advance.

Mature students not working for a degree may be admitted to the University provided they give satisfactory evidence that they are qualified to pursue the subjects in which they are interested. If such "special students" desire to become candidates for a degree they must qualify before the end of the first year's residence.
Upon admission to the University each student is placed in charge of an adviser. The adviser, a member of the faculty, is appointed by the Dean of his college.

The duty of the adviser is to counsel the student in regard to the planning of courses, the selection of studies, and to aid him in the problems of his college life and work.

After completing 90 quarter hours the student must elect the department in which he desires to major, and the professor in charge of that department then becomes his adviser.

Pre-Registration and Registration

Pre-registration and registration days are indicated in the calendar. Pre-registration is devoted to conferences with advisers and making the student's schedule of classes for the following quarter. Registration day is given over to the payment of tuition. Failure to attend to these duties on the proper day will subject the student to an extra fee of $3.00 for late registration. This does not apply to new registrants. Students who register after registration day may find it necessary to reduce the number of credit hours. Reduction will be made in proportion to the time lost.

Attendance

Regular and prompt attendance at all class and laboratory exercises is expected of every student. The student is responsible to the instructor for all work missed on account of absence. Instructors make a daily report of all absences to the Dean of Men or the Dean of Women.

Requests for excuses must be presented in writing to the Dean of Men or the Dean of Women within 24 hours after class or laboratory work is resumed. All excuses for absence due to illness must be obtained from the University physician. Instructors are not authorized to grant excuses for absences from their classes.

For each unexcused absence from class or laboratory appointments, the total number of quality points earned during the quarter is reduced by one-half point. Absences the day before or the day after a regular college holiday or recess involve the deduction of one quality point for each absence.

Chapel attendance is required except when excused by the Dean of Men or Dean of Women. Three unexcused absences are allowed each quar-
ter. One-fifth hour credit is deducted from the student’s total credit for each convocation missed above three.

Withdrawing a Course

The student is held responsible for the work scheduled on the registration card. No course may be dropped or changed except by consent of the Dean and the student’s adviser. Withdrawal from a course without proper procedure shall be checked as a failure in the course.

In case a student wishes to drop or change a course, it must be done within the first week of the quarter. A charge of $1.00 is made for each withdrawal or addition of a course after the first week.

Any student wishing to withdraw from the College in which he is registered must notify the Dean of his intentions. Failure to do this will jeopardize the standing of the student.

Regulations

1. Mid-term examinations are held at the discretion of the instructor. Final examinations are held at the close of each quarter.

2. All students must be present at final examinations. Absence from any final examination, unless caused by sickness or other unavoidable conditions, will result in a failure in the course.

3. A student absent from examinations may on presenting a satisfactory excuse receive permission from the Dean to take the examination at a later time.

4. All “X” grades must be removed within the first eight weeks of the next quarter in attendance to obtain credit without repeating the work in class.

5. All required courses in which a grade of F is made must be taken again in class the first quarter in which the subject is given after the failure occurs.

6. All incompletes must be removed within eight weeks of the beginning of the next quarter in attendance in order to obtain credit without again taking the work in class. In case this matter is not attended to, the mark will lapse into a failure.

Extension Courses

In order to meet the needs of teachers in service and others the University maintains an Extension Department. Classes will be organized in
centers where there is sufficient demand. Students enrolling in these courses are expected to do the regular college work. Not more than one-fourth of any curriculum leading to a degree or diploma shall be taken in extension classes. No courses are offered by correspondence.

For information write the Director of Extension Courses.

DEGREES

The work of the University is entirely undergraduate.

In order to graduate in any course the student must have one quality point per scheduled hour.

No student who has not been in residence for at least three quarters may be a candidate for a degree.

Final credits offered toward graduation must be earned in residence, except for students completing arts-professional combination courses.

Application for senior rating and graduation must be made to the Registrar at the end of the junior year.

The appropriate bachelor's degree is given upon the completion of courses as outlined in the four colleges of the University.

A diploma is given in the three-year course in education.

As a condition for graduation the University insists upon a satisfactory use of English.

Degrees are conferred at the commencement exercises which are held at the close of the Spring quarter. Seniors who have finished their work at the close of any previous quarter are expected to be present at the commencement exercises. Those whose work will be finished by the close of the Summer School are entitled to the privileges of the senior class, but their diplomas are not issued until the requirements for graduation are fully met.

SENIOR HONORS

Two classes of senior honors are recognized and conferred at graduation: honors with distinction granted to those who have a quality point average of 2.3 with no grade below D; and honors with high distinction granted to those who have a quality point average of 2.6 with no grade below C. These honors in scholarship are recorded on the diplomas, recognition is given at commencement, and the names of the recipients are printed in the catalogue. To receive senior honors a student must be in residence at Ohio Northern at least six quarters.
THE GEORGE FRANKLIN
AND SARAH CATHERINE GETTY
COLLEGE OF LIBERAL ARTS

Harvey Evert Huber
Dean
ADMISSION TO COLLEGE OF LIBERAL ARTS

Graduates from first grade high schools or accredited academies whose credits show proper distribution of units are admitted, without examination, on presentation of properly signed entrance certificates. Blanks for this purpose may be had by addressing the Registrar. If the student presents fifteen acceptable units for entrance but is deficient in certain of the prescribed units, the deficiencies as far as possible shall be made up as part of the regular work of the freshman year. Deficiencies must be made up outside the college schedule, necessitating a reduction of the number of college courses carried while making up entrance deficiencies. The quality of the high school record is an important index of probable success in doing college work.

An applicant from another college seeking advanced standing must present evidence of honorable dismissal and an official transcript of his college record.

Mature persons without special preparation not desiring to earn a degree may enter any department and pursue the studies they choose, if, on consultation, the head of the department is satisfied that they have sufficient preparation to pursue the work successfully. Such applicants are classified as special students.

DIVISIONS AND DEPARTMENTS

For purposes of administration, correlation and integration the departments of the college are organized into divisions. The chairmen of the four divisions and the Dean constitute the curriculum committee of the College of Liberal Arts.

DIVISION I—Language, Literature and Arts.
(a) English Language, Literature and Speech.
(b) Foreign Language and Literature.
(c) Music.

DIVISION II—Natural Sciences.
(a) Biology.
(b) Chemistry.
(c) Mathematics.
(d) Physics.
DIVISION III—Social Sciences.
(a) Economics and Business Administration; Secretarial.
(b) Health and Physical Education.
(c) History and Political Science.
(d) Psychology and Sociology.
(e) Religion and Philosophy.

DIVISION IV—Teacher Training.
(a) Elementary Education.
(b) Secondary Education.
(c) Commercial Education.
(d) Health and Physical Education.
(e) Industrial Arts Education.
(f) Public School Music.

Under each division heading (pages 59, 75, 83 and 97) in the Liberal Arts section of this bulletin dealing with description of courses is found a general statement which is of great importance to the student. This statement calls attention to the courses that should be selected as a background preparation for advanced and intensive work in that particular division. Likewise, under the appropriate departmental heading there is a more detailed statement referring to the various courses that should be elected (some of them during freshman and sophomore years) to prepare the student for work in that department. The curriculum, therefore, will be shaped to meet as far as possible the needs, interests, and abilities of the individual student.

Courses of Study and the War Effort

From the numerous offerings of courses described under liberal arts, for example, mathematics, natural sciences, accounting, economics, secretarial studies, business administration, history and government, modern foreign languages, English, shop and drawing, students may select special groups of studies which distinctly improve their immediate contribution to the war effort.

Students should also keep in mind that their adjustments to the changed conditions following the war will depend largely upon a broad liberal education with special emphasis on an understanding of the fundamental principles of government, sociology, economics, history, psychology, religion, and science.
Division Electives

Freshmen and sophomores are given considerable freedom in the choice of courses. It is possible for the student to select such subjects for study as will serve his best interests and capacities.

In order that the curriculum may be interesting, broad and cultural, yet flexible enough to allow preparation for the various professions and needs of life, the student during his first two years in college is required to select two complete year courses in each of the first three divisions outlined above, the remainder of the work in these years being elective from any course open to a student of this rank. Ordinarily the first year schedule will include at least one year course from each division plus one or more electives.

The group electives are to be made as follows:

From Division I—Language, Literature and Arts
Nine hours of English Composition must be scheduled during the freshman year. The remaining nine hours may be elected from English Literature or Speech.

From Division II—Natural Sciences
Two complete year courses must be selected from different fields, for example, Botany, Chemistry, Mathematics, Physics, or Zoology.

From Division III—Social Sciences
Two complete year courses must be elected. Six hours of Bible are required and should be scheduled during sophomore or junior year. Bible cannot be used toward satisfying the social science requirement unless nine hours are completed. Physical education is required of all students during the first six quarters in residence, with one hour of credit each quarter, but can not be used toward satisfying this division requirement.

From Division IV—Teacher Training
Students preparing to teach in the public schools are required to meet the professional requirements in Education as indicated under this division in a later section (page 97) of this bulletin.

Major and Minor

At the beginning of the third year the student is ready to choose, if he has not already done so, one division and the department or departments within this division in which he desires to complete his major or minor, or the field of concentration. For example, a prospective chemist would choose Division II—Natural Sciences, Department of Chemistry.

The candidate for a degree must complete in a logical sequence a major of not less than 36 quarter hours and a minor of not less than 24 quarter hours. The adviser will assist the student in planning the major and minor of the field of concentration. Candidates for the degree of Bachelor of Arts who expect to teach in the public schools must meet the requirements for the major and minors as specified in the Division of Teacher Training.
Electives in Other Colleges of the University

In the College of Engineering, the College of Pharmacy, and the College of Law there are many courses described, a limited number of which may be elected by students registered in the College of Liberal Arts, thus enabling them more fully to prepare for specific vocational objectives. The student must have junior rank before electing courses in the College of Law. Students who have professional ends in view should not overlook the opportunity to elect some courses in the other colleges of the University.

This opportunity is of special importance to men and women who are preparing for certain types of war work, or to men who are seeking technical training preparatory to entering the armed forces.

Graduation

As a condition of graduation with the bachelor's degree, a student must complete 186 quarter hours (including six hours of physical education), this being the equivalent of fifteen or sixteen class exercises a week for twelve quarters. The student must have an average scholarship rating of at least one quality point for each scheduled hour.

A residence period of three quarters and the completion of 45 quarter hours, elected largely from "200" courses, in the College of Liberal Arts of this University are minimum requirements for a student admitted on advanced standing.

Students of unusual ability may, with the consent of the faculty of the College of Liberal Arts, complete their work in less than twelve quarters. Applicants for this privilege must have an average of 2.6 quality points per hour.

By continuing in residence during summers the entire college course may be completed in three years.

General Regulations

1. The student may not register for more than sixteen or seventeen hours of work unless he has received a rating of B or better in the preceding quarter. If the previous record of the student shows that he is able, the Dean may grant extra hours.

2. Candidates for the degree of Bachelor of Arts must complete a minimum of six quarter hours of work in Bible.

3. The student must notify the Dean of his choice of a major before
registering for the junior year. The Dean will then name an adviser for the student.

4. No course in which a student has received a grade of D is accepted toward a major.

5. Seniors taking certain freshman courses are not given full credit. Seniors electing freshman courses should consult the Dean.

6. Juniors and seniors are requested to schedule a majority of their courses from the "200" group.

7. For purposes of classification the minimum requirements for sophomore standing are 38 credit hours and a point average of 0.5; for junior standing, 84 credit hours and a point average of 0.7; for senior standing, 130 credit hours and a point average of 0.9.

8. Not more than one-fourth of any curriculum leading to a degree or diploma shall be taken in extension classes.

9. Application for senior rating and graduation must be made to the Registrar at the end of the junior year.

Courses Open to Freshmen

Botany 107-109, 110
Business Organization 103-105
Chemistry 101A-103A; 101-103
English 101, 102, 102A
French 101-103 or 104A-106A
German 101-103 or 104A-106A
Health Education 117
History 104-106
History 110-112
Hygiene 115
Industrial Arts 101
Latin 107-109 or 110-112
Mathematics 100, 101, 101A, 103, 103B, 105
Mathematics of Finance 121
Mechanical Drawing 111-113
Music: Theoretical and Applied
Physical Education 101-103
Physics 109-111, 109A-111A
Political Science 100, 104-106
Spanish 101-103
Speech 101-103
Stenography
Typewriting
Zoology 101-103

Combination Curricula

Combination curricula lead to the degree of Bachelor of Arts and to a professional degree, within a reduced period of time. They are designed for students who desire an academic background for their professional course.

Arts-Engineering Combination

During the first three years the student is registered in the College of Liberal Arts and must secure a minimum of 145 quarter hours of credit. Upon the successful completion of 50 quarter hours in the College of Engineering during his fourth year, with a quality point average of one or
better, the degree of Bachelor of Arts is granted. Upon fulfilling the requirements as specified in his selected engineering curriculum, the student will be awarded the appropriate degree in engineering.

Students entering with advanced credits from another college must be in residence three quarters (the third year) and complete a minimum of 45 quarter hours in the College of Liberal Arts in this University.

Students entering the Arts-Engineering combination course must conform to the rules and regulations of the College of Liberal Arts. By complying with these regulations it will be possible for the student to secure both the degree of Bachelor of Arts and the appropriate engineering degree in five years.

**First Year**

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
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<tbody>
<tr>
<td><strong>Physical Education 101</strong></td>
<td><strong>Physical Education 102</strong></td>
<td><strong>Physical Education 103</strong></td>
</tr>
<tr>
<td><strong>English 101</strong></td>
<td><strong>English 102</strong></td>
<td><strong>English 102a</strong></td>
</tr>
<tr>
<td><strong>Mathematics 101</strong></td>
<td><strong>Mathematics 103</strong></td>
<td><strong>Mathematics 105</strong></td>
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<tr>
<td><strong>Chemistry 101</strong></td>
<td><strong>Chemistry 102</strong></td>
<td><strong>Chemistry 103</strong></td>
</tr>
<tr>
<td><strong>History 110</strong></td>
<td><strong>History 111</strong></td>
<td><strong>History 112</strong></td>
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**Second Year**

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Education 104</strong></td>
<td><strong>Physical Education 105</strong></td>
<td><strong>Physical Education 106</strong></td>
</tr>
<tr>
<td><strong>Public Speaking 101</strong></td>
<td><strong>Public Speaking 102</strong></td>
<td><strong>English 118</strong></td>
</tr>
<tr>
<td><strong>Mechanical Drawing 111</strong></td>
<td><strong>Mechanical Drawing 112</strong></td>
<td><strong>Mechanical Drawing 113</strong></td>
</tr>
<tr>
<td><strong>Mathematics 107</strong></td>
<td><strong>Mathematics 108</strong></td>
<td><strong>Mathematics 109</strong></td>
</tr>
<tr>
<td><strong>Economics 121</strong></td>
<td><strong>Economics 122</strong></td>
<td><strong>Economics 123</strong></td>
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**Third Year**

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<tr>
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<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physics 104</strong></td>
<td><strong>Physics 106</strong></td>
<td><strong>Physics 105</strong></td>
</tr>
<tr>
<td><em>Sociology 151 or Political Science 101</em></td>
<td><em>Sociology 152 or Political Science 102</em></td>
<td><em>Sociology 153 or Political Science 103</em></td>
</tr>
<tr>
<td><strong>Bible 151</strong></td>
<td><strong>Bible 152</strong></td>
<td><strong>Surveying 223 or Electrical Engineering 213</strong></td>
</tr>
<tr>
<td><strong>Surveying 221 or Calculus 216</strong></td>
<td><strong>Differential Equations 212</strong></td>
<td><strong>Arts Elective</strong></td>
</tr>
</tbody>
</table>

**Fourth and Fifth Years**

Student is registered in the College of Engineering.

* Year courses in Accounting, Psychology, or Business Law may be substituted for Sociology or Political Science.

**Arts-Medicine Combination**

Upon the completion of nine quarters of work in the College of Liberal Arts, prospective medical students may be granted a leave of absence for the senior year, and receive the degree, Bachelor of Arts, upon the successful completion of the first year of work in the medical school. This
means a saving of at least one year of time. Pre-medical students are urged to give favorable consideration to the combination curriculum and receive both the degree of Bachelor of Arts from this institution and the professional degree from the medical school.

At least 140 quarter hours, exclusive of physical education, are required, which must include the required and group elective courses for the degree of Bachelor of Arts. A scholarship average of at least 1.5 points per hour is desired for recommendation to a medical school. At least 90 quarter hours must be completed in this institution.

Owing to wartime conditions the requirements for admission to medical and dental schools may be modified somewhat. The student should plan to be in continuous residence.

A medical aptitude test, prepared under the auspices of the American Medical Association, is given during the college year to students who plan to enter medical schools.

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<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
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</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102</td>
</tr>
<tr>
<td>French or German</td>
<td>French or German</td>
<td>French or German</td>
</tr>
<tr>
<td>Chemistry 101 or 102a</td>
<td>Chemistry 102 or 102a</td>
<td>Chemistry 103a or 103</td>
</tr>
<tr>
<td>Biology 101</td>
<td>Biology 102</td>
<td>Biology 103</td>
</tr>
<tr>
<td>Elective</td>
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<tr>
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<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
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<tbody>
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<td>Physical Education 104</td>
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<td>Physical Education 106</td>
</tr>
<tr>
<td>Chemistry 104</td>
<td>Chemistry 105</td>
<td>Chemistry 106</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>Psychology 102</td>
<td>Psychology 104 or 210</td>
</tr>
<tr>
<td>Biology 206</td>
<td>Biology 213</td>
<td>English 108 or 122a</td>
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<td>Elective</td>
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</tbody>
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<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>English or Speech</td>
<td>English 211</td>
<td>Embryology 218</td>
</tr>
<tr>
<td>Physics 109 and 109a</td>
<td>Physics 110 and 110a</td>
<td>Physics 111 and 111a</td>
</tr>
<tr>
<td>Chemistry 206</td>
<td>Chemistry 207</td>
<td>Elective</td>
</tr>
<tr>
<td>Bible 151</td>
<td>Bible 152</td>
<td>3</td>
</tr>
</tbody>
</table>

It is highly desirable that a course in mathematics be scheduled in freshman or sophomore year since some medical schools require mathematics for admission.

**PRE-DENTAL**

Dental schools require for admission at least two years of collegiate work, consisting of not less than 90 quarter hours (60 semester hours). The required courses are incorporated in the two-year curriculum outlined below.
Suggested electives are political science, mathematics, English literature or speech, mechanical drawing, ethics, psychology, history, and foreign language.

**First Year**

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>Physical Education</td>
<td>Physical Education</td>
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<td>101</td>
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<td>103</td>
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<tr>
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<td>English 102a</td>
</tr>
<tr>
<td>Chemistry 101</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Electives 4-5</td>
<td>Electives 4-5</td>
<td>Electives 4-5</td>
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</tbody>
</table>

**Second Year**

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
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<td>105</td>
<td>106</td>
</tr>
<tr>
<td>Chemistry 206</td>
<td>Chemistry 207</td>
<td>Ethics 203</td>
</tr>
<tr>
<td>Physics 109 or 109a</td>
<td>Physics 110 or 110a</td>
<td>Physics 111 and 111a</td>
</tr>
<tr>
<td>Biology 206</td>
<td>Biology 213</td>
<td>Electives 7-8</td>
</tr>
</tbody>
</table>

**Arts-Dental Combination**

Upon completion of nine quarters of work in the College of Liberal Arts, the student may be granted a leave of absence for the senior year, and receive the degree of Bachelor of Arts upon the successful completion of the first year of work in the dental school. These nine quarters of work must total 140 hours, including the required and group elective courses.

The general regulations are the same as for the Arts-Medicine combination course.

**Arts-Nursing Combination**

Arrangements have been made for a combined curriculum in Liberal Arts and Nursing with St. Luke’s Hospital School of Nursing, Cleveland, Ohio. The plan calls for five years of study and can be completed in five calendar years. During the academic program of three years spent at Ohio Northern University, the student completes the course as outlined below. The professional course requires thirty months in residence at St. Luke’s, consisting of twenty-seven and one-half months of instruction with ten weeks of vacation. The student has her first professional experience during the three summer months following her sophomore year. After the completion of the junior year in college she again enters St. Luke’s for the summer and continues for the remainder of her professional work. The completion of the arts-nursing curriculum leads to the degree of Bachelor of Arts and a diploma in nursing. Students who elect this combination curriculum will be expected to do better than average quality work while in college.
and to have those personal and social qualities which are so essential to success in the field of nursing.

<table>
<thead>
<tr>
<th><strong>First Year</strong></th>
<th><strong>Second Year</strong></th>
<th><strong>Third Year</strong></th>
<th><strong>Pre-Law</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall Quarter</strong></td>
<td><strong>Winter Quarter</strong></td>
<td><strong>Spring Quarter</strong></td>
<td><strong>Fall Quarter</strong></td>
</tr>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
<td>Sociology 151</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
<td>Psychology 101</td>
</tr>
<tr>
<td>Biology 101</td>
<td>Biology 102</td>
<td>Biology 103</td>
<td>Biochemistry 261</td>
</tr>
<tr>
<td>Political Science 104</td>
<td>Political Science 105</td>
<td>Hygiene 115</td>
<td>English 210</td>
</tr>
<tr>
<td>Chemistry 102a or 101</td>
<td>Elective (Foreign Language or Mathematics)</td>
<td>Chemistry 103a or 103</td>
<td>Bible 151</td>
</tr>
<tr>
<td>Elective (Foreign Language or Mathematics)</td>
<td></td>
<td>Elective (Foreign Language or Mathematics)</td>
<td>Sociology 211 or 212</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Fall Quarter</strong></th>
<th><strong>Winter Quarter</strong></th>
<th><strong>Spring Quarter</strong></th>
<th><strong>Fall Quarter</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104</td>
<td>Physical Education 105</td>
<td>Physical Education 106</td>
<td>Sociology 152</td>
</tr>
<tr>
<td>Biology 206</td>
<td>Biology 213</td>
<td>Biology 218</td>
<td>Psychology 102</td>
</tr>
<tr>
<td>Chemistry 206</td>
<td>Chemistry 207</td>
<td>Bible 153</td>
<td>Biochemistry 261</td>
</tr>
<tr>
<td>Human Physiology 211</td>
<td>Bacteriology 222</td>
<td>Bacteriology and Health 223</td>
<td>English 219</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>Elective</td>
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<tr>
<th><strong>Fall Quarter</strong></th>
<th><strong>Winter Quarter</strong></th>
<th><strong>Spring Quarter</strong></th>
<th><strong>Fall Quarter</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology 151</td>
<td>Sociology 152</td>
<td>Sociology 211</td>
<td>Mathematics 100 or 101</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>Psychology 102</td>
<td>Psychology 210</td>
<td>Mathematics 103a or 103</td>
</tr>
<tr>
<td>Biochemistry 261</td>
<td>English 211</td>
<td>Biology 230</td>
<td>History 104</td>
</tr>
<tr>
<td>English 210</td>
<td>Biology 219</td>
<td>English 212</td>
<td>Electives</td>
</tr>
<tr>
<td>Bible 151</td>
<td>Elective</td>
<td>Ethics 203</td>
<td></td>
</tr>
</tbody>
</table>

For admission to standard law schools at least 90 quarter hours (60 semester hours), exclusive of physical education, are required. If there is a probability that the student may become a candidate for the degree, Bachelor of Arts, it is recommended that the general schedule of prescribed and group elective courses be followed. Students who plan to take only two years of pre-law work may omit some of the regularly prescribed courses in order to make possible the election of additional courses in history, political science, and economics.

<table>
<thead>
<tr>
<th><strong>First Year</strong></th>
<th><strong>Winter Quarter</strong></th>
<th><strong>Spring Quarter</strong></th>
<th><strong>Fall Quarter</strong></th>
</tr>
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<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
<td>Mathematics 100 or 101</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
<td>Mathematics 103a or 103</td>
</tr>
<tr>
<td>Mathematics 100 or 101</td>
<td>Mathematics 103</td>
<td>Mathematics 112</td>
<td>History 104</td>
</tr>
<tr>
<td>History 104</td>
<td>History 105</td>
<td>History 106</td>
<td>Electives</td>
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<tr>
<td>Electives</td>
<td>Electives</td>
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A year course in laboratory science (biology, chemistry or physics) may be elected instead of mathematics. For the duration of the war it is strongly urged that the student take a year course in both mathematics and physics.
Second Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
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<tbody>
<tr>
<td>Physical Education 104</td>
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<td>Physical Education 106</td>
</tr>
<tr>
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<td>Economics 121</td>
<td>Economics 122</td>
<td>Economics 123</td>
</tr>
<tr>
<td>Elective 2-3</td>
<td>Elective 2-3</td>
<td>Elective 3</td>
</tr>
</tbody>
</table>

Alternates for Economics 121, 122, 123 are History 113, 114, 115 or History 110, 111, 112.

Arts-Law Combination

It is strongly recommended that the student plan to take at least nine quarters of work in the College of Liberal Arts, completing a total of 140 quarter hours, exclusive of physical education, and covering the prescribed and group elective courses as well as a number of "200" courses in the social sciences. Many very desirable and highly important courses preliminary to a thorough legal training are offered. The fourth year is taken as the freshman year in a standard law school. Upon the successful completion of the freshman year in law with a quality point average of 1.0 or better the degree of Bachelor of Arts is granted. After two more years of successful work in the law school the degree, Bachelor of Laws, is granted.

It should be noted that a student admitted upon advanced credit from another college must be in residence three quarters (the third year) and complete a minimum of 45 quarter hours in the College of Liberal Arts in this University.

Students entering upon the Arts-Law combination course must meet the regular entrance requirements and conform to the rules and regulations of the College of Liberal Arts.

COURSES PRELIMINARY TO PROFESSIONAL OR TECHNICAL CURRICULA

There are many fields or professions which require liberal arts courses as a foundation or include certain courses in the arts and sciences in their curricula. Many of these basic courses are offered at the Ohio Northern University. Students who desire the favorable advantages for study offered on this campus may plan to spend one or more years here, paralleling and completing some of the foundation courses, then transfer to a larger institution where the professional curriculum may be concluded.
Agriculture

The student who may ultimately look toward the completion of a curriculum in a College of Agriculture may do well to take one or two years of work in the College of Liberal Arts, scheduling the courses listed below.

First Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
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</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
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<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Biology 107</td>
<td>Biology 108</td>
<td>Biology 109</td>
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<td>Mechanical Drawing 111</td>
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Second Year

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<tr>
<td>Physical Education 104</td>
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<td>Biology 103</td>
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<td>Mathematics 103</td>
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<td>Elective</td>
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</table>

Suggested electives are courses in literature, local flora, speech and business organization.

Agricultural Engineering

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<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Chemistry 101</td>
<td>Chemistry 102</td>
<td>Chemistry 103</td>
</tr>
<tr>
<td>Mathematics 101</td>
<td>Mathematics 103</td>
<td>Mathematics 105</td>
</tr>
<tr>
<td>Mechanical Drawing 111</td>
<td>Mechanical Drawing 112</td>
<td>Mechanical Drawing 113</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Dentistry

(See page 44 for preliminary courses).

Entomology

Students who may later enter upon the study of entomology in another institution should give consideration to the schedule that follows:

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Chemistry 101 or 102</td>
<td>Chemistry 102a or 102</td>
<td>Chemistry 103a or 103</td>
</tr>
<tr>
<td>Biology 101 or 107</td>
<td>Biology 102 or 108</td>
<td>Biology 103 or 109</td>
</tr>
<tr>
<td>Mathematics 100 or 101</td>
<td>Mathematics 103b or 103</td>
<td>Mathematics 105</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>
The suggested one year program which follows is designed for students who expect to enter a College of Forestry.

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Biology 107</td>
<td>Biology 108</td>
<td>Biology 109</td>
</tr>
<tr>
<td>Mathematics 101</td>
<td>Mathematics 103</td>
<td>Mathematics 105</td>
</tr>
<tr>
<td>Chemistry 101</td>
<td>Chemistry 102</td>
<td>Chemistry 103</td>
</tr>
</tbody>
</table>

If a second year is completed at this institution, the following courses are recommended: English literature, 9 hours; economics, 9 hours; zoology, 9 hours; physics, 15 hours; and surveying, 5 hours. In some instances, depending upon the student's objectives, calculus should be elected instead of some of the other courses.

**Home Economics**

The courses indicated below, generally considered basic to the study of Home Economics, constitute the freshman year of college work.

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Chemistry 101 or 102</td>
<td>Chemistry 102a or 102</td>
<td>Chemistry 103a or 103</td>
</tr>
<tr>
<td>Biology 101</td>
<td>Biology 102</td>
<td>Biology 103</td>
</tr>
<tr>
<td>Mechanical Drawing 111</td>
<td>Hygiene 115</td>
<td>Elective</td>
</tr>
</tbody>
</table>

Electives that may be substituted for some of the courses listed above are botany, foreign language, physiology, and industrial arts.

**Journalism**

Students who have completed at least two years of study in the College of Liberal Arts and have satisfactorily met specific requirements may enter schools of journalism as regular students with advanced credit and complete work for the degree in journalism. The student should have a working knowledge of French or German and should also possess some skill in typing.

Professional editorial courses in schools of journalism are offered on the assumption that the student has a broad foundation in the knowledge of liberal subjects calculated to enrich the mind. Other courses are offered as a preparation for work in special and critical fields (music, government, science, art, etc.) and newspaper management. The courses outlined serve as foundational work for professional courses in journalism.
### Ohio Northern University

#### First Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>French, German or Spanish</td>
<td>French, German or Spanish</td>
<td>French, German or Spanish</td>
</tr>
<tr>
<td>Biology 101 or Chemistry 101a</td>
<td>Biology 102 or Chemistry 102a</td>
<td>Biology 103 or Chemistry 103a</td>
</tr>
<tr>
<td>American History 113</td>
<td>American History 114</td>
<td>American History 115</td>
</tr>
<tr>
<td>English 121 or Public Speaking 101</td>
<td>English 122 or Public Speaking 102</td>
<td>English 122a</td>
</tr>
</tbody>
</table>

#### Second Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104</td>
<td>Physical Education 105</td>
<td>Physical Education 106</td>
</tr>
<tr>
<td>English 103</td>
<td>English 104</td>
<td>English 105</td>
</tr>
<tr>
<td>Economics 122</td>
<td>Economics 122</td>
<td>Economics 123</td>
</tr>
<tr>
<td>American Government 103</td>
<td>American Government 103</td>
<td>American Government 103</td>
</tr>
<tr>
<td>French, German or Spanish</td>
<td>French, German or Spanish</td>
<td>French, German or Spanish</td>
</tr>
<tr>
<td>General Psychology 101</td>
<td>Elective (Social Science)</td>
<td>Bible 153</td>
</tr>
</tbody>
</table>

#### Laboratory Technicians (Medical)

The curriculum outlined below is designed to include the cultural and basic courses preliminary to admission to schools training laboratory technicians.

#### First Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Biology 101</td>
<td>Biology 102</td>
<td>Biology 103</td>
</tr>
<tr>
<td>Chemistry 101</td>
<td>Chemistry 102</td>
<td>Chemistry 103</td>
</tr>
<tr>
<td>Physics 109, 109a</td>
<td>Physics 110, 110a</td>
<td>Physics 111, 111a</td>
</tr>
</tbody>
</table>

#### Second Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104</td>
<td>Physical Education 105</td>
<td>Physical Education 106</td>
</tr>
<tr>
<td>Physiology 211</td>
<td>Bacteriology 222</td>
<td>Bacteriology 223</td>
</tr>
<tr>
<td>Sociology 151</td>
<td>Sociology 152</td>
<td>Sociology 153</td>
</tr>
<tr>
<td>Chemistry 105</td>
<td>Chemistry 105</td>
<td>English</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>Psychology 102</td>
<td>Psychology 210</td>
</tr>
</tbody>
</table>

#### Third Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 151</td>
<td>English 211</td>
<td>English 212</td>
</tr>
<tr>
<td>Biology 206</td>
<td>Biology 213</td>
<td>Biology 218</td>
</tr>
<tr>
<td>Chemistry 206</td>
<td>Chemistry 207</td>
<td>Chemistry 208</td>
</tr>
<tr>
<td>Biochemistry 261</td>
<td>Biology 219</td>
<td>Bible 153</td>
</tr>
<tr>
<td></td>
<td>Elective 2-3</td>
<td>Elective 2-3</td>
</tr>
</tbody>
</table>

It is highly desirable that the student have a reading knowledge of one modern foreign language, preferably German or French.
Law

(See page 46 for preliminary collegiate courses).

Optometry

In this curriculum there are listed the preliminary collegiate courses for the first one or two years. Since science and mathematics constitute core subjects preparatory to professional courses in schools of optometry, it is important that the student have an aptitude for this scientific vocation.

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Biology 101</td>
<td>Biology 102</td>
<td>Biology 103</td>
</tr>
<tr>
<td>Chemistry 101 or 101a</td>
<td>Chemistry 102 or 102a</td>
<td>Chemistry 103 or 103a</td>
</tr>
<tr>
<td>Mathematics 100 or 101</td>
<td>Mathematics 103 or 103b</td>
<td>Mathematics 105</td>
</tr>
</tbody>
</table>

If two years of work are desired, in addition to the courses outlined above, it is suggested that the student elect 18 hours of one modern language (German, French, Spanish), 9 hours of history, 15 hours of physics, and 5 hours of differential calculus.

Veterinary Medicine

Five years are required to complete a course in veterinary medicine, the first year of which consists of courses usually offered in a college of liberal arts. A first year suggested program follows:

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Biology 101</td>
<td>Biology 102</td>
<td>Biology 103</td>
</tr>
<tr>
<td>Chemistry 101</td>
<td>Chemistry 102</td>
<td>Chemistry 103</td>
</tr>
<tr>
<td>Social Science</td>
<td>Social Science</td>
<td>Social Science</td>
</tr>
</tbody>
</table>

Social science includes history, political science, psychology and economics. Courses in speech, physics, and language are desirable.

Other Suggested Curricula

Business Administration and Law

This program is planned for students who expect to enter businesses which require, in addition to a knowledge of the commercial world, some training in legal subjects. This curriculum is so designed that the major in business administration can be completed in three years and the senior year can be devoted full-time to selected courses in the college of law which will be of great aid to the modern business man. This curriculum is open only to students of above average ability.
OHIO NORTHERN UNIVERSITY

First Year

FALL QUARTER
Physical Education 101      1
English 101                  3
Mathematics 100 or 101       5
Natural Science              3.5
Business Organization 103   2
Political Science 104 or    2-3
Speech 101

WINTER QUARTER
Physical Education 102       1
English 102                  3
Mathematics 103 or 103b      5
Natural Science              3.5
Business Organization 104   2
Political Science 105 or    2-3
Speech 102

SPRING QUARTER
Physical Education 103       1
English 102a                 3
Mathematics 121              5
Natural Science              3.5
Business Organization 105   2
Political Science 106 or    2-3
Speech 103

Second Year

FALL QUARTER
Physical Education 104       1
Economics 121                3
Political Science 101        3
Psychology 101               5
Accounting 131              3
Bible 151                    3

WINTER QUARTER
Physical Education 105       1
Economics 122                3
Political Science 102        3
Psychology 102               5
Accounting 132              3
Bible 152                    3

SPRING QUARTER
Physical Education 106       1
Economics 123                3
Political Science 103        3
Business Writing 118         3
Accounting 133              3
Electives                    3.5

Third Year

FALL QUARTER
Accounting 231               5
Economics 204 or 251         3
Economics 214 or 221         3
English or Speech            3
Electives                    2-3

WINTER QUARTER
Accounting 232               5
Economics 207 or 241         3
Economics 215 or 222         3
English or Speech            3
Electives                    2-3

SPRING QUARTER
Accounting 233               5
Economics 208 or 242         3
Economics 217 or 223         3
English or Speech            3
Mathematics 214              3.5

Fourth Year

FALL QUARTER
Contracts I                   4
Personal Property             3
Torts I                      4
Business Organization I      3

WINTER QUARTER
Contracts II                  4
Real Property I               5
Torts II                     4
Suretyship or Taxation       3

SPRING QUARTER
Real Property II              5
Agency                        5
Negotiable Instruments       5

CHEMISTRY

The teaching profession and the industries as well as the field of research offer many fine opportunities to persons who have good preparation in this and related divisions of learning. The curriculum herein recommended is intended to prepare the student who is scientifically inclined to avail himself of these opportunities, and to create in his mind the desire to continue advanced study in the graduate school or research laboratory. Adjustment of the curriculum, to accommodate the student who desires to qualify as a teacher of chemistry in the public schools, will be made, provided this desire is indicated prior to the beginning of the junior year.
<table>
<thead>
<tr>
<th>Year</th>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td></td>
<td>Chemistry 101 or 101a</td>
<td>Chemistry 102 or 102a</td>
<td>Chemistry 103 or 103a</td>
</tr>
<tr>
<td></td>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td></td>
<td>Mathematics 100 or 101</td>
<td>Mathematics 103 or 103b</td>
<td>Mathematics 105</td>
</tr>
<tr>
<td></td>
<td>Mechanical Drawing 111</td>
<td>Mechanical Drawing 112</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>4-5</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second Year</td>
<td>Physical Education 104</td>
<td>Physical Education 105</td>
<td>Physical Education 106</td>
</tr>
<tr>
<td></td>
<td>Chemistry 104</td>
<td>Chemistry 105</td>
<td>Chemistry 106</td>
</tr>
<tr>
<td></td>
<td>Speech 101</td>
<td>English 201</td>
<td>English 118</td>
</tr>
<tr>
<td></td>
<td>Mathematics 107</td>
<td>Mathematics 108</td>
<td>Mathematics 109</td>
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<td></td>
<td>Physics 104</td>
<td>Physics 105</td>
<td>Physics 106</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third Year</td>
<td>Chemistry 206</td>
<td>Chemistry 207</td>
<td>Chemistry 208</td>
</tr>
<tr>
<td></td>
<td>Economics 121</td>
<td>Economics 122</td>
<td>Economics 123</td>
</tr>
<tr>
<td></td>
<td>Modern Language</td>
<td>Modern Language</td>
<td>Modern Language</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td></td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth Year</td>
<td>Bible 151</td>
<td>Bible 152</td>
<td>Bible 153</td>
</tr>
<tr>
<td></td>
<td>Chemistry 212</td>
<td>Chemistry 213</td>
<td>Chemistry 214</td>
</tr>
<tr>
<td></td>
<td>Chemistry 215</td>
<td>Chemistry 216</td>
<td>Chemistry 217</td>
</tr>
<tr>
<td></td>
<td>Modern Language</td>
<td>Modern Language</td>
<td>Modern Language</td>
</tr>
<tr>
<td></td>
<td>Physics 216-217</td>
<td>Physics 217-218</td>
<td>Physics 214</td>
</tr>
</tbody>
</table>

German is advised and will generally be required to fulfill the modern language schedule.

Students who are specially interested in physical chemistry and who plan to do graduate work in the field should in the junior year elect advanced courses in mathematics; those who plan later to do work in biochemistry or agricultural chemistry would do well to elect courses in biology; and those who are preparing to teach chemistry should elect courses in education and psychology. In the senior year candidates for the degree of Bachelor of Science in Education should omit Bible 151, 152, 153 and Physics 216, 217, 218, and 214, and elect appropriate courses in education instead. If a minor in physics is desired, Physics 220 should be elected.

**Economics and Business Administration**

With the increasing complexity of industry and commerce, the system of apprenticeship as a method of business training has become less satis-
factory. Greater opportunity in business is therefore open to the college man with business training.

The objective which the individual student seeks will determine electives chosen. For example, if accounting is the student’s objective, additional courses in this field will be elected. If the field is sales, then electives should include: retailing, salesmanship, and advertising. If general business training is desired, electives will be in the field of finance and management. In all cases electives chosen must have the approval of the adviser and Dean.

The following curriculum has been planned to meet the needs of students who expect to do graduate work in economics or business administration or who intend to enter industry after graduation from college.

<table>
<thead>
<tr>
<th></th>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>1</td>
<td>Physical Education 102</td>
<td>1</td>
</tr>
<tr>
<td>English 101</td>
<td>3</td>
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<tr>
<td>Mathematics 100 or 101</td>
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<tr>
<td>Natural Science</td>
<td>3-5</td>
<td>Natural Science</td>
<td>3-5</td>
</tr>
<tr>
<td>Speech 101 or</td>
<td></td>
<td>Speech 102 or</td>
<td></td>
</tr>
<tr>
<td>Political Science 104</td>
<td>2-3</td>
<td>Political Science 105</td>
<td>2-3</td>
</tr>
<tr>
<td>Business Organization 103</td>
<td>2</td>
<td>Business Organization 104</td>
<td>2</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104</td>
<td>1</td>
<td>Physical Education 105</td>
<td>1</td>
</tr>
<tr>
<td>Economics 121</td>
<td>3</td>
<td>Economics 122</td>
<td>3</td>
</tr>
<tr>
<td>English or Speech or</td>
<td></td>
<td>English or Speech or</td>
<td></td>
</tr>
<tr>
<td>Natural Science</td>
<td>3-5</td>
<td>Natural Science</td>
<td>3-5</td>
</tr>
<tr>
<td>Accounting 131</td>
<td>3</td>
<td>Accounting 132</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>5</td>
<td>Psychology 102</td>
<td>5</td>
</tr>
<tr>
<td>Bible 151</td>
<td>3</td>
<td>Bible 152</td>
<td>3</td>
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<table>
<thead>
<tr>
<th></th>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 204 or 214</td>
<td>3</td>
<td>Economics 207 or 215</td>
<td>3</td>
</tr>
<tr>
<td>Economics 241</td>
<td>3</td>
<td>Economics 215 or 247</td>
<td>3</td>
</tr>
<tr>
<td>Accounting 231</td>
<td>5</td>
<td>Accounting 232</td>
<td>5</td>
</tr>
<tr>
<td>Geography 219</td>
<td>3</td>
<td>Electives</td>
<td>3-5</td>
</tr>
<tr>
<td>Electives</td>
<td>2</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 245 or 236</td>
<td>3</td>
<td>Economics 246 or 247</td>
<td>3</td>
</tr>
<tr>
<td>Business Law 221</td>
<td>3</td>
<td>Business Law 222</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>9-10</td>
<td>Electives</td>
<td>9-10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 208 or 237</td>
<td>3</td>
<td>Economics 208 or 237</td>
<td>3</td>
</tr>
<tr>
<td>Business Law 223</td>
<td>3</td>
<td>Business Law 223</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>9-10</td>
<td>Electives</td>
<td>9-10</td>
</tr>
</tbody>
</table>
**Physics**

The curriculum as given is suggested for those expecting to do graduate work in physics. For those wishing to teach the physical sciences in the public schools, the curriculum may readily be modified if psychology is taken in the second year, and the professional courses in education are scheduled during the junior and senior years.

**First Year**

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Mathematics 100 or 101</td>
<td>Mathematics 103 or 103b</td>
<td>Mathematics 105</td>
</tr>
<tr>
<td>Physics 109a</td>
<td>Physics 110a</td>
<td>Physics 111a</td>
</tr>
<tr>
<td>History 110</td>
<td>History 111</td>
<td>History 112</td>
</tr>
<tr>
<td>Political Science 104</td>
<td>Political Science 105</td>
<td>Political Science 106</td>
</tr>
</tbody>
</table>

**Second Year**

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104</td>
<td>Physical Education 105</td>
<td>Physical Education 106</td>
</tr>
<tr>
<td>Physics 104</td>
<td>Physics 106</td>
<td>Physics 105</td>
</tr>
<tr>
<td>Mathematics 107</td>
<td>Mathematics 108</td>
<td>Mathematics 109</td>
</tr>
<tr>
<td>Modern Language</td>
<td>Modern Language</td>
<td>Modern Language</td>
</tr>
<tr>
<td>English 106</td>
<td>English 107</td>
<td>English 108</td>
</tr>
</tbody>
</table>

**Third Year**

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 216</td>
<td>Physics 217</td>
<td>Physics 218</td>
</tr>
<tr>
<td>Mathematics 216</td>
<td>Mathematics 212</td>
<td>Mathematics 215</td>
</tr>
<tr>
<td>Chemistry 101 or 101a</td>
<td>Chemistry 102 or 102a</td>
<td>Chemistry 103 or 103a</td>
</tr>
<tr>
<td>Modern Language</td>
<td>Modern Language</td>
<td>Modern Language</td>
</tr>
</tbody>
</table>

**Fourth Year**

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 213</td>
<td>Physics 220</td>
<td>Physics 214</td>
</tr>
<tr>
<td>Chemistry 206</td>
<td>Chemistry 207</td>
<td>Chemistry 208</td>
</tr>
<tr>
<td>Physics 216</td>
<td>Physics 217</td>
<td>Physics 218</td>
</tr>
<tr>
<td>Bible 151</td>
<td>Bible 152</td>
<td>Elective</td>
</tr>
</tbody>
</table>

**Secretarial**

Professional achievement in secretarial work is more and more dependent upon a combination of academic education plus training in vocational and technical subjects, such as typewriting, stenography, accounting, business law, business writing, and office practice. The program herein offered has a good balance between the academic and the vocational requirements of business.
The purpose of this course is to prepare men and women for the duties of private secretaries, office assistants, and other types of business positions. The program is arranged so that the student who finds it impossible to remain in continuous residence for four years, may withdraw at the close of the second or third year with sufficient training to meet the requirements of the ordinary business position, although it is obvious that the entire course should be completed to receive the maximum benefits. Graduates with the bachelor’s degree are usually given preference by employers.

### First Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Business Organization 103</td>
<td>Business Organization 104</td>
<td>Business Organization 105</td>
</tr>
<tr>
<td>Mathematics 100 or 101</td>
<td>Mathematics 103b or 103</td>
<td>Mathematics of Finance 121</td>
</tr>
<tr>
<td>Stenography 110</td>
<td>Stenography 111</td>
<td>Stenography 112</td>
</tr>
<tr>
<td>*Typewriting 101</td>
<td>*Typewriting 102</td>
<td>*Typewriting 103</td>
</tr>
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</table>

### Second Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104</td>
<td>Physical Education 105</td>
<td>Physical Education 106</td>
</tr>
<tr>
<td>*Typewriting 107</td>
<td>*Typewriting 108</td>
<td>*Typewriting 109</td>
</tr>
<tr>
<td>Economics 121</td>
<td>Economics 122</td>
<td>Economics 123</td>
</tr>
<tr>
<td>Accounting 131</td>
<td>Accounting 132</td>
<td>Accounting 133</td>
</tr>
<tr>
<td>Stenography 115</td>
<td>Stenography 116</td>
<td>Stenography 117</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>Psychology 102</td>
<td>Statistical Methods 214</td>
</tr>
</tbody>
</table>

### Third Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Problems 204</td>
<td>Money and Banking 207</td>
<td>Money and Banking 208</td>
</tr>
<tr>
<td>Accounting 231</td>
<td>Accounting 232</td>
<td>Accounting 233</td>
</tr>
<tr>
<td>Bible 151</td>
<td>Office Practice 130</td>
<td>Bible 153</td>
</tr>
<tr>
<td>Natural Science</td>
<td>Natural Science</td>
<td>Natural Science</td>
</tr>
<tr>
<td>Political Science 101 or 201</td>
<td>Political Science 102 or 202</td>
<td>Political Science 103 or 203</td>
</tr>
<tr>
<td>Geography 219</td>
<td>Elective</td>
<td>Elective</td>
</tr>
</tbody>
</table>

### Fourth Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risks, Risk-Bearing and Insurance 251</td>
<td>Business Law 222</td>
<td>Public Finance 217</td>
</tr>
<tr>
<td>Business Law 221</td>
<td>Business Finance 215</td>
<td>Business Law 223</td>
</tr>
<tr>
<td>Marketing 241</td>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td>Business Finance 214</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Elective</td>
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</tr>
</tbody>
</table>

* No credit toward the degree of Bachelor of Arts.
SECRETARIAL

This curriculum is designed for those who do not wish to complete the four year course for a degree in the College of Liberal Arts. The courses are so planned that the student can prepare for positions in business in the secretarial, clerical, and sales fields.

**First Year**

**Fall Quarter**
- Physical Education 101
- English 101
- Typing 101
- Stenography 110
- Business Organization 103
- Public Speaking 101
- Political Science 104

**Winter Quarter**
- Physical Education 102
- English 102
- Typing 102
- Stenography 111
- Business Organization 104
- Public Speaking 102
- Political Science 105

**Spring Quarter**
- Physical Education 103
- English 102a
- Typing 103
- Stenography 112
- Business Organization 105
- Business Writing 118
- Political Science 106

**Second Year**

**Fall Quarter**
- Physical Education 104
- Typing 107
- Stenography 115
- Psychology 101
- Economics 121
- Accounting 131

**Winter Quarter**
- Physical Education 105
- Typing 108
- Stenography 116
- Office Practice 130
- Economics 122
- Accounting 132
- Electives

**Spring Quarter**
- Physical Education 106
- Typing 109
- Stenography 117
- Mathematics of Finance 121
- Economics 123
- Accounting 133

**Theology**

The suggested outline of studies which follows will be found to meet the entrance requirements of practically all theological schools. Many seminaries urge that the student have a thorough knowledge of the social sciences and include in their suggestions at least one natural science, such as biology or geology. This outline includes a broad and liberal course which will enable the student to appreciate his graduate studies to the fullest extent. The courses given plus the emphasis throughout upon Christian idealism will bring about a realization of the most important aim of this department which is to produce for the world well equipped, spiritually-minded young men who will minister to the needs of their communities in every possible way.
### First Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Biology 101</td>
<td>Biology 102</td>
<td>Biology 103</td>
</tr>
<tr>
<td>Speech 101</td>
<td>Speech 102</td>
<td>Speech 103</td>
</tr>
<tr>
<td>History 110</td>
<td>History 111</td>
<td>History 112</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
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</tbody>
</table>

### Second Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104</td>
<td>Physical Education 105</td>
<td>Physical Education 106</td>
</tr>
<tr>
<td>English 103 or 121</td>
<td>English 104 or 122</td>
<td>English 105 or 122a</td>
</tr>
<tr>
<td>Natural Science</td>
<td>Natural Science</td>
<td>Natural Science</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>Psychology 102</td>
<td>Psychology 104</td>
</tr>
<tr>
<td>Bible 151</td>
<td>Bible 152</td>
<td>Bible 153</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
<td>Electives</td>
</tr>
</tbody>
</table>

### Third Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophy 201</td>
<td>Logic 202</td>
<td>Ethics 203</td>
</tr>
<tr>
<td>Sociology 151</td>
<td>Sociology 152</td>
<td>Sociology 153</td>
</tr>
<tr>
<td>Bible 232</td>
<td>Bible 233</td>
<td>Church History 203</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
<td>Electives</td>
</tr>
</tbody>
</table>

### Fourth Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 214</td>
<td>English 215</td>
<td>English 216</td>
</tr>
<tr>
<td>Principles of Education 207</td>
<td>Principles of Education 208</td>
<td>History of Education 138</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
<td>Electives</td>
</tr>
</tbody>
</table>

Note: The numbers following each course indicate the number of credits.
DIVISIONS AND DEPARTMENTS
OF INSTRUCTION

All courses in the "100" group are primarily for freshmen and sophomores. All courses in the "200" group are primarily for juniors and seniors. Courses may be withdrawn or other changes made at the discretion of the Board of Trustees and the Faculty.

Division I. Language, Literature and Arts

LOUIS ROWELL HERRICK, Chairman

Students who expect to complete a major in any of the departments of this division other than English are advised to take a minimum of 18 hours in English or Speech, or both; to elect courses in history and philosophy; and to continue the study of foreign language as a preparation for advanced study.

ENGLISH LANGUAGE, LITERATURE
AND SPEECH

The work is arranged with three chief ends in view: first, to provide the student with such skill in writing and speaking that, regardless of what field of business or what profession he may later enter, he may express his ideas clearly and adequately; second, to give the student a knowledge of two great literatures, the English and the American, so that he may, after he has finished his college work, read with some critical ability, understanding, and appreciation of literature as an art and as an interpretation of life; and third, to offer advanced work to those who are planning to specialize in the field of English or American Literature as teachers.

Students majoring in English are advised to minor in French, Latin, or German, and to elect a year of English history. A minor may be completed in history.

A major in English consists of a minimum of 36 hours in addition to English 101, 102 and 102a. The department recommends the following sequence of courses: English 103, 104, and 105; English (American Literature) 121, 122, and 122a; English 210, 211, 212; English 214, 215, and 216; or English 217, 219, and 219a. English 201, 205, and 225 are required of all students majoring in English.
A minor in English consists of a minimum of 24 hours in addition to English 101 and 102. The department recommends that the student complete English 102a; English 103, 104, and 105; English (American Literature) 121, 122, and 122a, and English 201.

**ENGLISH COMPOSITION**

101. COMPOSITION  
102. COMPOSITION  
102a. COMPOSITION  

These three courses constitute a year of work for freshmen. A thorough drill in the mechanics of written English, exposition and argumentation; description and narration. Considerable attention is given to the study of the structure of the short story. Daily themes. Students who show a high degree of proficiency in English, may elect English 122a or English 105 in the place of Composition 102a. Four sections. M. W. F., 1, 2, 4, 7.  

Mr. L. Freeman

SPRING, 3 Hours

118. BUSINESS WRITING

A study of written communication in business, emphasizing the use of effective English and the technique of forms of communication. Sales, credit, collection, adjustment letters, business reports. Prerequisite: English 101, 102, 102a. M. W. F., 5.

Mr. L. Freeman

SPRING, 3 Hours

201. COLLEGE GRAMMAR


Mr. C. H. Freeman

WINTER, 3 Hours

205. EXPOSITORY WRITING

225. EXPOSITORY WRITING

A study of the various types of the essay and the writing of short themes together with longer fortnightly themes. Considerable attention is given to the familiar essay. In order to receive credit both courses must be completed. Open to all juniors and seniors. Required of all students who major in English. T. Th., 3.

Mr. L. Freeman

WINTER, 2 Hours

**ENGLISH LITERATURE**

103. FROM THE BEGINNING OF THE EIGHTEENTH CENTURY  
104. FROM THE EIGHTEENTH CENTURY TO THE VICTORIAN ERA  
105. FROM THE VICTORIAN ERA TO 1920

With the exception of the novel these three courses constitute a survey of English Literature in which the works of the chief English writers are stressed. Attention is given to the political, social, and intellectual background of the various periods. Some emphasis is placed upon the types of poetry and prose and upon versification. M. W. F., 3.

Mr. C. H. Freeman

SPRING, 3 Hours

*106. EIGHTEENTH CENTURY PROSE*

*Not given in 1943-44*
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>*107</td>
<td>Eighteenth Century Prose</td>
<td>Winter</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>In these courses a study is made of the prose of</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Defoe, Swift, Steele, Addison, Fielding, Burke,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gibbon, Johnson, Goldsmith, and Boswell. An</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>attempt is made to interpret eighteenth century</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>thought through the chief prose writers of the</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>period.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>M. W. F., 2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*108</td>
<td>Eighteenth Century Poetry</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>The poetry of the Restoration and the Eighteenth</td>
<td></td>
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<tr>
<td></td>
<td>Century. A study of the poetry of Dryden,</td>
<td></td>
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<tr>
<td></td>
<td>Pope, Collins, Burns, Cowper, Blake, and Crabbe,</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>together with some of the minor writers of the</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>period. English 106 and 107 together with this</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>course constitute a year's work in sophomore</td>
<td></td>
<td></td>
</tr>
<tr>
<td>112</td>
<td>Modern British and American Poets</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Open to sophomores. M. W. F., 6.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*121</td>
<td>American Poetry</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A study chiefly of the nine great American poets</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>of the nineteenth century, but attention is given</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>to work of the recent and contemporary poets. An</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>attempt is made to show what America has done in</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>poetry, the greatest of the fine arts. M. W. F., 3</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Mr. C. H. Freeman, Mr. L. Freeman</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*122</td>
<td>American Prose</td>
<td>Winter</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Some attention is paid to the prose of the</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Colonial period, but the following writers are</td>
<td></td>
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<tr>
<td></td>
<td>stressed: Edwards, Franklin, Irving, Hawthorne,</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Poe, Thoreau, Lowell, Emerson, Holmes, Calhoun,</td>
<td></td>
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<tr>
<td></td>
<td>Webster, and Lincoln. M. W. F., 3.</td>
<td></td>
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<tr>
<td>*122a</td>
<td>American Prose</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A continuation of English 122 with special</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>emphasis on the development of the American</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>novel. English 121, 122, and 122a constitute a</td>
<td></td>
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<tr>
<td></td>
<td>year's work of sophomore rank. Prerequisite:</td>
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<tr>
<td></td>
<td>English 101 and 102, M. W. F., 3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>210</td>
<td>Shakespeare: Histories</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>211</td>
<td>Shakespeare: Tragedies</td>
<td>Winter</td>
<td>3</td>
</tr>
<tr>
<td>212</td>
<td>Shakespeare: Comedies</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>In these courses Shakespeare is studied as a</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>dramatist, poet, interpreter of his age and of</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>human life. Attention is given to the technique</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>of the Elizabethan drama. Open to juniors and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>214</td>
<td>Nineteenth Century Poetry</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A study of the poetry of Wordsworth, Coleridge,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>215</td>
<td>Nineteenth Century Poetry</td>
<td>Winter</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A study of the chief poems of Tennyson and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Browning. Attention is given to the patriotic and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>social attitude of Tennyson and to Browning's</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ability to portray and to interpret character. M.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>W. F., 7.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>216</td>
<td>Nineteenth Century Poetry</td>
<td>Spring</td>
<td>3</td>
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<td></td>
<td>A study of the poetry of Arnold, Swinburne,</td>
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<td></td>
<td>Morris, Rossetti, Thompson, Meredith, and Kipling,</td>
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<td></td>
<td>M. W. F., 7.</td>
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</table>

* Not given in 1943-44
217. Nineteenth Century Essayists  Fall, 3 Hours
In English 217 the following essayists are studied: Coleridge, Lamb, Hazlitt, Landor, DeQuincy, Macaulay, Carlyle, Newman, Ruskin, Huxley, Pater, and Stevenson. M. W. F., 2.

219. The Nineteenth Century English Novel  Winter, 3 Hours

219a. The Nineteenth Century English Novel  Spring, 3 Hours
Courses 219 and 219a constitute a survey of the English novel of the century. The masterpieces of the major novelists from Scott to Conrad are read and studied. Attention is given to the technique of the novel. Courses 217, 219, and 219a constitute a year's work for juniors and seniors.

Mr. C. H. Freeman

231. English Problems  Fall, Winter, Spring, 1-3 Hours
Minor investigation for qualified seniors who are majoring in English. Consult head of department. Total credit may not exceed three hours.

Mr. C. H. Freeman

SPEECH

Students who expect to major in speech will do well to observe the following sequence: First year, courses 101, 102, 103; 107. Second year, courses 110, 111, 112, 113. Third year, courses 220, 221, 222, 230. Fourth year, 231, 232.

101. Public Speaking  Fall, 3 Hours
The technical side of speech is emphasized; the fundamentals of voice production, action and platform deportment; speech construction, principles and practice; selection and arrangement of material; and the development of self-confidence in thinking while before an audience. M. W. F., 1, 5 and 6.

Mr. Deming

102. Public Speaking  Winter, 3 Hours

Mr. Deming

103. Literary Interpretation  Spring, 3 Hours
The analysis of literary selections for thought and emotion content; practice in the use of the voice to interpret mental and emotional states. The work of the course deepens the student's own literary appreciation and helps him to awaken others to a fuller sense of the beautiful in literature. M. W. F., 1 and 5.

Mr. Deming

107. Speech Improvement  Winter, 3 Hours
A course dealing with the use of the speaking voice in social and professional situations; the development of pleasing and well modulated voice, distinct and acceptable pronunciation; and elimination of speech defects. Selection of poetry and prose, brief talks, reports and other speech activities are practiced. No prerequisite. M. W. F., 3.

Mr. Deming

110. Argumentation  Fall, 3 Hours

111. Argumentation  Winter, 3 Hours
Two courses given to a detailed study of the principles of argumentation; practice in brief-making and debating. No credit is given unless both courses are completed. Prerequisite: English 101, 102. M. W. F., 6.

Mr. C. H. Freeman
112. Dramatic Technic  
Mr. Deming

Fall, 2 Hours

113. Acting  
A continuation of course 112, giving opportunity to put into practice in groups the principles studied. The students take part in scenes and short plays. T. Th., 7.
Mr. Deming

Winter, 2 Hours

150. Private Speech  
Individual demands for which classroom work is inadequate are met, including platform work and speech correction. Open to all students by arrangement.

Mr. Deming

1 Hour

220. Interpretative Reading  
The art of effective oral reading. Analysis of forms of literature; technical and psychic exercises and problems; modulations of voice; speech correction; and presentation of the intellectual and emotional content of the printed page. Each student is assigned literary selections for vocal interpretation. This course is especially recommended for those who expect to teach English.

M. W. F., 2.

Mr. Deming

Fall, 3 Hours

221. Play Directing  
A laboratory course dealing with the problems of the actor in amateur plays. Practice in organizing players and presenting plays. It is expected that those who desire membership in the Northern Players will register for this course. Prerequisite: Speech 103, 220. M. W. Th., 7.

Mr. Deming

Winter, 3 Hours

222. Extempore Speaking  
This course for advanced students aims at developing facility in organization and presentation of various kinds of speech material, for example: Expository, after-dinner, pulpit, campaign, and commemorative. Platform etiquette and practice in speech are stressed. Prerequisite: Speech 101, 102. T. Th., 6.

Mr. Deming

Spring, 2 Hours

230. Intercollegiate Debate  
Members of the debate teams are selected by competitive tryouts to which any student in good standing is eligible. Intensive study, investigation, and practice on intercollegiate questions. The work is carefully supervised and credited according to the quality and quantity of work done.

Mr. Deming

Fall, 2-3 Hours

231. Shakespearean Reading  
Plays are critically studied from standpoint of platform presentation; relation of personation and impersonation; plot, incident, and character analysis. Expressional reading of selected speeches and scenes from the platform. Prerequisite: Speech 103. M. W. F., 2.

Mr. Deming

Winter, 3 Hours

232. High School Dramatics  
A careful study of the problems of amateur dramatics relating to the technique of acting and stagecraft as they affect the teacher who is called upon to direct high school plays. The director’s responsibilities and opportunities in the public school and community. Prerequisite: Some training in the speech arts or by consent of the instructor. T. Th., 7.

Mr. Deming

Spring, 2 Hours

250. Private Speech  
Limited to speech majors.

Mr. Deming

1/2 Hour
FOREIGN LANGUAGE AND LITERATURE

The modern languages are designed to meet both cultural and practical needs. The advanced courses afford opportunity for students to major or minor in French. If a student expects to do graduate work or to specialize in science, he should have a working knowledge of French or German, or both.

For a major in French the requirements are three years of college French in addition to Elementary French or the equivalent and two quarters of French Phonetics, a total of 38 hours.

For a minor in French, the requirement is two years in addition to Elementary French, a total of 24 hours.

Students majoring in this department should elect courses in English literature, history, Latin, and speech.

FRENCH

101. ELEMENTARY FRENCH

102. ELEMENTARY FRENCH

103. ELEMENTARY FRENCH

The elements of pronunciation and phonetics, essentials of grammar and easy reading. Conversation suited to the needs and abilities of the class. M. W. F., 5.

104A. INTERMEDIATE FRENCH

105A. INTERMEDIATE FRENCH

106A. INTERMEDIATE FRENCH

Further elements of grammar, practice in phonetics, pronunciation, dictation, conversation based on lantern slides and occasional illustrated lectures on salient points of French history, architecture, art, and civilization. Prerequisite: French 101-103. T. Th. F., 3.

223. MODERN LITERATURE

224. MODERN LITERATURE

225. MODERN LITERATURE

The study of typical and selected texts, illustrative of modern literary movements, such as Romanticism, Realism, Naturalism, accompanied by illustrated lectures on French life, customs, architecture, art, etc., intended as a background for assigned readings. Prerequisite: French 104-106A. In alternate years with French 231a-233a. M. W. F., 11:30.

*206A. GENERAL SURVEY OF FRENCH LITERATURE

*207A. GENERAL SURVEY OF FRENCH LITERATURE

* Not given in 1943-44
*208a. General Survey of French Literature
A study of the main literary currents and characteristic monuments of the great periods of French literature. Lectures, class discussions, assigned readings. Prerequisite: French 104a-106a. Given in alternate years with French 223-225. M. W. F., 11:30. Mr. Herrick

225a. French Phonetics
Winter, 1 Hour

226a. French Phonetics
Spring, 1 Hour

The scientific study of French pronunciation based on texts like the "Passy-Rambaud," "Chrestomathie Francaise," and Nyrop's "Mauel du Francais Parle," accompanied by lectures on historical grammar. Especially designed for prospective teachers. Hour to be arranged. Mr. Herrick

*231a. Advanced Grammar Review, Prose Composition, Conversation
Fall, 3 Hours

*232a. Advanced Grammar Review, Prose Composition, Conversation
Winter, 3 Hours

*233a. Advanced Grammar Review, Prose Composition, Conversation
Spring, 3 Hours

A thorough review of grammar, phonetics, prose composition, together with conversation and lectures based on lantern slides illustrative of French life, customs, architecture, etc. Given in alternate years with French 223-225. M. W. F., 11:30. Mr. Herrick

SPANISH

101. Elementary Spanish
Fall, 3 Hours

102. Elementary Spanish
Winter, 3 Hours

103. Elementary Spanish
Spring, 3 Hours

The elements of pronunciation and phonetics, essentials of grammar and easy reading, with conversation adapted to the needs of the class. M. W. F., 5. Mr. Herrick

104a. Intermediate Spanish
Fall, 3 Hours

105a. Intermediate Spanish
Winter, 3 Hours

106a. Intermediate Spanish
Spring, 3 Hours

Further elements of grammar and grammar review, practice in phonetics, pronunciation, dictation, conversation, based on abilities of the class and occasional lantern slide lectures on Spain. Mr. Herrick

121. Commercial Spanish
Fall, 3 Hours

122. Commercial Spanish
Winter, 3 Hours

123. Commercial Spanish
Spring, 3 Hours

The study of commercial texts with practice in pronunciation, reading and writing business Spanish. Given on sufficient demand instead of Spanish 104a, 105a and 106a. Mr. Herrick

GERMAN

101. Elementary German
Fall, 3 Hours

102. Elementary German
Winter, 3 Hours

103. Elementary German
Spring, 3 Hours

Essentials of pronunciation, grammar and composition, verb drill, and easy graded texts for reading. M. W. F., 1. Mr. Herrick

* Not given in 1943-44
104A. Intermediate German  
FALL, 3 Hours  
105A. Intermediate German  
WINTER, 3 Hours  
106A. Intermediate German  
SPRING, 3 Hours  
Grammar, pronunciation, and conversation with the reading of graded texts. Prerequisite: German 101-103, or the equivalent. T. W. Th., 2.  
Mr. Herrick

117. Scientific German  
FALL, 3 Hours  
118. Scientific German  
WINTER, 3 Hours  
119. Scientific German  
SPRING, 3 Hours  
The reading of scientific texts with particular emphasis on individual needs. Required of pre-medical students. Given on sufficient demand instead of 104A, 105A and 106A. Prerequisite: German 101-103. T. Th. F., 2.  
Mr. Herrick

LATIN

The Latin program is designed to introduce the student to the masterpieces of Latin Literature in the Republican period, the Augustan age, and the Empire. The types of literature represented include comedy, the essay, history, lyric poetry, letters and the epigram. In addition, two courses add information on the social, historical, and literary background, and one course is devoted to the study of the linguistic relationship between Latin and English.

Students majoring in Latin are advised to minor in English. Other foreign languages are suggested as electives.

Students entering with two units of high school Latin take courses 107, 108, 109, and 210 through 218. Students entering with four units of high school Latin take 210 through 218. Courses 210, 211, 212, alternate with 213, 214, 215 and 216, 217, 218, one sequence being given each year.

107. Cicero and Vergil  
FALL, 3 Hours  
108. Cicero and Vergil  
WINTER, 3 Hours  
109. Cicero and Vergil  
SPRING, 3 Hours  
Selections from Cicero’s Orations and Vergil’s Aeneid and a review of the principles of Latin grammar. Prerequisite: Two years of high school Latin. M. W. F., 3.  
Miss Gillespie

210. Livy  
FALL, 3 Hours  
Book XXI of Livy’s History and supplementary reading on the period of the Punic wars. Prerequisite: Latin 109 or four years of high school Latin. M. W. F., 4.  
Miss Gillespie

211. Horace  
WINTER, 3 Hours  
Selections from the Odes and Epodes of Horace with readings on life in the Augustan age and Horace’s philosophy of life. M. W. F., 4.  
Miss Gillespie

212. Latin-English Etymology  
SPRING, 3 Hours  
Lectures and readings on elementary linguistics and the relation of Latin to English. Open to students majoring in English. M. W. F., 4.  
Miss Gillespie
*213. Roman Private Life
Lectures and readings on Roman life and on the topography of Rome. Prerequisite: Latin 109 or four years of high school Latin. Open to social science students for history credit. M. W. F., 4.

*214. Pliny
An introduction to the prose of the Silver Age and to the life of the empire of the first century. M. W. F., 4.

*215. Martial
An introduction to the poetry of the Silver Age and to the life of the empire of the first century. M. W. F., 4.

*216. Plautus and Terence
Reading of one play of each author. Prerequisite: Latin 109 or four years of high school Latin. M. W. F., 4.

*217. Roman History and Literature
A rapid survey of Roman history from legendary times to the fall of the empire and an outline of the history of Latin literature. M. W. F., 4.

*218. Cicero’s Essays
De Senectute and De Amicitia. M. W. F., 4.

219. The Teaching of Latin
An analysis of objectives, content, and methods in the teaching of Latin and a study of textbooks and other teaching materials.

FALL, 3 Hours
MISS GILLESPIE

WINTER, 3 Hours
MISS GILLESPIE

SPRING, 3 Hours
MISS GILLESPIE

FALL, 3 Hours
MISS GILLESPIE

WINTER, 3 Hours
MISS GILLESPIE

SPRING, 3 Hours
MISS GILLESPIE

2 Hours
MISS GILLESPIE

MUSIC

AIMS

Instruction is provided for those who desire to become musicians, either as performers or as teachers, and an opportunity is afforded to those who wish to devote themselves to the literature of music. Because training in music should be based upon a broad and thorough general education, the curricula have been so constructed as to secure a symmetrical balance between musical and academic subjects.

PRESSER HALL

Presser Hall, the home of the Department of Music, built in memory of Theodore Presser, an early faculty member, cost nearly $145,000. It contains the Willis Auditorium, with a seating capacity of 500, a large stage, studios, practice rooms, and classrooms.

SPECIAL STUDENTS

A student who desires to register for work in applied music or theoretical subjects without having graduation in view, may register as a special student. There are no requirements for registration as a special student.

* Not given in 1943-44
other than evidence of talent and the ability to pursue a selected course with success.

**JUNIOR DEPARTMENT**

The applied Music Department is open to children of public school age without any restriction other than an interest and a willingness to study. In all teaching the ideal of musical feeling is sought together with beautiful tone and accurate intonation. Group playing is stressed as much as possible and students of orchestral instruments are encouraged to enter the local high school orchestra.

**BACHELOR OF ARTS WITH MAJOR IN MUSIC**

A major of 45 hours of music or a minor of 25 hours of music, is accepted toward the degree of Bachelor of Arts. The major consists of the following courses of Theoretical and Applied Music: Sight Singing and Ear Training, History of Music, Harmony, Musical Form, Applied Music and Ensemble participation. Theoretical Music should constitute about 30 hours of this major.

The courses listed above are not inflexible and may be changed to meet the requirements of the individual by consulting the Dean and the Head of the Department.

**PUBLIC SCHOOL MUSIC COURSE**

This course is approved by the State Department of Education for the training of teachers and supervisors of Public School Music. The degree of Bachelor of Science in Education is granted to students completing the Public School Music curriculum, and such persons are granted the state four-year provisional certificate.

See curriculum under Division of Teacher Training.

**GRADUATE IN MUSIC**

Students who do not desire to do work toward a degree may follow a course in professional studies in music and earn a diploma as Graduate in Music. The course may be completed in about three years. A graduation recital must be given.

**CURRICULUM FOR THE DEGREE OF BACHELOR OF MUSIC**

The degree of Bachelor of Music is granted in piano, voice, violin, or organ when the student has completed the prescribed theoretical and academic work and has reached such a stage of advancement that he can ren-
der in a finished manner a public recital consisting of representative works of the greatest composers.

**First Year**

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**Second Year**

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<td>Musical Form 211</td>
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**Third Year**

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**Fourth Year**

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* Elective for Vocal Majors.

Major studies may be selected in piano, pipe organ, voice, violin, or violoncello. In selecting organ or voice as a major study, a different adjustment of practice hours for the major and minor branches is necessary. (All major studies require two lessons per week.)

Minor studies can be taken in piano, voice, organ, violoncello, or orchestral instruments.
THEORETICAL MUSIC

101. ELEMENTARY SIGHT SINGING AND EAR TRAINING
      Fall, 2 Hours

102. ELEMENTARY SIGHT SINGING AND EAR TRAINING, Winter, 2 Hours

103. ELEMENTARY SIGHT SINGING AND EAR TRAINING
      A series of sequential courses. M. W. F., 2.
      Spring, 2 Hours
      Mr. Watson

104. ADVANCED SIGHT SINGING AND EAR TRAINING
      Fall, 2 Hours

105. ADVANCED SIGHT SINGING AND EAR TRAINING
      Winter, 2 Hours

106. ADVANCED SIGHT SINGING AND EAR TRAINING
      A series of sequential courses for sophomores. M. W. F., 4.
      Spring, 2 Hours
      Mr. Watson

109. CLASS VOICE
      A course designed for prospective teachers of vocal music in the public school.
      Spring, 2 Hours
      Mrs. Lamale

111. HARMONY
      Fall, 3 Hours

112. HARMONY
      Winter, 3 Hours

113. HARMONY
      First quarter includes study of scales, intervals, triads, use of the triad in simple part-writing
      from melodies and basses. Second and third quarters continue with the primary and secondary
      seventh chords, modulation, easy suspensions and passing tones. Original work includes
      the hymn tune and simple two and three part song-forms. Prerequisite: The ability to play
      four part music at sight. An important part of this course is the Keyboard Harmony which
      comes once a week during the Winter and Spring quarters. M. W. F., 4.
      Spring, 3 Hours
      Mr. Lamale

114. ADVANCED HARMONY
      Fall, 3 Hours
      Altered chords. Non-harmonic tones. Advanced work in chromatics and modulation. Keyboard
      Harmony continued one hour per week. Prerequisite: One year of harmony. M. W. F., 6.
      Mr. Lamale

115. HARMONIC ANALYSIS
      Analysis and discussion of chords and non-harmonic tones. Prerequisite: Advanced Harmony
      Winter, 3 Hours
      Mr. Lamale

211. MUSICAL FORM
      Spring, 3 Hours
      From the motive and song-forms to the sonata and contrapuntal forms. Materials to be analyzed:
      Mendelssohn, Songs without Words; Mozart, Sonatas; Beethoven, Sonatas; Bach, Preludes and Fugues.
      Prerequisite: Harmonic Analysis 115. M. W. F., 6.

140. CONDUCTING
      Fall, 2 Hours

141. CONDUCTING
      Winter, 2 Hours

142. CONDUCTING
      Spring, 2 Hours
      Courses in principles of conducting, concluding with conducting full band and orchestra
      scores. Prerequisite: Harmony 113. T. Th., 2.
      Mr. Watson

153. HISTORY AND APPRECIATION
      Fall, 3 Hours

154. HISTORY AND APPRECIATION
      Winter, 3 Hours
155. **History and Appreciation**  
*Spring, 3 Hours*  
These courses deal with the origin and development of music, studied from an appreciative basis. M. W. F., 3.

202. **Primary Music Methods and Observation**  
*Fall, 4 Hours*  
Two observations each week are required. Prerequisite: Advanced Sight Singing 106; Harmony 114. M. W. F., 5.

203a. **Intermediate Music Methods and Observation**  
*Spring, 4 Hours*  
Materials and methods in vocal music. Four observations each week are required. Prerequisite: Primary Methods 202. M. W. F., 7.

203b. **Intermediate Music Methods and Observation**  
*Spring, 4 Hours*  
Organization and management of bands and orchestras in the elementary school and the high school. Instrumental classes, substitution of parts, repertoire, public performances. Observation of bands, orchestras, and instrumental classes in the public school. M. W. F., 4.

204. **Junior and Senior High School Methods and Observation**  
*Winter, 4 Hours*  
The adolescent voice and its care. Two observations each week are required. Prerequisite: Intermediate Music Methods 203. M. W. F., 7.

213. **Supervised Teaching in the Primary Grades, Winter, 3 Hours**  
Prerequisite: Primary Music Methods 202.

214. **Supervised Teaching in the Intermediate Grades**  
*Fall, 3 Hours*  
(a) Practice teaching in vocal music. Prerequisite: Intermediate Music Methods 203a.  
(b) Practice teaching in instrumental music. Prerequisite: Intermediate Music Methods 203b.

215. **Supervised Teaching, Junior and Senior High School**  
*Spring, 3 Hours*  
(a) Practice teaching in vocal music. Prerequisite: Methods and Observation 204.  
(b) Practice teaching in instrumental music. Prerequisite: Intermediate Music Methods 203b.

220. **Orchestral Instruments**  
*Fall, 2 Hours*

221. **Orchestral Instruments**  
*Winter, 2 Hours*

222. **Orchestral Instruments**  
*Spring, 2 Hours*  
A study of stringed, brass and woodwind instruments designed to prepare the student for conducting school orchestras and bands. T. Th.. 5.

230. **Instrumental Ensemble Materials**  
*Winter, 3 Hours*  
Study of string, woodwind, and brass ensemble materials suitable for use in the Junior and Senior high school. Problems of the development of the ensemble. The class will use materials studied for laboratory practice. M. W. F., 3.
251. **School Orchestration**  
Prerequisites: Harmony 115; Advanced Sight Singing 106. M. W. F., 6.  
Mr. Watson  

252. **Advanced Orchestration**  
A continuation of 251, with scoring for full band and orchestra. Prerequisite: School Orchestration 251. M. W. F., 6.  
Mr. Watson  

285. **Counterpoint**  
Fall, 3 Hours  

286. **Counterpoint**  
Winter, 3 Hours  

287. **Counterpoint**  
Spring, 3 Hours  
Mr. Lamale  

Courses in strict and free counterpoint; the art of combining melodies in the various species for two, three, and four voices. M. W. F., 7.  

**Applied Music**  
A minimum of one period of practice per day is required for each hour of applied music.  

**Voice**  
These courses aim primarily to establish correct principles of breathing, tone production, diction, style, and all those phases of the work essential to success in any branch of the art of singing. A considerable amount of memorizing is required throughout the course. All vocal students are advised to study at least one modern language: French or German.  

**Voice 151, 152, 153**  
Breathing, Tone production. Exercises. Easy songs in English and foreign languages.  
Mrs. Lamale  

**Voice 154, 155, 156**  
Continuation of first year. Vocalises. Easier recitatives and arias from standard operas and oratorios. Songs in several languages.  
Mrs. Lamale  

**Voice 251, 252, 253**  
Mrs. Lamale  

**Voice 254, 255, 256**  
Mrs. Lamale  

**Piano**  
Instruction in piano playing involves a special adaptation to the needs of the individual. A minute study of each student’s deficiencies and previous habits of work is made and technical studies and selections best adapted
to his needs are given him. Music is a means of intellectual culture and artistic enjoyment; the works of the best masters are therefore employed through all grades.

**Piano 151, 152, 153**

**Piano 154, 155, 156**

**Piano 251, 252, 253**

**Piano 254, 255, 256**

**Organ**
No student will be accepted who has not reached the fourth grade in piano.

The course of study provides for thorough training in preparation for church and concert work. The course has been arranged to give a knowledge of the French school of organ music through the study of the works of the best composers in this particular school.

**Organ 151, 152, 153**
The Technique and Art of Organ Playing by Dickinson. Bach Chorales. Studies by Merkel and Whiting. Easy Hymns. Mr. Lamale

**Organ 154, 155, 156**

**Organ 251, 252, 253**

**Organ 254, 255, 256**
VIOLIN

After a thorough preparation in the fundamentals, instruction in violin includes not only the systematic development of adequate technical facility but also definite emphasis on such phases as intonation, tone production, and style, all necessary to artistic performance and interpretation. The course of study is flexible and depends upon individual needs and qualifications.

**Elementary Course**


**Intermediate Course**

Mazas Etudes, Books 1 and 2. Schradieck Technic Studies, Book 1. Sitt Scales in two and three Octaves. Solos by Dancla, Simonetti, Godard, Borowski, Bohm, and others. **Mr. Watson**

**VIOLIN 151, 152, 153**


**VIOLIN 154, 155, 156**


**VIOLIN 251, 252, 253**

Rode Caprices. Carl Flesch Scales. Concerti by Vivaldi, Rode, Mozart, Spohr, and others. Solos by Corelli, Wieniawski, Vieuxtemps, Kreisler, Sarasate, and others. **Mr. Watson**

**VIOLIN 254, 255, 256**


**REED AND BRASS INSTRUMENTS**

The course of instruction includes both private lessons and daily band rehearsals. Suitable materials for the advancement of technique and the building of repertoire will be selected to suit the needs of the individual.
Division II. Natural Sciences

Dawson Gerald Fulton, Chairman

A student who chooses one of the departments in this division for his major is advised to schedule two laboratory sciences during the freshman and sophomore years, and in most cases a course in mathematics, and to acquire a reading knowledge of a foreign language if advanced work is anticipated.

BIOLOGY

The aims of this department are to enable the student to understand better the life world in which he lives, to prepare for the teaching field, to obtain a biological foundation for the study of medicine, dentistry, and nursing, and to qualify for admission to graduate work.

A student who plans to complete a major in biology is advised to include a course in chemistry, one in physics, an introduction to statistical methods, courses in psychology and sociology, and have a reading knowledge of German and French if he intends to enter upon graduate work. A course in philosophy is strongly recommended.

101. Zoology
102. Zoology
103. Zoology

These courses are designed for students who desire a general acquaintance with some of the biological laws and theories evidenced by the animal world. A general survey of the animal kingdom based on classification, morphology, physiology, and ecology. Special attention is given to the problems of the organism, with emphasis on development, reproduction, genetics, and evolution. Section I, M. W., 3, 4; F., 3. Section 2, T. Th., 3, 4; F., 4.

Mr. Dobbins and Mr. Huber

107. Botany
108. Botany
109. Botany

These courses are presented largely as cultural courses with emphasis on careful observation and logical conclusion. The processes, structure, classification, environmental relations, distribution, and evolution of plants are considered. Section 1, M. W., 5, 6; F. 5; Section 2, M. W., 7, 8; F., 7.

Mr. Dobbins

110. Local Flora

A systematic study of the vascular plants, both native and introduced. A field course supplemented by greenhouse and herbarium studies. S., 1, 2, 3, 4; T. Th., 1.

Mr. Dobbins

206. Comparative Vertebrate Anatomy

A comparative study of the anatomy of fishes and amphibians. Careful dissections are made of the different systems and the relationships noted. Recitations three hours; laboratory, six hours.

M. W., F., 2; T. Th., 2, 3, 4.

Mr. Huber

* Not given in 1943-44
213. Mammalian Anatomy and Physiology

Winter, 5 Hours

A thorough dissection of a typical mammal with a careful correlation of structure and function. The course is designed especially for physical education and pre-medical students. Prerequisite: Comparative Vertebrate Anatomy. M. W. F., 2; T. Th., 2, 3, 4. Mr. Huber

218. Vertebrate Embryology

Spring, 5 Hours

This course is fundamentally important to students who expect to teach zoology, study medicine, or from a cultural standpoint wish to know something of the origin and development of the human body. Laboratory work is confined largely to the chick, with occasional reference to the pig. Prerequisite: Zoology 101, 102, 103. M. W. F., 2; T. Th., 2, 3, 4. Mr. Huber

219. Histology and Technique

Winter, 3 Hours

Methods of collecting, killing, preserving and preparing materials for demonstration and laboratory purposes are considered. A detailed microscopic study of various plant or animal tissues is made. Lecture and class work one hour, laboratory, six to eight hours. Time schedule to be arranged. Open to seniors majoring in biology. Mr. Dobbins or Mr. Huber

220. Biological Problems

Winter, 3 Hours

Minor investigations for qualified seniors who are taking a major or minor in biology. By arrangement any quarter. Fee depends on nature of work done. May be repeated. Mr. Dobbins or Mr. Huber

222. Plant Physiology

Winter, 3 Hours

This course consists of a critical study of some of the physiological processes of plants. Prerequisite: Botany 107, 108, 109. M. W., 3; F., 3. Mr. Dobbins

230. Heredity

Spring, 3 Hours

A study of the principles of inheritance in plants and animals. The inheritance of human traits is given considerable emphasis, and the problems of eugenics are considered. Laboratory exercises with plant and animal materials are included. Prerequisite: Zoology 101, 102, 103 or Botany 107, 108, 109. M. W. F., 1. Mr. Dobbins

*235. Evolution

Spring, 3 Hours

A course dealing with the development of the organic world, and an examination of the evidences of evolution and of the theories attempting to explain the method of evolution. Prerequisite: A year course in biology. T. Th. F., 1. Mr. Huber

Courses in Bacteriology and Human Physiology are listed in the College of Pharmacy.

CHEMISTRY

The aim is to lay the foundation for an understanding of this basic science. The four fundamental courses, general chemistry, quantitative analysis, organic chemistry, and physical chemistry studied in the order mentioned, together with allied courses in physical and social sciences, prepare the student for industrial work. In addition, by completing required courses in teacher training, preparation may be made for the teaching of chemistry in secondary schools. In anticipation of continued work in chemistry, courses in mathematics through calculus and a reading knowledge of German and French are required.

1012. Introductory Chemistry

Fall, Winter, 5 Hours

WINTER, Spring, 5 Hours

1022. Introductory Chemistry

* Not given in 1943-44
103a. Introductory Qualitative Analysis  
Spring, 5 Hours  
A series of courses designed for students who do not present chemistry for entrance credit. Courses 103a and 103a consist of a careful study of the fundamental laws of chemistry and of the properties of common non-metallic elements and their compounds; course 103a is an introductory study in qualitative analysis of acids and metals, based upon the principles of ionization, mass action and chemical equilibrium. A brief study is made of the common metallic elements and their compounds. Lecture and quiz, M. W. F., 3; laboratory, T. Th., 2, 3, 4 or 6, 7, 8.  
Mr. Wixom

101. General Chemistry  
102. General Chemistry  
103. Qualitative Analysis  
Summer, Fall, 5 Hours  
Summer, Winter, 5 Hours  
Spring, 5 Hours  
Basic courses in general chemistry. Prerequisite: One unit of high school chemistry. Lecture and quiz, M. W. F., 2; laboratory, T. Th., 2, 3, 4 or 6, 7, 8.  
Mr. Wixom

104. Quantitative Analysis  
105. Quantitative Analysis  
106. Quantitative Analysis  
Fall, 5 Hours  
Winter, 5 Hours  
Spring, 5 Hours  
These courses deal with the theory and practice of gravimetric and volumetric analysis. The use of the fundamental principles of modern theoretical chemistry, as well as the attainment of the ability to make quantitative separations and determinations, is emphasized. Prerequisite: Chemistry 103a or 103. Lecture, T. Th., 5; laboratory, M. W. F., 5, 6, 7.  
Mr. McFadden and Mr. Wixom

206. Organic Chemistry  
207. Organic Chemistry  
208. Organic Chemistry  
Fall, 5 Hours  
Winter, 5 Hours  
Spring, 5 Hours  
These courses consist of a fundamental study of the compounds of carbon. Careful attention is given to group structure, group relationship, group properties, isomerism and nomenclature. Prerequisite: Chemistry 103a or 103. Lecture and quiz, M. W. F., 5; laboratory, T. Th., 5, 6, 7.  
Mr. McFadden

209. Industrial Inorganic Chemistry  
210. Industrial Organic Chemistry  
211. Industrial Organic Chemistry  
Fall, 5 Hours  
Winter, 5 Hours  
Spring, 5 Hours  
These courses in industrial chemistry (formerly 209, 210a, 210b) are a descriptive survey of industrial chemical processes and their products. In addition to regular class work, visits at appropriate periods are made to industrial plants in neighboring cities. Prerequisite: Quantitative Analysis and Organic Chemistry. Daily, 1.  
Mr. McFadden

212. Inorganic Chemistry  
213. Inorganic Chemistry  
214. Inorganic Chemistry  
Fall, 5 Hours  
Winter, 5 Hours  
Spring, 5 Hours  
The primary purpose of these courses (formerly 211a, 211b, and 212) is to teach inorganic chemistry. Laboratory work in Courses 212 and 213 deals with advanced qualitative analysis on a semi-micro basis, and is more comprehensive than 103 in both theoretical consideration and number of elements studied. Course 214 consists of a preparation of pure inorganic compounds, and a study of the theoretical principles involved. In all these courses the Periodic Law is used as the basis for the classification of the elements and their compounds. Prerequisite: Chemistry 103 or 103a. Lecture, T. Th., 5; laboratory, M. W. F., 5, 6, 7.  
Mr. McFadden, Mr. Wixom
215. Physical Chemistry
216. Physical Chemistry
217. Physical Chemistry
A series of courses designed to develop a comprehensive conception of chemical change and the structure of matter. Laboratory work designed for these courses is done in the department of physics, courses 216, 217, 218. Prerequisite: Quantitative Analysis, Organic Chemistry, General Physics, and Mathematics 109. Lecture and quiz, M. W. F., 4.
Mr. Wixom

231. Chemistry Problems
Minor investigation in chemistry, may be elected any quarter in the senior year by any student who is qualified to carry it. Work may be started in the Fall quarter and continued through the year. Credit will be evaluated at the close of the course. This is an honor course.
Consult head of department.
Mr. McFadden, Mr. Wixom

MATHMATICS

The aim is to offer courses primarily as part of a liberal education, as requirements for engineering students and for prospective graduate students in mathematics and physics. In all courses the theory developed is followed by application to exercises and practical problems when possible.

Credits for courses 90, 91 and 92 will not count toward a minor or a major in mathematics. These credits may not be transferable to other institutions where such courses are not offered. Students in pre-professional courses of study will not count these credits as fulfilling the requirements in college mathematics. No college credit will be given to engineers for courses 90, 91, 92 and 100; however, they may be used as entrance requirements. Courses 90, 91 and 92 will be offered only when there is sufficient demand.

Students majoring in mathematics are advised to follow the sequence of courses 101 to 109 inclusive and to complete at least five quarter hours from other offerings in this department. Those planning to do graduate work in this field should complete courses 212, 215, and 216 with enough additional courses to bring the total to a minimum of forty-five hours. Physics is recommended as a minor. A reading knowledge of German or French is advised.

*90. Beginning Algebra
Fall, 3 Hours
For students who enter without any credit in high school algebra. Daily, 4.

*91. Plane Geometry
Winter, 3 Hours
For students who have no high school geometry. Prerequisite: Mathematics 90 or one unit of algebra. Daily, 4.
* Not given in 1943-44
*92. SOLID GEOMETRY
This course is the equivalent of high school solid geometry. Prerequisite: Mathematics 90 and 91 or one unit of algebra and one unit of geometry. Daily, 4.

100. INTERMEDIATE ALGEBRA
This course covers the material of advanced algebra in high school and college algebra through the solution of systems of linear equations by the method of determinants. Prerequisite: Mathematics 90 and 91 or one unit of algebra and one unit of geometry. Daily, 2.

Mr. Davis

101. COLLEGE ALGEBRA
This course covers much of the material of the traditional course in algebra with emphasis upon number theory, quadratic forms, functions and their graphs, and the theory of determinants as applied to the solution of simple sets of equations. Prerequisite: Mathematics 100 or plane geometry and one and one-half units of high school algebra. Daily, 5.

Mr. Fulton, Mr. O'Donnell

*101a. FRESHMAN MATHEMATICS

*102a. FRESHMAN MATHEMATICS

*103a. FRESHMAN MATHEMATICS
A survey course built around high school mathematics, acquainting the student with the meaning, practical uses and the possibilities in the general field of mathematics. Course continues through the year and may be elected as an alternative for science. Prerequisite: One unit of algebra and one unit of geometry. M. W. F., 4.

Mr. Davis

103b. TRIGONOMETRY
The fundamental principles of the subject are developed and applied to trigonometric reductions and to the solutions of triangles. Numerous exercises in the field of geometry, physics, and mechanics are studied. Prerequisite: Plane geometry and one and one-half units of high school algebra. Daily, 5.

Mr. Fulton, Mr. O'Donnell

103b. TRIGONOMETRY
The fundamental principles of the subject are developed and applied to trigonometric reductions and to the solutions of triangles. Numerous exercises in the field of geometry, physics and mechanics are studied. Prerequisite: Plane geometry and one unit of high school algebra. Daily, 2.

Mr. Davis

105. ANALYTICAL GEOMETRY
The purpose of this course is to acquaint the student with analytical methods of investigation and to make him more skilful in the use of algebraic processes as applied to geometric loci. Special attention is given to the equations of the right line, circle, conic sections, and the higher plane curves. Prerequisite: Mathematics 103 or 103b. Daily, 3 or 5.

Mr. Fulton

107. CALCULUS: DIFFERENTIAL
The fundamental theorems for the differentiation of algebraic, trigonometric, logarithmic, and exponential functions are taken up with numerous applications to problems in geometry, mechanics, and physics. Prerequisite: Mathematics 105. Daily, 4.

Mr. Fulton

108. CALCULUS: DIFFERENTIAL AND INTEGRAL
This course is a continuation of Mathematics 107, but giving a more extended use of differentiation to analytical functions of two or more variables with an introduction to the indefinite integral. Prerequisite: Mathematics 107. Daily, Fall 3, Winter 4.

Mr. Fulton

* Not given in 1943-44
109. **CALCULUS: INTEGRAL**  
**WINTER, SPRING, 5 Hours**  
This is a continuation of Mathematics 108, but giving a more detailed account of methods of integration by the aid of substitution, parts and reduction formulae. Integration as a summation and the definite integral with its application to problems in surfaces, volumes, moments of inertia, center of gravity and fluid pressure is studied. Prerequisite: Mathematics 108.  
**Mr. Fulton**

111a. **PRACTICAL ASTRONOMY**  
**SPRING, 3 Hours**  
This course covers spherical trigonometry with numerous applications to the fields of geodesy and astronomy. Prerequisite: College algebra and plane geometry. M. W. F., 6.  
**Mr. Fulton**

121. **MATHEMATICS OF FINANCE**  
**SPRING, 5 Hours**  
This course is designed to meet the needs of students in economics and commerce. It treats of both simple and compound interest, and true and bank discount. Applications are made to annuities, amortization, sinking funds, depreciation, valuation of bonds, building and loan associations and insurance. Prerequisite: College algebra 100 or 101, Plane trigonometry 103b or 103. Daily, 2.  
**Mr. Fulton, Mr. Davis**

206. **ANALYTICAL GEOMETRY OF SPACE**  
**ANY QUARTER, 3 Hours**  
This offering is planned to give the student a good working knowledge of coordinate geometry in three dimensional space. Equations of the first and second degree of two and three unknowns are stressed. A seminar course. Prerequisite: Mathematics 105. Time to be arranged.  
**Mr. Fulton**

212. **DIFFERENTIAL EQUATIONS**  
**WINTER, 5 Hours**  
This is a study of the more common types of ordinary differential equations, especially those of the first and second orders, with emphasis on geometrical interpretations and applications to geometry, elementary mechanics and physics. Prerequisite: Mathematics 109. Daily, 6.  
**Mr. Fulton**

*213. **COLLEGE GEOMETRY**  
**WINTER, 5 Hours**  
This course is designed to meet the needs of those who expect to teach mathematics in the public schools. General methods leading to the solution and construction of geometric problems are studied. Open to juniors and seniors. Daily, by arrangement.  
**Mr. Fulton**

214. **STATISTICAL METHODS**  
**SPRING, 3-5 Hours**  
This is an elementary survey of statistical methods designed to meet the needs of students in education, economics, sociology, and science. It includes sampling, tabulation, graphs, averages, probability and error, dispersion, trends, cycles, correlation, and index numbers. Prerequisite: Mathematics 100 or 101. Daily, 6.  
**Mr. Davis**

*215. **VECTOR ANALYSIS**  
**FALL, 3 Hours**  
This is an account of the methods of elementary vector analysis in two and three dimensional space, followed by simple applications to geometry and physics. Prerequisite: Mathematics 109. M. W. F., 6.  
**Mr. Fulton**

216. **CALCULUS: ADVANCED INTEGRAL**  
**FALL, 4 Hours**  
This course takes up plane areas by means of double integration; volume by triple integration; moment of inertia; center of gravity; fluid pressure; centroid of solids and hyperbolic functions. Prerequisites: Mathematics 108, 109. M. T. W. Th., 6.  
**Mr. Fulton**

217. **THEORY OF EQUATIONS AND DETERMINANTS**  
**ANY QUARTER, 3 Hours**  
The theory of equations is necessary in subsequent mathematical courses and furnishes light upon certain algebraic and analytical functions. A seminar course. Prerequisite: Mathematics 105, 107. Time to be arranged.  
**Mr. Fulton**

* Not given in 1943-44
PHYSICS

The primary aim of this department is to train the student to reason from fundamental experimental facts in solving the problems of physics. In conjunction with this, the department aims to give a training sufficiently broad to enable the student to appreciate the physics of popular scientific articles, to teach physics in the public schools, to apply physics in engineering, medicine and other sciences, and to pursue graduate work to the best advantage.

The physics major must include courses 213, 214, and 220. A year of general chemistry should be completed. A year of economics is recommended.

For those contemplating graduate work in physics 45 hours each of physics and mathematics should be completed. An introductory course in philosophy and a reading knowledge of German are strongly recommended.

104. General Physics: Mechanics of Solids and Fluids
   Fall, 5 Hours

106. General Physics: Electricity and Magnetism
   Winter, 5 Hours

105. General Physics: Sound, Heat and Light
   Spring, 5 Hours
   For engineering and science majors. Prerequisite: High school physics and analytics. T. W. Th. F., 2. One three-hour laboratory period on M. T. W. Th., 5, 6, 7, or 6, 7, 8. Mr. Berger

109. General Physics: Mechanics of Solids and Fluids
   Fall, 3 Hours

110. General Physics: Sound, Heat and Light
   Winter, 3 Hours

111. General Physics: Electricity and Magnetism
   Spring, 3 Hours
   Open to freshmen. Prerequisites: One year each of high school algebra and plane geometry. Mr. Berger

109a. General Physics
   2 Hours

110a. General Physics
   2 Hours

111a. General Physics
   2 Hours
   Laboratory to precede or accompany 109, 110, 111. Any quarter. Two 2-hour laboratory periods on T. or Th., at 5, 6, or 7, 8.
   Mr. Berger

213. Mechanics
   Fall, 5 Hours
   A course in mechanics problems. Prerequisites: Physics 106 or 111 and calculus. Daily, 3. Mr. Berger
214. **Mathematics of Physics**  
Spring, 5 Hours  
A course dealing with the application of mathematics to physics and related sciences. Prerequisites: Physics 105 or 111 and Calculus. Daily, 1.  
Mr. Berger

216. **Advanced Laboratory: Mechanics**  
1-6 Hours

217. **Advanced Laboratory: Light, Heat, Sound**  
1-6 Hours

218. **Advanced Laboratory: Electricity**  
1-6 Hours
  
Credit is given in courses 216, 217, and 218 according to the amount of work done. A quiz is given on assigned readings for each experiment. Not more than six hours of credit may be earned in any one of the three courses. Offered every quarter. Prerequisite: Physics 106 or 111 and Mathematics 109. Two three-hour laboratory periods and one class period each week for three hours credit.  
Mr. Berger

*220. **Modern Physics**  
Winter, 3 Hours  
A lecture and quiz course involving fundamental questions on the nature of things, such as atomic structure, electron theory, quantum theory, and the theory of relativity. Prerequisite: General chemistry and general physics. M. W. F., 1.  
Mr. Berger

221. **Advanced Light**  
Winter, 5 Hours  
An honor course in physical optics and spectroscopy. There are no regular class recitations. Reports are made by the student in individual conferences. Only superior students may register for this course. Consent of the head of the department is necessary. Prerequisite: Physics 105 and Calculus 216.  
Mr. Berger

222. **Advanced Electricity**  
Winter, 5 Hours  
An honor course in the mathematical treatment of electricity and magnetism. Requirements are the same as for course 221. Only one honor course open each year.  
Mr. Berger

*Not given in 1943-44*
Division III. Social Science

Wilfred E. Binkley, Chairman

A student who plans to make his major elections from a department in this group should complete at least two year courses in the social sciences during the freshman and sophomore years. Proficiency in English is indispensable. A course in statistical methods will prove useful, and a reading knowledge of French or German is essential if graduate work is anticipated.

ECONOMICS AND BUSINESS ADMINISTRATION

The aim is to help the student acquire a sympathetic understanding of the origin and functions of our business institutions. Aside from its cultural value, such an understanding should enable the student to adjust himself intelligently to his industrial environment and to prepare himself for the wise performance of the duties of a citizen in an industrial democracy.

It is recommended that the course in Principles of Economics be completed during the first two college years. Students majoring in this department are expected to take courses in history, political science, and sociology, especially such courses as coordinate with the field of economics. An acquaintance with the physical sciences is also required.

Secretarial courses are designed to serve those persons who plan to become secretaries and assistants to executives or who are looking toward administrative positions in keeping with their training and experience. Students preparing to teach commercial subjects will find these courses suited to their needs. Under the Division of Teacher Training a four-year course in commercial education is outlined.

ECONOMICS

121. Principles of Economics  Fall, 3 Hours
122. Principles of Economics  Winter, 3 Hours
123. Principles of Economics  Spring, 3 Hours

Wants, scarcity, and economy; economic history; organization of production; value and price; monopoly and its control; financial organization; distribution of wealth and income; inequality and social reform; public finance; and international trade. Not open to freshmen. M. W. F., 1 and 5.

Mr. Patton
125. **Economics for Engineers**  
Winter, 5 Hours  
This course is designed to acquaint the student with the fundamental principles underlying our economic system. The material is presented from the point of view of the engineer. Not open to freshmen. Daily, 3.  
Mr. Patton

*204. **Labor Problems**  
Fall, 3 Hours  
The Industrial Revolution and the workers; wages; standard of living; population and immigration; hours of labor; unemployment; the aged worker; labor organization; employers' associations; industrial disputes; arbitration and conciliation; scientific management; personnel administration; and programs of reconstruction. Prerequisite: Economics 121, 122, and 123. M. W. F., 6.  
Mr. Patton

*207. **Money and Banking**  
Winter, 3 Hours

*208. **Money and Banking**  
Spring, 3 Hours  
Nature and functions of money and credit; banking operations; development of banking; Federal Reserve System; clearing and collection; foreign exchange; financing foreign trade; business cycle; trust companies; investment banking; savings banks; investment trusts; agricultural credit institutions; and recent tendencies in banking. Prerequisite: Economics 121, 122, and 123. M. W. F., 6.  
Mr. Patton

214. **Business Finance**  
Fall, 3 Hours

215. **Business Finance**  
Winter, 3 Hours  
Stocks and bonds; promotion; capitalization plan; marketing of securities; short-term borrowing; budgeting; financial forecasting; tests of successful operation; treatment of earnings; expansion; and failure and reorganization. Prerequisite: Economics 121, 122, and 123. T. Th. F., 6.  
Mr. Patton

217. **Public Finance**  
Spring, 3 Hours  
Public expenditures in nation, state, and municipality; causes of increasing expenditures and the means of controlling them; meaning and development of taxation; means of escape from taxation; some requisites of a sound tax system; redemption, refunding and conversion of debt; financial administration and legislation; the budget. Prerequisite: Economics 121, 122, 123. T. Th. F., 6.  
Mr. Patton

220. **Economics Problems**  
Credit to be Arranged  
Minor investigations in economics and business open to qualified students. Courses may be elected any quarter with consent of head of department.

**BUSINESS ADMINISTRATION**

103. **Business Organization and Management**  
Fall, 2 Hours

104. **Business Organization and Management**  
Winter, 2 Hours

105. **Business Organization and Management**  
Spring, 2 Hours  
In these courses some of the problems which confront the business man are treated in the manner in which they are presented, discussed, and disposed of by the executive. The student is introduced to the principles of organization, operation, and control of business enterprise. Open to freshmen. T. Th., 3.  
Mr. Patton

*Not given in 1943-44*
121. MATHEMATICS OF FINANCE
Designed to acquaint the student with the mathematical tools of business. Prerequisite: College Algebra 100 or 101 and Trigonometry 103b or 103. Daily, 2. (See Department of Mathematics).

131. PRINCIPLES OF ACCOUNTING

132. PRINCIPLES OF ACCOUNTING

133. PRINCIPLES OF ACCOUNTING
Principles of the double entry system; asset and equity accounts; journal and ledger; expense and revenue accounts; periodic adjustment of accounts; working sheets; income statements; balance sheets; valuation and income determination; trading and manufacturing accounts; and partnership and corporate accounting. M. W. Th. F., 3.

221. BUSINESS LAW

222. BUSINESS LAW

223. BUSINESS LAW
Three courses in general elementary law; legal divisions and terminology, definitions of rights, wrongs, and remedies. Study of contracts; agency; sales; bailments; negotiable paper; partnerships and corporations; trusts and monopolies. Open to majors in business administration. Prerequisite: Junior standing. M. W. F., 7.

231. INTERMEDIATE ACCOUNTING

232. ADVANCED ACCOUNTING
A comprehensive survey of the field of intermediate and advanced accounting dealing specifically with analysis of statements; partnerships, liquidations and sale of same; accounting for insolvent concerns; corporations; trusts as business companies; controlling accounts; agencies and branches; venture accounts; statement of affairs; realization and liquidation of accounts and statements; statement of application of funds; statement accounting for consolidations; actuarial science. M. W. F., 1; laboratory, T. Th., 1, 2.

233. COST ACCOUNTING
Elementary cost accounting. Departmental, process and job lot costs; cost records and procedures; control of materials and labor; disposition of overhead. T. Th. F., 4. Mr. Patton

234. ANALYSIS OF FINANCIAL STATEMENTS
The course presents the general principles of statement analysis. Emphasis is placed upon how statements are to be read, and deals with particular types of statements. The course lays the foundation for advanced study of financial statements. Alternates with course in Cost Accounting. Prerequisite: Accounting 231, 232. M. W. F., 2. Miss Emberger or Mr. Patton

*235. FEDERAL INCOME TAX ACCOUNTING
A course in the fundamentals of federal taxes. Particular emphasis is laid on the current law and the preparation of income tax returns for individuals, partnerships, corporations, estates and trusts. Prerequisite: Economics 121, 122, 123; Accounting 231, 232. M. W. F., 1; laboratory, T. Th., 1, 2.

*236. AUDITING
This course deals with both theory and practice of auditing, discussion being supplemented with problems, questions, and specimen working papers applicable to balance sheet audits. Prerequisite: Economics 121, 122, 123; Accounting 231, 232. M. W. F., 2. Miss Emberger

* Not given in 1943-44
237. C. P. A. PROBLEMS
Spring, 5 Hours
Classroom practice and preparation for the certified public accountant examination. Practical accounting problems, auditing and theory of accounts, analysis and discussion are some features of the course. Open only to qualified seniors in business administration. Prerequisite: Accounting 231, 232, 233, and Federal Income Tax Accounting, Auditing, and Business Law. M. W. F., 1; T. Th., 1, 2. Miss Lewis

241. MARKETING
Fall, 3 Hours
Marketing functions and institutions; consumers' buying motives and demand; methods and costs of marketing; and marketing problems of the farmer, manufacturer, wholesaler, retailer, and other middlemen. Required of all majors. Course 241 alternates with course 214. Prerequisite: Economics 121, 122, 123. T. Th. F., 4. Mr. Patton

245. PRINCIPLES OF ADVERTISING
Fall, 3 Hours
This course is designed for general business students who seek an understanding of advertising in the present business, social, and economic environment. The material covers advertising principles for the retailer and national advertiser. Problems are presented for solution and discussion by students. Prerequisite: Marketing 241; Psychology 101. T. Th. F., 4. Mr. Patton

246. SALESMANSHIP
Spring, 3 Hours
This course presents an analysis of the technique of personal selling as a part of marketing. Demonstration sales are conducted in which students participate. The aims of the course are to develop the capacity for personal persuasion and to provide a broad view of modern selling activity. Prerequisite: Marketing 241; Psychology 101. T. Th. F., 4. Mr. Patton

247. RETAILING
Winter, 3 Hours
This course is devoted to the study and analysis of the fundamental principles underlying the operation of retail stores—department stores, chain stores, and single line—or independent unit stores. Among topics treated are: the present status of retailing in the United States; store location, arrangement, and merchandise classification; types of store organization; personnel; controlling of inventories; publicity; operating activities; and control. Prerequisite: Marketing 241. T. Th. F., 4. Mr. Patton

251. RISK, RISK-BEARING, AND INSURANCE
Fall, 3 Hours
The theory of risk; methods and institutions of risk-bearing, including insurance; kinds of insurance; types of policies; reserves; investment of funds; buying and selling insurance; and state regulation. Required of all majors. Prerequisite: Economics 121, 122, 123. T. Th. F., 3. Mr. Patton

SECRETARIAL SCIENCE
(Commercial Education)

101. TYPEWRITING
Fall, 2 Hours

102. TYPEWRITING
Winter, 2 Hours

103. TYPEWRITING
Spring, 2 Hours
These constitute a series of courses in typewriting designed to give the student a practical working knowledge of the typewriter and skill in operation. Credit not counted toward the degree of Bachelor of Arts. Daily, 6.

* Not given in 1943-44
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<tr>
<th>Course Code</th>
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<th>Fall Hours</th>
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<td>107</td>
<td>Typewriting</td>
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<td>110</td>
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<td>130</td>
<td>Office Practice</td>
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<td>230</td>
<td>Special Methods in Teaching Commercial Subjects</td>
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<td>240</td>
<td>Supervised Teaching in Commercial Education</td>
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<td>245</td>
<td>Problems in Commercial Education</td>
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More advanced courses in typewriting whose purpose is to develop speed in writing, to give opportunity for office practice work, such as filing, mimeographing, writing business papers, etc. Credit not counted toward the degree of Bachelor of Arts. T. Th. F., 2. Miss Eamberger.

These are first year courses in shorthand offered for students who are planning to prepare themselves for teaching or secretarial work. Typing should be taken previously or concurrently. Miss Eamberger.

Advanced courses with increased speed in writing and reading. Writing for dictation and transcribing on typewriter. Student must pass high efficiency tests. Daily, 7. Miss Eamberger.

Theory and practice in office work. Students are assigned to offices on the campus, thus securing actual experience. By arrangement. Miss Eamberger.

A study of the methods and technique of teaching commercial subjects in the high school. Required for commercial teachers. Time to be arranged. Miss Eamberger.

Prerequisite: Special Methods 230. Given each quarter. Miss Eamberger.

Open to properly qualified seniors. By arrangement. Miss Eamberger.
HEALTH AND PHYSICAL EDUCATION

Some form of physical activity is required of all students during their first two years in the University. The nature and amount of work to be taken depends upon physical condition as revealed by a careful examination and by efficiency tests given at the beginning of the school year. A varied program of elective and required activities is provided, which aims to secure and maintain the highest degree of individual and social efficiency both during and after college life.

The elective courses are both theoretical and practical. A strong intramural sports program is designed to provide some form of activity for nearly every student on the campus; while for those who wish to specialize in the physical education field, a four-year professional curriculum is offered, leading to the degree of Bachelor of Science in Education and to a special state four-year provisional certificate.

REQUIRED COURSES

Physical education two hours a week. One credit hour each quarter for the first six quarters.

First Year. This work is given both out-of-doors and in the gymnasium. It is systematically graded and arranged to fit the needs and interest of the individual. Corrective work, for those who need it, and the fundamentals of natural gymnastics and games are stressed.

Second Year. A continuation of the first year program, with greater emphasis on play activities.

ELECTIVE COURSES

INTRAMURAL SPORTS. Ample athletic fields and a splendid new gymnasium afford exceptional facilities for an intramural program that is sufficiently broad and varied to offer some form of activity for practically all University students. In their proper seasons, the following sports are offered: football, basketball, baseball, speedball, handball, playground ball, volleyball, tennis, wrestling, boxing, and track.

INTERCOLLEGIATE ATHLETICS. Ohio Northern University is a member of the Ohio Intercollegiate Athletic Conference and has gained an enviable reputation for the quality and character of her teams. In football, basketball, baseball and track the University has consistently been rated among the stronger members of the conference.
Four-Year Professional Course

The curriculum for the four-year professional course for teachers and supervisors of physical education will be found under the Division of Teacher Training.

101. Physical Education
     Fall, 1 Hour

102. Physical Education
     Winter, 1 Hour

103. Physical Education
     Spring, 1 Hour
Men—Gymnasium and outdoor classes in season, natural gymnastics, informal play. Six sections. M. W., 1, 2, 3, 4, 5, or 6.  
- Mr. Lamb, Mr. Murphy
Women—A course in natural gymnastics including games and sports in season, dancing and tumbling. Four sections. T. Th., 1, 2, 3, 4.  
- Miss Tolf, Miss Youngs

104. Physical Education
     Fall, 1 Hour

105. Physical Education
     Winter, 1 Hour

106. Physical Education
     Spring, 1 Hour
Men—Continuation of course 103 with team games and apparatus added. Six sections. M. W., 1, 2, 3, 4, 5, or 6.  
- Mr. Lamb, Mr. Murphy
Women—A continuation of course 103. Four sections. T. Th., 1, 2, 4, 6.  
- Miss Tolf, Miss Youngs

101a. Physical Education for Majors
     Fall, 1 Hour

102a. Physical Education for Majors
     Winter, 1 Hour

103a. Physical Education for Majors
     Spring, 1 Hour

104a. Physical Education for Majors
     Fall, 1 Hour

105a. Physical Education for Majors
     Winter, 1 Hour

106a. Physical Education for Majors
     Spring, 1 Hour
Courses 101a to 106a inclusive are required of all students majoring or minoring in physical education in place of courses 101 to 106. These courses consist of natural activities in season, including games, stunts, tumbling, clogging, folk and characteristic dancing, natural dancing, pageantry for women and combat activities for men. These courses apply toward physical education major. Men, T. Th., 5. Women by arrangement.  
- Mr. Lamb, Miss Tolf, Miss Youngs

115. Personal and General Hygiene
     Fall, Winter, Spring, 3 Hours
A course designed to cover the various phases of personal hygiene and health, from the individual aspect, with emphasis on preventive measures. Each quarter. T. Th. F., 4.  
- Mr. Lamb

117. Health Education
     Fall, 3 Hours
A course for the special teacher and supervisor of physical education, dealing with the sanitation of school buildings, surveys of various school systems, teachers' health, and other health problems arising in a school system. M. W. F., 5.  
- Miss Tolf

151. Health Education
     Spring, 3 Hours
This course deals with the health program of the public schools, and the teaching of habits, attitudes and knowledge conducive to good health. M. W. F., 2.  
- Miss Youngs
152. Health Education
Winter, 3 Hours
The relation of hygiene to home and community life, including a study of sewage disposal, refuse, disposal, transmission and control of diseases. M. W. F., 5.
Miss Tolf

155. Body Mechanics
Spring, 3 Hours
This course deals with the general body mechanics of the human organism, furnishing the student an opportunity to study and analyze the activities of the physical education program in their relation to coordination and the proper body mechanics. Prerequisite: Comparative Anatomy 206 and Mammalian Anatomy and Physiology 213. T. Th. F., 3.
Mr. Lamb

156. Theory and Practice of Plays and Games
Spring, 3 Hours
The need, purpose, and function of play in education are studied. Activities adaptable to various age levels of the elementary and secondary schools are studied. Two hours of theory and two hours of laboratory per week. M. T. W. Th., 6.
Miss Tolf

158. First Aid and Athletic Training
Spring, 2 Hours
Lectures, discussion and practice in the giving of first aid in cases of emergency. Methods of scientific training and conditioning of athletic teams. The American Red Cross First Aid Certificate may be obtained by students who pass a satisfactory examination. T. Th., 4.
Mr. Lamb

201. Principles and Methods of Physical Education
Fall, 4 Hours

202. Principles and Methods of Physical Education
Winter, 4 Hours

203. Methods of Physical Education
Spring, 4 Hours
Lectures, demonstrations, and practice. An examination of the principles underlying modern practices in physical education, from the standpoint of general education. The methods used in the natural program of physical education, such as the teaching of fundamental skills of tumbling and stunts, basketball, indoor baseball, speedball, volleyball, handball. Class, M. W. F., 4; practice, T. Th., 5.
Mr. Lamb

221a. Methods in Coaching Football
Fall, 3 Hours
A course covering in detail, equipment, fundamentals of the game, kicking, passing, handling the ball, tackling, blocking, etc.; individual position play; discussion of various types of offensive and defensive formations now in use, and the merits of each; strategy and general ship. T. Th. F., 4.
Mr. Murphy

221b. Methods in Coaching for Women
Fall, 3 Hours
This course is to prepare major and minor students in physical education to coach athletics in secondary schools. The course covers presentation of technique, basic principles, team play and methods for instruction of hockey, soccer, and speedball. M. W. F., 6.
Miss Youngs

222. Methods in Coaching Basketball
Winter, 3 Hours
Men—Special emphasis is given to the fundamentals, passing, shooting, dribbling, feinting, and pivoting; to the various styles of offense and defense used by leading coaches; to equipment; to the conditioning of a team; and to the handling of a team in games. Lectures, reports, demonstration and practice. T. Th. F., 4.
Mr. Murphy
Miss Youngs

223. Methods in Coaching Baseball and Track
Spring, 3 Hours
This course covers pitching, catching, batting, fielding, baserunning, individual position and team play in baseball. It takes up the best methods and forms for all of the events in track and field. Lectures, reports, demonstration, and practice. T. Th. F., 4.
Mr. Lamb, Mr. Murphy
Women—Baseball, tennis, track, and field sports. M. W. F., 7.
Miss Youngs
252. Normal Diagnosis

Winter, 3 Hours

This course includes recording of personal and family history, methods of making general health examinations, including special methods of examining the eyes, ears, nose, throat, spine, feet; weighing and measuring, and a limited study of corrective exercises for various postural defects. T. Th., 2, 3.

Mr. Lamb

254. Organization and Administration of Physical Education—Men and Women

Fall, 2 Hours

A course dealing with the objectives, principles, and methods of organization and administration of physical education in elementary and secondary schools and colleges. It includes management of athletic sports, games, and contests, and intramural athletics. T. Th., 2.

Mr. Lamb

260. History of Physical Education

Spring, 2 Hours

This course traces the evolution and development of physical education through ancient and modern times. It demonstrates the close relationship existing between certain elements in civilization and the status of physical education in that civilization. T. Th., 1.

Mr. Lamb

265. Problems in Physical Education

Spring, 1 to 3 Hours

This course deals with specific problems in physical and health education and is open to properly qualified students. Time to be arranged.

Mr. Lamb

263. Student Teaching—Physical Education

Fall, Winter, Spring, 6 Hours

Students taking the four year course for the training of physical education supervisors and teachers are required to prepare a syllabus of the work covered, write lesson plans, hold conferences with the professor in charge and teach in the University, junior and senior high schools and elementary schools.

Mr. Lamb

271. Advanced Coaching Practice

Fall, 1 Hour

272. Advanced Coaching Practice

Winter, 1 Hour

273. Advanced Coaching Practice

Spring, 1 Hour

These courses are designed to give students who have had courses 221, 222 and 223 an opportunity to do actual coaching under supervision, in all sports in season. Hours arranged.

Mr. Murphy

HISTORY AND POLITICAL SCIENCE

The history courses stress the evolution of human institutions with a view to developing an understanding of our present civilization. Students majoring in history must take courses in both American and European history and electives in the allied social sciences, particularly political science, sociology, psychology and economics. It is the policy of the department to recommend no graduate for the teaching of history who has not taken nine hours in American government.

The most appropriate sequence of courses for a major in history would be History of Western Europe 110, 111, 112; History of the United States 113, 114, 115; History of England 104, 105, 106; Recent American History 216, 217, 218; or Constitutional History of the United States 224, 225, 226; and Recent European History 251, 252, 253 or Bourbon France 235,
236, 237. In addition to the 36 hours required for the major in history the student must complete nine hours in American government.

The courses in political science are designed to prepare the student for the intelligent performance of the functions of citizenship, for entrance into public service, for the study of law, and for graduate study in this field. Those majoring in political science are advised also to pursue courses in sociology, psychology, history and economics.

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<th>Course Number</th>
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<td>104</td>
<td>English History to 1558</td>
<td>Fall</td>
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<td>105</td>
<td>English History: 1558-1783</td>
<td>Winter</td>
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<td>106</td>
<td>English History: 1783 to the Present Time</td>
<td>Spring</td>
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<td>110</td>
<td>History of Western Europe A.D. 1 to 1517</td>
<td>Fall</td>
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<td>111</td>
<td>History of Western Europe 1517 to 1815</td>
<td>Winter</td>
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<td>112</td>
<td>History of Western Europe 1815 to Present Time</td>
<td>Spring</td>
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<td>113</td>
<td>History of the United States to 1815</td>
<td>Fall</td>
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<td>114</td>
<td>History of the United States: 1815 to 1865</td>
<td>Winter</td>
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<td>115</td>
<td>History of the United States: 1865 to the Present Time</td>
<td>Spring</td>
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<td>216</td>
<td>Recent American History</td>
<td>Fall</td>
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<td>217</td>
<td>Recent American History</td>
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<td>218</td>
<td>Recent American History</td>
<td>Spring</td>
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<td>224</td>
<td>Constitutional History of the United States</td>
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<td>225</td>
<td>Constitutional History of the United States</td>
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226. Constitutional History of the United States

Spring, 2 Hours

A survey of the constitutional development of the United States from the colonial period to the present time. Prerequisite: Political Science 101, 102, 103, and History 113, 114, 115.

Mr. Binkley

* Not given in 1943-44
*235. BOURBON FRANCE AND THE REVOLUTIONARY ERA  Fall, 2 Hours
*236. BOURBON FRANCE AND THE REVOLUTIONARY ERA  Winter, 2 Hours

*237. BOURBON FRANCE AND THE REVOLUTIONARY ERA  Spring, 2 Hours
Three courses presenting in detail the history of Europe during the period of the absolute monarchy, the ancient regime, the revolutionary era and Napoleon. Prerequisite: History 110, 111, 112, T. Th., 7.

251. RECENT EUROPEAN HISTORY  Fall, 2 Hours
252. RECENT EUROPEAN HISTORY  Winter, 2 Hours
253. RECENT EUROPEAN HISTORY  Spring, 2 Hours
Three courses presenting the background of the World War, the War, the Peace, and the new Europe. Prerequisite: History 110, 111, 112. T. Th., 7.

254. HISTORY PROBLEMS  3 Hours
Individual investigation on a specific problem. Open to qualified seniors majoring in history. Any quarter.  Mr. Binkley

POLITICAL SCIENCE

100. DEVELOPMENT OF HUMAN FREEDOM  Winter, 1 Hour
A study of the ideas of liberty that have emerged from the experience, thought, and cultural development of the human race. T., 2.  Mr. Binkley

101. AMERICAN GOVERNMENT  Fall, 3 Hours
102. AMERICAN GOVERNMENT  Winter, 3 Hours
103. AMERICAN GOVERNMENT  Spring, 3 Hours
A study of the origin, development, structure, and functions of national and state governments in the United States. Sophomore course. M. W. F., 1.  Mr. Binkley

104. INTRODUCTION TO POLITICAL SCIENCE  Fall, 2 Hours
105. INTRODUCTION TO POLITICAL SCIENCE  Winter, 2 Hours
106. INTRODUCTION TO POLITICAL SCIENCE  Spring, 2 Hours
An approach to the field of political science through the study of current problems both domestic and foreign. Cannot be used as partial requirements of eighteen hours in social science. T. Th., 1.  Mr. Binkley

204. MUNICIPAL GOVERNMENT  Winter, 3 Hours
A study of the principal problems of municipal government in the United States. Prerequisite: Political Science 101, 102, 103. M. W. F., 2.  Mr. Binkley

*208. COMPARATIVE GOVERNMENT  Fall, 3 Hours
*209. COMPARATIVE GOVERNMENT  Winter, 3 Hours
A study of the governments of England, France, Germany, Italy, Switzerland, and Russia. Prerequisite: Political Science 101, 102, 103, or the consent of the instructor. M. W. F., 2.  Mr. Binkley

210. AMERICAN POLITICAL PARTIES  Fall, 3 Hours
A brief survey of the development of political parties in the United States followed by an investigation of the psychological, sociological, and practical aspects of the phenomena of political parties. Prerequisite: Nine hours of political science or the consent of the instructor. M. W. F., 2.  Mr. Binkley

* Not given in 1943-44
211. **Political Science Problems** 3 Hours
Individual investigation in the field of political science. Open to qualified seniors majoring in this department. Any quarter.

Mr. Binkley

*212. **American Political Theories** Spring, 3 Hours
The development of American political theories from the colonial period to the present with a view to providing a basis for national approach to the solution of our present political problems. Prerequisite: Nine hours of political science or the consent of the instructor. M. W. F., 2.

Mr. Binkley

230. **European Political Theories** Spring, 3 Hours
A survey of the development of political philosophy from the period of Ancient Greece to modern times. Prerequisite: Political Science 101, 102, 103, or the consent of the instructor.

Mr. Binkley

**PSYCHOLOGY AND SOCIOLOGY**

The purpose of this department is to acquaint the student with a study of the traits of human nature and the problems of social organization in order that he may become a better citizen, a more efficient teacher, and be better able to further his interests and studies either in private life or in institutions of learning.

A minor in psychology consists of 24 hours in psychology. A minor in sociology consists of 18 hours in sociology and Psychology 101 and 104.

**PSYCHOLOGY**

101. **General Psychology** Fall, 5 Hours
A general survey of psychological facts and principles including the topics of perception, motivation, learning, remembering, personality, and social behavior. Prerequisite: One year of college work. Two sections. Daily, 1 or 7.

102. **Applied Psychology** Winter, 5 Hours
The application of psychological principles to problems of modern life. Advertising, vocational psychology, industrial relations, personnel work, and social problems. Daily, 1.

104. **Social Psychology** Spring, 3 Hours
A study of social behavior and social adjustment. The effect of the social environment upon the development of personality. The relation of social and psychological laws to problems of the community. Prerequisite: Psychology 101. M. W. F., 7.

135. **Educational Psychology** Winter, 3 Hours
The application of psychological principles to education. Problems of thinking, motivation, attitudes, learning, memory, transfer of training. M. W. F., 5 or 7.

Miss Geeting

136. **Adolescent Psychology** Spring, 3 Hours
An intensive study of the problems of growth through childhood and adolescence; systematic psychology and personality of adolescence; applied problems in junior and senior high schools. Prerequisite: General Psychology 101, or Educational Psychology 135. M. W. F., 5.

Miss Geeting
210. **Abnormal Psychology**  
This course is an introduction to the study of problems of mental health and is designed to meet the needs of students of education and pre-professional courses. Prerequisite: Psychology 101. Daily, 1.

212. **Psychological Problems**  
Minor investigation. Open only to qualified seniors By arrangement.

**Sociology**

151. **General Sociology**  
152. **General Sociology**  
A study of the phenomena of human relations, including the nature and import of sociology, social evolution, socialization, social ideals, and social control. Serious consideration is given to the question, "How does human life in general become what it is, what values does it actually contain, and under what conditions can those values be more completely realized?" Not open to freshmen. Courses 151 and 152 are prerequisite to other courses in sociology. M. W. F., 2.

Mr. Potter

153. **Social Pathology**  
Social pathology as it concerns our own society including the study of such problems as child labor, poverty, crime, the family, public health, etc. Prerequisite: Sociology 151 and 152. M. W. F., 8.

Mr. Potter

211. **Criminology**  
A consideration of the problems of crimes and criminals. Special attention is given to the factors conducive to the making of criminals, together with a suggested program of treatment and prevention. The work also includes some study of the history of punishment and penal institutions. Prerequisites: Sociology 151 and 152. M. W. F., 2.

Mr. Potter

*212. **The Family**  
A discussion course on the history of marriage and the family. A detailed study of the normal family, the conditions which interfere with the normal functioning of the family, and the means of social control. Prerequisites: Sociology 151 and 152 or consent of the instructor. M. W. F., 8.

*213. **Social Organization and Social Control**  
Social organization as it influences and is influenced by social control. Propaganda, minority groups, co-operation, competition, and social legislation. M. W. F., 2.

**Religion and Philosophy**

The courses in Biblical Literature seek to serve students interested in work of a religious nature. The sociological, historical and religious interpretations of the Biblical material are stressed in order that a sound point of view may be obtained. The courses are intended to prepare students for graduate work, to enable students to meet more effectively the needs of their home communities, and also to enable them to reconstruct constantly their religious experiences in the light of the high religious and ethical idealism of the prophets and Jesus.

Students preparing for the ministry are urged to work out their majors

*Not given in 1942-1943*
in the social sciences, especially psychology and sociology, and also to obtain a good background in the natural sciences and philosophy.

BIBLICAL LITERATURE

151. Old Testament
The history of the Hebrew people from early times to the Division of the Hebrew Kingdom. The purpose of this course is to introduce the student to the essential features of the political, social and religious life of this interesting people with special emphasis upon their religious activities. Not open to freshmen. M. W. F., 6.

152. Old Testament
The history of the Hebrew and Jewish people from the Division of the Hebrew Kingdom to the Death of Herod the Great. Not open to freshmen. M. W. F., 6.

153. The Life and Teaching of Jesus
A study of the life and teaching of Jesus together with some consideration of the social and political setting into which he was born and its relation to the success of his message. Not open to freshmen. M. W. F., 6.

232. The Life and Teaching of Paul

PHILOSOPHY

201. Introduction to Philosophy
A survey of the workings of the mind. A study is made of the characteristics of effective thinking and the various methods involved. Resourcefulness in thinking, classifications of knowledge and how conclusions are reached are studied. A desirable course to parallel a study of the sciences and philosophy. M. W. F., 5.

202. Logic
A constructive study of mental processes, the laws of learning, mental fallacies, methods of proof, the proper organization and presentation of ideas, and the limitation and expression of knowledge. M. W. F., 5.

203. Ethics
A study of morality and the problems of conduct, their historical development and social and political relationships. Especially designed for teachers and students in professional schools. M. W. F., 5.

RELIGION

203. Church History
A consideration of the significant individuals, movements and events in the Christian Church from the Apostolic Age to the present day and their relation to the course of general history. M. W. F., 3.

210. History of Religion
A study of the origin and development of the primitive and historic religions of mankind. The fundamental religious beliefs and customs and the institutions which have grown up around these beliefs are studied. A knowledge of the general aim and nature of religion is sought. M. W. F., 3.
Division IV. Teacher Training

FRANK L. LOY, Chairman and Director of Teacher Training

The Teacher Training work at Ohio Northern University, organized within the College of Liberal Arts, is designed to aid its students in forming clear conceptions of the dignity and importance of the teacher’s work; to trace in the history of education the origin and development of modern principles of teaching; to present in theory and practice approved and rational methods of instruction; to create and maintain high professional standards among present and prospective teachers; and to offer such courses for the professional training of teachers as will broaden their horizon and advance them to higher planes of usefulness, ability, and service.

The Ohio Northern University is accredited by the State Department of Education to train teachers in the following fields: Elementary, High School, Industrial Arts, Health and Physical Education, Public School Music, and Commerce. Those who complete the courses described in the following pages will be granted the state four-year provisional certificate.

Students who wish to enroll in any teacher training curriculum and prepare for a State Teacher’s Certificate must secure a statement from the Registrar or Director of Teacher Training that their entrance examination score is satisfactory.

ELEMENTARY EDUCATION

Grades One to Six

Ohio Northern University offers a three-year curriculum for the training of elementary teachers. This entitles the student to the state elementary four-year provisional certificate.

A four-year course is offered for students who desire both the provisional certificate and the degree of Bachelor of Science in Education.

At the request of a city, county or exempted village superintendent, upon evidence of a scarcity of suitable teachers otherwise certified, the State Department of Education will issue a temporary certificate to those who have completed two years of training in an elementary curriculum.

During the freshman year, the student will be required to take diagnostic tests in arithmetic, geography, history, and English to determine his knowledge of the content of these subjects. Students failing in any of these
tests will be assigned to non-credit courses until their deficiencies are made up.

The Division of Certification of the State Department of Education specifies the following course requirements for the provisional elementary certificate:

I. Professional Courses
   A. Introduction to Education .................................. 2 sem. hrs.
   B. Educational Psychology I .................................. 2 sem. hrs.
   C. Educational Psychology II .................................. 2 sem. hrs.
   D. Principles of Education .................................... 2 sem. hrs.
   E. School Management ......................................... 2 sem. hrs.
   F. Methods:
      1. Reading ...................................................... 3 sem. hrs.
      2. Skills ....................................................... 3 sem. hrs.
      3. Content ..................................................... 3 sem. hrs.
   G. Student Teaching ........................................... 5 sem. hrs.

II. Art ............................................................... 6 sem. hrs.
   (Including Graphic Expression, Design, Materials and Methods).

III. English ......................................................... 15 sem. hrs.
   (Including children's literature 3 sem. hrs., base course, speech, and guaranteed grammatical competence).

IV. Health and Physical Education.
   A. Hygiene ......................................................... 3 sem. hrs.
   B. Health Activities ........................................... 3 sem. hrs.

V. Music.
   A. Literature and appreciation ................................. 2 sem. hrs.
   B. Introduction to music ....................................... 2 sem. hrs.
   C. Music Education ............................................. 2 sem. hrs.

VI. Practical Arts .................................................. 3 sem. hrs.

VII. Science (General Science or Biology) ......................... 8 sem. hrs.

VIII. Social Studies ................................................ 24 sem. hrs.
   (Composed of integrated base course plus pertinent electives or distributed credits in history, political science, sociology, economics, principles of geography, problems of rural and urban life).

Total of Required Courses ........................................ 92 sem. hrs.
Institutional Requirements ....................................... 20-36 sem. hrs.
Untrammeled Electives ........................................... 12 sem. hrs.
TOTAL ............................................................. 124-140 sem. hrs.
## Two-Year Curriculum for Elementary Teachers

### First Year

**Fall Quarter**
- Physical Education 101 1
- English 101 3
- Zoology 101 3
- Introduction to Political Science 104 2
- Public School Music 124 3
- Teaching of Literature 220 4

**Winter Quarter**
- Physical Education 102 1
- English 102 3
- Zoology 102 3
- Introduction to Political Science 105 2
- Hygiene 115 or History and Appreciation of Music 154 3
- Teaching of Arithmetic 221 4

**Spring Quarter**
- Physical Education 103 1
- English 102a 3
- Zoology 103 3
- Introduction to Political Science 106 2
- Public School Music 125 3
- Teaching of Reading 223 4

### Second Year

**Fall Quarter**
- Physical Education 104 1
- Psychology 101 5
- Geography 219 3
- Introduction to Education and Principles of Education 205 3
- Principles of Teaching 206 3
- Industrial Art 126 2

**Winter Quarter**
- Physical Education 105 1
- Psychology 135 3
- Teaching of Geography 222 3
- United States History 114 3
- English 122 3
- Organization and Administration 252 3
- Applied Design 127 2

**Spring Quarter**
- Physical Education 106 1
- English 122a 3
- History 115 3
- Teaching of History 224 3
- Student Teaching 268 3
- Plays and Games 156 3

### Three-Year Curriculum for Elementary Teachers

#### First Year

**Fall Quarter**
- Physical Education 101 1
- English 101 3
- History 104 or 110 3
- Zoology 101 3
- Introduction to Political Science 104 2
- Speech 101 3

**Winter Quarter**
- Physical Education 102 1
- English 102 3
- History 105 or 111 3
- Zoology 102 3
- Introduction to Political Science 105 2
- Hygiene 115 or Elective 2

**Spring Quarter**
- Physical Education 103 1
- English 102a 3
- History 106 or 112 3
- Zoology 103 3
- Introduction to Political Science 106 2
- Practical Arts 101 5

#### Second Year

**Fall Quarter**
- Physical Education 104 1
- English 122 or 103 3
- Geography 219 3
- Introduction to Education 205 3
- Public School Music 124 3
- General Psychology 101 5

**Winter Quarter**
- Physical Education 105 1
- English 122 or 104 3
- Educational Psychology 135 3
- Teaching of Arithmetic 221 4
- Teaching of Geography 222 3
- History and Appreciation of Music 154 3

**Spring Quarter**
- Physical Education 106 1
- English 122a or 105 3
- Teaching of Reading 223 4
- Public School Music 125 3
- Educational Psychology 136 3
- Elective 3
### Third Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>History 113</td>
<td>History 114</td>
<td>History 115</td>
</tr>
<tr>
<td>Professionalized Course in Industrial Arts 126</td>
<td>Applied Design 127</td>
<td>2 Teaching of History 224</td>
</tr>
<tr>
<td>Principles of Teaching 206</td>
<td>Teaching of Reading 225</td>
<td>2 Theory and Practice of Plays and Games 156</td>
</tr>
<tr>
<td>Educational Measurements 229</td>
<td>Student Teaching and Technique of Teaching 268</td>
<td>6 Professionalized Course in Industrial Arts 128</td>
</tr>
<tr>
<td>Teaching of Literature 220</td>
<td>School Organization and Administration 252</td>
<td>3 Student Teaching and Technique of Teaching 268</td>
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</tbody>
</table>

### Four-Year Curriculum for Elementary Teachers

#### First Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
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<tbody>
<tr>
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<td>Zoology 101</td>
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<tr>
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<tr>
<td>Speech 101</td>
<td>Hygiene 115</td>
<td>Practical Arts 101</td>
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#### Second Year

<table>
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<th>Spring Quarter</th>
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<tbody>
<tr>
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</tr>
<tr>
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<td>English 104 or 122</td>
<td>English 105 or 122A</td>
</tr>
<tr>
<td>History 113</td>
<td>History 114</td>
<td>History 115</td>
</tr>
<tr>
<td>General Psychology 101</td>
<td>Educational Psychology 135</td>
<td>Professionalized Course in Industrial Arts 128</td>
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<tr>
<td>Professionalized Course in Industrial Arts 126</td>
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<td>2 Local Flora 110</td>
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<tr>
<td>Health Education 117</td>
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#### Third Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Education 205</td>
<td>Teaching of Arithmetic 221</td>
<td>Teaching of Reading 223</td>
</tr>
<tr>
<td>Teaching of Literature 220</td>
<td>History and Appreciation of Music 154</td>
<td>Economics 123</td>
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<td>Public School Music 124</td>
<td>Economics 122</td>
<td>Educational Psychology 136</td>
</tr>
<tr>
<td>Economics 121</td>
<td>Teaching of Elementary Geography 222</td>
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<tr>
<td>Geography 219</td>
<td>School Organization and Administration 252</td>
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#### Fourth Year

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<td>Principles of Teaching 206</td>
<td>Teaching of Reading 225</td>
<td>Public School Music 125</td>
</tr>
<tr>
<td>Practical Arts 235</td>
<td>Elective</td>
<td>Theory and Practice of Plays and Games 156</td>
</tr>
<tr>
<td>Sociology 151</td>
<td></td>
<td>Elective</td>
</tr>
</tbody>
</table>

* Student Teaching offered each quarter during senior year. Only six hours required.
Graduates from the Two-Year Elementary Curriculum may receive the degree, Bachelor of Science in Education, by completing the following courses:

**Third Year**

**Fall Quarter**
- Economics 121 or American Government 101 3
- History 3
- Biology 3
- Electives 7

**Winter Quarter**
- Economics 122 or American Government 102 3
- History 3
- Biology 3
- Educational Psychology 136 3
- Electives 4

**Spring Quarter**
- Economics 123 or American Government 103 3
- History 3
- Biology 3
- Electives 7

**Fourth Year**

**Fall Quarter**
- English 210 or 214 3
- Educational Measurements 229 3
- Electives 10

**Winter Quarter**
- English 211 or 215 3
- Electives 13

**Spring Quarter**
- Student Teaching 270 4

**Requirements for a Degree in Elementary Education**

Upon the satisfactory completion of 186 quarter hours, including 6 hours of physical education, the student will be recommended for the degree of Bachelor of Science in Education. The student must have an average scholarship rating of at least one quality point for each scheduled hour.

**Secondary Education**

Requirements for the Degree of Bachelor of Science in Education

(Requirements for the degree of Bachelor of Arts will be found in earlier pages of this bulletin).  

A. General and Academic Requirements

1. **English**
   - Composition 101, 102, 102a, and Literature.  
   
   18 Hours

2. **Biological Science**
   - Botany 107, 108, 109, or Zoology 101, 102, 103. Courses in physical science may be substituted for biological science.  
   
   9 Hours

3. **Social Science**
   - The completion of any one of the following courses will meet the social science requirement: History 110, 111, 112; History 113, 114, 115; Political Science 101, 102, 103. With the consent of the student's adviser other courses in the field of the social sciences may be substituted.  
   
   9 Hours

4. **General Psychology**
   - Required as prerequisite to the professional courses in Education.  
   
   5 Hours
5. **Physical Education** 6 Hours

Physical education is required in addition to the one hundred eighty quarter hours required for graduation.

Constants for freshman year in all four-year curricula leading to the degree of Bachelor of Science in Education follow:

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
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<tbody>
<tr>
<td>Physical Education 101</td>
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<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>3</td>
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<tr>
<td>Biological Science or</td>
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<tr>
<td>Physical Science</td>
<td>Physical Science</td>
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</tr>
<tr>
<td>Social Science</td>
<td>3</td>
<td>Social Science</td>
</tr>
<tr>
<td>Electives in line with student's objectives to complete the schedule.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. **Professional Requirements**

1. **Educational Psychology** 3 or 6 Hours

Psychology 135, 136.

2. **Introduction to Education and Principles of Education** 3 or 6 Hours

Education 207, 208.

3. **School Administration** 3 Hours

Administration 252.

4. **Special Methods or Professionalized Subject Matter Courses in Teaching Academic Major** 3 to 5 Hours

Education 250.

5. **Student Teaching, Including Technique of Teaching** 6 to 9 Hours

Education 270.

6. **Electives**

The following courses are offered as electives in Education: Education 136, 238, 229.

The above courses meet the professional requirements of the State Department of Education.

The professional requirements of the various states may be secured from the Director of the Division of Teacher Training.

In order to secure the proper correlation with academic courses the student is expected to distribute the work in education over several quarters. The following sequence is very desirable:

Second Year: General Psychology 101, Educational Psychology 135 or 136.

Third Year: Principles of Education 207, 208; Special Methods and Observation.

Fourth Year: Administration 252; Special Methods (if not completed), and Student Teaching.
C. Major and Minor Subjects

All candidates for the degree of Bachelor of Science in Education or Bachelor of Arts who expect to teach must have a teaching major of 36 quarter hours and one or more minors of 24 quarter hours each. Students should confer with their advisers before electing their major and minor subjects.

The Division of Certification of the State Department of Education specifies the following minimum requirements in the various teaching fields for the provisional high school certificate.

A. Biological Science (Prerequisite
2. Botany .................. 3 sem. hrs.
   (Or General Biology, 6 sem. hrs.)

B. Bookkeeping .................. 9 sem. hrs.
   (Bookkeeping, accounting and methods)

C. Bookkeeping—Social Business ............. 20 sem. hrs.
1. Bookkeeping and account-
ing .................. 9 sem. hrs.
2. Business Law
3. Economic Geography
4. Economics
5. Business Organization
6. Excess in above or perti-
nent electives ............. 11 sem. hrs.

D. Earth Science (Prerequisite
1. high school unit) .......... 15 sem. hrs.
1. Geology .................. 3 sem. hrs.
2. Geography ................ 3 sem. hrs.
3. Pertinent electives or
   excess in above ............. 9 sem. hrs.

E. English (Prerequisite
1. English Composition ......... 6 sem. hrs.
2. English and American
   Poetry .................. 3 sem. hrs.
3. English and American
   Prose .................. 3 sem. hrs.
4. Pertinent electives or
   excess in above ............. 3 sem. hrs.

F. General Science ............. 15 sem. hrs.
1. Physics .................. 3 sem. hrs.
2. Chemistry ................ 3 sem. hrs.
4. Other science electives
   or excess in above .......... 6 sem. hrs.
   (General science will also be added
   to a certificate on the basis of an
   integrated base course and pertinent
   electives totaling 15 sem. hrs.)

G. History (prerequisite
1. World History ............. 3 sem. hrs.
3. Political Science ........... 3 sem. hrs.
4. Pertinent electives or
   excess in above ............. 6 sem. hrs.

H. Industrial Arts ............. 24 sem. hrs.
   Well distributed over following areas:
   1. Graphic Arts
      (Including drawing, planning, print-
      ing, photography, and duplicating).
   2. Woods
      (Including furniture construction, carpentry and wood finishing).
   3. Metals
      (Including sheet metal, art metal,
      foundry and machine metal work).
   4. Applied Electricity
      (Communication, transportation and
      power).
   5. Ceramics
      (Clay and concrete).
   6. Methods and Organization

I. Language (Prerequisite
   2 high school units) ........ 15 sem. hrs.
   (15 semester hours in the language
   in which certification is desired).

J. Library Science ............. 15 sem. hrs.
   Distributed over the following areas:
   1. Bibliographic
   2. Materials
   3. Technical
   4. Management and functions
K. Mathematics (Prerequisite 2 high school units) 15 sem. hrs.
2. College Geometry .......... 3 sem. hrs.
3. Trigonometry .......... 3 sem. hrs.
4. Pertinent electives or excess in above .......... 6 sem. hrs.

L. Music—Instrumental 24 sem. hrs.
(Valid in both elementary and high school).
1. Harmony (Written, oral and keyboard, sight singing and ear training) .......... 10 sem. hrs.
2. History and Appreciation .......... 4 sem. hrs.
3. Applied music (Orchestral instruments) .......... 4 sem. hrs.
4. Music education, including instrumental methods and conducting .......... 6 sem. hrs.
5. Membership in band or orchestra

M. Music—Vocal 24 sem. hrs.
(Valid in both elementary and high school).
1. Harmony (written, oral and keyboard, sight singing and ear training) .......... 10 sem. hrs.
2. History and Appreciation .......... 4 sem. hrs.
3. Applied music—piano or singing or both .......... 4 sem. hrs.
4. Music education, including methods for elementary and high school observation, participation and conducting .......... 6 sem. hrs.
5. Membership in some choral group

N. Physical Education 16 sem. hrs.
2. Theory and practice, including stunts, apparatus, tumbling, swimming, dancing, etc. .......... 4 sem. hrs.
3. Theory and practice, including athletic coaching in intramural and interscholastic athletics . 4 sem. hrs.
4. Health Education, including teaching of health and school health problems .......... 4 sem. hrs.

O. Physical Science (Prerequisite 1 high school unit) 15 sem. hrs.
2. Chemistry .......... 6 sem. hrs.
3. Pertinent electives or excess in above .......... 3 sem. hrs.

P. Salesmanship—Merchandising 20 sem. hrs.
3. Advertising
4. Retailing
5. Merchandising
6. Economic Geography
7. Excess in above or pertinent electives .......... 14 sem. hrs.

Q. Science (Comprehensive)

Major) 40 sem. hrs.
Integrated base course plus pertinent electives or forty semester hours well distributed over the following areas:
1. Physics
2. Chemistry
3. Zoology
4. Botany
5. Geology
6. Astronomy

R. Social Science 15 sem. hrs.
(Prerequisite one high school unit)
2. Sociology .......... 3 sem. hrs.
3. Industrial Geography .......... 3 sem. hrs.
4. Pertinent electives or excess in above .......... 6 sem. hrs.

S. Social Studies (Comprehensive)

Major) 40 sem. hrs.
Integrated base course plus pertinent electives or forty semester hours well distributed over following areas:
1. Economics
2. Sociology
3. Modern European History
4. American History
5. Principles of Geography
6. Political Science

T. Speech 15 sem. hrs.
Distributed over the following areas:
1. Speech fundamentals
2. Interpretative reading
3. Speech correction and voice
4. Dramatic production
5. Public address and discussion
6. Excess in above or pertinent electives .......... 5 sem. hrs.

U. Stenography—Typing 20 sem. hrs.
2. Typing .......... 3 sem. hrs.
4. Office Practice
5. Business English
6. Excess in above or pertinent electives .......... 6 sem. hrs.
V. Typing 5 sem. hrs
   (Typing and Methods)
Any of the above subjects appearing on a certificate issued by the State of Ohio shall be valid for teaching that subject or any subject listed as a required course in the above schedule.

After September 1, 1939, teaching subjects will not be designated as majors or minors. The certificate will, however, indicate the number of hours of preparation in each subject listed thereon.

The Division of Certification of the State Department of Education specifies the following minimum requirements for the provisional special certificate.

A. Art 60 sem. hrs.
   1. Drawing 15 sem. hrs.
   3. Appreciation and History 10 sem. hrs.
   4. Methods, teaching materials, sources, organization, observation and student teaching 10 sem. hrs.

B. Business Education 45 sem. hrs.
   Distributed over the following areas:
   1. Stenographic-Typing
      Shorthand, Typing, Office Practice, Business English and Correspondence, Methods in Shorthand and Typing.
   2. Bookkeeping—Social Business
      Business Law, Accounting, Economic Geography, Economics, Business Organization
   3. Salesmanship—Merchandising
      Marketing Principles, Salesmanship, Advertising, Retailing, Merchandising.
      Minima—Typing 3 sem. hrs.; Shorthand, 6 sem. hrs.; Bookkeeping and Accounting, 6 sem. hrs.; Methods, 2 sem. hrs.

C. Industrial Arts 45 sem. hrs.
   Well distributed over the following areas:
   1. Graphic Arts
      (Including Drawing, Planning, Printing, Photography and Duplicating).
   2. Woods
      (Including Furniture Construction, Carpentry and Wood Finishing).
   3. Metals
      (Including Sheet Metal, Art Metal, Foundry and Machine Metal Work).

D. Library Science
   1. Professional Preparation 17 sem. hrs.
      a. Educational Psychology 3 sem. hrs.
      b. School Administration, Organization or Management or Library Organization and Management 3 sem. hrs.
      c. Methods of Teaching or Materials and Methods of Library Science 3 sem. hrs.
      d. Student Teaching or Supervised Field Work 5 sem. hrs.
   2. Special Preparation 40 sem. hrs.
      Distributed over the following areas:
      a. Bibliographic
         (This shall include reference bibliography and book selection. At least one course shall deal specifically with books for young people).
      b. Technical
         (This shall include cataloguing and classification).
      c. Administrative
         (Administration of school libraries must be included).
      d. Field Work
         (Preferably done in school library).

E. Music
   1. Instrumental 53 sem. hrs.
      a. Methods, Materials and Observation 4 sem. hrs.
b. Student Teaching . 3 sem. hrs.  
   (Elementary and Secondary levels).

c. Conducting ....... 2 sem. hrs.

d. Instrumental Classes
   ..................... 4 sem. hrs.

e. Theory (Ear Training, Sight Singing, Dictation, Harmony, etc.)
   ...................... 16 sem. hrs.

f. Applied Music . 16 sem. hrs.

g. History, Appreciation and Literature
   ............ 4 sem. hrs.

h. Ensemble ........... 4 sem. hrs.

2. Vocal .............. 53 sem. hrs.

a. Methods, Materials and Observation
   ........... 6 sem. hrs.

b. Student Teaching . 3 sem. hrs.  
   (Elementary and Secondary levels).

c. Conducting ....... 2 sem. hrs.

d. Class Voice ....... 2 sem. hrs.

e. Theory (Ear Training, Sight Singing, Dictation, Harmony, etc.)
   ...................... 16 sem. hrs.

f. Applied Music . 16 sem. hrs.

g. History, Appreciation and Literature
   ............ 4 sem. hrs.

h. Ensemble ........... 4 sem. hrs.

F. Physical Education ....... 40 sem. hrs.

1. The Principles, Organization and Administration of Physical and Health Education . 4 sem. hrs.

2. Theory and Practice of Physical Education . 12 sem. hrs.  
   (Games of low organization; Elementary Physical Education; Play and Recreation; First Aid; Activities other than athletics such as games, stunts, gymnastics, apparatus, dancing, tumbling, swimming).

3. Theory and Practice of Physical Education . 6 sem. hrs.  
   (Athletic coaching, including inter-scholastic and intramural sports such as: (Men) Football, soccer, speedball, basketball, baseball, tennis, track; (Women) Soccer, volleyball, hockey, basketball, baseball, tennis, track).

4. Health Education .... 10 sem. hrs.  
   (The teaching of Health and School Health Problems, Hygiene, including personal health, public health, child hygiene, sanitation, immunology, and allied subjects).

5. Individual Corrective Gymnastics and Normal Diagnosis 2 sem. hrs.

6. Human Anatomy and Physiology ............. 6 sem. hrs.

G. Speech .................. 40 sem. hrs.

1. 34 sem. hrs. well distributed over the following: Speech fundamentals, Interpretative Reading, Speech correction and voice, Dramatic production, Public address and discussion (including debates, extempore speaking, panel discussion, the oration, the persuasive speech and the various original speech forms), and special methods in teaching speech.

2. Remaining 6 sem. hrs. to be selected from the fields designated in (1) above or from other collegiate speech courses.

NOTE: The above subjects may also be added to the provisional high school certificate.

COMMERCIAL EDUCATION

This curriculum designed for students who wish to prepare themselves for teaching commercial education leads, upon completion, to the degree of Bachelor of Science in Education. It is approved and accredited by the State Department of Education, and students who complete it in a satisfactory manner are eligible to receive the state high school provisional certificate for the teaching of commercial education.
### First Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
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<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English Composition 101</td>
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</tr>
<tr>
<td>Mathematics 100 or 101</td>
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<tr>
<td>Stenography 110</td>
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</tr>
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<tr>
<td>Biological Science</td>
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### Second Year

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<th>SPRING QUARTER</th>
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<tbody>
<tr>
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<tr>
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<td>Educational Psychology 135</td>
<td>Business Writing 118</td>
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### Third Year

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<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
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<tbody>
<tr>
<td>English 106 or 121</td>
<td>English 107 or 122</td>
<td>English 108 or 122a</td>
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<tr>
<td>Marketing 241</td>
<td>Principles of Education 208</td>
<td>Office Practice 130</td>
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<tr>
<td>Principles of Education 207</td>
<td>Accounting 232</td>
<td>Accounting 233</td>
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</table>

### Fourth Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Finance 214</td>
<td>**Student Teaching 240</td>
<td>Public Finance 217</td>
</tr>
<tr>
<td>Geography 219</td>
<td>Retailing 247</td>
<td>Business Law 223</td>
</tr>
<tr>
<td>Special Methods 230</td>
<td>Business Law 222</td>
<td>Electives</td>
</tr>
<tr>
<td>Advertising 245</td>
<td>Salesmanship 246</td>
<td>9</td>
</tr>
<tr>
<td>Business Law 221</td>
<td>School Organization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Administration 252</td>
<td></td>
</tr>
</tbody>
</table>

*Students not meeting the accepted standards of efficiency in typewriting and stenography must take additional courses in these fields.

**Student Teaching offered each quarter, six quarter hours required.

The following options give the privilege of teaching the secondary subjects indicated:

**OPTION I—BUSINESS EDUCATION**

This comprehensive major is designed to prepare the student to teach all phases of business education. This shall be distributed among the following three phases of business education: (a) Stenography-Typing; (b) Bookkeeping-Social Business; (c) Salesmanship-Merchandising.

**45 SEMESTER HOURS**

(68 Quarter Hours)

**OPTION II—STENOGRAPHY-TYPING**

**20 SEMESTER HOURS**

(30 Quarter Hours)
This field is valid for teaching shorthand, typing, business English, clerical practice, and secretarial practice. It may be expanded to a forty-hour major.

**DETAIL:**
- Shorthand ........................................... 9 semester hours
- Typing ............................................. 3 semester hours
- Methods ........................................... 2 semester hours
- Office Practice
- Business English and Correspondence
- Excess in the above or pertinent electives to total 20 semester hours

**OPTION III—BOOKKEEPING-SOCIAL BUSINESS**

This field is valid for teaching bookkeeping, business law, economic geography, business economics, business organization, and management. It may be expanded to a forty-hour major.

**DETAIL:**
- Bookkeeping and Accounting .................. 9 semester hours
- Business Law
- Economic Geography
- Economics
- Business Organization
- Excess in the above or pertinent electives to total 20 semester hours

**OPTION IV—SALESMANSHIP-MERCHANDISING**

This field is valid for teaching merchandising, retail store selling, salesmanship, advertising, and economic geography.

**DETAIL:**
- Marketing Principles .......................... 3 semester hours
- Salesmanship .................................... 3 semester hours
- Advertising
- Retailing
- Merchandising
- Economic Geography
- Excess in the above or pertinent electives to total 20 semester hours

**OPTION V—TYPING**

This is valid only for teaching typing.

**DETAIL:**
- Typing and Methods ............................ 5 semester hours

**OPTION VI—BOOKKEEPING**

**DETAIL:**
- Bookkeeping and accounting ................. 11 semester hours

For description of courses see Department of Economics and Business Administration. Economics and Business Administration courses 103, 104, 105, 207, 208, and 251 may be offered as electives for those wishing a major in business administration.
HEALTH AND PHYSICAL EDUCATION

The purpose of this curriculum is the preparation of teachers and supervisors of physical education, athletic coaches, and recreation directors. Students majoring or minoring in physical education must have their schedules approved by their adviser in the Department of Health and Physical Education. Students completing the following curriculum will be granted the degree of Bachelor of Science in Education with a major in health and physical education.

The department recommends that all majors in physical education secure minors in some of the sciences, such as mathematics, physics, chemistry, or biology.

This curriculum is fully approved and accredited by the State Department of Education, and students who complete it in a satisfactory manner are eligible to receive the state high school provisional certificate for the teaching and supervision of physical education.

First Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101a 1</td>
<td>Physical Education 102a 1</td>
<td>Physical Education 103a 1</td>
</tr>
<tr>
<td>Biology 101 3</td>
<td>Biology 102 3</td>
<td>Biology 103 3</td>
</tr>
<tr>
<td>English 101 3</td>
<td>English 102 3</td>
<td>English 102a 3</td>
</tr>
<tr>
<td>Mathematics, Foreign Language or Social Science 7</td>
<td>Mathematics, Foreign Language or Social Science 9</td>
<td>Theory and Practice of Plays and Games 156 3</td>
</tr>
<tr>
<td>Hygiene 115 3</td>
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<td>Mathematics, Foreign Language or Social Science 6</td>
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Second Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104a 1</td>
<td>Physical Education 105a 1</td>
<td>Physical Education 106a 1</td>
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<tr>
<td>Comparative Anatomy 206 5</td>
<td>Anatomy and Physiology 213</td>
<td>Local Flora or</td>
</tr>
<tr>
<td>Health Education 117 3</td>
<td>Health Education 152</td>
<td>Heredity or Evolution 3</td>
</tr>
<tr>
<td>General Psychology 101 5</td>
<td>Educational Psychology 135 3</td>
<td>Health Education 151 3</td>
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<tr>
<td>English 3</td>
<td>English</td>
<td>Adolescent Psychology 136 3</td>
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<td></td>
<td>Elective</td>
<td>Body Mechanics 155 3</td>
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<td>First Aid 158 2</td>
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<td>English 3</td>
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Third Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles and Methods of Physical Education 201 4</td>
<td>Principles and Methods of Physical Education 202 4</td>
<td>Methods of Physical Education 203 4</td>
</tr>
<tr>
<td>Football Coaching 221a or Coaching (Women) 221b 3</td>
<td>Basketball Coaching 222 or Coaching (Women) 222</td>
<td>Baseball and Track Coaching 223 or Coaching (Women) 223</td>
</tr>
<tr>
<td>Principles of Education 207 3</td>
<td>Educational Methods 250 3</td>
<td>Sociology 153 3</td>
</tr>
<tr>
<td>Sociology 151 3</td>
<td>Sociology 152 3</td>
<td>Electives 6</td>
</tr>
<tr>
<td>Electives 3</td>
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### Fourth Year

<table>
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<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organ. and Admin. of Physical Education 254</td>
<td>Normal Diagnosis 252</td>
<td>History of Physical Education 260</td>
</tr>
<tr>
<td>Advanced Coaching 271</td>
<td>Advanced Coaching 272</td>
<td>Advanced Coaching 273</td>
</tr>
<tr>
<td>Student Teaching 263a</td>
<td>History of Education 138</td>
<td>Student Teaching 263c</td>
</tr>
<tr>
<td>Educational Measurements 229</td>
<td>School Organization and Administration 252</td>
<td>Electives 11</td>
</tr>
<tr>
<td>Electives</td>
<td>8 Elective</td>
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</tr>
</tbody>
</table>

Twenty-seven hours of credit in educational subjects are required of all teachers in secondary education.

Students offering less than one unit of chemistry for entrance must schedule Chemistry 101A, 102A, and 103A, not later than the sophomore year.

**INDUSTRIAL ARTS EDUCATION**

The industrial arts curriculum has been established to meet the need of those desiring to teach industrial arts in the junior and senior high schools of Ohio.

In the secondary program, industrial arts includes both study and experiences in the materials, processes, products and occupations of an industrial society in order that the functions of orientation, avocation, consumer literacy, technical competency, social understandings, and cultural relationships may be achieved.

These functions are achieved through providing adequate situations for their development. For example, orientation is achieved through exploring many types of tools, materials, processes, products, and occupations common to an industrial society. The avocational function is stimulated by studying the possibilities of a variety of useful and enduring leisure time interests and activities. Consumer literacy is sought in situations that provide for the development of intelligent attitudes and understandings concerning the selection and use of the commoner products of industry.

It is the aim of the department to provide a well rounded and comprehensive program, equipping graduates for specific fields as well as for general programs such as are usually found in the smaller high schools. Students completing the following curriculum in a satisfactory manner will be granted the degree of Bachelor of Science in Education with a major in industrial arts.

The curriculum is approved and accredited by the State Department of Education, and students who complete it satisfactorily are eligible to receive the state high school provisional certificate for the teaching of industrial arts.
### College of Liberal Arts

#### First Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
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</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Chemistry 101 or 101a</td>
<td>Chemistry 102 or 102a</td>
<td>Chemistry 103 or 103a</td>
</tr>
<tr>
<td>Drawing 111</td>
<td>Drawing 112</td>
<td>Industrial Arts Orientation</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
<td>Laboratory 101</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Drawing 113</td>
</tr>
</tbody>
</table>

#### Second Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104</td>
<td>Physical Education 105</td>
<td>Physical Education 106</td>
</tr>
<tr>
<td>Economics 121</td>
<td>Economics 122</td>
<td>Economics 123 or 204</td>
</tr>
<tr>
<td>Physics 109, 109a</td>
<td>Physics 110, 110a</td>
<td>Physics 111, 111a</td>
</tr>
<tr>
<td>Woods 114</td>
<td>Woods 116</td>
<td>Woods 117</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>Design 127</td>
<td>English 118</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
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</table>

#### Third Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of Education 207</td>
<td>Psychology 135</td>
<td>Psychology 136 or Elective</td>
</tr>
<tr>
<td>Metals 210</td>
<td>Principles of Education 208</td>
<td>Industrial Arts Methods and Organization 250</td>
</tr>
<tr>
<td>Materials of Industry 231</td>
<td>Metals 220</td>
<td>Electrical Engineering 213</td>
</tr>
<tr>
<td>Industrial Arts 126</td>
<td>Photography 225</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>School Organization and Administration 252</td>
<td>Elective</td>
</tr>
<tr>
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</tbody>
</table>

#### Fourth Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech 101</td>
<td>Speech 102</td>
<td>Machine Shop 333</td>
</tr>
<tr>
<td>Crafts and Hobbies 235</td>
<td>Ceramics 240</td>
<td>*Teaching Industrial Arts</td>
</tr>
<tr>
<td>Electrical Engineering 301</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
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</tr>
</tbody>
</table>

* Offered each quarter, 6 hours required.

Seventy quarter hours are required for a teaching major in the field of industrial arts.

Forty quarter hours are required for a teaching minor in this field. The following courses are suggested:

| 111, 112. Drawing (For description of these courses see Engineering section). |
|---|---|---|
| Drawing 111 | Photography 225 | Methods and Organization 250 |
| Industrial Arts 101 | Crafts and Hobbies 235 | Electrical Engineering 213 |
| Woods 114, 116 | Ceramics 240 | |
| Metals 210 | Electrical Engineering 213 | |

### Industrial Arts

*Fall, Winter, 4 Hours

Mr. Klein
115. Drawing
(See Engineering section).

101. Industrial Arts Orientation Laboratory
An orientation course in Industrial Arts, required of all majors and minors. Covering briefly
the fundamental tools and operations for each area. Prerequisite: Drawing 111. Daily, 5 and 6.
Mr. Lowman

114. Woods          Fall, Winter, 3 Hours
116. Woods          Winter, 3 Hours
117. Woods          Spring, 3 Hours
118. Woods          Spring, 3 Hours

Uses and characteristics of the common woods. Use and care of the fundamental hand tools
and power machines. Basic operations and materials. Prerequisite: Drawing 111. M. W. F.,
5 and 6. Courses 117 and 118 M. W. F., 2 and 3.
Mr. Lowman

126. Professionalized Course in Industrial Arts
Fall, 2 Hours
For description see Professionalized Subject Matter section. T. Th., 2 and 3.
Miss Geeting

127. Applied Design
Practice in free-hand sketching. Originality is emphasized in designing and studying suitable
projects. M. T. W. Th., 2.
Mr. Lowman

210. Metals        Fall, 5 Hours
220. Metals        Winter, 5 Hours
221. Metals        Winter, 5 Hours

Practice in many basic operations including casting, planning, laying out, cutting, folding,
wiring, burring, raising, setting down, welding, riveting, soldering, and others. Not open to
freshmen. Daily, 3 and 4.
Mr. Lowman

213. Elementary Electric Machines
See Electrical Engineering section for description. Daily, 3.

225. Photography
Study of cameras, photographic materials, development and theory of development, printing
processes and many other topics. One lecture and one two-hour laboratory period each week.
Time to be arranged.
Mr. C. Lamb and Mr. Lowman

231. Materials of Industry
A study of industrial materials, their characteristics, sources and uses. T. Th., 2.
Mr. Lowman

235. Crafts and Hobbies
Work in copper, brass, wood, plastics, and other materials. M. W. F., 1 and 2.
Mr. Lowman

240. Ceramics
Work in clay, concrete and others. Daily, 7 and 8.
Mr. Lowman

242. Student Teaching in Industrial Arts Education
Fall, Winter, Spring, 6 Hours
Prerequisite: Industrial Arts 250.
Mr. Lowman.
250. **Industrial Arts Organization and Methods**  
This is the methods course for industrial arts majors and minors. It covers the methods of instruction, the selection and evaluation of instructional materials and the planning and equipping of the modern school laboratory. Daily, 4.

260. **Special Problems in Industrial Arts**  
Time to be arranged. Offered any quarter.

301. **Elementary Alternating Currents**  

333. **Machine Shop**  
See Mechanical Engineering section for description. M. W. F., 6, 7, 8.

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**Public School Music**

These courses are designed for students who wish to prepare themselves for the teaching and supervision of music in public schools. Applicants for admission are expected to possess a reasonable amount of musical training. Students completing these courses will receive the degree of Bachelor of Science in Education and the state four-year provisional certificate.

**Curriculum I**

**For Teachers of Music in Public Schools**  
(Either Vocal or Instrumental Music)

**First Year**

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Sight Singing and Ear</td>
<td>Sight Singing and Ear</td>
<td>Sight Singing and Ear</td>
</tr>
<tr>
<td>Training 101</td>
<td>Training 102</td>
<td>Training 103</td>
</tr>
<tr>
<td>Harmony 111</td>
<td>Harmony 112</td>
<td>Harmony 113</td>
</tr>
<tr>
<td>Applied Music</td>
<td>Applied Music</td>
<td>Applied Music</td>
</tr>
<tr>
<td>Science</td>
<td>Science</td>
<td>Science</td>
</tr>
<tr>
<td>Chorus</td>
<td>Chorus</td>
<td>Chorus</td>
</tr>
<tr>
<td>*Band or Orchestra</td>
<td>*Band or Orchestra</td>
<td>* Band or Orchestra</td>
</tr>
<tr>
<td>1/2</td>
<td>1/2</td>
<td>1/2</td>
</tr>
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**Second Year**

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104</td>
<td>Physical Education 105</td>
<td>Physical Education 106</td>
</tr>
<tr>
<td>General Psychology 101</td>
<td>Educational Psychology 135</td>
<td>Voice Class 109</td>
</tr>
<tr>
<td>Sight Singing and Ear</td>
<td>Sight Singing and Ear</td>
<td>Sight Singing and Ear</td>
</tr>
<tr>
<td>Training 104</td>
<td>Training 105</td>
<td>Training 106</td>
</tr>
<tr>
<td>History and Appreciation 153</td>
<td>History and Appreciation 154</td>
<td>History and Appreciation 155</td>
</tr>
<tr>
<td>Harmony 114</td>
<td>Harmonic Analysis 115</td>
<td>Conducting 142</td>
</tr>
<tr>
<td>Conducting 141</td>
<td>Conducting 141</td>
<td>Conducting 142</td>
</tr>
<tr>
<td>Applied Music</td>
<td>Applied Music</td>
<td>Applied Music</td>
</tr>
<tr>
<td>Chorus</td>
<td>Chorus</td>
<td>Musical Form 211</td>
</tr>
<tr>
<td>*Band or Orchestra</td>
<td>*Band or Orchestra</td>
<td>or Elective</td>
</tr>
<tr>
<td>1/2</td>
<td>1/2</td>
<td>1/2</td>
</tr>
</tbody>
</table>

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Dean Needy and Assistants
Ohio Northern University

Third Year

**Fall Quarter**
- Primary Methods 202 4
- Public Speaking 101 3
- Orchestral Instruments 220 2
- Principles of Education 207 3
- Applied Music 1
- English Literature 3
- Ensemble ½

**Winter Quarter**
- Student Teaching 213 3
- Acting 113 2
- Orchestral Instruments 221 2
- Applied Music 3
- English Literature 3
- Elective 3
- Ensemble ½

**Spring Quarter**
- **Intermediate Methods** 3
- 203 (a) or (b) 4
- Orchestral Instruments 222 2
- Applied Music 3
- English Literature 3
- Elective 3
- Ensemble ½

Fourth Year

**Fall Quarter**
- **Student Teaching 214** (a) or (b) 3
- Educational Methods 250 3
- History or Political Science 3
- Applied Music 3
- Elective 3
- Ensemble ½

**Winter Quarter**
- **Junior and Senior High School Methods 204** or **Instrumental Ensemble Materials** 4
- School Orchestration 251 3
- History or Political Science 3
- Applied Music 3
- School Organization and Administration 252 2
- Ensemble ½

**Spring Quarter**
- **Student Teaching 215** (a) or (b) 3
- Advanced Orchestration 252 or Advanced Elective 3
- History or Political Science 3
- Applied Music 3
- Recital 1
- Elective 3
- Ensemble ½

†Required of all Vocal Majors.
‡Required of all Instrumental Majors.
*Elective for all Vocal Majors.
**Instrumental or Vocal according to the Major.
Attendance at all recitals is required of all music majors.

Curriculum II

For Teachers of Music in Public Schools
(Both Vocal and Instrumental Music)

First Year

**Fall Quarter**
- Physical Education 101 1
- English 101 3
- Sight Singing and Ear Training 101 2
- Harmony 111 3
- Applied Music 3
- Science 3
- Chorus ½
- Band or Orchestra ½

**Winter Quarter**
- Physical Education 102 1
- English 102 3
- Sight Singing and Ear Training 102 2
- Harmony 112 3
- Applied Music 3
- Science 3
- Chorus ½
- Band or Orchestra ½

**Spring Quarter**
- Physical Education 103 1
- English 102a 3
- Sight Singing and Ear Training 103 2
- Harmony 113 3
- Applied Music 3
- Science 3
- Chorus ½
- Band or Orchestra ½
# Second Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104</td>
<td>Physical Education 105</td>
<td>Physical Education 106</td>
</tr>
<tr>
<td>General Psychology 101</td>
<td>Educational Psychology 135</td>
<td>Voice Class 109</td>
</tr>
<tr>
<td>Sight Singing and Ear Training 104</td>
<td>Sight Singing and Ear Training 105</td>
<td>Sight Singing and Ear Training 106</td>
</tr>
<tr>
<td>History and Appreciation 153</td>
<td>History and Appreciation 154</td>
<td>History and Appreciation 155</td>
</tr>
<tr>
<td>Harmony 114</td>
<td>Keyboard Harmony 115</td>
<td>Conducting 142</td>
</tr>
<tr>
<td>Conducting 140</td>
<td>Conducting 141</td>
<td>Conducting 142</td>
</tr>
<tr>
<td>Applied Music</td>
<td>Chorus</td>
<td>Applied Music</td>
</tr>
<tr>
<td>Chorus</td>
<td>1/2 Band or Orchestra</td>
<td>1/2 Band or Orchestra</td>
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</table>

# Third Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
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<tbody>
<tr>
<td>Primary Methods 202</td>
<td>Student Teaching 213</td>
<td>Intermediate Methods 203 (b)</td>
</tr>
<tr>
<td>Public Speaking 101</td>
<td>Acting 113</td>
<td>Orchestral Instruments 220</td>
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<td>Orchestral Instruments 220</td>
<td>Orchestral Instruments 221</td>
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<td>Principles of Education 207</td>
<td>Applied Music</td>
<td>English Literature</td>
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<tr>
<td>Applied Music</td>
<td>English Literature</td>
<td>English Literature</td>
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<tr>
<td>English Literature</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Ensemble</td>
<td>1/2 Ensemble</td>
<td>1/2 Ensemble</td>
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# Fourth Year

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Teaching 203 (b)</td>
<td>Junior and Senior High School Methods 204 (a)</td>
<td>Student Teaching 215 (a)</td>
</tr>
<tr>
<td>Educational Methods 250</td>
<td>School Methods 204 (a)</td>
<td>Advanced Orchestration 252</td>
</tr>
<tr>
<td>History or Political Science</td>
<td>School Orchestration 251</td>
<td>History</td>
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<tr>
<td>Applied Music</td>
<td>History</td>
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<td>Elective</td>
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<td>Ensemble</td>
<td>School Organization and Administration 252</td>
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</tr>
<tr>
<td>1/2 Ensemble</td>
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<td>1/2 Ensemble</td>
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# Fifth Year

<table>
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<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>Applied Music</td>
<td>Materials</td>
<td>Composition</td>
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<tr>
<td>Counterpoint</td>
<td>Applied Music</td>
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<tr>
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<td>Counterpoint</td>
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<td>Composition</td>
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<td>Song Repertoire</td>
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</table>

*Foreign Language optional.

For description of courses see Department of Music.
DESCRIPTION OF PROFESSIONAL COURSES IN EDUCATION

EDUCATIONAL PSYCHOLOGY

135. Educational Psychology
The application of psychological principles to education, problems of thinking, motivation, attitudes, learning, memory and transfer of training. Prerequisite: Psychology 101. M. W. F., 5. Winter, 3 Hours
Miss Geeting

136. Educational Psychology
An intensive study of the problem of growth, reaction, systematic psychology and personality of youth; applied problems in junior and senior high schools. Prerequisite: Psychology 101 or 135. M. W. F., 8. Spring, 3 Hours
Miss Geeting

PRINCIPLES AND HISTORY OF EDUCATION

205. Principles of Education
This course is an introduction to education. In addition to an overview of education, consideration is given to the application of psychological principles to the tasks of instruction. Leading topics are educational aims, sources of human conduct, and modification of conduct through education. M. W. F., 6. Fall, 3 Hours
Miss Geeting

206. Principles of Teaching in the Elementary Grades
Consideration will be given to the various types of lessons and the most approved methods of teaching in the elementary schools; an evaluation of the present-day curriculum in furthering the child’s growth; power and appreciation; needed changes in the organization and administration of the elementary school. Prerequisite: Principles of Education 205. M. W. F., 7. Fall, 3 Hours
Miss Geeting

207. Principles of Secondary Education
The object of this course is to give a fundamental conception of the secondary school; the function of the school in meeting the needs of adolescent years; a study of the educative process and the contributions of modern educational philosophy to education theory and practice. Prerequisite: Psychology 136. M. W. F., 3. Fall, 3 Hours
Mr. Loy

208. Principles of Teaching (Secondary)
This course deals with the different types of teaching in secondary schools; the selection and arrangement of subject matter; economy in class room management; the conduct of the recitation under various plans; the disciplinary problem; the use of text books and the most approved methods of teaching in high school; and observations in training school. Prerequisite: Principles of Education 207. M. W. F., 3. Winter, 3 Hours
Mr. Loy

238. History of Education
A survey of ancient, mediaeval and modern education with the object of acquiring a better understanding of modern educational problems. M. W. F., 6. Spring, 3 Hours
Mr. Loy
SCHOOL ORGANIZATION AND ADMINISTRATION

229. EDUCATIONAL MEASUREMENTS  FALL, 3 Hours
Standardized tests as a means of classifying and promoting pupils; use of standard tests in improving instruction; elementary principles of statistical methods in education; and observations in training school. Prerequisite: Education 207 or 208. M. W. F., 3; T. Th. F., 5.

252. SCHOOL ORGANIZATION AND ADMINISTRATION  WINTER, 3 Hours
Problems of major importance, the school principal and his duties; the staff; the curriculum; program building; extra-curricular activities; problems of management; systems of grading; records and reports are considered and observations in training school. Prerequisite: Education 207 or 208. M. W. F., 6.

MR. LOY

PROFESSIONALIZED SUBJECT MATTER COURSES

124. PUBLIC SCHOOL MUSIC  FALL, 3 Hours
This course begins with the presentation of notation and develops independent sight-reading ability through the use of Public School Music materials presented according to the class methods employed in public schools. M. W. F., 2.

MR. WATSON

125. PUBLIC SCHOOL MUSIC  SPRING, 3 Hours
A study of the child's singing voice in grades 5 and 6; selection and presentation of rote, listening and sight-reading material for these grades. Prerequisite: Public School Music 124. Observation is required. M. W. F., 2.

MR. WATSON

126. PROFESSIONALIZED COURSE IN INDUSTRIAL ARTS  FALL, 2 Hours
This course includes a brief survey of the history of the fine arts; a survey of the history of industrial arts; the relation of industrial arts to fine arts; the use of home industries as a means of personal contact; the use of tools and materials for elementary schools. T. Th., 2 and 3.

MISS GEETING

127. APPLIED DESIGN  WINTER, 2 Hours
For description of course, see Industrial Arts section.

MR. LOWMAN

128. PROFESSIONALIZED COURSE IN INDUSTRIAL ARTS  SPRING, 5 Hours
The psychology of the teaching of art; the application of educational principles to the teaching of arts; relation of art to other school subjects; selection of materials to be used in the teaching of drawing and industrial arts; organizing these materials for teaching purpose; study of textbooks in art; study of courses of study. Daily, 2 and 3.

MISS GEETING

154. HISTORY AND APPRECIATION OF MUSIC  WINTER, 3 Hours
The origin and development of music, studied from an appreciative basis. M. W. F., 2.

MR. DAVIDSON

156. THEORY AND PRACTICE OF PLAYS AND GAMES  SPRING, 3 Hours
The need, purpose and function of play in education are studied. This includes a consideration of the social, educational and biological aspects of play and recreation. Activities adaptable to various age levels of the elementary and secondary schools are learned. Two hours of theory and two hours of laboratory per week. M. T. W. Th., 6.

MISS TOLF

219. GEOGRAPHY FOR ELEMENTARY TEACHERS  FALL, 3 Hours
Weather observations; geographical controls; continent study of North America, South America, and Europe; relationship between man and his environment; industry as the key to a region: a brief history of the growth of geography. M. W. F., 1.

MR. DOBBINS
220. **Teaching of Literature in Elementary Grades, Fall, 4 Hours**
Principles of selecting materials for the teaching of literature; preparation of these materials for teaching; comparison of curricula in progressive schools; creative work; observation and class discussion; supervised practice in teaching literature, in elementary grades, to class. M. T. W. F., 5. **Miss Geeting**

221. **Teaching Arithmetic in Elementary Grades**
Winter, 4 Hours
Modern methods of teaching arithmetic to elementary children; psychology of the teaching of arithmetic; diagnostic and remedial work; literature of the subject; comparison of courses of study; evaluating of text books; observation and class discussion; supervised practice in teaching to class. M. T. W. Th., 5. **Miss Geeting**

222. **Teaching Geography in Elementary Grades, Winter, 3 Hours**
Modern methods of teaching geography in the elementary grades; principles of selecting materials for teaching geography; preparation of this material for teaching purposes; experimental studies made in the teaching of geography; writing lesson plans; activities suitable for children to gain an understanding of geographical principles; comparison of courses of study; evaluation of textbooks. M. W. F., 6. **Miss Geeting**

223. **History of the Development of the Teaching of Reading**
Spring, 4 Hours
A thorough study of two systems of teaching reading; comparison and contrast with at least six other present day systems of teaching reading; reference reading; observation and class discussions. Brief history of the English language; principles of selecting materials for teaching language; preparations of materials for teaching; relation of language and spelling to other subjects in the curriculum. M. T. W. Th., 5. **Miss Geeting**

224. **Teaching History in Elementary Grades**
Spring, 3 Hours
Principles of selecting material for teaching history in each of the six elementary grades; preparation of this teaching material; comparison of courses of study; study of modern methods of teaching history; a study of the application of these methods with groups of children, through observation; the use and value of aids of all kinds; library references; tests and remedial work; evaluation of textbooks. M. W. F., 7. **Miss Geeting**

225. **Teaching of Reading in Elementary Grades**
Winter, 2 Hours
A study of children's readiness for reading; discovering special reading interests; materials and methods best adapted to teach children how to read and to increase interest in reading; supervised practice in teaching reading to the class; comparison of courses of study; evaluation of textbooks; a study of tests in reading. T. Th., 3. **Miss Geeting**

**SPECIAL METHODS IN HIGH SCHOOL SUBJECTS**

These courses are professionalized subject-matter courses and deal with subject-matter that is necessary for the successful teaching of high school subjects. They cover the selection of materials, methods of instruction, and the organization of the work in each subject under consideration. Observation in the training school is required. Prerequisite: Education 207 or 208. Credit 3 to 5 hours. Fall, Winter. M. W. F., 6.

250. **Teaching English**
250. Teaching History and Social Sciences
250. Teaching Mathematics
250. Teaching Latin
250. Teaching Modern Languages
250. Teaching Biology
250. Teaching Physics and Chemistry

These courses in special methods do not count toward the academic major.

OBSERVATION AND PARTICIPATION

The work in observation and participation is integrated with the courses in educational theory and student teaching.

STUDENT TEACHING

Student teaching will be required of all candidates for the degree, Bachelor of Science in Education or Bachelor of Arts who expect to teach, and of all candidates for the diploma in elementary education. The Training School is the center around which all courses are organized.

Prerequisites

1. Students preparing for teaching in the elementary field, may do student teaching in the junior year or in later years of their college course. High school student teaching may be done in the senior year.

2. The student is expected to have a general scholarship rating of one and one-fourth (1 ¼) quality points per scheduled hour. This means that a student should have a rank of C plus before student teaching may be done in any training school.

3. A student who wishes to do student teaching in the elementary field must be able to make a score of 80 on the Ayres Scale for Handwriting.

4. Those wishing to do student teaching in the elementary schools must have completed the following academic and professional courses as outlined in the curricula for the preparation of elementary teachers: English, 6 hours; social science, 6 hours; educational psychology, 3 hours; principles of education, 3 hours; and at least 12 quarter hours of professionalized subject matter or method courses in the elementary school subjects, 4 quarter hours of which must be in reading.
5. A senior who wishes to do student teaching in the high school, must have completed 24 hours of work including special methods in the major subject. It is highly recommended that student teaching be done in a major subject in which the student's scholarship ranks highest. A rating of less than C plus or B should be looked upon as disqualifying one for student teaching.

6. The student must have the recommendation of both his major and minor professors and the Director of Teacher Training. Continuance in student teaching depends upon the attitude, preparation, and progress of the student teacher.

268. Student Teaching—Grades 1 to 6

Fall, Winter or Spring, 3 to 9 Hours

A course for students preparing to teach in elementary grades. Students are required to write a syllabus of the work to be covered; prepare lesson plans and teach them in the Training School; hold conferences with critic teacher; and spend two hours per week on the campus in studying the technique of teaching.

270. Student Teaching—Junior and Senior High School

Fall, Winter or Spring, 3 to 9 Hours

Students will prepare a syllabus of work to be covered; write lesson plans; prepare a bibliography of teaching helps; study the technique of teaching two hours per week; and attend conferences.

263. Student Teaching—Physical Education Students

Fall, Winter or Spring, 6 Hours

Students taking the four-year course for the training of physical education supervisors and teachers will be required to prepare a syllabus of work to be covered, write lesson plans, hold conferences with the professor in charge in the department, and teach in the University, Junior and Senior High School, and Elementary School.

213, 214, 215. Student Teaching—Music

Fall, Winter or Spring, 6 Hours

For description of course see Department of Music.

242. Student Teaching in Industrial Arts Education

Fall, Winter or Spring, 6 Hours

Prerequisite: Industrial Arts 250.

240. Student Teaching in Commerce

Fall, Winter or Spring, 6 Hours
COLLEGE OF ENGINEERING

JOHN ALFRED NEEDY

Dean
The first catalogue of the University included a course in surveying. In 1880, a department of Civil Engineering was organized. Later, departments in Mechanical and Electrical Engineering were established. All the courses of the various curricula have been revised and greatly strengthened.

The purpose of the College of Engineering is to furnish the student the knowledge necessary for a thorough training in the principles of Engineering, and to give him such special and technical information as is required in his own particular field of engineering.

Admission

Candidates of good moral character may apply for admission upon the following plans:

1. Certificate. Graduates from first grade high schools or accredited academies whose credits show proper distribution of units are admitted without examination upon presentation of properly signed entrance certificates. Distribution of fifteen units must be as follows:

   English ................................................. 3
   Mathematics, including solid geometry .............. 3
   Physics ................................................. 1
   Electives .............................................. 6
   Two units to be chosen from the following list: Chemistry, Biology, Language, History.

Applicants deficient in advanced algebra, solid geometry, or physics are required to make up deficiencies.

2. Examination. Candidates who are not graduates of first grade high schools or academies and are therefore deficient in some of the units for admission may be admitted upon examination.

3. Advanced Standing. An applicant from another college seeking advanced standing must present evidence of honorable dismissal and an official transcript of his college record. Some credit may be allowed for practical experience in drafting, surveying, and shop work. Applicants for such credit must submit a satisfactory statement from their employer, giving time of service, nature of work, name and address of employer.

Advance credit will not be given for more than 162 quarter hours (108 semester hours).
4. **Special Student.** Mature persons not candidates for a degree may be admitted, if on consultation the Dean is satisfied that they have sufficient preparation to pursue the work successfully. Such applicants are classified as Special Students. Upon completion of their work, a certificate showing the course of study pursued and the amount of work covered is presented to them.

The standard load in the College of Engineering is 18 hours, no student being permitted to carry less than 15 hours. Extra hours based upon scholarship attainments may be granted by the Dean.

**Classification**

The minimum requirements for sophomore standing are 46 credit hours and a point average of 0.5; for junior standing, 97 credit hours and a point average of 0.7; for senior standing, 150 credit hours and a point average of 0.9.

**Graduation and Degrees**

Two hundred and sixteen hours including physical education are required for graduation. The student must have a scholarship rating of at least one quality point for each credit hour. A student cannot be a candidate for more than one degree at any one time.

Final credits toward graduation must be earned in residence.

The university is empowered to grant the customary academic degrees, which in the College of Engineering are Bachelor of Science in Civil Engineering, Bachelor of Science in Mechanical Engineering, and Bachelor of Science in Electrical Engineering. The University may confer the professional degree upon a candidate who within five years after graduation has a record of at least three years in a responsible position, has submitted an approved thesis, and has successfully completed a comprehensive examination.

**Chemical Engineering**

Fundamental chemistry has in recent years become a vital factor in the industrial world, and its application to the processes of manufacturing is indispensable. In addition to a four-year course for students majoring in chemistry, the University offers a two-year course in chemical engineering which may admit the student to an approved university where he may complete the professional requirements in chemical engineering.
Ohio Northern University

First Year

Fall Quarter
- Physical Education 101  1
- Mathematics 101  5
- Physical Education 115  2
- Chemistry 101A or 101  5
- English 101  3
- Mechanical Engineering 111.4
- Survey of Engineering 120  1

Winter Quarter
- Physical Education 102  1
- Mathematics 103  5
- Chemistry 102A or 102  5
- English 102  3
- Mechanical Engineering 112.4
- Survey of Engineering 121  1

Spring Quarter
- Physical Education 103  1
- Mathematics 105  5
- Chemistry 103A or 103  5
- English 102A  3
- Mechanical Engineering 113.5
- Survey of Engineering 122  1

Summer Quarter
- Mechanical Engineering 442  5
- Industrial Arts 101  5

Second Year

Fall Quarter
- Physical Education 104  1
- Mathematics 107  5
- Physics 104  5
- Chemistry 104  5
- Economics 121  3

Winter Quarter
- Physical Education 105  1
- Mathematics 108  5
- Physics 106  5
- Chemistry 105  5
- Geology 332  3

Spring Quarter
- Physical Education 106  1
- Mathematics 109  5
- Physics 105  5
- Chemistry 106  5
- Mechanical Engineering 114.3

Summer Quarter
- Mechanical Engineering 501  5

Aeronautical Engineering

An ever increasing emphasis has been placed upon the study of aeronautics and airplane design in particular. Both in time of war and peace, the study is not only interesting but practical since it assists in transportation, the enriching of commerce, and in time of war, the defense of the country.

The primary objective of this course is to provide the student with a sound basic training in order that he may complete the course in an approved school of aeronautical engineering.

First Year

Fall Quarter
- Physical Education 101  1
- Mathematics 101  5
- Chemistry 101A or 101  5
- English 101  3
- Mechanical Engineering 111.4
- Mechanical Engineering 101  ½

Winter Quarter
- Physical Education 102  1
- Mathematics 103  5
- Chemistry 102A or 102  5
- English 102  3
- Mechanical Engineering 112.4
- Mechanical Engineering 101  ½

Spring Quarter
- Physical Education 103  1
- Mathematics 105  5
- Chemistry 103A or 103  5
- English 102A  3
- Mechanical Engineering 113.5
- Mechanical Engineering 101  ½
### Second Year

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<tr>
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<td>or Industrial Arts 101</td>
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### CIVIL ENGINEERING

Although many of the former divisions have grown into separate departments, civil engineering offers greater opportunities than ever before. No sharp line of distinction can be drawn in the fundamental training of civil, mechanical, electrical, and chemical engineering, for the reason that the sciences basic to engineering—mathematics, physics, chemistry, and some applied science—are essential in all departments of engineering.

The department is supplied with high grade instruments and appliances necessary for first class instruction and practice. The laboratories are well equipped, the drafting room large and modern, the scientific library excellent. A fully equipped senior design room is also in use.

### First Year

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Ohio Northern University

Third Year

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Fourth Year

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Total number of hours required for graduation 216.
Attendance at Engineering Lectures is required.
Attendance on Inspection Trip is required during third year.

ELECTRICAL ENGINEERING

The courses offered in electrical engineering require a thorough study of theoretical and applied electricity. The first half of the course of study consists of basic engineering subjects. In the second half an intensive study is made of direct current circuits and machinery, alternating current circuits and machinery, electrical power transmission, electrical machine design, electronics, and high-frequency currents. Carefully chosen laboratory experiments supplement class instruction in theory.

The curriculum stresses fundamentals rather than specialized skills. Ample opportunity is provided by campus activities and elective courses for the engineer to develop his cultural as well as his technical training.

The University power plant supplies both direct and alternating currents for laboratory test purposes. The laboratory equipment includes direct current and alternating current motor-generator sets, compound and series direct current motors, rotary converters, squirrel-cage and wound-rotor induction motors, transformers, vacuum tube oscillators, capacity bridges, teletypewriters, an artificial communication line, an oscillograph, and the necessary auxiliary equipment and instruments for thorough laboratory instruction.
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Total number of hours required for graduation 216.
Attendance at Engineering Lectures is required.
Attendance on Inspection Trip is required during third year.

**MECHANICAL ENGINEERING**

Mechanical Engineering deals with the transformation and transmission of energy and with the theory and construction of mechanism and machinery.

The first half of the curriculum consists of basic engineering subjects. In the latter half an exhaustive study is made of heat engineering, together
with the design, erection, and maintenance of power plant apparatus. Thorough training is given in machine drafting, machine design, thermodynamics, steam engines, steam boilers, gas engines, electrical machinery, and steam power plants.

The University has its own steam and gas-engine driven lighting plant and a central steam heating plant, lighting and heating all the University buildings. The equipment is installed with special conveniences for making laboratory tests on boilers, heating and power apparatus under operating conditions.

A machine shop supplements the laboratory equipment, giving opportunity for training in the use of tools and general machine shop practice.

### First Year

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FALL QUARTER
Civil Engineering 411 or
Electrical Eng. 301 6-5
Mechanical Engineering 414 4
Mechanical Engineering 422 4
Mechanical Engineering 431 1
Civil Engineering 441 or Elective 3
Mechanical Engineering 101 ½

WINTER QUARTER
Civil Engineering 322 5
Mechanical Engineering 412 4
Mechanical Engineering 421 5
Mechanical Engineering 432 or 442 or Elective 1-5
Mechanical Engineering 101 ½

SPRING QUARTER
Mechanical Engineering 423 5
Civil Engineering 433 5
Mechanical Engineering 443 5
Elective 3
Mechanical Engineering 101 ½

Total number of hours required for graduation 216.
Attendance at Engineering Lectures is required.
Attendance on Inspection Trip is required during third year.

ENGINEERING, SCIENCE AND MANAGEMENT WAR TRAINING COURSES


No tuition is charged and no college credit is given for these courses. Most classes meet for three hours, two nights a week for sixteen weeks. Upon the completion of the course, the student receives a certificate of proficiency.

WAR PILOT TRAINING

The College of Engineering offers instruction in the basic training of glider and liaison pilots under the Civil Aeronautics Authority. Candidates for the training are assigned by the Civil Aeronautics Authority, and all expenses are paid by the government.

Students who successfully complete the basic training courses, which vary in length from eight to twelve weeks, are then transferred to other centers for advanced training. Ground school courses are taught on the campus, and flying instruction is given at Lima airport.
The Ohio Northern Student Chapter of the American Society of Civil Engineers holds semi-monthly meetings. All civil engineering students are eligible for membership.

The American Institute of Electrical Engineers student branch holds semi-monthly meetings. At these meetings original papers and papers printed in the Proceedings of the American Institute of Electrical Engineers are read and discussed. All students interested in electrical engineering are eligible for membership.

The American Society of Mechanical Engineers holds semi-monthly meetings at which original papers in this field of engineering are read and discussed by members of the society. Students enrolled in the department of mechanical engineering are eligible for membership.

The student affiliate branch of the National Society of Professional Engineers embraces all departments of the College of Engineering.

The University Radio Club maintains a short-wave station, W8AOT, gives code practice and short-wave operating experience and holds semi-monthly meetings at which papers and talks on radio subjects are presented.

The Ohio Northern Chapter of Student Affiliates of the American Chemical Society holds semi-monthly meetings. Scientific men of national and often international renown appear before this group from time to time.

The Annual Inspection Trip

The Junior class devotes one week to an extended visit to some large commercial center. The class spends its time profitably in the study of various phases of engineering and industrial activity in Chicago, Milwaukee, South Bend, Detroit, Pittsburgh, or the Cleveland areas.

Positions

Past experience shows that the demand for graduates of the College of Engineering exceeds the supply. Often representatives of leading utilities and industries visit the University to interview seniors relative to employing them upon graduation. The University does not guarantee positions to its graduates but does everything within its power to assist them in obtaining employment after graduation.
Description of Courses

CIVIL ENGINEERING

101. A. S. C. E. STUDENT BRANCH MEETINGS

Fall, Winter and Spring Quarters. Professional seminar meetings of the Student Branch of the American Society of Civil Engineers to hear lectures by prominent engineers, to read and discuss papers presented by members of the Branch, and to gain some experience in the conduct of such meetings.

Mr. Webb

221. SURVEYING

Use of chain, level, and transit. Land surveying, topographic surveying by stadia and transit, city surveying and measurements of volumes. Prerequisite: Trigonometry 103. Recitations, M. W. F., 1; laboratory, T, Th., 5, 6, 7, or M. W., 6, 7, 8.

Mr. Webb

Fall, 5 Hours

222. SURVEYING

Precise surveying, advanced topographic surveying, hydrographic surveying. Prerequisite: Surveying 221. Recitations, M. W. F., 1; laboratory, T, Th., 6, 7, 8.

Mr. Webb

Spring, 5 Hours

223. RAILROAD ENGINEERING

Simple curves, compound curves, reverse curves, spirals, switches, and turnouts. Prerequisite: Surveying 213. Recitations, M. T. W. Th., 4; laboratory, F., 5, 6, 7.

Mr. Webb

Fall, 5 Hours

311. RAILROAD ENGINEERING

General principles of stresses, elastic limit, shear, riveted joints, torsion, beams, stresses in beams, deflection in beams. Prerequisite: Calculus 109 and Mechanics 213. Daily, 2.

Mr. Pearson

Winter, 5 Hours

312. MECHANICS OF MATERIALS

Beams with more than two supports, shear in beams, special beams, bending combined with tension or compression, column theory, column formulas used by engineers, resilience in bending or shear, combined stresses, theory of elastic limit and failure, curved beams and hooks. Prerequisite: Mechanics of Materials 312. Daily, 2.

Mr. Pearson

Spring, 5 Hours

321. TESTING MATERIALS

Testing cement mortars, tests of small wooden beams and columns with deflection instrument, tension test of steel and iron with extensometer, tests for impurities in concrete aggregates, sieve analysis of concrete aggregates, test of weir. Prerequisite: Mechanics of Materials 313. Laboratory, T. Th., 5, 6.

Mr. Pearson

Fall, 2 Hours

322. HYDRAULICS

Static water pressure, flotation, buoyancy, laws of falling bodies applied to hydraulics, measurements of flow. Prerequisite: Physics, Calculus 109 and Mechanics 213. Daily, 3.

Mr. Webb

Winter, 5 Hours

323. HIGHWAY ENGINEERING

Design, construction and maintenance of earth roads, paved roads, and streets. Prerequisite: Geology and Surveying 213. Recitations, M. W. F., 4.

Mr. Webb

Spring, 3 Hours

332. GEOLOGY

The important rock making minerals, Rocks and their relation to engineering work, Rock weathering and soils, Land-slides, land subsidence and their effects, Origin and relation of lakes and swamps to engineering work, Geology of dams and reservoirs, Road foundations and road materials. Prerequisite: General Chemistry. Recitations, M. W. F., 4.

Mr. Webb

Winter, 3 Hours

* Not given in 1943-44
411. **Structural Engineering**
An introductory course covering by analytical and graphical methods the determinations of reactions, moment, shears and stresses in simple trussed structures for fixed and moving loads. Design steel and wood beams, and design and make detail drawings of simple roof truss. Prerequisite: Mechanics of Materials 313. M. W. F., 5, 6, 7.  
Mr. Webb

412. **Structural Engineering**
An extension of Structural Engineering 411. Credit 6 hours covering the use of influence lines and the design of plate girders and columns. Design and make detail drawings of a plate girder viaduct. Prerequisite: Structural Engineering 411. M. W. F., 5, 6, 7.  
Mr. Webb

413. **Structural Engineering**
Mr. Webb

421. **Reinforced Concrete**
Mr. Webb

422. **Reinforced Concrete**
Design of buildings. Prerequisite: Reinforced Concrete 421. Recitation, 2 hours; drafting room, 4 hours. T. Th., 5, 6, 7.  
Mr. Webb

423. **Reinforced Concrete**
Design of retaining walls and bridges. Prerequisite: Reinforced Concrete 422. Recitation, 2 hours; drafting room, 4 hours. T. Th., 5, 6, 7.  
Mr. Webb

431. **Sewerage**
General course on sewerage system and disposal of sewerage. Prerequisite: Hydraulics 322. Daily, 2.  
Mr. Webb

432. **Water Supply**
Requisites of a water supply, quality of water, collecting and distributing works, studies of rainfall and runoff, works for treating water. Theory of dams. Prerequisite: Hydraulics 322 and Sewerage 431. Daily, 2.  
Mr. Webb

433. **Hydraulic Machinery**
Theory and selection of reciprocating pumps, centrifugal pumps and hydraulic turbines. Prerequisite: Hydraulics 322. Daily, 3.  
Mr. Webb

441. **Financial Engineering**
Mr. Webb

*442. **Foundations**
A descriptive course dealing with pile foundations, pile driving, pile sheeting, cofferdams, open and pneumatic caissons, open wells, types of piers and abutments and underpinning. Prerequisite: Reinforced Concrete 421. M. W. F., 4.  
Mr. Webb

*443. **Engineering Law**
A general course dealing with contracts, agency, mechanic’s liens, negotiable instruments, and workmen’s compensation.  
Mr. Webb

* Not given in 1943-44
101. **Seminar**  
1/2 Hour  
Fall, Winter and Spring quarters. Presentation of talks and papers by student members. Participation in conducting the Ohio Northern Student Branch of the American Institute of Electrical Engineers.  
Mr. Pearson

213. **Elementary Electric Machines**  
Spring, 5 Hours  
Introductory or survey course for all engineering students. The electric and magnetic circuit, D. C. and A. C. generators and motors as well as transformers, storage batteries and illumination will be treated. Prerequisite: Physics 106. Daily, 3.  
Mr. Pearson

301. **Elementary Alternating Currents**  
Fall, 5 Hours  
A comprehensive survey of the generation, transmission, distribution, and use of alternating current power. The theory and characteristics of alternating current circuits, machines and protective apparatus are studied. Prerequisite: Elementary Electric Machines 213. M. W. F., 5.  
Mr. Pearson

311. **Alternating Current Circuits**  
Fall, 5 Hours  
A fundamental course in alternating current circuit theory. Vector representation, the calculation of impedance in series and parallel circuits, polyphase circuits, and elementary transients are studied. Prerequisite: Elementary Electric Machines 213. M. T. W. Th., 1 laboratory, T. Th., 6.  
Mr. Pearson

312. **Alternating Current Machines**  
Winter, 5 Hours  
The theory, characteristics and control of transformers; induction motors, synchronous motors, converters, and alternating current generators. Prerequisite: Elementary Electric Machines 213. M. T. W. Th., 4; laboratory, T. Th., 6.  
Mr. Pearson

313. **Electrical Transmission**  
Spring, 5 Hours  
This is a course in the electrical transmission of energy. Overhead and underground systems and high voltage phenomena. Prerequisite: Alternating Current Circuits, M. T. W. Th., 4; laboratory, T. Th., 6.  
Mr. Pearson

321, 322, 323. **Shop Projects**  
Fall, Winter, Spring, 1 Hour  
Required for graduation. Practical projects involving calculation, drafting, engineering judgment and skill in construction or repair work. These projects may vary from armature winding and motor repairing to the design and construction of laboratory apparatus. This course involves no class room or text book work and the course is usually covered in one hour per quarter for three quarters. Individual assignments are made to each student. M. T. W. Th., 6-8.  
Mr. Pearson

411. **Direct Currents**  
Fall, 5 Hours  
This is a thorough course in the theory, characteristics, application and control of direct current circuits and machinery. Prerequisite: Elementary Electric Machines 213. M. T. W. Th., 1; laboratory, T. Th., 6.  
Mr. Pearson

*412. **High Frequency Currents**  
Winter, 5 Hours  
This is a course in the theory and calculation of circuits and apparatus performance at communication frequencies. Prerequisite: Electrical Transmission 313. M. T. W. Th., 4; laboratory, T. Th., 6.  
Mr. Pearson

* Not given in 1943-44
413. **High Frequency Currents**

This is a continuation of the above course involving the mathematical and experimental analysis of equipment characteristics and circuit performance at radio frequencies. Prerequisite: High Frequency Currents 412. M. T. W. Th., 4; laboratory, T. Th., 6.

**Spring, 5 Hours**

Mr. Pearson

421. **Illumination**


**Fall, 3 Hours**

Mr. Pearson

422. **Electrical Machine Design**

A course in the detailed electrical calculation of direct current generators and controllers. Prerequisite: Direct Currents 411. Recitations, M. T. W. Th., 5.

**Winter, 4 Hours**

Mr. Pearson

423. **Electrical Machine Design**

The electrical design of alternating current generators, motors and transformers. Prerequisite: Alternating Current Machines 312. M. W. F., 4.

**Spring, 3 Hours**

Mr. Pearson

431. **Electronics**

This is a course in the theory of electronic flow in vacuum tubes. Characteristics and application of newer types of tubes. Amplifiers, modulators, oscillators and detectors. Prerequisite: Elementary Alternating Currents 301. M. W. F., 5.

**Fall, 5 Hours**

Mr. Pearson

441, 442. **Advanced Electrical Laboratory**

Elective in the senior year. Special laboratory problems and investigations more intricate and advanced than included in the required courses. Minor research projects may be undertaken. Hours to be arranged to suit balance of schedule.

**Fall, Winter, 3 Hours**

Mr. Pearson

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**MECHANICAL ENGINEERING**

101. **A. S. M. E. Student Branch Meeting**

1/2 Hour

Fall, Winter and Spring Quarters. Professional seminar meetings of the Student Branch of the American Society of Mechanical Engineers to hear lectures by prominent engineers, to read and discuss papers presented by members of the Branch and to gain some experience in conducting such meetings.

Mr. Needy

111. **Engineering Drawing**

Use of instruments, applied geometry, lettering, orthographic projection and pictorial drawing. Ten hours drafting work each week. Daily, 1, 2; Daily, 3, 4; M. W. F., 6, 7, 8.

**Fall, Winter, 4 Hours**

Mr. Klein

112. **Engineering Drawing**

Developments, intersections, perspective and working drawings. Prerequisite: Engineering Drawing 111. Ten hours work in drafting room each week. Daily, 1, 2; Daily, 3, 4; M. W. F., 6, 7, 8.

**Winter, 4 Hours**

Mr. Klein

113. **Engineering Drawing**

Descriptive geometry, advanced orthographic projections, problems of point, line, plane, and curved surfaces. Shades and shadows. Prerequisite: Engineering Drawing 112. Recitations, 3 hours. Six hours drafting room work each week. Daily, 1, 2; Daily, 3, 4; M. W. F., 6, 7, 8.

**Spring, 5 Hours**

Mr. Klein

114. **Engineering Drawing**

A course in technical drawing designed for chemical engineering students. One recitation and three two-hour laboratory periods each week. Prerequisite: Engineering Drawing 113. Time to be arranged.

**Spring, 3 Hours**

Mr. Klein

* Not given in 1943-44
115. **Engineering Drawing**
Primarily intended for students majoring in Industrial Arts. Additional work in isometric, oblique, perspective drawings, charts, graphs, and other figures. Time to be arranged.

_Spring, 3 Hours_

Mr. Klein

120. **Survey of Engineering**

_Fall, 1 Hour_

121. **Survey of Engineering**

_Winter, 1 Hour_

122. **Survey of Engineering**

_Spring, 1 Hour_

The purpose of this course of study is to assist the student to find out definitely what branch of engineering he wishes to pursue, since without inconvenience he can change at the end of the first year, F., 1.

Mr. Needy

311. **Thermodynamics**

_Fall, 5 Hours_

Mr. Needy

312. **Steam Power Plants**
A study of the combustion, handling and storage of fuel, and of steam generating machinery, including boilers, stokers, steam engines, and condensers. Prerequisite: Physics 105 and Thermodynamics 311. M. T. W. Th., 3.

_Winter, 4 Hours_

Mr. Needy

313. **Steam Power Plants**
A continuation of Steam Power Plants 312 with consideration given to complete installations, the cost of power, typical specifications and the power test codes. M. T. W. Th., 2.

_Fall, 4 Hours_

Mr. Needy

321. **Mechanical Laboratory**
Calibration of instruments, use of planimeter, study of engine indicators and their use, determination of steam quality, approximate coal analysis, heating value of coal by use of bomb calorimeter, flue gas analysis, testing of lubricating oils for flash point, fire point, and viscosity. Prerequisite: Thermodynamics 311. T. Th., 5, 6.

_Fall, 3 Hours_

Mr. Klein

322. **Mechanical Laboratory**
Boiler evaporative test, engine indicator and brake horsepower tests, indicator card analysis, efficiency tests of injector, electric motor, ventilating fan, centrifugal pump and automobile motor. Prerequisite: Mechanical Laboratory 321. T. Th., 6, 7.

_Winter, 3 Hours_

Mr. Klein

323. **Machine Design**

_Spring, 4 Hours_

Mr. Klein

332. **Mechanism**
Mechanisms, motion and velocity, kinematic chains, instantaneous centers, velocity diagrams, parallel and straight line motion, cams, gearing, bevel gears, gear trains, belting and intermittent motions. Daily, 5.

_Winter, 5 Hours_

Mr. Klein

333. **Machine Shop**
Bench work in filing, chipping, and fitting. Machine work in threading, turning, boring, drilling, shaping, tool grinding. M. W. F., 6, 7, 8.

_Spring, 3 Hours_

Mr. Klein
334. **ADVANCED MACHINE SHOP**  
Winter, 3 Hours  
Elective in the senior year. Special type of machine work more intricate and advanced than included in the required course. Minor problems in machine design may be worked out in this course. Laboratory hours to be arranged to suit balance of schedule. Prerequisite: Machine Shop 333.  
Mr. LOWMAN

411. **METALLURGY**  
Fall, 4 Hours  
The manufacture of pig iron, wrought iron, and steel, mechanical treatment of steel, iron and steel founding, physical and chemical constitution of iron and steel, alloy metals and metallurgy. Prerequisite: Chemistry 103. M. T. W. Th., 4.  
Mr. NEEDY

412. **MACHINE DESIGN**  
Winter, 4 Hours  
Mr. NEEDY

421. **GAS AND OIL ENGINES**  
Winter, 5 Hours  
Liberation of heat energy, combustion, engine burning gas, kerosene and gasoline, semi-Diesel and Diesel engines, automobile engines, carburetion, ignition and testing. Prerequisites: Thermodynamics 311. Daily, 3.  
Mr. NEEDY

422. **STEAM TURBINES**  
Fall, 4 Hours  
Nozzle and blade design, mechanical losses, impulse turbine, reaction turbines, impulse reaction turbine, governing economics of turbine operation, and the gas turbine. Prerequisite: Thermodynamics 311. M. T. W. Th., 2.  
Mr. NEEDY

423. **GAS ENGINE DESIGN**  
Spring, 5 Hours  
Design of gas or oil engine. Complete calculations and detail drawings required of each member of the class. Prerequisite: Gas and Oil Engines 421, and Machine Design 323. Daily, 4.  
Mr. NEEDY

431. **SHOP PROJECTS**  
Fall, 1 Hour  
Practical projects involving calculation, design, drafting, engineering judgment and skill in construction or repair work. The course involves no classroom or textbook work and is covered in one hour per week in the Fall quarter.  
Mr. LOWMAN

432. **POWER PLANT OPERATION**  
Winter, Spring, 1-5 Hours  
Practical work in the operation and maintenance of the University Power Plant. Prerequisite: Steam Power Plants 312 and 313. Daily, 7:00 a.m. to 5:00 p.m.  
Mr. NEEDY

442. **ELECTRIC WELDING**  
Winter, 1-5 Hours  
The uses and principles of construction of arc welding equipment. Actual operation of arc welding and spot welding machines, including a study of lap, butt and perpendicular welding. Hours to be arranged.  
Mr. NEEDY

443. **HEATING, VENTILATING AND AIR CONDITIONING**  
Spring, 5 Hours  
Heating and ventilation. Heat losses from buildings, methods of heating, boilers, radiators and accessories, steam systems, hot water systems, automatic temperature control, hot air furnace heating, fan systems, air washers, and air conditioning. Prerequisite: Thermodynamics 311. Daily, 6.  
Mr. NEEDY

501. **ENGINEERING PRACTICE WORK**  
Summer, 5 Hours  
This summer practice work is required of all students in the course of Chemical Engineering. It is elective in other courses. The purpose of the course is to acquire the point of view of labor by personal contact. The student must keep notes and pass a creditable examination some time during the following Fall quarter. Work will be acceptable providing it is shop or factory experience and is of ten weeks duration.  
Mr. NEEDY
COLLEGE OF PHARMACY

RUDOLPH HENRY RAABE

Dean
History

The College of Pharmacy of Ohio Northern University had its beginning in the departments of Science and Medicine. Following a passage of a law in Ohio in 1884, which required registration with the Ohio Board of Pharmacy of all who wished to engage in the practice of the profession, Pharmacy was changed from a sub-department to a separate and distinct division of the university.

In 1885 the courses of study covered a period of thirty weeks, three terms of ten weeks each. From time to time the requirements for admission, the courses of study and facilities for instruction have been increased. These changes are concurrent with the progress in medical, chemical, pharmaceutical, health, and the allied sciences.

On August 24, 1925, the Ohio Northern University College of Pharmacy was admitted to membership in the American Association of Colleges of Pharmacy.

Graduates of the College of Pharmacy enjoy broad and liberal recognition.

Purpose

This College of Pharmacy aims to prepare men and women to meet not only the legal requirements of the profession but also the increasing public demand for educated and trained pharmacists. Majors are offered in biology, chemistry, pharmacology, and pharmacy.

Through organized courses of study, instruction is given in the sciences pertaining to the selection, standardization, preservation, and dispensing of drugs, medicines, and chemicals used in the promotion of personal and public health, and in the service of the pharmacist to the public, to the medical practitioners, and to the profession.

A knowledge of the business methods involved in the successful distribution of medicinal materials is essential to the successful pursuit of the profession. Through a series of courses in business administration and drug store business methods, the student is given excellent opportunity to elect courses suited to his particular needs in this field.

Laboratories and Equipment

In addition to the general biological, chemical, and physical laboratories of the University, the College of Pharmacy has three pharmaceutical and dispensing laboratories. The desk arrangement is such as to afford the
student every facility for complete and thorough work, and the tables are supplied with an entire outfit of apparatus, including storing closet.

There are three chemical laboratories: General Inorganic, Organic, and Analytical. Each laboratory is equipped with individual lockers and with the necessary apparatus and supplies to do modern work in the courses offered. Chainomatic balances are the predominating type of analytical balances used.

The microscopic laboratory is equipped with tables, compound microscopes, microtome, projection lantern, and accessories.

Each individual locker in the pharmaceutical laboratories is equipped with apparatus and accessories necessary to do practice and experimental work in the courses offered, covering the entire range from the introductory courses for freshmen to the advanced courses in drug assay and the compounding of medicines. The practice dispensary laboratory is equipped with tables made by one of the leading drug store fixture manufacturers, and each table is equipped with a complete set of such apparatus as is needed in extemporaneous compounding and dispensing.

The Student Health Service Dispensary is administered by the registered pharmacists on the staff of the College of Pharmacy. Qualified junior and senior pharmacy students may be assigned to the pharmacists in charge for instructions in actual dispensary practice.

Library

Reference books and periodicals on pharmacy are located in the departmental library in the Dukes Memorial Building. The facilities of the general library are also at the disposal of pharmacy students.

Time to Enter

Although the curriculum for beginning students is designed for those entering the College of Pharmacy at the opening of the Fall quarter, Tuesday, September 7, 1943, during the present emergency the student may enter any quarter and complete the course of study by continuing in residence for twelve consecutive quarters, thus making it possible to complete the regular four-year course in three calendar years. The course as outlined on page 143 can be completed in nine consecutive quarters or two and one-fourth calendar years. The sequence of courses presented herein should be followed insofar as possible, but every effort will be made to accommodate the needs of the individual student.
Students who are entitled to advanced standing may enter at the time approved by the Dean. Write for further information.

Admission

Candidates who are at least seventeen years of age and of good moral character may apply for admission upon the following plans:

1. Certificate. Evidence of the satisfactory completion of four years of high school work or its equivalent and a certificate of preliminary education issued by the Entrance Examiner of the Ohio Board of Pharmacy. Blanks for these purposes may be had by addressing the Ohio Northern University Entrance Examiner.

2. Advanced Standing. A student desiring to transfer from another college must present a transcript of record and a certificate of honorable dismissal from the college he is leaving. He should submit a catalogue of his college. Full credit will be given for work satisfactorily completed in recognized institutions of higher learning, provided such work is parallel to the requirements for graduation in this institution.

Advanced credit is given for not more than 135 quarter hours (90 semester hours) exclusive of physical education.

Persons who meet the requirements for admission as indicated in the preceding paragraphs are issued a Permit to Enter the College of Pharmacy. To enter any of the regular courses of study the candidate, after being granted a Permit to Enter, must prepare a schedule of studies with the aid of an adviser and approval of the Dean, and pay tuition and fees as stated elsewhere in this catalogue.

Classification

The minimum requirements for sophomore standing are 42 credit hours and a point average of 0.5; for junior standing, 96 credit hours and a point average of 0.7; for senior standing, 150 credit hours and a point average of 0.9.

Requirements for Graduation

Every person upon whom a degree is conferred must be of good moral character; satisfactorily complete all prescribed work; spend the last year in resident study in this college; have as many quality points as scheduled hours, and be present at the commencement exercises unless officially excused.
THE FOUR-YEAR CURRICULUM

The curriculum is flexible enough to allow preparation in specialized activities of the profession. In addition to a group of courses which are constants for all candidates for the degree of Bachelor of Science in Pharmacy, several groups of electives are offered. Courses designated as constants are required. A sufficient number of credit hours must be chosen from the elective group to bring the total number of credit hours up to the requirement for graduation. All subjects are assigned in logical sequence.

Students who choose to major in the natural sciences may be assigned to courses in German or French, or both, in order to acquire ability to read scientific texts and periodicals published in these languages. Those who elect courses in economics and business administration may choose the language which best serves their needs. All elections are subject to the approval of the Dean.

All colleges holding membership in the American Association of Colleges of Pharmacy require for graduation the satisfactory completion of not less than four full college years or twelve quarters.

Not less than one hundred ninety-six credit hours, including physical education, are to be selected from the schedule below for graduation.

### Required Basic Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 101, 102, 103, 206, 207, 208, or the equivalent</td>
<td>30</td>
</tr>
<tr>
<td>English 101, 102, 102a or the equivalent</td>
<td>9</td>
</tr>
<tr>
<td>Mathematics</td>
<td>9</td>
</tr>
<tr>
<td>Physics</td>
<td>6 to 9</td>
</tr>
</tbody>
</table>

### Required Professional Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceutical Chemistry 201, 202, 203, 251, 252, 253</td>
<td>24</td>
</tr>
<tr>
<td>Pharmacy 101, 103, 104, 105, 151, 152, 153, 203, 251, 252, 253, 254, 299</td>
<td>45</td>
</tr>
<tr>
<td>and electives</td>
<td>6</td>
</tr>
<tr>
<td>Pharmacognosy 101, 102, or 103, or the equivalent</td>
<td>15</td>
</tr>
<tr>
<td>Pharmacognosy 151, 152, 153</td>
<td>26</td>
</tr>
<tr>
<td>Pharmacology 201, 202, 203, 211, 222, 223</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 103 or the equivalent</td>
<td>3</td>
</tr>
</tbody>
</table>

### Electives in the Basic Subjects

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>French or German</td>
<td>9</td>
</tr>
<tr>
<td>Economics</td>
<td>9</td>
</tr>
<tr>
<td>Biology</td>
<td>9</td>
</tr>
<tr>
<td>Botany</td>
<td>9</td>
</tr>
<tr>
<td>Zoology</td>
<td>9</td>
</tr>
</tbody>
</table>
**Ohio Northern University**

Electives in the Professional and Applied Subjects

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>6</td>
</tr>
<tr>
<td>Biological Assaying</td>
<td>3</td>
</tr>
<tr>
<td>Business Methods</td>
<td>9</td>
</tr>
<tr>
<td>Chemistry</td>
<td>20</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>10</td>
</tr>
<tr>
<td>Pharmacognosy</td>
<td>5</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>5</td>
</tr>
</tbody>
</table>

**Four-Year Course in Pharmacy**

(Effective July 1, 1940)

**Degree: Bachelor of Science in Pharmacy**

**First Year**

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>Chemistry 101 or 101a</td>
<td>Chemistry 102 or 102a</td>
<td>Chemistry 103 or 103a</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Mathematics 101a</td>
<td>Mathematics 102a</td>
<td>Mathematics 103a</td>
</tr>
<tr>
<td>Pharmacognosy 101 or</td>
<td>Pharmacognosy 102 or</td>
<td>Pharmacognosy 103 or</td>
</tr>
<tr>
<td>Biology 101 or 107</td>
<td>Biology 102 or 108</td>
<td>Biology 103 or 109</td>
</tr>
<tr>
<td>Pharmacy 101</td>
<td>Pharmacy 103</td>
<td>Pharmacy 104</td>
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<tr>
<td></td>
<td>3.5</td>
<td>3</td>
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</table>

**Second Year**

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 104</td>
<td>Physical Education 105</td>
<td>Physical Education 106</td>
</tr>
<tr>
<td>Chemistry 206</td>
<td>Chemistry 207</td>
<td>Chemistry 208</td>
</tr>
<tr>
<td>Pharmacy 151</td>
<td>Pharmacy 152</td>
<td>Pharmacy 153</td>
</tr>
<tr>
<td>Pharmacognosy 151</td>
<td>Pharmacognosy 152</td>
<td>Pharmacognosy 153</td>
</tr>
<tr>
<td>Physics 109</td>
<td>Physics 110</td>
<td>Physics 111</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
</tr>
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</table>

**Third Year**

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceutical Chemistry 201</td>
<td>Pharmaceutical Chemistry 202</td>
<td>Pharmaceutical Chemistry 203</td>
</tr>
<tr>
<td>Pharmacology (Physiology) 211</td>
<td>Pharmacology (Bacteriology) 222</td>
<td>Pharmacology (Bacteriology and Health) 223</td>
</tr>
<tr>
<td>Pharmacy (Business) 203</td>
<td>Pharmacy (History) 105</td>
<td>Pharmacy (Law) 254</td>
</tr>
<tr>
<td>Pharmacology 201</td>
<td>Pharmacology 202</td>
<td>Pharmacology 203</td>
</tr>
<tr>
<td></td>
<td>3 to 5</td>
<td>3 to 5</td>
</tr>
</tbody>
</table>

**Fourth Year**

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceutical Chemistry 251</td>
<td>Pharmaceutical Chemistry 252</td>
<td>Pharmaceutical Chemistry 253</td>
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<tr>
<td>Pharmacy (Dispensing) 251</td>
<td>Pharmacy (Dispensing) 252</td>
<td>Pharmacy (Dispensing) 253</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td></td>
<td>3 to 8</td>
<td>3 to 8</td>
</tr>
</tbody>
</table>
Additional credit hours may be selected each quarter of the Senior year from the following subjects:

**FALL QUARTER**
- Pharmaceutical Chemistry (Biochemistry) 261
- Pharmacy (Manufacturing) 204
- Pharmacy (NNR) 261
- Pharmaceutical Chemistry (Urinalysis) 271

**WINTER QUARTER**
- Pharmaceutical Chemistry (Biochemistry) 262
- Pharmacy (Manufacturing) 205
- Pharmacy (NNR) 262
- Pharmaceutical Chemistry (Urinalysis) 271

**SPRING QUARTER**
- Pharmaceutical Chemistry (Biochemistry) 263
- Pharmacy (Manufacturing) 206
- Pharmacy (NNR) 263
- Physical Education (First Aid) 158

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**A Course in Pharmacy for Students Who Have Completed Their Pre-Professional Studies**

The professional courses in pharmacy are based upon satisfactory accomplishments in certain basic subjects. The prospective pharmacy student who has completed one or more years of work in a recognized College of Liberal Arts must submit a transcript of his credits before he can be admitted to advanced standing.

The required basic subjects which have been recommended by the American Association of Colleges of Pharmacy as being most advantageous to the successful pursuit of the professional and applied courses of study are botany, chemistry, economics, English, mathematics, physics, physiology, and zoology. Certain basic courses in bacteriology, business, chemistry, foreign language, public health studies, and zoology are listed as optional and will be given careful consideration in the evaluation of credits for advanced standing. The minimum length of time required to complete the professional and applied courses is three years.

**Degree: Bachelor of Science in Pharmacy**

**First Year**

**FALL QUARTER**
- Pharmacy 101
- Pharmacognosy 151
- Pharmacy 151
- Electives

**WINTER QUARTER**
- Pharmacy 103
- Pharmacognosy 152
- Pharmacy 151
- Electives

**SPRING QUARTER**
- Pharmacy 104
- Pharmacognosy 153
- Pharmacy 153
- Electives

**Second Year**

**FALL QUARTER**
- Pharmaceutical Chemistry 201
- Pharmacology 211
- Pharmacy 203
- Pharmacology 201

**WINTER QUARTER**
- Pharmaceutical Chemistry 202
- Pharmacology 222
- Pharmacy 105
- Pharmacology 202

**SPRING QUARTER**
- Pharmaceutical Chemistry 203
- Pharmacy 254
- Pharmacology 203
- Pharmacology 223
Ohio Northern University

Third Year

**FALL QUARTER**
- Pharmacy 251 3
- Pharmaceutical Chemistry 251 3 to 5
- Electives 3 to 8

**WINTER QUARTER**
- Pharmacy 252 3
- Pharmaceutical Chemistry 252 3 to 5
- Electives 3 to 8

**SPRING QUARTER**
- Pharmacy 253 3
- Pharmaceutical Chemistry 253 3 to 5
- Pharmacology 259 3
- Electives 3 to 5

* To be admitted to this schedule of courses, the candidate must have completed at least thirty-six semester hours or forty-eight quarter hours in the prescribed pre-pharmacy subjects.

Additional credit hours may be selected each quarter of the Senior year from the following subjects:

**FALL QUARTER**
- Pharmaceutical Chemistry (Bio-) 261 3
- Pharmacy (Manufacturing) 204 3
- Pharmaceutical Chemistry (Urinalysis) 271 3

**WINTER QUARTER**
- Pharmaceutical Chemistry (Bio-) 262 3
- Pharmacy (Manufacturing) 205 3
- Pharmaceutical Chemistry (Urinalysis) 271 2

**SPRING QUARTER**
- Pharmaceutical Chemistry (Bio-) 263 3
- Pharmacy (Manufacturing) 206 3
- Pharmaceutical Chemistry (Urinalysis) 271 2
- First Aid 2

Description of Courses

**BIOLOGY**

One of the specific aims of this department is to prepare students for the study of medical sciences, and to give them foundation courses to qualify them for entrance into clinical and research laboratories.

**101. Zoology**

**FALL, 3 Hours**

**102. Zoology**

**WINTER, 3 Hours**

**103. Zoology**

**SPRING, 3 Hours**

These courses are designed for students who desire a general acquaintance with some of the biological laws and theories as evidenced by the animal world. A general survey of the animal kingdom based on classification, morphology, physiology, and ecology. Special attention is given to the problems of the organism, with emphasis on development, reproduction, genetics, and evolution. Section 1, M. W., 3; 4; F., 3; Section 2, T. Th., 3, 4; F., 4.

**Mr. Huber and Mr. Dobbins**

**107. Botany**

**FALL, 3 Hours**

**108. Botany**

**WINTER, 3 Hours**

**109. Botany**

**SPRING, 3 Hours**

These courses are presented largely as cultural courses with emphasis placed on careful observation and logical conclusion. The time is devoted to a consideration of the physiological processes, ecology, structure, reproduction, genetics, distribution, and evolution of plants. Section 1, M. W., 5, 6; F., 5; Section 2, M. W., 7, 8; F., 7.

**Mr. Dobbins**
110. **Local Flora**
A systematic study of the vascular plants, both native and introduced. A field course supplemented by greenhouse and herbarium studies. S., 1, 2, 3, 4; T. Th., 1.

**Spring, 3 Hours**

Mr. Dobbins

219. **Histology and Technique**
Methods of collecting, killing, preserving, and preparing materials for demonstration and laboratory purposes are considered. A detailed microscopic study of various plant or animal tissues is made. Lecture and class work one hour, laboratory six to eight hours. Time schedule to be arranged. Open to seniors majoring in biology.

**Winter, 3 Hours**

Mr. Dobbins or Mr. Huber

220. **Biological Problems**
Minor investigations for qualified seniors who are taking a major or minor in biology. By arrangement any quarter. Fee depends on nature of work done.

**1-3 Hours**

Mr. Huber or Mr. Dobbins

222. **Plant Physiology**
Course consists of a critical study of some of the physiological processes of plants. Prerequisite: Botany 107, 108, 109. M. W., 3, 4; F., 3.

**Winter, 3 Hours**

Mr. Dobbins

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**CHEMISTRY**

All students who are candidates for graduation from the College of Pharmacy will be required to complete Chemistry 101, 102, 103, 206, 207, and 208, or the equivalent. Those wishing to work in chemistry beyond the constants as listed for all pharmacy students should see their adviser.

Additional courses in chemistry may be elected, subject to the recommendation of the student’s adviser and approval of the Dean.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>101a</td>
<td>Introductory Chemistry</td>
<td>Fall</td>
<td>5</td>
</tr>
<tr>
<td>102a</td>
<td>Introductory Chemistry</td>
<td>Winter</td>
<td>5</td>
</tr>
<tr>
<td>103a</td>
<td>Introductory Qualitative Analysis</td>
<td>Spring</td>
<td>5</td>
</tr>
<tr>
<td>101</td>
<td>General Chemistry</td>
<td>Fall</td>
<td>5</td>
</tr>
<tr>
<td>102</td>
<td>General Chemistry</td>
<td>Winter</td>
<td>5</td>
</tr>
<tr>
<td>103</td>
<td>Qualitative Analysis</td>
<td>Spring</td>
<td>5</td>
</tr>
<tr>
<td>104</td>
<td>Quantitative Analysis</td>
<td>Fall</td>
<td>5</td>
</tr>
<tr>
<td>105</td>
<td>Quantitative Analysis</td>
<td>Winter</td>
<td>5</td>
</tr>
</tbody>
</table>

Mr. Wixom

Mr. Wixom

Mr. Wixom

Mr. Wixom
106. Quantitative Analysis

These courses deal with the theory and practice of gravimetric and volumetric analysis. The use of the fundamental principles of modern theoretical chemistry, as well as the attainment of the ability to make quantitative separations and determinations, is emphasized. Prerequisite: Chemistry 103a or 103. Lecture, T. Th., 5, 24 hours; laboratory, M. W. F., 5, 6, 7, 108 hours.

Mr. McFadden and Mr. Wixom

206. Organic Chemistry

Fall, 5 Hours

207. Organic Chemistry

Winter, 5 Hours

208. Organic Chemistry

Spring, 5 Hours

These courses consist of a fundamental study of the compounds of carbon. Careful attention is given to group structure, group relationship, group properties, isomerism and nomenclature. Prerequisite: Chemistry 103a or 103. Lecture and quiz, M. W. F., 5, 36 hours; laboratory, T. Th., 5, 6, 7, 72 hours.

Mr. McFadden

212. Inorganic Chemistry

Fall, 5 Hours

213. Inorganic Chemistry

Winter, 5 Hours

214. Inorganic Chemistry

Spring, 5 Hours

The fundamental purpose of these courses is to teach inorganic chemistry. Courses 212 and 213 deal with systematic analysis on a semi-quantitative basis and are more comprehensive than Chemistry 103 in both theoretical consideration and number of elements studied. Course 214 consists of a preparation of pure inorganic compounds, and a study of the theoretical principles involved. In all these courses the Periodic Law is used as the basis for the classification of the elements and their properties. Prerequisite: Chemistry 103a or 103. Lecture, M. W. F., 4, 36 hours; laboratory, M. W. F., 5, 6, 7, 108 hours.

Mr. Wixom

215. Physical Chemistry

Fall, 3 Hours

216. Physical Chemistry

Winter, 3 Hours

217. Physical Chemistry

Spring, 3 Hours

A series of courses designed to develop a comprehensive conception of chemical change and the structure of matter. In the interest of the pre-medical student, special attention is given to osmosis, equilibrium, colloids, and hydrogen ion determination. Prerequisite: Quantitative analysis, organic chemistry, general physics, and mathematics 109. Lecture and quiz, M. W. F., 4, 36 hours.

Mr. Wixom

231. Chemistry Problems

Minor investigations for qualified seniors who are majoring in chemistry. Consult head of department.

Mr. McFadden and Mr. Wixom

PHARMACEUTICAL CHEMISTRY

201. Drug Assay

Fall, 5 Hours


Mr. McFadden

202. Drug Assay

Winter, 5 Hours

A continuation of Pharmaceutical Chemistry 201. In addition some attention is directed to the physical methods employed in the testing of certain classes of drugs. Lectures and recitations, T. Th., 4, 24 hours; Laboratory, M. W. F., 2, 3, 4, 108 hours.

Mr. McFadden
203. **Drug Assay**
A study of official methods of assay of crude drugs and preparations of crude drugs. Appropriate laboratory work is carried out to illustrate the various methods employed. Lectures and recitations, T. Th., 4. 24 hours; Laboratory, M. W. F., 2, 3, 4. 108 hours.

**Spring, 5 Hours**
Mr. McFadden.

251. **Inorganic Pharmaceutical Chemistry**
A study of the preparation, reactions, solubility, identity and purity of the inorganic substances of the United States Pharmacopoeia and National Formulary. The laboratory work consists of the preparation of a variety of substances and the application of the various official tests for purity and identity. Lectures and recitations, M. W. F., 1. 36 hours; Laboratory, T. Th., 1, 2, 3. 72 hours.

**Fall, 3 to 5 Hours**
Mr. Neuroth.

252. **Organic Pharmaceutical Chemistry**
A study of the preparation, reactions, solubility, identity and purity of the synthetic organic substances of the United States Pharmacopoeia and National Formulary. Laboratory work is carried out to illustrate the various topics mentioned, stress being placed on the processes involved in the manufacture of synthetic drugs. Lectures and recitations, M. W. F., 1. 36 hours; Laboratory, T. Th., 1, 2, 3. 72 hours.

**Winter, 3 to 5 Hours**
Mr. Neuroth.

253. **Natural Drug Principles**
A study of the alkaloids, glucosides, saponins and allied substances occurring in crude drugs. Emphasis is placed on the relationship of chemical structure and pharmacological action. The laboratory work includes separation and identity of representative examples of the various principles. Lectures and recitations, M. W. F., 1. 36 hours; Laboratory, T. Th., 1, 2, 3. 72 hours.

**Spring, 3 to 5 Hours**
Mr. Neuroth.

261. **Biochemistry**
An introductory course on the chemistry of fats, proteins and carbohydrates. Prerequisites: Organic chemistry and quantitative chemistry or its equivalent. Lectures and recitations, M. W. F., 5. 36 hours.

**Fall, 3 Hours**
Mr. McFadden.

262. **Biochemistry**
A course in the chemistry of digestion and metabolism. Prerequisite: Biochemistry 261. Lectures and recitations, M. W. F., 5. 36 hours.

**Winter, 3 Hours**
Mr. McFadden.

263. **Biochemistry**
The chemistry of vitamins, sterols, hormones, and enzymes. Prerequisite: Biochemistry 262. Lectures and recitations, M. W. F., 5. 36 hours.

**Spring, 3 Hours**
Mr. McFadden.

*271. **Urinalysis**
The principles and applications of urinalysis. The laboratory work includes the analysis of samples for the Health Service of the University. Laboratory, T. Th., 5, 6, 7. 36 hours.

**Any Quarter, 2 or 3 Hours**
Mr. McFadden.

**Economics and Business Administration**
Ability to buy, sell and organize business efficiently is one of the essentials in the profession of pharmacy. General courses in the principles of accounting, economics, and business organization may be elected by those who wish to acquire a broader knowledge of sound business procedure.

Pharmacy 203 is a course in commercial pharmacy dealing specifically with drug store business methods.

*Not given in 1943-44*
121. Principles of Economics  
122. Principles of Economics  
123. Principles of Economics

Wants, scarcity, and economic history, organization of production, value and price, monopoly and its control, financial organization, distribution of wealth and income, inequality and social reform, public finance, and international trade. M. W. F., 1 and 5.  
Mr. Patton

131. Principles of Accounting  
132. Principles of Accounting  
133. Principles of Accounting

Principles of the double-entry system, asset and equity accounts, journal and ledger, expense and revenue, periodic adjustment, working sheets, income statements, balance sheets, valuation and income determination, trading and manufacturing accounts, and partnership and corporate accounting. Prerequisite or concurrent: Economics 121, 122, 123. M. W. Th. F., 3.  
Miss Emberger

For electives and other courses in business the student is referred to the Department of Economics and Business Administration in the College of Liberal Arts.

ENGLISH

The pharmacist must use both oral and written English. In order to communicate clearly and adequately with the wholesaler, manufacturer, medical practitioner, layman, state boards, the government, and to prepare papers for clubs, articles for magazines and local newspapers, or advertising, the ability to speak and write English is essential.

101. Composition  
102. Composition  
102a. Composition

These three courses constitute a year of work for freshmen. A thorough drill in the mechanics of written English, exposition and argumentation; description and narration. Considerable attention is given to the study of the structure of the short story. Daily themes. Students who show a high degree of proficiency in English may elect English 102a or English 105 in the place of Composition 102a. Four sections. M. W. F., 1, 2, 4, 7.  
Mr. L. Freeman

118. Business Writing  

A study of written communication in business, emphasizing the use of effective English and the technique of forms of communication. Sales, credit, collection, adjustment letters, business reports. Prerequisite: English 101, 102, 102a. M. W. F., 5.  
Mr. L. Freeman
Some form of physical activity is required of all students during the first two years of residence in the University. The nature of the work will depend upon the needs of the individual as revealed by a careful examination.

The pharmacist should learn the fundamentals of personal and general hygiene that he may be able to maintain a high degree of efficiency during and after college life and to assist in the promotion of public health as outlined by the United States Public Health Service.

Courses 101, 102, 103, 104, 105, 106, 115, 152, and 258 as given in the Department of Health and Physical Education, and Bacteriology 222 and Health 223 as given in the Department of Pharmacology are of special interest to the pharmacy student.

101. Physical Education

102. Physical Education

103. Physical Education

Men—Gymnasium and outdoor classes in season, natural gymnastics, informal play. Six sections. M. W., 1, 2, 3, 4, 5, or 6.

Women—A course in natural gymnastics including games and sports in season, dancing, and tumbling. Six sections. T. Th., 1, 2, 3, 4.

104. Physical Education

105. Physical Education

106. Physical Education

Men—Continuation of course 103 with team games and apparatus added. Six sections. M. W., 1, 2, 3, 4, 5, or 6.

Women—A continuation of course 103. Four sections. T. Th., 1, 2, 4, or 6.

115. Personal and General Hygiene

A course designed to cover the various phases of personal hygiene and health, from the individual aspect, with emphasis on preventive measures. T. Th. F., 4.

152. Health Education

The relation of hygiene to home and community life, including a study of sewage disposal, refuse disposal, transmission and control of diseases. M. W. F., 5.

158. First Aid and Athletic Training

Lectures, discussion and practice in giving first aid in cases of emergency. The American Red Cross First Aid Certificate may be obtained by students who pass a satisfactory examination. T. Th., 4.
MATHEMATICS

Inaccurate computations in pharmacy may lead to serious results. A course in mathematics especially designed for the student of pharmacy is required of all candidates for graduation. It includes the mathematical processes involved in operative pharmacy and in the compounding of prescriptions. A limited amount of the mathematics involved in commercial pharmacy is included. This course is listed and described in the Department of Pharmacy, course 104. In addition to Pharmacy 104 at least nine credit hours in college mathematics or its equivalent are required.

Those students who desire courses in chemistry beyond the prescribed constants may take additional courses in mathematics, subject to the recommendation of the student's adviser and approval of the Dean.

101a. FRESHMAN MATHEMATICS  
FALL, 3 Hours

102a. FRESHMAN MATHEMATICS  
WINTER, 3 Hours

103a. FRESHMAN MATHEMATICS  
SPRING, 3 Hours

A course built around high school mathematics. It acquaints the student with the meaning, practical use and possibilities in the general field of mathematics. Prerequisite: one unit of algebra, one unit of geometry. M. W. F., 4.

101. COLLEGE ALGEBRA  
FALL, 5 Hours

Prerequisite: Plane geometry and one and one-half units of high school algebra. Daily, 5.  
Mr. Davis

103b. TRIGONOMETRY  
WINTER, 3 TO 5 Hours

The fundamental principles of the subject are developed and applied to trigonometric reductions and to the solutions of triangles. Numerous exercises in the field of geometry, physics, and mechanics are studied. Prerequisite: Plane geometry and one unit of high school algebra. Daily, 2.  
Mr. Fulton

107. CALCULUS: DIFFERENTIAL  
FALL, 5 Hours

The fundamental theorems for the differentiation of algebraic, trigonometric, logarithmic, and exponential functions are taken up with numerous applications to problems in geometry, mechanics, and physics. Prerequisite: Mathematics 105. Daily, 4.  
Mr. Davis

108. CALCULUS: DIFFERENTIAL AND INTEGRAL  
FALL, WINTER, 5 Hours

This course is a continuation of Mathematics 107, but gives a more extended use of differentiation to analytical functions of two or more variables with an introduction to the indefinite integral. Prerequisite: Mathematics 107. Daily, 4.  
Mr. Fulton

109. CALCULUS: INTEGRAL  
WINTER, SPRING, 5 Hours

This is a continuation of Mathematics 108, but gives a more detailed account of methods of integration by the aid of substitution, parts and reduction formulae. Integration as a summation and the definite integral with its application to problems in surfaces, volumes, moments of inertia, center of gravity, and fluid pressure are studied. Prerequisite: Mathematics 108. Daily, Winter, 3; Spring, 4.  
Mr. Fulton
MODERN FOREIGN LANGUAGES

Many texts and periodicals pertaining to pharmacy and the allied sciences are published in a foreign language. In order to meet the demand of students who desire a knowledge of a foreign language for reading, conversational, or business purposes, appropriate courses in French and German are offered. If a student expects to do graduate work, he should have a working knowledge of at least two foreign languages, French and German.

German 118 is recommended for those who expect to enter graduate schools.

FRENCH

101. Elementary French          Fall, 3 Hours
102. Elementary French          Winter, 3 Hours
103. Elementary French          Spring, 3 Hours

The elements of pronunciation and phonetics, essentials of grammar and easy reading. Conversation suited to the needs and abilities of the class. M. W. F., 5.

MISS GILLESPIE

GERMAN

101. Elementary German          Fall, 3 Hours
102. Elementary German          Winter, 3 Hours
103. Elementary German          Spring, 3 Hours

Essentials of pronunciation, grammar, and composition, verb drill, and easy graded texts for reading. M. W. F., 1.

MR. HERRICK

117. Scientific German          Fall, 3 Hours
118. Scientific German          Winter, 3 Hours
119. Scientific German          Spring, 3 Hours

The reading of scientific texts and periodicals with particular emphasis on individual needs. Required of pre-medical students. Prerequisite: German 101-103. T. Th. F., 2.

MR. HERRICK

MATERIA MEDICA

PHARMACOCGNOSY

The study of the numerous plant and animal drugs is of prime importance in the field of pharmaceutical training, because a clear majority of the therapeutic agents of modern medicine represent either the crude drug or some derivative of it. In these courses the student is trained in the proper use and care of the compound microscope and in the methods of sectioning and mounting specimens. He is also trained in the elements of identifi-
cation of powdered drugs by microscopical examination, a technique which is becoming of increasing importance in view of the ever-increasing activity of the professional pharmacist in analysis.

**101. PHARMACOGNOSY**

Fall, 3 Hours

In this course, various types of plant cells and plant tissues, as well as the morphology (gross anatomy), histology, and physiology of the leaf, are studied by means of class demonstrations and individual laboratory exercises. Throughout this and the following two quarters, careful attention is paid to the botanical terms occurring in the United States Pharmacopoeia and the National Formulary. Lectures, T., 1, 12 hours; laboratory and recitation, T. Th., 2, 3, 48 hours.

**102. PHARMACOGNOSY**

Winter, 3 Hours

The gross and microscopic anatomy of the stem and root and their variants are considered, and the classification of cryptogam plants is studied by careful examination of representatives of the various groups. Plants of economic importance are stressed. Lectures, T., 1, 12 hours; Laboratory and recitations, T. Th., 2, 3, 48 hours.

**103. PHARMACOGNOSY**

Spring, 3 Hours

The reproductive organs (flower, fruit and seed) of the phanerogam plants are studied as thoroughly as time will allow, and further attention is devoted to the study of classification of these, the seed plants. Emphasis is placed on plants of pharmaceutical or medicinal usage. Lectures T., 1, 12 hours; laboratory and recitations, T. Th., 2, 3, 48 hours.

**151. PHARMACOGNOSY**

Fall, 5 Hours

A study of the crude botanical drugs official in the latest revisions of the United States Pharmacopoeia and the National Formulary. The subjects of study are drugs obtained from plants of the lower groups up to and including drugs from several of the dicotyledonous families. Nomenclature, definitions, history, sources, commercial collection and preparation, geographical distribution, physical and chemical characteristics and constituents, properties, adulteration, preservation, and identification are the chief topics of discussion. Macroscopic study is supplemented in the case of important drugs by microscopic examination of the powdered or thinly sectioned drug. Prerequisite: College Botany or Pharmacognosy 102. Lectures and recitations, M. W. F., 2, 36 hours; Laboratory, M. W., 7, 8, 48 hours. 

**MISS SCHOLL**

**152. PHARMACOGNOSY**

Winter, 5 Hours

In this course, study of the official crude drugs of the dicotyledons is continued. Prerequisite: College Botany or Pharmacognosy 102. Lectures and recitations, M. W. F., 2, 36 hours; Laboratory, M. W., 7, 8, 48 hours.

**MISS SCHOLL**

**153. PHARMACOGNOSY**

Spring, 5 Hours

In this course the study of the dicotyledonous crude drugs is concluded. The remainder of the time is devoted to the study of the animal drugs of the United States Pharmacopoeia and the National Formulary. Prerequisite: College Botany or Pharmacognosy 102. Lectures and recitations, M. W. F., 2, 36 hours; Laboratory, M. W., 7, 8, 48 hours.

**MISS SCHOLL**

**201. PHARMACOGNOSY**

**ANY QUARTER, 3 TO 5 HOURS**

A study of the histology of the crude botanical drugs, including microscopic identification and detection of adulterants. Prerequisite: College Botany or Pharmacognosy 101, 102, 103. Lectures. Credit and hours to be arranged.

* General college botany 107, 108, 109 or their equivalent will be accepted for credit.

*Not given in 1943-44
PHARMACOLOGY

In order that the pharmacist may be better prepared to discuss certain phases of the dynamics of drugs with members of the various professional groups engaged in health service and to have a better background for the critical examinations of prescriptions, a knowledge of pharmacology and its allied branches is a prime essential. The following courses of study are designed to meet these fundamental requirements.

201. Pharmacology

Fall, 5 Hours

202. Pharmacology

Winter, 3 to 5 Hours

203. Pharmacology

Spring, 3 to 5 Hours

The study of the physiological action, therapeutics, toxicology, and dosage of accepted medicinal agents, based upon a therapeutic classification. Laboratory work is performed by students in group of fours or sixes. Lectures M. W. F., 6, 36 hours; laboratory, demonstrations and recitations, T. Th., 5, 6, 48 hours (for 5 hour course).

Mr. Raabe

211. Physiology

Fall, 5 Hours

A brief course in human physiology preparatory to the study of the action of drugs. The digestive, circulatory, respiratory, and nervous systems are the chief subjects considered. Lectures and recitation, M. W. F., 1, 36 hours; laboratory, T. Th., 1 and 2, 48 hours.

Mr. Huber

222. Bacteriology

Winter, 5 Hours

A course in the fundamentals of bacteriology. The basic facts are studied and the essential technique practiced. To illustrate and give point to the general principles of the subject, particular attention is devoted to bacteria of economic importance, and especially to those causing disease. The value and use of antiseptics, germicides and disinfectants are studied in some detail. Lectures and recitations, M. W. F., 1, 36 hours; laboratory and demonstrations, T. Th., 1, 2, 48 hours.

Mr. Dobbins

223. Bacteriology and Health

Spring, 5 Hours

The outstanding human diseases are discussed in this course, together with modern biological methods of combating them. Toxins, anti-toxins, toxoids, bacterins, vaccines, and other products of bacterial origin are studied. Prerequisite: Pharmacology 222, or a course in general bacteriology. Lectures and recitations, Daily, 1, 60 hours.

Mr. Dobbins

251. Biological Assaying

3 to 5 Hours

Attention is given to biological assay methods and standardization of the U. S. P. drugs that are most satisfactorily valued by this method. Lectures and recitations, 12 hours; laboratory, 96 hours. Time schedule to be arranged.

*Not given in 1943-44
275. Phamacology Problems Any Quarter, 1 to 5 Hours
A course of special problems open to students of advanced standing who have shown the ability to carry them to completion. Hours and time of work to be arranged. Staff

Pharmacy

101. Pharmacy Fall, 3 to 5 Hours
This course is designed to give the student a good foundation for the further study of pharmacy. The aim is to acquaint the student with the reference books and literature used in pharmacy and to present the principles upon which pharmaceutical operations are based. Lectures and recitations, M. W., 1, 24 hours; laboratory, W. or F., 6, 7, 24 hours.

Mr. Raabe

103. Pharmacy Winter, 3 Hours
A course covering such essentials of inflection and syntax as to familiarize the student with the etymology and construction of the nomenclature used in the United States Pharmacopoeia and National Formulary and to enable him to interpret prescriptions. Lectures and recitations, M. W. F., 1, 36 hours.

Mr. Raabe

104. Pharmacy Spring, 3 Hours
A course in calculations pertaining to pharmacy. The student is taught current weights and measures, applications of proportion, allegation, specific gravity, specific volume, thermometer scales, percentage solutions, and elementary chemical problems common to pharmacy. Lectures and recitations, M. W. F., 1, 36 hours.

Mr. Raabe

105. History of Pharmacy Winter, 3 Hours
A survey of the ancient, medieval, and modern practices and ideals of the profession of pharmacy. This course is mainly cultural. Lectures and discussions. M. W. F., 5, 36 hours.

Mr. Neuroth

151. Pharmacy Fall, 5 Hours
A thorough study of the more simple preparations official in the latest U. S. P. and N. F. The chief topics of this course are mixtures, lotions, solutions, liniments, magmas, and other preparations of quite similar nature. Prerequisite: Pharmacy 101 and Chemistry 101, 102, and 103. Lectures and recitations, M. W. F., 5; laboratory, T, Th., 2, 3, 4, 36 hours.

Mr. Neuroth

152. Pharmacy Winter, 3 Hours
This course includes emulsions, ointment, suppositories, and powder type of pharmaceuticals official in the United States Pharmacopoeia and National Formulary. Prerequisite: Pharmacy 101, Chemistry 101, 102 and 103. Lectures and recitations, M. W. F., 3, 36 hours; laboratory, T, Th., 2, 3 and 4, 72 hours.

Mr. Neuroth

153. Pharmacy Spring, 5 Hours
This course includes a study of pharmaceutical preparations made by extraction; tinctures, fluid extracts, extracts, resins, and oleoresins. Prerequisite: Pharmacy 101, 151, and 152; Chemistry 101, 102 and 103; Pharmacognosy 151 and 152. Lectures and recitations, M. W. F., 3, laboratory, T, Th., 2, 3, and 4, 72 hours.

Mr. Neuroth

203. Pharmacy Fall, 3 Hours
A course in drug store business methods. Attention is given to arrangement of fixtures and stock, sources of supplies, distribution to the physician, dentist, veterinarian, the public, hospitals, and to other phases of business essential to successful drug store management. Lectures and recitations, M. W. F., 5, 36 hours.

Mr. Neuroth
204. Pharmacy  
205. Pharmacy  
206. Pharmacy
Manufacturing of official and nonofficial pharmaceuticals in quantities for use in the University Student Health Service. Some attention is given to commercial manufacturing problems. A limited number of senior students, under the direction of a registered pharmacist, will compound prescriptions written by the University physician. During the Spring quarter the student is required to visit the laboratory of at least one reputable pharmaceutical manufacturer and write a report. Prerequisite: Pharmacy 101, 151, 152, and 153.

Mr. Neuroth

251. Dispensing Pharmacy  
252. Dispensing Pharmacy  
253. Dispensing Pharmacy
Prescriptions, compounding of prescriptions and recipes, incompatibilities, and dispensing are the subjects of this course. Lectures and laboratory, M. W. F., 2, 3, 72 hours. Prerequisite: Pharmacognosy 151, 152, Chemistry 103 or 103a, Pharmacy 151, 152, 153.

Mr. Raabe

254. Pharmacy
A course in the federal, state and local acts, laws, and regulations governing the practice of Pharmacy and the sale of potent and habit forming drugs. Lectures and recitations, M. W. F., 5, 36 hours.

*261. Pharmacy  
*262. Pharmacy
Courses in the new and non-official remedies which have been accepted by the Council on Chemistry and Pharmacy of the American Medical Association as well as the newer medicinals and preparations of the leading manufacturers which have not been accepted by the Council. Lectures and recitations, M. W. F., 4, 36 hours.

Mr. Raabe

275. Pharmacy Problems
Minor investigations for qualified students. Credit and fee depend on nature of work done.

Any Quarter

299. Pharmacy

Mr. Raabe

PHYSICS

It is impossible to comprehend many of the changes which occur in the manufacture of pharmaceutical preparations without having a knowledge of the fundamentals of the science of physics. Many of the fundamentals of this science are presented in the courses in chemistry, pharmacognosy, and pharmacy. However, the student should arrange his schedule so as to include one year of college physics.

* Not given in 1943-44
Physics 109, 110, and 111 are recommended as a pre-medical science. Electives in physics are subject to the recommendation of the student adviser and approval of the Dean.

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<tr>
<th>Course</th>
<th>Fall, Hours</th>
<th>Winter, Hours</th>
<th>Spring, Hours</th>
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<tr>
<td>109. GENERAL PHYSICS</td>
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Open to freshmen. Prerequisite: One year each of algebra and geometry. M. W. F., 4. Mr. Berger

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<tr>
<th>Course</th>
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<tr>
<td>109a. GENERAL PHYSICS</td>
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<td>110a. GENERAL PHYSICS</td>
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<td>111a. GENERAL PHYSICS</td>
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Laboratory to precede or accompany 109, 110, 111. T. Th., two 2-hour periods. Any quarter. A year of work in college physics. Open to freshmen. Prerequisite: One year of high school algebra and plane geometry. Two 2-hour periods on T. or Th. at 5, 6, or 7, 8. Mr. Berger

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<tr>
<th>Course</th>
<th>Spring, Hours</th>
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<tr>
<td>214. MATHEMATICS OF PHYSICS</td>
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A course dealing with the application of mathematics to physics and related sciences. Prerequisite: Physics 111 and Calculus. Daily, 1. Mr. Berger

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<tr>
<th>Course</th>
<th>Winter, Hours</th>
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<tr>
<td>*220. MODERN PHYSICS</td>
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</table>

A lecture and quiz course involving fundamental questions on the nature of things, such as atomic structure, electron theory, quantum theory, and the theory of relativity. Prerequisites: General Chemistry and General Physics. M. W. F., 1. Mr. Berger

* Not given in 1943-44
WARREN G. HARDING
COLLEGE OF LAW

Claude Westcoat Pettit
Dean
History

The College of Law was organized as a department of the University in 1885, and has been in continuous operation since that date. It numbers among its alumni and former students many of the most prominent lawyers in Ohio and other states. Its graduates have been successful beyond the average as candidates for admission to the Bar at the State Bar Examinations and as practitioners afterwards.

Affiliations

The College of Law was approved by the American Bar Association on January 10, 1939, subject to reinspection. The College also holds membership in the League of Ohio Law Schools.

Beginning Law Students

Law students who are commencing the study of law may start at the beginning of the Summer, Fall, or Spring quarters and will be able to continue for nine consecutive quarters, including summer quarters.

The right is reserved to make such changes in the curriculum and the order in which courses are given as may be necessary in order to meet the needs and requirements of students during the war.

The curriculum herein presented for beginning students for the first three quarters in residence, is established for those who enter in the Fall quarter, and the indicated sequence of courses will be followed for all other students, so far as possible.

Purpose

The aim of its founders, continued through the ensuing years, was to afford an opportunity for students, both men and women, of limited means, to obtain a collegiate training in law, and by connection with the University to offer them the added opportunity for the general preliminary education indispensable to its successful study and practice. Tuition rates, therefore, are low and reasonable. The courses are planned primarily to train students for the practice of law, but they may also be pursued advantageously by anyone desiring to acquire a knowledge of the principles and history of law, either as part of a liberal education, or as part of the foundation for a business career.

Courses are offered in all subjects included in the Ohio bar examination, as well as various electives.
In training students for the practice of law, the College of Law has four chief aims:

1. To inculcate a systematic and complete grounding in the history and fundamental principles of law, and a readiness and accuracy in the application of these principles to the complicated relations, rights and duties arising in modern society.

2. To impart a thorough and ready working knowledge of the common law and of statute law (including the more important statutes and decided cases of Ohio), to the end that the young lawyer may be prepared to serve his clients efficiently.

3. To show the place, importance, and aims of the law in society.

4. To inculcate the principles of legal ethics and of the lawyer's public responsibility, so that the young lawyer may be prepared to take his place as a trusted leader, counselor, and guide in his community.

Schools Represented

An ever increasing proportion of our law students have secured their pre-legal education at colleges and universities other than Ohio Northern University. Many of these are coming with the bachelor's degree or its equivalent. Among the colleges and universities contributing to the pre-legal education of our students in the past are the following: Alfred Holbrook, Ashland College, Baldwin-Wallace, Bowling Green, Colgate, Defiance, Denison University, Depauw, Duquesne University, De Sales College, Fenn College, Geneva, Harvard, Heidelberg, Hillsdale, Hiram, John Carroll University, Kenyon, Marshall College, Miami, Mt. Union, Muskingum College, Northwestern, Ohio University, Ohio State University, Ohio Wesleyan University, Pittsburgh, Purdue, Rio Grande, Swarthmore, Toledo University, University of Cincinnati, University of Dayton, University of Kentucky, University of Michigan, University of Southern California, University of Virginia, University of West Virginia, University of Wisconsin, Vincennes University, Virginia Military Institute, George Washington University, Washington and Lee University, Western Reserve University, Western State Teachers College, Wittenberg College, Wooster, and Youngstown College.

Building and Equipment

The College of Law is located in a handsome two story building, built of ornamental brick in the classical style, erected in the year 1923. This
building was especially designed to meet the requirements of the College of Law, and contains classrooms, professorial offices, court room, library, and reading rooms.

Library

The law library is up-to-date, modern, and well selected. It contains the reports of the courts of last resort of the States, the United States Supreme Court Reports, the Federal Reports, the Reporter System, a complete set of English reports, the more important series of special reports and selected cases, a collection of the latest editions of standard text books, leading legal periodicals, digests, the leading encyclopedias of law, and other works of reference. The library is accessible each week day, the students being allowed free access to the books.

The material included in the library complies with law library requirements of the American Bar Association.

Methods of Instruction

Instruction is based upon the case-book method. To the cases found in the case-book are added selected cases from Ohio and other jurisdictions. The lecture hour includes a thorough questioning of the students upon the cases studied and informal discussions by instructors and students upon the underlying and distinguishing principles illustrated by the cases.

Admission

Candidates of good moral character may apply for admission upon the following plans:

1. Certificate. To enter the first year of law the requirements are (1) graduation from a first grade high school and (2) two full years of collegiate study (60 semester hours or 90 quarter hours exclusive of physical education, military science, and courses without definite intellectual content) in an approved college of liberal arts in accordance with the rules of that institution. It is further required that the scholarship average of the applicant must not be below the graduating average of the institution from which he comes.

A student desiring to enroll in the College of Law should cause to be sent to the University Entrance Examiner at least ten days prior to the beginning of the quarter, his transcript of collegiate work in duplicate. These
papers must be on file, both for admission to the College of Law and for registration as a law student upon the rolls of the Supreme Court. In no case can a deficiency in pre-law study be made up concurrently with the work of the College of Law.

Students beginning the study of law will not be admitted to the work of the Spring quarter.

The entering class is limited to 40.

2. **ADVANCED STANDING.** Advanced credit is given for not more than two years of law study in residence at any reputable law school in the United States maintaining a three-year full-time course.

3. **SPECIAL STUDENT.** Persons who are not candidates for a degree and who have sufficient education and experience to study law with profit may enter the College of Law as special students with the approval of the Dean, even though they cannot meet the entrance requirements for a degree. Any one desiring to enter as a special student or to secure fuller information in regard to preliminary education should write to the University Entrance Examiner or the Dean of the College of Law. Such special students will not be eligible for the bar examination in Ohio and many other states.

**PRE-LAW AND ARTS-LAW COURSES**

The College of Liberal Arts offers favorable opportunities to the student in preparing for the study of law.

The Pre-Law course offered not only meets the requirements set by the Supreme Court of the State of Ohio as to the preliminary education that every student must have before beginning the study of law, but is especially planned to help the student to prepare properly for such an undertaking.

The Arts-Law course is designed for the student who desires the degree of Bachelor of Arts and the degree of Bachelor of Laws. By taking this course, which extends over a period of six years, the student not only meets the requirements set by the Supreme Court of the State of Ohio but in addition thereto is entitled to receive the degrees indicated.

For further information about these courses, the student is referred to the Liberal Arts section of this catalogue.

**GRADUATION**

The degree of Bachelor of Laws is conferred on students who have completed satisfactorily a total of one hundred twenty-five quarter hours in-
including all the prescribed courses and certain required courses for which no credit hours are given, or who have received credit therefor in accordance with the section entitled Advanced Standing, and who have studied in residence at this College for at least three quarters immediately preceding graduation, and who have at least one quality point average for every credit hour.

**General Regulations**

1. Students may select from the courses offered such work as they desire, with the approval of the Dean, not to exceed a maximum of 16 credit hours per quarter. Special students may not become candidates for a degree.

2. Hours above 16 are considered as excess and are subject to special tuition rates. Only in exceptional cases are regular students allowed excess hours.

3. In the section of the general catalogue dealing with Administration are found rules and regulations pertaining to chapel and class attendance, registration, and preregistration, government, withdrawing courses, warning and probation, eligibility for extra-curricular activities, examinations, grade marks, and quality points.

4. Expenses, tuition fees, living costs, and housing are likewise described in an earlier section of this catalogue.

5. The Board of Trustees and Faculty of the University reserve the right to make such changes as they deem necessary without published notice.

**Classification**

The minimum requirements for junior standing are 38 credit hours and a point average of 0.9; for senior standing, 80 credit hours and a point average of 0.9.

**Other Advantages**

There are musical, debating, and dramatic societies and other organizations on the campus to which any student in the College of Law is eligible.
**Summer School**

The College of Law offers courses during the Summer School. The subjects are taught by regular instructors who are in residence.

Summer courses are of particular interest to those who may desire to complete the work required for a degree in nine consecutive quarters. For information write to the Dean, College of Law.

**College of Law Curriculum**

The work of the first year is all required. Second and third year courses are all required except those separately designated as electives, which are open to both second and third year students subject to the provision that a student may not elect to exceed fifteen hours in any quarter in which elective courses are open to him, unless approved by the Dean.

### First Year

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<th>Spring Quarter</th>
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<tr>
<td>Common Law Pleading 3</td>
<td>Contracts II</td>
<td>Agency 5</td>
</tr>
<tr>
<td>Contracts I</td>
<td>Real Property I 4</td>
<td>Criminal Law 5</td>
</tr>
<tr>
<td>Legal Bibliography 4</td>
<td>Torts II 1</td>
<td>Real Property II 5</td>
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<td>Torts I 3</td>
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### Second Year

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<tr>
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<th>Spring Quarter</th>
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<tr>
<td>Constitutional Law I 3</td>
<td>Constitutional Law II 3</td>
<td>Evidence II 3</td>
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<tr>
<td>Domestic Relations 3</td>
<td>Equity II 3</td>
<td>Private Corporations II 3</td>
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<td>Partnership 3</td>
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### Third Year

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<th>Winter Quarter</th>
<th>Spring Quarter</th>
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<tbody>
<tr>
<td>Code Pleading 5</td>
<td>Conflict of Laws II 3</td>
<td>Trial and Appellate Practice 5</td>
</tr>
<tr>
<td>Conflict of Laws I 3</td>
<td>Legal Ethics 1</td>
<td>Trusts II 3</td>
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<tr>
<td>Municipal Corporations 4</td>
<td>Negotiable Instruments 5</td>
<td>Electives 6</td>
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<td>Suretyship 3</td>
<td>Trial Practice 1</td>
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<td>Trusts I 3</td>
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Description of Courses

FIRST YEAR

(All Courses Required)

AGENCY
The nature and purposes of the agency relation, parties, methods of creating the relationship, authority and capacity, the duties and liabilities arising from the relationship; also a consideration of workman’s compensation legislation and other phases of the subject of master and servant. Case book to be announced.

Mr. Smith

SPRING, 5 Hours

COMMON LAW PLEADING
This course embraces a discussion of the nature and purposes of pleading, emphasizing the connection between pleading and the history and development of the Common Law. Keigwin, *Cases On Common Law Pleading*.

Mr. McHugh

FALL, 3 Hours

CONTRACTS I

CONTRACTS II
Fundamental courses dealing with the nature of a contract; the capacity of the parties, offer and acceptance; consideration; requisites of contracts under seal; the performance of contracts, including conditions and impossibility of performance; the discharge of contracts; rights of beneficiaries, joint and several contracts; assignment of contracts; illegal contracts and the statute of frauds. Shepherd, *Cases and Materials on Contracts*.

Mr. Smith

FALL, 4 Hours

CRIMINAL LAW
This course treats of the theories of crime and punishment; the criminal act and mental element in crime; specific offenses at common law and as developed by statutes; appropriate defenses in relation to the specific crimes; parties. Harno, *Cases and Materials on Criminal Law and Procedure* (2nd Edition).

Mr. Smith

WINTER, 5 Hours

LEGAL BIBLIOGRAPHY
This course is required, but no credit is given for it toward graduation. The purpose is to give the student training in the use of law books and in finding the law. The course must be completed to the satisfaction of the instructor. Case book to be announced.

Mr. Smith

FALL, 1 Hour

PERSONAL PROPERTY
This course deals with the distinction between real and personal property; of the title to personal property and its transfer by agreement and by operation of law; its use and liabilities arising therefrom. Bigelow, *Cases on Personal Property* (2nd Edition).

Mr. Pettit

FALL, 4 Hours

REAL PROPERTY I
This course treats of the historical origin of land law, tenure, seisin, the differentiation of estates in land, rights in air, water, easements, covenants running with the land, licenses, rents, waste and public rights. Case book to be announced.

Mr. Pettit

WINTER, 5 Hours

REAL PROPERTY II
Titles and their transfer by act of parties and operation of law. Case book to be announced.

Mr. Pettit

SPRING, 5 Hours
Torts I  
Fall, 3 Hours  

Torts II  
Winter, 5 Hours  

This course includes a consideration of the bases and extent of legal liability for invasions of various interests of personality and property with special attention given to wrongs, such as assault, battery, false imprisonment, trespass upon realty and personality, conversion, deceit, defamation, malicious prosecution, injuries resulting from negligence, injuries intentionally inflicted and liability without fault. An analysis is made of the various concepts of importance in this field of the law, such as intention, malice, legal right and wrong, negligence and proximate causation. Bohlen and Harper, *Cases on Torts* (4th Edition).  
Mr. Fuller  

SECOND YEAR  

CONSTITUTIONAL LAW I  
Fall, 3 Hours  

CONSTITUTIONAL LAW II  
Winter, 3 Hours  

Courses include the interpretation of the constitutional limitations for the protection of life, liberty and property, police power, taxation, eminent domain, obligation of contracts; and a consideration of the law of the American Federal system, with special reference to inter-state commerce, the powers of Congress and the jurisdiction of the federal courts. Dodd, *Cases on Constitutional Law* (3rd Edition).  
Mr. Smith  

DOMESTIC RELATIONS  
Fall, 3 Hours  

A study of the law of marriage and divorce, parent and child, the rights and liabilities of husband and wife, the rights and liabilities of infants, including a study of statutory material. Case book to be announced.  
Mr. Fuller  

EQUITY I  
Fall, 5 Hours  

EQUITY II  
Winter, 3 Hours  

These courses involve consideration of the rise of the court of equity; the powers of such court; principles governing the exercise of equitable jurisdiction, in specific reparation of tort, and specific performance, reformation, and recission of contracts; and equitable remedies and declaratory judgments. Cook, *Cases on Equity* (3rd Edition).  
Mr. McHugh  

EVIDENCE I  
Winter, 3 Hours  

EVIDENCE II  
Spring, 3 Hours  

An examination of contemporary rules of evidence relating to burden of proof and presumptions, judicial notice, the examination of witnesses, competency and privilege, and illegally obtained evidence, followed by a careful development of the opinion rule, the hearsay rule and its exceptions, the best evidence rule, and the parol evidence rule. Morgan and Maguire.  
Mr. Pettit  

PARTNERSHIP  
Winter, 3 Hours  

The law governing partnership ventures, including their formation; individual and firm liability to creditors, marshalling of assets in equity and priorities as between individual and firm creditors. Clark and Douglas, *Cases on Partnership*.  
Mr. Smith  

PRIVATE CORPORATIONS I  
Winter, 3 Hours  

PRIVATE CORPORATIONS II  
Spring, 3 Hours  

This course treats of the characteristics of private corporations, including their formation, powers, rights, and liabilities, the rights and liability of stockholders, and of officers and directors, and the rights of creditors against the corporation and its officers. Ballantine and Lattin, *Cases and Materials on the Law of Corporations* (1939).  
Mr. Betts
Wills and Administration of Estates
This course treats of the nature of testamentary dispositions. Mechem and Atkinson, *Cases on Wills and Administration* (2nd Edition).

Code Pleading
This course deals with parties, joinder and splitting of causes of action, the petition, answer, reply, demurrer, amended and supplemental pleadings and motion practice as these problems have developed under the code provisions of the various states. Special emphasis is placed on the Federal Rules of Procedure. Case book to be announced.

Conflict of Laws I
Conflict of Laws II
This course treats of the principles of private international law; jurisdiction of courts; the law governing torts, contracts, divorce, transfers of property by deed, will and intestate succession; penal statutes; marriage, adoption, domicile; foreign judgments and such procedural matters as statutes of frauds and of limitations. Lorenzen, *Cases and Materials on Conflict of Laws* (4th Edition).

Legal Ethics
This course treats of the rules of conduct governing the lawyer in the practice of his profession. The course must be completed to the satisfaction of the instructor, although no credit toward graduation is given. Cheatham, *Cases and Materials on the Legal Profession*.

Municipal Corporations
This course treats of the general nature and rights and liabilities of public corporations, (cities, villages, counties, and townships). Stason, *Cases On Municipal Corporations*.

Negotiable Instruments
This course involves the consideration of the general principles governing bills of exchange, promisory notes and checks, and the uniform negotiable instruments of law. Smith and Moore, *Cases and Materials on Bills and Notes* (4th Edition).

Suretyship
This course includes the creation of the relationship, the contract, the statute of frauds, the rights and remedies, the defenses, guaranty contract, and letters of credit, private and corporate sureties, and incidentally a consideration of the different kinds of bonds. Case book to be announced.

Trial and Appellate Practice
Principles controlling the trial practice of civil actions; laying a foundation for review; methods and problems of procedure on review and disposition upon review. Hunter, *Cases and Materials on Ohio Trial Practice*.

Trial Practice
The preparation of briefs and the presentation of oral arguments. Visiting members of the Ohio Bench or Bar read the briefs and hear the arguments. This is a required course but gives no credit toward graduation.

Trusts I
Trusts II
ELECTIVE COURSES

ADMINISTRATIVE LAW
This course deals with the powers and procedure of administrative agencies in this country. It includes a consideration of the nature of the power vested in administrative bodies, distinction between legislative, judicial and executive powers; conclusiveness of administrative determinations, the requirement of due process, and the extent of judicial control over administrative action. Gellhorn, Administrative Law Cases and Comments.  
Mr. Pettit

CREDITOR’S RIGHTS
Procedure and practice in liquidations, including bankruptcy, assignments for creditors, and equity receivership. Case book to be announced.  
Mr. Smith

DAMAGES
In this course the rules governing the measure of damages in actions founded on contract and tort are considered. McCormick, Cases and Materials on Damages.  
Mr. Smith

DRAFTING LEGAL INSTRUMENTS
Designed to give the student practice in the drafting of the more common legal instruments, with a brief consideration of law office management.  
Mr. Smith

FUTURE INTERESTS
A study of future interests, vested and contingent, in real property. Leach, Cases on Future Interests.  
Mr. Pettit

INSURANCE
This course includes the nature and requisites of the contract, parties, insurable interest, premiums, representations and warranties, agents and their powers, waiver, and estoppel, rights under the policy, a study of the standard fire policies, life insurance, marine and accident. Case book to be announced.  
Mr. Smith

LABOR LAW
This course includes the right to organize; the union; the legality of strikes, lockouts and boycotts; the interest of the public in labor disputes; legislative intervention with emphasis upon the Federal ant-injunction statute and the National Labor Relations Act. Case book to be announced.  
Mr. Smith

MORTGAGES
The various theories of the mortgage including the historical evolution thereof in equity; recording statutes, and other problems in connection with the law of mortgages. Campbell, Cases on Mortgages.  
Mr. Pettit

SALES
The topics included in this course are the contract for delivery of goods, the statute of frauds, the passing of the property, fraud and retention of possession, illegality, condition and warranties, performance, rights of the seller and buyer in case of breach. Woodward, Cases on Sales (3rd Edition).  
Mr. Smith

TAXATION
This course treats of the various kinds of taxes, including property taxes, income taxes, inheritance taxes, franchise and excise taxes, with particular attention to constitutional limitations upon state and federal taxation. Consideration will also be given to the collection of taxes and the taxpayers' remedies against the unlawful collection of taxes. Rottschaefer, Cases on Taxation (3rd Edition).  
Mr. Pettit
PRIZES ANNOUNCED ON UNIVERSITY RECOGNITION DAY
APRIL 28, 1942

GENERAL PRIZES TO SENIORS

Ben R. Conner Prize (Liberal Arts) - - - Charles P. Hablitzel
Walter F. Rittman Prize (Engineering) - - - David William Conner
Charles R. Wilson Prize (Pharmacy) - - - Jack Arthur Pritchard
E. S. Matthias Prize (Law) - - - Dominick Bianco
* Anonymous (Women's Prize) - - - Jean Belle Porter
* Anonymous (Men's Prize) - - - Dominick Bianco
* Anonymous (Men's Prize) - - - Robert G. Binkley

DEPARTMENTAL HONORS

College of Liberal Arts

Biology - - - - - William F. Morse
Chemistry - - - - - Charles P. Hablitzel
Commercial Education - - - - - Jean Belle Porter
Economics and Business Administration - - - - - Dale Pugh
Education - - - - - George W. Urich
Education (Two-Year Elementary) - - - - - Evelyn Irene Clifton
English - - - - - Laura Elizabeth Henkle
History and Political Science - - - - - Robert G. Binkley
Industrial Arts - - - - - Bruno Mallone
Mathematics - - - - - Donovan Ewing McKinney
Modern Foreign Language - - - - - Jane Weaver
Physics - - - - - Lowell Shuck

College of Engineering

Civil Engineering - - - - - Robert Opre Wilson
Electrical Engineering - - - - - Paul W. Huber
Mechanical Engineering - - - - - David William Conner

* Name of donor withheld by request
Degrees

College of Pharmacy

Pharmacognosy
Pharmacology
Pharmaceutical Chemistry
Pharmacy
Lehn and Finke Gold Medal

Sam Singer
Jane Bowers
George Hawkey
William H. Smith
Jack Arthur Pritchard

College of Law

First-Year Law Honors

Norman Ned Bowsher

Honorary Degrees

1942

Lester B. Minion
River Forest, Illinois
Doctor of Divinity

Lester L. Roush
Columbus, Ohio
Doctor of Divinity

Joseph E. Priestly
Wooster, Ohio
Doctor of Divinity

George W. Crabbe
Baltimore, Maryland
Doctor of Laws

W. W. Morrall
Morrall, Ohio
Doctor of Engineering

E. J. Brookhart
Celina, Ohio
Doctor of Laws

Rollo Walter Brown
Cambridge, Mass.
Doctor of Laws

Graduates in the College of Liberal Arts

Spring

Class of 1942

Bachelor of Arts

Helen Ansley
Naomi Maria Beery,
Robert G. Binkley
Nelson Bloom
William Harvey Davies
Thurman Nelson Forsythe

**Charles P. Hablitzel

Laura Elizabeth Henkle
**Francis Winans Kubbs
William H. Lamale

††Carroll Lewis
Benjamin David Loan
Erskel E. Mohr

*William Robert Morse

Herman Anthony Patterson
Donald Frank Fletcher
†Robert Holmes Pugh
Hiram D. Taylor
††Georges Thacker
William R. Tivener
†Walter L. White
Ohio Northern University

Bachelor of Science in Education

Norma Jean Bailey
† Floyd Brown
Mabel Jane Casper
Bina-May Crosser
Catherine M. Culleton
Leona F. Duncan
Robert Johnston Durbin
Robert E. Edwards
* Clay Rolland Folsom
Melville Stewart Fryer
Rosemary Huston
Walter W. Lloyd
Kathryn Mabel Lust
Bruno A. Malone
Randall E. Oller
June Lois Person
††† Lowell M. Shuck
††† Edwin Cox Treherne
George Urich
Jane Ardis Weaver
† † Donald Earl Winegardner

Graduates in the College of Engineering

Bachelor of Science in Civil Engineering

Merle D. Baird
David Charles Brown
Warren Cremeans
Jack Hamilton Durey
George Arthur Fiedler
A. Leonard Opdycke
Robert O. Wilson

Bachelor of Science in Electrical Engineering

Thomas John Bender
Robert Ellsworth Coleman
Robert A. Filliez
John Henry Grafe III
Gerald Glen Halstead
Paul William Huber
Joel Herbert Keller
Homer Wallace Lebold
Ralph George B. Lindstrom
Robert Cloyd Rogers
Robert Kiel Slusser
Charles E. Taggart
Cletus J. Vincze

Bachelor of Science in Mechanical Engineering

Robert Branstetter
* David William Conner
Richard M. Downing
Frank C. Fyke, Jr.
Standish W. Hopper
Ned C. Hughes
Lawrence D. Irey
James A. Miller
Harry Albert Moon
William F. D. Neiheiser
Herbert Milton Park
Delmar J. Reagan
† † Earl William Trup
† † Bolis Bill Umbrazum

Graduates in the College of Pharmacy

Bachelor of Science in Pharmacy

Dwight Wilbur Archinal
James Wesley Armstrong
David Bellknap Barr
Jane Bowers
Charles Roby Burt
Robert T. Capps
C. Norman Fink
Louis Robert Gray
Edwin Charles Hart
George Delbert Hawkey
Hyman Kasofsky
Rachel Roberta Kennedy
Stanley A. Kujawski
Jack Margolis
John R. Orndorff
Martha Elizabeth Parker
Donald Clark Patrick
Howard J. Potts
* Jack Arthur Pritchard
* Sam Singer
John B. Skelly
William Henry Smith
GRADUATES IN THE COLLEGE OF LAW

BACHELOR OF LAWS

Rex Bell
*Dominick J. N. Bianco
Paulene R. Cole
Curtis D. Crawford
†G. William Depler
Ralph Richard Dollison
William Temple Hicks
Harry Arthur Hoffman

John E. LaRock
Luther LeRoy Liggett
Scott Delmar McCoy
Thomas J. Parrino
†Paul Justin Rockey
†George D. Sauer
Charles Harvey Shobe
John Randolph Spon
G. Edward Stroehel
Alfred David Treherne
John Edward Wade
†Don Williamson
†Philip Hall Worman, Jr.
Vernon L. Young

SUMMARY OF THE CLASS OF 1942
(Fall, Winter, Spring, only)

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GRADUATES, SUMMER, 1942

BACHELOR OF ARTS

Betty Lou Beem
Richard Allen Black

Charles Robert Meighan
Doris Eleanor Messenger

Robert L. Townsend, Jr.

BACHELOR OF SCIENCE IN EDUCATION

Marguerite Bischoff
Norman C. Bray, Jr.
Arthur Disegi
May E. Davis
Celina Detrick
Robert Martel Eley

Edith Birdell Foos
Helen Frances Hull
Hariett Grant McKibben,
A. B.
Bonnie Violet Middlestetter
Thomas E. Pierson

*Jean Belle Porter
Helen Elizabeth Rider
Hugh D. Semple
Mildred L. Temple
Berniece June Warner

GRADUATES IN THREE-YEAR ELEMENTARY EDUCATION

Genevieve Clifton
Ohio Northern University

Bachelor of Laws
James Harold McHugh

Bachelor of Science in Pharmacy
Robert Winfield Burley
Betty Lou Harris
Carl Edward Klein
Robert Charles Kreisher
Clyde Kenneth Rice

* With Distinction
** With High Distinction
† Finished work at end of Fall Quarter
‡‡ Finished work at end of Winter Quarter

SUMMARY, SUMMER GRADUATES, 1942

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SUMMARY, GRADUATES, 1942
(Total All Quarters)

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REGISTER OF STUDENTS—1941-1942

REGISTER OF STUDENTS

FRESHMEN

COLLEGE OF LIBERAL ARTS

Ankerman, Eleanor ......................... Alger
Arthur, Frances .......................... Alger
Augur, Ted ............................... Kenton
Bash, Norman ........................... Cleveland
Bashor, Edythe Marjorie .................. St. Marys
Bauman, Kenneth ......................... Ada
Bennett, Bailey ........................... Ada
Bible, Marguerite ......................... Ada
Bird, Betty Ann .......................... Kenton
Bolender, Mary Jane ..................... Brookville
Booth, Donna Clarinel .................... W. Mansfield
Braschwitz, Russell I ..................... Detroit, Mich.
Bryant, Marjorie ........................ Ellett
Burley, Sarita ............................ Zanesville
Carpenter, Victor ......................... Ada
Clark, James, Jr. ......................... Alger
Cox, Robert .............................. Arcanum
Crawford, Marian ......................... Ada
Crepis, Lucile ............................ Ada
Daniels, Emmett C. ....................... Forest
Davids, Albert J. ......................... Port Clinton
Davis, Arthur H. ......................... Mt. Victory
Decemer, Paul R. ......................... Antwerp
Dhume, Jean Eleanor ..................... Columbus
Donelson, Josean ......................... Carey
Drake, Ardythe R. ....................... Mendon
Dunlap, John W. ......................... Utica
Durbin, Jane Irwin ....................... Lima
Dy-Ball, I. Louise ......................... Youngstown
Eley, Bernard ........................... Ada
Evans, Wilna Jean ....................... Youngstown
Fahs, Estella Marie ...................... Mansfield
Floyd, Betty June ....................... Lima
Focht, Bettie ............................. Ada
Frase, Elaine ............................. Cuyahoga Falls
Gambill, Milburn ......................... Dunkirk
Garwick, Martha Ann ..................... Ada
Gaskey, Irvin L. ......................... Lima
Gordon, Harold M. ...................... Cleveland
Graham, Ned L. ......................... Marysville
Green, Raymond ........................ Uniopolis
Grundler, Jean M. ....................... Sandusky
Harrod, Rachel .......................... Ada
Hedeen, John Eric ....................... Shiloh
Hefner, Jane ............................ LaFayette
Hill, Martha Jane ....................... Kenton
Heitzman, John ........................ Ft. Jennings
Hoffman, Vernetta ....................... Bryan
Horack, Shirley ........................ Bradford, Ill.
House, Sara ............................ Conneaut
Jacobs, Jane ............................. Lima
Jenkins, Dorothy ......................... Ada
Johns, Nancy Ann ....................... Rocky River
Jones, Raymond ........................ Lima
Joseph, Mary Jane ...................... Ada
Kersker, Betty ........................... Lima
Klingler, Doris .......................... Ada
Leferink, Albert ......................... Bay Village
Lindsay, Jack ........................... Mt. Victory
London, Bernard ......................... Flushing, N.Y.
Long, Dorothy A. ....................... Ada
Loy, Dale ................................. Greenville
Lutz, Dorothy Louise .................... Lima
McChesney, Eleanor ..................... Carey
MacDonald, Ruth ......................... Elyria
Mabee, Robert ........................... Mansfield
Martino, Paul E. ......................... Mt. Victory
Mauk, William E. ......................... Kenton
Mertz, Virginia ........................ Ada
Mestetzko, Howard ....................... Cleveland
Moore, Geraldine ....................... Ada
Moore, Louise ........................... Ada
Mruczowski, Eugene ..................... Cleveland
Nash, Donald ........................... Chicago, III.
Neiswander, Claire ...................... Ada
Niece, Lewis H. ......................... Lakeview
O’Conner, Mary June ..................... Wilkinsburg, Pa.
Park, Elizabeth ......................... Painesville
Parlette, Betty ........................ Uniopolis
Perry, Lois .............................. Lakeview
Peterson, William E. .................... Empire
Place, Julia ............................. Wapakoneta
Plaughter, Dorothy ...................... Lima
Pochal, John ............................ Farrell, Pa.
Polland, Frank ........................ Hempstead, L. I., N. Y.
Powell, Delbert ........................ Highland
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COLLEGE OF PHARMACY

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Baransy, Lila Mae .................................... Midland, Pa.
Barnes, Howard ....................................... Wauseon
Butler, Lowell ......................................... Lima
Butler, Richard ........................................ Columbus
Davies, William ....................................... Canton
Hardman, Evelyn ...................................... Mt. Vernon
Hill, Richard .......................................... East Palestine
Hunter, William ....................................... Lima
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McDevitt, Earl ........................................ Salem
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Mannino, Vincent ..................................... Erieside
Moore, James C. ...................................... Marion
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Rees, Ralph ............................................. Geneva
Rider, John ............................................. Nelsonville
Robinson, Albert ..................................... Kenton
Seidman, Ralph ....................................... Cleveland
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West, Raymond ........................................ Canton
White, Edward ........................................ Rising Sun
Wolff, Donald ......................................... Miamisburg

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Cafagno, Nicholas ..................................... Marion
Campbell, Dorothy .................................... Lakewood
Carpenter, Norma Jean .............................. Celina
Clapper, Henry ........................................ Akron
Clifton, Evelyn ........................................ Swanton
Conover, Arthur G. .................................. Sea Girt, N. J.
Cordero, Florence ..................................... Clyde
Crawford, Kenneth ................................... Millersburg
Detwiler, Henry ....................................... Kenton
Dorney, Dic ............................................. Arlington
DuMond, Mary Ann ................................... Painesville
Eisele, Edward ......................................... Mansfield
Fox, Opal ................................................ Lexington
Goforth, Richard ...................................... Lorain
Heck, Charles ......................................... Carey
Hiller, Clarence ........................................ Dola
Hubble, Gilbert ........................................ Bucyrus
Huston, Alice .......................................... Ada
Jolley, James ........................................... Akron
Kennedy, Pauline ..................................... Marysville
Kozelka, Celia .......................................... Cleveland
Krofft, Clara ........................................... Ada
Kunze, Jacob ........................................... Cairo
Lawrence, Margie ..................................... Amherst
Lewis, Merle Donald ................................. Zanesville
Luft, Arlene ........................................... Ada
McGinnis, Howard .................................. Belle Center
McKinney, Donovan .................................. LaFayette
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Potter, Alban ........................................... Ada
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Rainsberger, Lynn .................................... Fayette
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Smith, Pauline ......................................... Ada
Spar, Helen .............................................. Ada
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Fredericks, Cecil ................................ Lima
Fry sing er, Robert ............................ Lima
Goldenberg, William ........................ Elizabethtown, N. J.
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Huey, Dale Alfred .............................. Ashtabula
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Thobaben, Charles ............................. Bedford
Tozzer, Jack ................................. Marion
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Zimpfer, Richard .............................. Anna

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Hanneman, Fred J. ............................ Sandusky
Janssen, Marilyn .............................. Burton
Kreisher, Robert C. .......................... Dover

Lukes, Robert J. ................................ Parma
Maxfield, Quentin ............................... Lima
Perkoski, Thomas .............................. Conneaut
Schaeffer, James T. ........................ Salem
Schipper, Harry ................................ Lima
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Strong, James ................................. Martins Ferry
Zimmerman, Larry .............................. Youngstown

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Hall, Vance .................................. Toledo
Hite, William A. .............................. Thornville
Holmes, William ................................. Ada
Hosenfeld, Charles ............................ Martins Ferry
Latta, Delbert ................................. McComb

Manlovitz, Simon .............................. East Liverpool
Navarre, Ernest ............................... Wauseon
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Schmidt, Raymond ............................. New Carlisle
Schoenberger, Loren .......................... Upper Sandusky
Schwall, DeFord .............................. Wauseon
Trier, Jack ................................. Youngstown
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Sauer, George D. .......... Marietta
Shobe, Charles .......... Lima
Spon, John R. .......... Steubenville
Stroebel, G. Edward .......... Wapakoneta
Trehorne, Alfred .......... Byesville
Wade, John E. .......... Fostoria
Williamson, Don .......... Marion
Worman, Phillip H., Jr. .......... Dayton
Young, Vernon .......... Seaman

SPECIAL STUDENTS

COLLEGE OF LIBERAL ARTS

Byerly, Ruth .......... Lima
Carmean, Florence .......... Ada
Crosser, Ruth .......... Cairo
Dobbins, Esther .......... Ada
Inserre, Lucy .......... Jamestown, N. Y.
Klotman, Robert .......... Cleveland
Krofft, Jean .......... Ada
Kuechli, Marcella .......... Roundhead
MacDonald, Forest .......... New Concord
Patton, Mrs. G. W. .......... Ada
Pratte, Catherine .......... Ada
Schaefer, Elizabeth .......... Ada
Snell, Richard .......... Ada
Snyder, Carolyn .......... Ada
Stroebel, Mrs. Edward .......... Ada

COLLEGE OF ENGINEERING

Cronbaugh, William .......... Ada

COLLEGE OF PHARMACY

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Douglas, John F. .......... Mansfield

COLLEGE OF LAW

Gulick, Peter .......... Youngstown

SUMMARY, 1941-1942

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EXTENSION STUDENTS

1941-1942

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Bischoff, Marguerite ............. Ada Miller, Helen ................. Lima
Brentlinger, James ............... Lima Miltenberger, Emil ........... Lima
Byerly, Juanita .................. Lima Mowry, Vera .................. Lima
Byerly, Ruth ..................... Lima Page, Dorothy ............... Lima
Campbell, Opal .................. Lima Parent, Cathren .............. Lima
Cannon, Yvonne ................. Wapakoneta Ridenour, Paul .......... Lima
Clark, Ellen ..................... Lima Rider, Helen ................. Spencerville
Coon, Daisy ..................... Lima Roush, Bernard .............. Lima
Cooper, Jessie .................. Lima Scott, Aileen ............... Lima
Culleton, Catherine ............. Wapakoneta Slagheck, Theodore ...... Lima
Cupp, Richard .................. Lima Stadler, Lois ............... Lima
Davis, May ..................... Galion Townsend, Robert .......... Lima
Detrick, Celina .................. Lima Tullis, Mary ................. Lima
Hardin, Helen .................. Lima Vogelsong, James ........... Lima
Hornish, Donald ................. Jewell Warner, Berniece .......... Dunkirk
Howell, Giles .................. LaPeyette Weaver, Charles .......... Lima
Hunt, Lola Jane .................. Lima West, Verona .............. Harrod
Ireland, Edith .................. Lima Wheeler, Gertrude .......... Wapakoneta
Kinkle, Harold .................. Lima Winegardner, Donald ....... Waynesfield
Kohli, Nelson ................... Lima Winegardner, Winona ....... Waynesfield
McKitrick, O. S .................. Mt. Cory Younkmann, Daniel ....... Beaverdam

SUMMARY OF EXTENSION STUDENTS

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SUMMARY OF STUDENTS

1941-1942

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Extension

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Summer, 1942

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Beem, Betty ............. Delaware
Bible, Marguerite ..... Ada
Bird, Betty Ann ......... Kenton
Bischoff, Jeanne Loy ... Ada
Black, Richard A. ....... LaFayette
Bozarth, Harry .......... Bettsville
Braschwitz, Russell ... Detroit, Mich.
Bray, Junior .......... Empire
Brown, Ruth ............. Empire
Browning, Catherine ... Portsmouth
Bryant, Marjorie ...... Akron
Cannon, Yvonne ......... Wapakoneta
Carpenter, Mary Eleanor Findlay
Clifton, Evelyn ......... Swanton
Clifton, Genevieve ..... Swanton
Corderman, Phyllis ..... Lima
Crall, Wilma .......... Galion
Crawford, Marion ...... Ada
Davis, May .............. Galion
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Deemer, Paul R. ....... Antwerp
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Application for Admission

I hereby apply for admission to Ohio Northern University at the opening of ........................................ Quarter, 19......

Fall, Winter, Spring, Summer

Name in full .................................................................

Street Address ............................................................

Postoffice ................................................................. State ............................................................

Parent or Guardian .....................................................

Parent or Guardian’s Address ........................................

Date of Birth ............................................................. Church Preference ...........................................

Race ................................................................. Nationality ............................................................

High School .............................................................

Address of High School ................................................

Date of Graduation .....................................................

Previous College attendance ........................................

Write “None” or Name of College with Date of Attendance

Check the department in which you are interested:

LIBERAL ARTS  .........................................................

Teacher Training .........................................................

ENGINEERING ...........................................................

GENERAL ARTS ..........................................................

Pre-Professional .........................................................

Pre-Professional Training ..........................................

Teacher Training .........................................................

Pre-Professional .........................................................

Pre-Professional Training ..........................................

Teacher Training .........................................................

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Pre-Professional .........................................................

Pre-Professional Training ..........................................

Teacher Training .........................................................

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Pre-Professional Training ..........................................
OHIO NORTHERN UNIVERSITY
BEQUEST FORM

UNRESTRICTED

I give and bequeath to Ohio Northern University at Ada, Ohio, the sum of

.................................................. dollars
(or designated property or portion of estate) the principal or income to be used in
such manner and for such purposes as in the judgment of the trustees shall best
promote the interests of the University.

REstricted ENDowment

I give and bequeath to Ohio Northern University of Ada, Ohio, the sum of

.................................................. dollars
(or designated property or portion of estate) to be added to the general endowment
funds of the University, the income to be used in such manner and for such pur-
poses as in the judgment of the Board of Trustees shall best promote the interests
of the University.

REstricted Purpose

I give and bequeath to Ohio Northern University of Ada, Ohio, the sum of

.................................................. dollars
(or designated property or portion of estate) the principal or income to be used
(or, the income to be used), for the purpose of ..............................................

in such manner as the Board of Trustees shall determine. If at any time the need
of income for such purpose no longer exists, Ohio Northern University shall be,
and hereby is, authorized to use the principal or income for such other educational
purposes as in the judgment of the Board of Trustees shall best promote the wel-
fare of the University.