To meet war-time requirements Ohio Northern University has adopted a year-round schedule which will enable students to enter most programs of study at the beginning of any Quarter — Fall, Winter, Spring, or Summer.

The student may reduce by as much as a year the time necessary to complete his college work by attending consecutive quarters throughout the year.

In instances where the student desires a program which may not lend itself to the new schedule, the University will make every effort to meet the needs of the individual.
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CALENDAR, 1942-43

FALL QUARTER, 1942

September 8, Tuesday ........ Freshman Preregistration and Payment of Fees
September 9, Wednesday, Upper Class Registration and Payment of Fees
September 10, Thursday .......... Classes Begin, First Convocation
October 17, Saturday ............... Homecoming Day
October 17, Saturday .......... Annual Meeting of the Board of Trustees
October 26, 27, 28, 29, 30, 31, inclusive,
   Monday to Saturday Noon .......... Preregistration
November 20, 21, 23, 24, Friday, Saturday, Monday, Tuesday
 .................................. Final Examinations
November 24, Tuesday (5:10 p.m.) ...... Fall Quarter Ends

WINTER QUARTER, 1942-1943

November 30, Monday ........ Registration and Payment of Fees
December 1, Tuesday ............... Classes Begin
December 18, Friday (5:10 p.m.) .... Christmas Vacation Begins
January 4, Monday ................. Classes Resume
February 1, 2, 3, 4, 5, 6, Monday to Saturday Noon, inclusive ...
 .................................. Preregistration
February 23, 24, 25, 26 Tuesday to Friday, inclusive. .. Final Examinations
February 26, Friday (5:10 p.m.) .... Winter Quarter Ends

SPRING QUARTER, 1943

March 1, Monday .................. Registration and Payment of Fees
March 2, Tuesday .................. Classes Begin
April 9, Friday ........................ Founder’s Day
April 17, Saturday ................. Semi-Annual Meeting of the Board of Trustees
May 3, 4, 5, 6, 7, 8, Monday to Saturday Noon, inclusive . Preregistration
May 15, 17, 18, 19, Saturday to Wednesday ...... Final Examinations
May 22, Saturday ..................... Alumni Day and Class Day
May 23, Sunday (2:00 p.m.) ........ Commencement Exercises

SUMMER SESSION, 1942

First Term, June 15, Monday, to July 18, Saturday
Second Term, July 21, Tuesday, to August 22, 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
1922 REV. E. L. Motter, D. D. ........................... Columbus 1942
1905 Mr. JOHN H. CLARK, LL. D. ........................ Marion 1943
1924 REV. B. F. Readng, D. D. ............................ Toledo 1943
1924 REV. D. F. Helms, D. D. ............................ Lima 1944
1918 Mr. E. J. Brookhart, LL. B. .......................... Celina 1944
1919 Mr. W. W. Morral ........................................ Morral 1945
1939 Mr. E. S. Matthias, LL. D. .......................... Columbus 1945
1922 Mr. E. C. Edwards ....................................... Toledo 1946
1941 REV. D. Finley Wood, D. D. ........................ Fostoria 1946

ELECTED BY THE NORTH EAST OHIO CONFERENCE

1930 MR. JAY P. TAGGART, LL. B., LL. D. .................. Cleveland 1943
1938 REV. HOWARD W. PETERSON, D. D. .................... Mansfield 1943

ELECTED BY THE ALUMNI

1937 Mr. Earl F. Boyle, C. E. .............................. Winnetka, Ill. 1942
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. Hazelton, C. E. ........................ Mansfield 1946

AT LARGE, ELECTED BY THE TRUSTEES

1934 Mr. Ben R. Conner ...................................... Ada 1942
1934 Mr. Alden M. Elliott ................................... Chicago, Ill. 1942
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 J. Hoskins, LL. B. ........................ Columbus 1943
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.

THOMAS JEFFERSON SMULL, C. E., M. E., ENG. D.
Director of Engineering Development
C. E., M. E., Ohio Northern University; Graduate Student, Lafayette College, one semester; University of Michigan, one semester; Eng. D., Oglethorpe University.

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

MAE McADOW FIDDLER, M. A.
Acting 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.
CLAUDE WESTCOAT PETTIT, B. A., LL. M.

Dean of the College of Law and 418 Union Street
Professor of Law.

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

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

Dean of Men and 228 East North Avenue
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.

ALVA TOLF, M. A.

Dean of Women and Director of 506 South Main Street
Women's Health and Physical Education

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

FRANK LEWIS LOY, M. A.

Director of the Division of Teacher Training and 414 South Main Street
Professor of Education

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

CLYDE ALBERT LAMB, M. A.

Director of the Department of Health and Physical Education and 805 South Simon Street
Professor of Health and Physical Education

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

BIRDELL FOOS, B. S.

Secretary to the President 621 South Main Street

B. S. in Education, Ohio Northern University.

DORIS MESSENEER, 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, 723 Union Street
Dean of Men and Dean of Women

Ohio Northern University, three years.
ANNA FRANCES BENTLEY
Secretary to the Registrar
Ohio Northern University, two years; Office Training School, one year.

ILIO RUTTER
Secretary in the Alumni Office
Graduate in Stenography, Ohio Northern University; Actual Business College, one year.

EVALYN ALICE HALSTEAD, B. A.
Secretary to the Dean of Engineering
B. A., Ohio Northern University.

CLIFFE DEMING, M. A.
Professor of Speech
B. O., B. A., M. A., Ohio Normal University; Emerson College of Oratory.

CHILDE HAROLD FREEMAN, B. S., LIT. D.
Professor of English Literature on the John Davison Chair of English Literature
B. S., Ohio Normal University; Lit. D., Taylor University; University of Chicago, one summer.

FRANK LEWIS BERGER, M. S.
Professor of Physics
B. A., Ohio Northern University; B. S., University of Chicago; M. S., Ohio State University.

WILLIAM PETER LAMALE, M. A.
Professor of Piano and Organ
Mus. B., Oberlin College Conservatory; Student with Tobias Matthay and Matilda Verne, London, one year; Student, Piano, Ernest Hutcheson, Lake Chautauqua, one summer; Student in Conducting, Columbia University and Piano Student with Edwin Hughes, two summers; Student in Piano with Scionti and Composition with Palmer, American Conservatory, one summer; M. A., Ohio State University.

WILFRED ELLSWORTH BINKLEY, PH. D.
Professor of History and Political Science
B. S., Ohio Northern University; B. A., Antioch College; M. A., Ph. D., Ohio State University.

*JESSE RAYMOND HARROD, PH. D.
Professor of Chemistry
B. S. in Ed., B. S., Ohio Northern University; M. S., Ph. D., Ohio State University; Ohio State University, one quarter.

* Deceased February 24, 1942.
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.

*JAMES ALBERT WHITTEN, M. A.
Professor of Mathematics
219 West Highland Avenue
Ph. B., M. A., Southwestern College; University of Chicago, one year and four summers; Columbia University, one summer.

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
706 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 Pharmaceutical Chemistry
927 South Main Street
B. S., Muskingum College; B. S. in Phar., M. S., Ph. D., Ohio State University.

DONALD STUART PEARSON, B. S., M. S. in E. E.
Professor of Electrical Engineering
325 West University Avenue
B. S. and M. S. in E. E., Case School of Applied Science.

* Retired March 6, 1942.
Dawson Gerald Fulton, Ph. D.
Professor of Mathematics 805 South Main Street
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.

Raymond Anson Dobbins, Ph. D.
Assistant Professor of Biology 620 Union Street
B. S., Ohio Northern University; B. A., M. S., Ph. D., Ohio State University.

Lawrence Freeman, M. A.
Assistant Professor of English 724 South Gilbert Street
B. A., Ohio Northern University; M. A., University of Michigan; University of Cambridge, England, one summer.

Harris Arthur Lamb, M. A.
Assistant Professor of Health and Physical Education 202 East Montford Avenue
B. A., Coe College; M. A., Columbia University.

George Willard Patton, M. A.
Assistant Professor of Economics and Business Administration 524½ South Main Street
B. Ph., Emory University; M. A., University of Kentucky; Graduate Student and teaching fellow, five years, Northwestern University.

*Arthur Warren Phelps, M. A., LL. M.
Assistant Professor of Law Bryn Mawr Apartment No. 7
B. A., Washington and Lee University; M. A., Ohio State University; LL. B., University of Cincinnati; LL. M., Columbia University.

Lewis Earl Miller, Ph. D.
Assistant Professor of Chemistry 307 Union Street
Diploma in Education, Muskingum College; B. A., M. S., Ohio State University; Ph. D., University of Pittsburgh; University of Michigan, three summers; Ohio State University, two summers; University of Illinois, one summer.

Donn Willard Watson, B. P. S. M., M. Sc. in Ed.
Assistant Professor of Violin and Public School Music 520 North Main Street
B. P. S. M., M. Sc. in Ed., Indiana University; University of Michigan, one summer. Private work, Violin study with Emil Bare, Robert Perutz, and Jean ten Have at Cincinnati Conservatory. Principal Viola with Indianapolis Symphony, 1912-1918 and 1932-34.

* Resigned January 5, 1942.
Milton Louis Neuroth, B. S. in Phar., M. S.  
Assistant Professor of Pharmacy  
327 West University Avenue  
B. S. in Phar., M. S., Purdue University.

Elizabeth May Lewis, M. S.  
Assistant Professor of Economics and Business Administration  
The Terrace  
B. Ed., Illinois State Normal University; M. S., University of Illinois; University of Chicago, one summer.

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

Thomas Newell Ewing, Ph. D.  
Assistant Professor of Psychology  
307 South Gilbert Street  
B. A., DePauw University; M. A., Syracuse University; Ph. D., Duke University.

John Baugham Harrison, Ph. D.  
Assistant Professor of History  
709 South Gilbert Street  
B. A., M. A., University of North Carolina; Ph. D., University of Wisconsin.

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. D., Ohio State University.

Mary Margaret Gillespie, M. A.  
Instructor in Latin and Director of Turner Hall  
311 South Gilbert Street  
B. Ed., Illinois State Normal University; M. A., University of Chicago; University of Wisconsin, two 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
Ph. C., B. Sc., University of Minnesota; M. S. in Phar., State University of Montana.

Mildred Lee Youngs, M. A.
Instructor in Physical Education
Brymaw Apartment No. 5
B. S., Michigan State College; M. A., Ohio State University.

Alfred Paul Koch, M. S.
Instructor in Economics and Business Administration
Brymaw 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.

Charles Elmer Fiddler, M. A., LL. B.
Instructor in Law
Brymaw Apartment No. 8
A. B., M. A., Ohio University; LL. B., Ohio State University.

Oren E. Dickason, Jr., LL. B.
Instructor in Law
Lima, Ohio
LL. B., Ohio Northern University.

Howard Everett, LL. B.
Instructor in Law
Lima, Ohio
LL. B., Ohio Northern University.

Helene Marie Ansley, R. N.
Nurse
412 Union Street
R. N., Lima Memorial Hospital.

Eleanor Messerly, R. N.
Nurse
412 Union Street
R. N., St. Luke's Hospital, Cleveland, Ohio.
COMMITTEES OF THE FACULTY

1941-1942

ACADEMIC COUNCIL: Huber, Pettit, Loy, Needy, Raabe, Tolf, Potter, Mrs. Fiddler.

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

ARTIST-LECTURE: Smull, Deming, Owens, Mrs. Ewing, Tolf, L. Freeman.

CATALOGUE: C. H. Freeman, Huber, Smull, Watson, L. Freeman.

CHAPEL: Potter, Deming, Owens, Koch.

CLASSROOM ASSIGNMENTS: Pearson, Harrod, Youngs, H. Lamb, McFadden.

COMMENCEMENT: Loy, Deming, Watson, Fiddler.

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

GENERAL ADVISERS: Huber, Pettit, Loy, Needy, Raabe.


HEALTH SERVICE: Dr. Kramer, C. Lamb, Raabe, Potter, Tolf.


INTER-COLLEGIATE DEBATE: Deming, Binkley, C. H. Freeman, Harrison.

LOAN COMMITTEE: Mrs. Ewing, Tolf, Potter.

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

SCHOLARSHIP: Potter, Tolf, Huber, C. Lamb.

SECTIONS COMMITTEE: Harrod, Dobbins, L. Freeman, Miller, Fulton, Davidson.

STUDENT PROMOTION: Davidson, Owens, H. Lamb.

STUDENT PUBLICATIONS: L. Freeman, Berger, Lamale, Neuroth, Smith, Mrs. Ewing.

STUDENT WELFARE AND SOCIAL CALENDER: 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 School

Ohio Northern University has been one of the pioneer institutions in maintaining a summer session. The Summer Session is composed of two terms of five weeks each, six days a week. The first term of the 1942 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 all 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 curriculum 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 Association. The University is on the approved list of the University Senate of the Methodist Church.

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. It is equipped with stage settings, a pipe organ, and moving picture booths. In this hall regular convocations of the student body are held. 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.

The Brown Memorial Library, situated at the north end of the front campus, is admirably adapted to the work of a modern college. Spacious and well lighted, it is capable of accommodating two hundred students. There are also opportunities at private tables for advanced study and research. The library at present possesses 22,000 live and well administered volumes, and affords opportunity for every student to find literature in his own and other fields for reference, reading and study.

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 five class rooms, together with a library, study room, court room, and offices. 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, eighteen 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.

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.

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.

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 reg-
ulation 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 rooms are beautifully equipped with single day beds (three feet, three inches in width), inner-spring mattresses, pads, pillows, ample dressers with mirrors, individual desks, Windsor desk chairs, Windsor rockers, curtains, and rugs. The entire house has excellent hardwood floors. Each student furnishes and launders all of her bedding, towels, dresser scarfs, and other accessories. Each student should also bring her own desk lamp and waste basket. Radios are not permitted in the student rooms.

Residents are permitted light laundry privileges; built-in tubs, pressing boards, electric iron, and a drying room, compose the equipment. Certain kitchen privileges are also permitted under the supervision of the housemother. The Hall is closed for occupancy during all vacations. It will be opened for occupancy on the day before each Registration Day. Students wishing to arrive before this date should notify the office of the Dean of Women.

Two privately owned homes are also used in connection with Turner Hall for housing freshmen women. In these homes, arrangements for light-housekeeping may be made for a small fee. In all residences women are required to furnish their own linens.

Applications should be submitted promptly.

**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. Room equipment and regulations are similar to those described for Turner Hall.

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

First Period .................................. 7:50 to 8:40
Second Period ................................ 8:45 to 9:35
Third Period .................................. 9:40 to 10:30
Fourth Period .................................. 10:35 to 11:25

Chapel ........................................... 11:30 to 12:00

Fifth Period .................................. 1:30 to 2:20
Sixth Period .................................. 2:25 to 3:15
Seventh Period ................................ 3:20 to 4:10
Eighth Period .................................. 4:15 to 5:05

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 consideration. They are urged to identify themselves with the work and participate 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: Methodist, 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 themselves for life’s work.

The Young Men’s Christian Association has an enthusiastic organization 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 purpose is to aid in developing a spiritual and practical outlook on the Christian ministry through contacts with men already in active service in the church.

Women’s Organizations

Three organizations are of special interest to all women.

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 women 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-ordinate the activities of all women’s groups on the campus and to plan a constructive 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 and one extended tour 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 games and accompanies the team on one or two out-of-town trips. 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 1940-41:

Our Town
Margin for Error
Pure As the Driven Snow
What A Life
Charlie’s Aunt

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

The Opening of A Door
Dinner for Two
Campus Quarantine
Phantom Bells

TECHNICAL ORGANIZATIONS AND LITERARY CLUBS


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. To those who have completed four years’ service in the band a gold key is given, the award being made at the formal spring concert and presented by the president of the University.

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 four 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.

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.

All student publications are controlled by the Faculty committee on Student Publications and are under the direct supervision of the chairman of the committee.

**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 full time resident physician and two registered nurses for the purpose of providing efficient health service to the student body. It also maintains its own infirmary and dispensary. Each student upon payment of the health fee is entitled to this health service which includes a yearly medical examination, office consultation and treatment by the 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 ($2,000.00). 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).

11. The Fairchild Scholarship. This scholarship of $500 in cash is awarded annually after a competitive examination. It is open to graduates of the College of Pharmacy that are members of the American Association of Colleges of Pharmacy. The winner of this award must plan to enter graduate study during the year immediately following the award.

**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.
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 exercise a week for one quarter. It is equivalent to two-thirds of a semester hour.
The following grade and points system is in effect: Grade A, Excellent, 3 points; B, Good, 2 points; C, Average, 1 point; D, Passing, 0 points; F, Failed, 0 points; I, incomplete; X, absent from examination.

**ELIGIBILITY**

Students on probation for any cause shall not represent in a public manner, the University, their class, or any University organization in any extra-curricular activity.

To be eligible for the office of president or vice president of the Sophomore, Junior or Senior class, editor or business manager of the *Northern Review*, editor or business manager of the *Northern* yearbook, president of the Y. M. C. A. or Y. W. C. A., the candidate must have a scholarship rating of at least one and one-half (1½) quality points per hour.

**EXPENSES**

No matriculation or entrance fee is required to enter the University.

**TUITION**

Tuition for instruction in the University is $30.00 per quarter in the College of Liberal Arts and the Division of Teacher Training; and $35.00 per quarter in Public School Music and in the Colleges of Law, Engineering, and Pharmacy.

**GENERAL FEE**

A general fee of $20.00 per quarter is charged for all colleges at the time tuition is paid. This fee is not refundable and includes in general all costs exclusive of instruction such as cost of administration, maintenance of plant, and such other expenses as are incidental to the operation of the University.

**SUMMARY OF TUITION AND OTHER FEES**

**One Quarter—Twelve Weeks**

**TUITION—**

| Liberal Arts, 11 to 16 credit hours | $30.00 |
| Education, 11 to 16 credit hours | $30.00 |
| Engineering, 11 to 19 credit hours | $35.00 |
| Law, 11 to 16 credit hours | $35.00 |
| Music, 11 to 16 credit hours | $35.00 |
| Pharmacy, 11 to 18 credit hours | $35.00 |
| Public School Music—B. S. in Education | $35.00 |

Tuition for each credit hour above the maximum or below the minimum as indicated above ........................................ $5.00

General Fee in all colleges ........................................ $20.00

Activity Fee ........................................ $5.00
### General Information

#### FEES—

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<thead>
<tr>
<th>Course Description</th>
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<tr>
<td>Auditing Course (per 3 credit hours)</td>
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<tr>
<td>Biology 101, 102, 103, 107, 108, 109, 206, 218, 219</td>
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<td>Civil Engineering 221, 223, 311, 321</td>
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<td>Late Registration</td>
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*Music:*

<table>
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<tr>
<th>Activity</th>
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<tr>
<td>History and Appreciation 153, 154, 155</td>
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<tr>
<td>Orchestral Instruments 220, 221, 222</td>
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**Private Lessons:**

<table>
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<tr>
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<tbody>
<tr>
<td>Voice, Piano, Organ, Violin, Reed, or Brass</td>
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</tr>
<tr>
<td>Two Lessons per week</td>
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<tr>
<td>Pharmacology 251</td>
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<tr>
<td>Pharmacology 275, Fee and deposit depend upon the nature of the investigation</td>
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<td>Pharmacy 251, 252, 253</td>
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<td>Pharmacy 275, Fee and deposit depend upon the nature of the investigation</td>
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<td>Course</td>
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<td>Physical Education</td>
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<td>Physics 104, 105, 106, 109a, 110a, 111a</td>
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<td>Physics 216, 217, 218 (per credit hour)</td>
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<tr>
<td>Practice Teaching (6 credit hours)</td>
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Speech:
- Private Lessons 150 (one lesson per week)   | 15.00 |
- Private Lessons 250 (for Speech majors only, one-half credit hour) | 5.00  |
- Special Examination (3 credit hours)        | 2.50  |
- Typewriting                                 | 3.00  |

*Private lesson costs do not apply to music majors whose private lessons are included in their tuition and general fees. High school students will be charged $20.00 per quarter for two lessons per week, and $12.00 per quarter for one lesson per week; single lesson, $1.25.

No diploma, certificate, transcript, letter of honorable dismissal or recommendation will be granted to students who have an unadjusted indebtedness to the University or to organizations connected in any way with the University.

A student suspended or dismissed from college, or withdrawing when under investigation for misconduct, is not entitled to any refund of tuition.

Students failing to pay tuition on the assigned days will be charged $3.00. This does not apply to new registrants.

Refunds when allowed shall be made as follows:
- During the first two weeks: 80%
- During the third and fourth weeks: 60%
- During the fifth and sixth weeks: 40%
- No refunds are made on fees.
- No refunds are made after six weeks. Written notice of withdrawal must be sent to the Treasurer's Office; refunds are made as of date of receipt of notice.

*Upon application, students who are drafted for service in any of the armed forces of the nation will have their total tuition refunded for the quarter.*

**Rooms and Board**

Rooms are available in Ada at very reasonable prices, ranging from $1.50 to $3.00 per week. Board may be secured at prices from $5.00 to $7.00 per week.

In order to insure good, wholesome food and plenty of it at the very least possible cost to the student, board at The Terrace Restaurant, which is operated under private management, is furnished at a remarkably low fee, by the day or week, average costs per week ranging from $5.00 to $7.00 for twenty-one meals. The Terrace contains two spacious dining halls and
a lounge. Fireplaces, a beamed ceiling and fixtures in early American style, make it a beautiful and attractive dining hall.

Very many students, members of fraternities or sororities, find comfortable rooms and good board in the various fraternity and sorority houses.

Rooms are obtainable in Turner Hall and The Terrace from $25.00 to $33.00 per quarter for each student, payable in advance. A deposit of $5.00 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 house-holders.

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.

Advisers

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 quarter. 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 Uni-
iversity 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

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, on presentation of properly signed entrance certificates. Blanks for this purpose may be had by addressing the Registrar. Students deficient in some of the units for admission may be admitted upon examination.

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

3. **Special Students.** 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.

**Entrance Requirements**

Fifteen units of high school work are required for unconditional admission to the college, ten units of which should be in the following groups of subjects:

(a) English Composition and English Literature.
(b) Foreign Language (classical or modern).
(c) Natural Science.
(d) History and Social Science.
(e) Mathematics (algebra and geometry; 2 units).

The remaining five units may be offered from the above groups or from any other subjects accepted toward graduation from the high school. 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.
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 61, 77, 85 and 99) 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.
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 99) 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.

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**

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<th>Mathematics 100, 101, 101A, 103, 103b, 105</th>
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<tr>
<td>Business Organization 103-105</td>
<td>Mathematics of Finance 121</td>
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<tr>
<td>Chemistry 101A-103A; 101-103</td>
<td>Mechanical Drawing 111-113</td>
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<tr>
<td>English 101, 102, 102a</td>
<td>Music: Theoretical and Applied</td>
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<tr>
<td>French 101-103 or 104a-106a</td>
<td>Physical Education 101-103</td>
</tr>
<tr>
<td>German 101-103 or 104a-106a</td>
<td>Physics 109-111, 109A-111A</td>
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<tr>
<td>Health Education 117</td>
<td>Political Science 104-106</td>
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<td>History 104-106</td>
<td>Spanish 101-103</td>
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<td>History 110-112</td>
<td>Speech 101-103</td>
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<td>Hygiene 115</td>
<td>Stenography</td>
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<tr>
<td>Industrial Arts 101</td>
<td>Typewriting</td>
</tr>
<tr>
<td>Latin 107-109 or 110-112</td>
<td>Zoology 101-103</td>
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**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 re-
quirements 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>
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<td>English 101</td>
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### Second Year

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### Third Year

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<tr>
<td>Surveying 221</td>
<td>Differential Equations 212</td>
<td>Electrical Engineering 213</td>
</tr>
<tr>
<td>or Calculus 216</td>
<td></td>
<td>Arts Elective</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.

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 the following autumn.

### 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 or German</td>
<td>French or German</td>
<td>French or German</td>
</tr>
<tr>
<td>Chemistry 101 or 101a</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>
<td>Elective</td>
<td>Elective</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>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>3-5</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>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>5-6</td>
</tr>
</tbody>
</table>

It is highly desirable that a course in mathematics be scheduled in freshman or sophomore year.

### 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

FALL QUARTER
Physical Education 101
English 101
Chemistry 101
Biology 101
Electives

WINTER QUARTER
Physical Education 102
English 102
Chemistry 102
Biology 102
Electives

SPRING QUARTER
Physical Education 103
English 102A
Chemistry 103
Biology 103
Electives

Second Year

FALL QUARTER
Physical Education 104
Chemistry 206
Physics 109 or 109A
Biology 206

WINTER QUARTER
Physical Education 105
Chemistry 207
Physics 110 or 110A
Biology 213

SPRING QUARTER
Physical Education 106
Ethics 203
Physics 111 and 111A
Electives

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.
First Year

**Fall Quarter**
- Physical Education 101
- English 101
- Biology 101
- Political Science 104
- Chemistry 101A or 101
- Elective (Foreign Language or Mathematics)

**Winter Quarter**
- Physical Education 102
- English 102
- Biology 102
- Political Science 105
- Chemistry 102A or 102
- Elective (Foreign Language or Mathematics)

**Spring Quarter**
- Physical Education 103
- English 102A
- Biology 103
- Hygiene 115
- Chemistry 103A or 103
- Elective (Foreign Language or Mathematics)

Second Year

**Fall Quarter**
- Physical Education 104
- Biology 206
- Chemistry 206
- Human Physiology 211

**Winter Quarter**
- Physical Education 105
- Biology 213
- Chemistry 207
- Bacteriology 222

**Spring Quarter**
- Physical Education 106
- Biology 218
- Bible 153
- Bacteriology and Health 223
- Elective

Third Year

**Fall Quarter**
- Sociology 151
- Psychology 101
- Biochemistry 261
- English 210
- Bible 151

**Winter Quarter**
- Sociology 152
- Psychology 102
- English 211
- Biology 219
- Elective

**Spring Quarter**
- Sociology 211 or 212
- Psychology 210
- Biology 230
- English 212
- Ethics 203

Pre-Law

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.

First Year

**Fall Quarter**
- Physical Education 101
- English 101
- Mathematics 100 or 101
- History 104
- Electives

**Winter Quarter**
- Physical Education 102
- English 102
- Mathematics 103A or 103
- History 105
- Electives

**Spring Quarter**
- Physical Education 103
- English 102A
- Mathematics 112
- History 106
- Electives

A year course in laboratory science (biology, chemistry or physics) may be elected instead of mathematics.
Second Year

FALL QUARTER  
Physical Education 104  1  
Speech 110 or English 121  3  
Political Science 101  3  
Psychology 101  5  
Economics 121  3  
Elective  2-3  
Alternates for Economics 121, 122, 123 are History 113, 114, 115 or History 110, 111, 112.

WINTER QUARTER  
Physical Education 105  1  
Speech 111 or English 122  3  
Political Science 102  3  
Psychology 102  5  
Economics 122  3  
Elective  2-3  

SPRING QUARTER  
Physical Education 106  1  
History  3  
Political Science 103  3  
Psychology 104  3  
Economics 123  3  
Elective  3  

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.
Ohio Northern University

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>
</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>Chemistry 101</td>
<td>Chemistry 102</td>
<td>Chemistry 103</td>
</tr>
<tr>
<td>Mechanical Drawing 111</td>
<td>Mechanical Drawing 112</td>
<td>Elective</td>
</tr>
</tbody>
</table>

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

**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>Biology 101</td>
<td>Biology 102</td>
<td>Biology 103</td>
</tr>
<tr>
<td>Mathematics 101</td>
<td>Mathematics 103</td>
<td>Mathematics 105</td>
</tr>
<tr>
<td>Economics 121</td>
<td>Economics 122</td>
<td>Economics 123</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>Psychology 102</td>
<td>Elective</td>
</tr>
<tr>
<td>Suggested electives are courses in literature, local flora, speech and business organization.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Agricultural Engineering**

<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</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>
</tbody>
</table>

**Dentistry**

(See page 46 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 102 or 102</td>
<td>Chemistry 103 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>
</tbody>
</table>
COLLEGE OF LIBERAL ARTS

FORESTRY AND CONSERVATION

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 102 or 101</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 typewriting.

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.
### 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 121</td>
<td>Economics 122</td>
<td>Economics 123</td>
</tr>
<tr>
<td>American Government 101</td>
<td>American Government 102</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) 3-4</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>Elective 2-3</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.
College of Liberal Arts

Law

(See Page 48 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</td>
<td>1 Physical Education</td>
<td>1 Physical Education</td>
</tr>
<tr>
<td>English 101</td>
<td>3 English 102</td>
<td>3 English 102a</td>
</tr>
<tr>
<td>Biology 101</td>
<td>3 Biology 102</td>
<td>3 Biology 103</td>
</tr>
<tr>
<td>Chemistry 101 or</td>
<td>5 Chemistry 102 or</td>
<td>5 Chemistry 103 or</td>
</tr>
<tr>
<td>101A</td>
<td>102A</td>
<td>103A</td>
</tr>
<tr>
<td>Mathematics 100 or</td>
<td>5 Mathematics 103 or</td>
<td>5 Mathematics 105</td>
</tr>
<tr>
<td>101</td>
<td>103B</td>
<td></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</td>
<td>1 Physical Education</td>
<td>1 Physical Education</td>
</tr>
<tr>
<td>English 101</td>
<td>3 English 102</td>
<td>3 English 102a</td>
</tr>
<tr>
<td>Biology 101</td>
<td>3 Biology 102</td>
<td>3 Biology 103</td>
</tr>
<tr>
<td>Chemistry 101</td>
<td>5 Chemistry 102</td>
<td>5 Chemistry 103</td>
</tr>
<tr>
<td>Social Science</td>
<td>5 Social Science</td>
<td>5 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.
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 Speech 101 2-3

**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 Speech 102 2-3

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

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 112 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.
### College of Liberal Arts

#### First Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Code</th>
<th>Course Title</th>
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<td>Physical Education 101</td>
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<td>Mathematics</td>
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#### Third Year

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<tr>
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<td>Chemistry</td>
<td>Chemistry 207</td>
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<td></td>
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<tr>
<td></td>
<td>Elective</td>
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<td>Spring Quarter</td>
<td>Chemistry</td>
<td>Chemistry 208</td>
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#### Fourth Year

<table>
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<tr>
<td></td>
<td>Physics</td>
<td>Physics 216-217</td>
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<tr>
<td>Winter Quarter</td>
<td>Bible</td>
<td>Bible 152</td>
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<td>Chemistry</td>
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<tr>
<td></td>
<td>Chemistry</td>
<td>Chemistry 216</td>
</tr>
<tr>
<td></td>
<td>Modern Language</td>
<td>Modern Language</td>
</tr>
<tr>
<td></td>
<td>Physics</td>
<td>Physics 217-218</td>
</tr>
<tr>
<td>Spring Quarter</td>
<td>Bible</td>
<td>Bible 153</td>
</tr>
<tr>
<td></td>
<td>Chemistry</td>
<td>Chemistry 214</td>
</tr>
<tr>
<td></td>
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<td>Chemistry 217</td>
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</tr>
<tr>
<td></td>
<td>Physics</td>
<td>Physics 214</td>
</tr>
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</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.

### First Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
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<tbody>
<tr>
<td>Physical Education 101</td>
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<td>English 101</td>
<td>English 102</td>
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<td>Mathematics 103 or 103b</td>
<td>Mathematics 121</td>
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<tr>
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<td>Natural Science 3-5</td>
<td>Natural Science 3-5</td>
</tr>
<tr>
<td>Speech 101 or</td>
<td>Speech 102 or</td>
<td>Speech 103 or</td>
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<tr>
<td>Political Science 104 2-3</td>
<td>Political Science 105 2-3</td>
<td>Political Science 106 2-3</td>
</tr>
<tr>
<td>Business Organization 103 2</td>
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<td>Business Organization 105 2</td>
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### Second Year

<table>
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<td>English or Speech or</td>
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### Third Year

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<td>Economics and Business 247</td>
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### Fourth Year

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<tr>
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<td>Electives 9-10</td>
<td>Electives 9-10</td>
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</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 during the junior and senior years.

First Year

<table>
<thead>
<tr>
<th>FALL QUARTER</th>
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<th>SPRING QUARTER</th>
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<td>Physics 110a</td>
<td>Physics 111a</td>
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<tr>
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Second Year

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Third Year

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Fourth Year

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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

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<td>English 102</td>
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<td>Mathematics 103b or 103</td>
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<tr>
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### Second Year

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<tr>
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### Third Year

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<td>Money and Banking 207</td>
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<td>3</td>
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<td>Political Science 103 or</td>
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### Fourth Year

<table>
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<td>Public Finance 217</td>
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<td>Business Finance 214</td>
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<td>Electives</td>
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<tr>
<td>Elective</td>
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</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

**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.
<table>
<thead>
<tr>
<th></th>
<th>First Year</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
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<tbody>
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<td>English 102</td>
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<tr>
<td></td>
<td>Biology 101</td>
<td>Biology 102</td>
<td>Biology 103</td>
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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**  
       **Fall, Winter, 3 Hours**

102. **COMPOSITION**  
       **Winter, 3 Hours**

102a. **COMPOSITION**  
       **Spring, 3 Hours**  
       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. Seven sections. M. W. F., 1, 2, 3, 4, 5, 6, 7.  
       Mr. L. Freeman, Miss Gillespie

118. **BUSINESS WRITING**  
       **Spring, 3 Hours**  
       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

201. **COLLEGE GRAMMAR**  
       **Winter, 3 Hours**  
       Mr. C. H. Freeman

*205. **EXPOSITORY WRITING**  

*225. **EXPOSITORY WRITING**  
       **Fall, 2 Hours**  
       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

**ENGLISH LITERATURE**

*103. **FROM THE BEGINNING TO THE EIGHTEENTH CENTURY**  
       **Fall, 3 Hours**

*104. **FROM THE EIGHTEENTH CENTURY TO THE VICTORIAN ERA**  
       **Winter, 3 Hours**

*105. **FROM THE VICTORIAN ERA TO 1920**  
       **Spring, 3 Hours**  
       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

106. **EIGHTEENTH CENTURY PROSE**  
       **Fall, 3 Hours**

* Not given in 1942-43
107. **Eighteenth Century Prose**  
In these courses a study is made of the prose of Defoe, Swift, Steele, Addison, Fielding, Burke, Gibbon, Johnson, Goldsmith, and Boswell. An attempt is made to interpret eighteenth century thought through the chief prose writers of the period. M. W. F., 2.

**Winter, 3 Hours**

108. **Eighteenth Century Poetry**  
The poetry of the Restoration and the Eighteenth Century. A study of the poetry of Dryden, Pope, Collins, Burns, Cowper, Blake, and Crabbe, together with some of the minor writers of the period. English 106 and 107 together with this course constitute a years' work in sophomore English. M. W. F., 2.

**Spring, 3 Hours**

Mr. C. H. Freeman

112. **Modern British and American Poets**
Open to sophomores. M. W. F., 6.

**Fall, 3 Hours**

Mr. C. H. Freeman

121. **American Poetry**
A study chiefly of the nine great American poets of the nineteenth century, but attention is given to work of the recent and contemporary poets. An attempt is made to show what America has done in poetry, the greatest of the fine arts. M. W. F., 3.

**Fall, 3 Hours**

Mr. C. H. Freeman, Mr. L. Freeman

122. **American Prose**
Some attention is paid to the prose of the Colonial period, but the following writers are stressed: Edwards, Franklin, Irving, Hawthorne, Poe, Thoreau, Lowell, Emerson, Holmes, Calhoun, Webster, and Lincoln. M. W. F., 3.

**Winter, 3 Hours**

Mr. C. H. Freeman, Mr. L. Freeman

122a. **American Prose**
A continuation of English 122 with special emphasis on the development of the American novel. English 121, 122, and 122a constitute a year's work of sophomore rank. Prerequisite: English 101 and 102. M. W. F., 3.

**Spring, 3 Hours**

Mr. C. H. Freeman, Mr. L. Freeman

210. **Shakespeare: Histories**

**Fall, 3 Hours**

211. **Shakespeare: Tragedies**

**Winter, 3 Hours**

212. **Shakespeare: Comedies**
In these courses Shakespeare is studied as a dramatist, poet, interpreter of his age and of human life. Attention is given to the technique of the Elizabethan drama. Open to juniors and seniors. M. W. F., 4.

**Spring, 3 Hours**

Mr. C. H. Freeman

214. **Nineteenth Century Poetry**

**Fall, 3 Hours**

215. **Nineteenth Century Poetry**
A study of the chief poems of Tennyson and Browning. Attention is given to the patriotic and social attitude of Tennyson and to Browning's ability to portray and to interpret character. M. W. F., 7.

**Winter, 3 Hours**

216. **Nineteenth Century Poetry**

**Spring, 3 Hours**

Mr. C. H. Freeman
*217. NINETEENTH CENTURY ESSAYISTS
In English 217 the following essayists are studied: Coleridge, Lamb, Hazlitt, Landor, DeQuincey, Macaulay, Carlyle, Newman, Ruskin, Huxley, Pater, and Stevenson. M. W. F., 2.

*219. THE NINETEENTH CENTURY ENGLISH NOVEL

*219a. THE NINETEENTH CENTURY ENGLISH NOVEL
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
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
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

Mr. Deming

103. LITERARY INTERPRETATION
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
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

111. ARGUMENTATION
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.

* Not given in 1942-1943
112. **Dramatic Technic**
A study of the problems of the actor in voice and action. A review of the stage art and modern tendencies. Presentation of classical and modern scenes. Prerequisite: Speech 103. T. Th., 7. 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.

**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.

**1 Hour**

Mr. Deming

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.

**FALL, 3 Hours**

Mr. Deming

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. T. W. Th., 7.

**WINTER, 3 Hours**

Mr. Deming

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.

**SPRING, 2 Hours**

Mr. Deming

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.

**FALL, 2-3 Hours**

Mr. Deming

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.

**WINTER, 3 Hours**

Mr. Deming

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.

**SPRING, 2 Hours**

Mr. Deming

250. **Private Speech**
Limited to speech majors.

**½ Hour**

Mr. Deming
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.

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

FRENCH

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<td>102</td>
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<td>103</td>
<td>ELEMENTARY FRENCH</td>
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<td>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.</td>
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<td>106a</td>
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<td>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.</td>
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<td>223</td>
<td>MODERN LITERATURE</td>
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<td>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 104a-106a. In alternate years with French 231a-233a. M. W. F., 11:30.</td>
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<td>206a</td>
<td>GENERAL SURVEY OF FRENCH LITERATURE</td>
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* Not given in 1942-43
*208a. GENERAL SURVEY OF FRENCH LITERATURE  
Spring, 3 Hours
Mr. Herrick

225a. FRENCH PHONETICS  
Winter, 1 Hour

226a. FRENCH PHONETICS  
Spring, 1 Hour
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. Prerequisite: Spanish 101-103. M. W. F., 6.  
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

104a. INTERMEDIATE GERMAN  
Fall, 3 Hours

*Not given in 1942-1943*
105a. Intermediate German
106a. Intermediate German
Grammar, pronunciation, and conversation with the reading of graded texts. Prerequisite: German 101-103, or the equivalent. T. W. Th., 2.

117. Scientific German
118. Scientific German
The reading of scientific texts with particular emphasis on individual needs. Required of premedical students. Given on sufficient demand instead of 105a and 106a. Prerequisite: German 101-103. T. Th. F., 2.

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
108. Cicero and Vergil
109. Cicero and Vergil
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.

*210. Livy
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.

*211. Horace

*212. Latin-English Etymology
Lectures and readings on elementary linguistics and the relation of Latin to English. Open to students majoring in English. M. W. F., 4.

*213. Roman Private Life
Lectures and readings on Roman life and on the topography of Rome. Prerequisite: Latin 109 of four years of high school Latin. Open to social science students for history credit. M. W. F., 4.

* Not given in 1942-43
*214. Pliny
An introduction to the prose of the Silver Age and to the life of the empire of the first cen-

*215. Martial
An introduction to the poetry of the Silver Age and to the life of the empire of the first cen-

216. Plautus and Terence
Reading of one play of each author. Prerequisite: Latin 109 or four years of high school

217. Roman History and Literature
A rapid survey of Roman history from legendary times to the fall of the empire and an out-

218. Cicero's Essays
De Senecute 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 text-
books and other teaching materials.

**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.

Equipment

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, 7 fine studios, 18 practice rooms, 3 classrooms, and 14 upright pianos. In Lehr auditorium is a large organ and a grand piano.

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 other than evidence of talent and the ability to pursue a selected course with success.

*Not given in 1942-1943*
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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**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  SPRING, 2 Hours
   A series of sequential courses. M. W. F., 2.
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  SPRING, 2 Hours
   A series of sequential courses for sophomores. M. W. F., 2.
109. CLASS VOICE  SPRING, 3 Hours
   A course designed for prospective teachers of vocal music in the public school.

111. HARMONY  FALL, 3 Hours
112. HARMONY  WINTER, 3 Hours
113. HARMONY  SPRING, 3 Hours
   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.

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.

115. HARMONIC ANALYSIS  WINTER, 3 Hours
   Analysis and discussion of chords and non-harmonic tones. Prerequisite: Advanced Har.
   Mony 114.

211. MUSICAL FORM  SPRING, 3 Hours
   From the motive and song-forms to the sonata and contrapuntal forms. Materials to be an-
   alyzed: Mendelssohn, Songs without Words; Mozart, Sonatas; Beethoven, Sonatas; Bach, Prel-
  udes and Fugues. Prerequisite: Harmonic Analysis 115.

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.

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**  
Four observations each week are required. Prerequisite: Advanced Sight Singing 106; Harmony 114. M. W. F., 5.

**Fall, 4 Hours**

203a. **Intermediate Music Methods and Observation**  
Materials and methods in vocal music. Four observations each week are required. Prerequisite: Primary Methods 202. M. W. F., 5.

**Spring, 4 Hours**

203b. **Intermediate Music Methods and Observation**  
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.

**Spring, 4 Hours**

204. **Junior and Senior High School Methods and Observation**  
The adolescent voice and its care. Four observations each week are required. Prerequisite: Intermediate Music Methods 203. M. W. F., 5.

**Winter, 4 Hours**

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

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

**Fall, 3 Hours**

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

**Spring, 3 Hours**

220. **Orchestral Instruments**

221. **Orchestral Instruments**

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

**Fall, 2 Hours**

**Winter, 2 Hours**

**Spring, 2 Hours**

230. **Instrumental Ensemble Materials**  
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.

**Winter, 3 Hours**

251. **School Orchestration**  
Prerequisites: Harmony 115; Advanced Sight Singing 106. M. W. F., 4.

**Winter, 3 Hours**

252. **Advanced Orchestration**  
A continuation of 251, with scoring for full band and orchestra. Prerequisite: School Orchestration 251. M. W. F., 4.

**Spring, 3 Hours**
262. Song Repertoire
A study of the songs of the various schools of music. Time to be arranged. Mr. Owens

285. Counterpoint
Fall, 3 Hours

286. Counterpoint
Winter, 3 Hours

287. Counterpoint
Spring, 3 Hours
Courses in strict and free counterpoint; the art of combining melodies in the various species for two, three, and four voices. M. W. F., 4. Mr. Davidson

289. Double Counterpoint and Fugue
Fall, 2 Hours

290. Double Counterpoint and Fugue
Winter, 2 Hours

291. Double Counterpoint and Fugue
Spring, 2 Hours
Advanced counterpoint: Invertible for two and three voices; strict and free canons; the art of fugal composition. Prerequisite: One year of counterpoint. T. Th., 3. Mr. Davidson

293. Composition
Fall, 2 Hours

294. Composition
Winter, 2 Hours

295. Composition
Spring, 2 Hours
Original composition in the various forms; song, sonata, dance. Prerequisite: A thorough course in harmony and counterpoint and at least six months of piano instruction. T. Th., 3. Mr. Owens

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. Mr. Owens

VOICE 154, 155, 156
Continuation of first year. Vocalises. Easier recitatives and arias from standard operas and oratorios. Songs in several languages. Mr. Owens

VOICE 251, 252, 253
More advanced work in technique. Opera and oratorio. Lieder by Schubert, Schumann, Brahms, and other composers. Modern American, English, and French songs. Mr. Owens
VOICE 254, 255, 256

MR. OWENS

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

MR. LAMELE

PIANO 154, 155, 156

MR. LAMELE

PIANO 251, 252, 253

MR. LAMELE

PIANO 254, 255, 256

MR. LAMELE

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

MR. LAMELE
ORGAN 154, 155, 156  
Mr. LAMALE

ORGAN 251, 252, 253  
Mr. LAMALE

ORGAN 254, 255, 256  
Mr. LAMALE

VIOLIN

Elementary Course
Mr. WATSON

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  
Mr. WATSON

VIOLIN 154, 155, 156  
Mr. WATSON

VIOLIN 251, 252, 253  
Mr. WATSON

VIOLIN 254, 255, 256  
Mr. WATSON

REED AND BRASS INSTRUMENTS

The course of instruction includes both private and class lessons, and daily band rehearsals. Private instruction on a solo instrument to be selected by the student constitutes the major subject. Class instruction in which the student is given a playing knowledge of every band instrument is also included.  
Mr. DAVIDSON
Division II. Natural Sciences

Jesse Raymond Harrod, 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. Especial 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; Section 3, T. Th., 5, 6; F., 6.

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. M. W., 5, 6; F., 5; M. W., 7, 8; F., 7.

Mr. Dobbins

110. Local Flora

A systematic study which acquaints the student with many of the native and introduced plants. A field course supplemented by greenhouse and herbarium studies. S., 1, 2, 3, 4; T. Th., 1.

Mr. Dobbins
206. **Comparative Vertebrate Anatomy**  
**FALL, 5 Hours**  
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

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**  
**1-3 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, 4; F., 3.  
Mr. Dobbins

*230. **HEREDITY**  
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

* Not given in 1942-1943
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.

101A. Introductory Chemistry  
102A. Introductory Chemistry  
103A. Introductory Qualitative Analysis  

FALL, WINTER, 5 Hours  
WINTER, SPRING, 5 Hours  
SPRING, 5 Hours  

A series of courses designed for students who do not present chemistry for entrance credit. Courses 101A and 102A 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. Harrod, Mr. Miller

101. General Chemistry  
102. General Chemistry  
103. Qualitative Analysis  

FALL, 5 Hours  
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. Harrod, Mr. Miller

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. Miller

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. Harrod

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. Harrod
212. **Inorganic Chemistry**  
**Fall, 5 Hours**

213. **Inorganic Chemistry**  
**Winter, 5 Hours**

214. **Inorganic Chemistry**  
**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 104 and 105. Lecture, M. W. F., 4; laboratory, T. Th., 5, 6, 7.

Mr. Miller

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. 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. Miller

231. **Chemistry Problems**  
**Credit to be Arranged**

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. Harrod, Mr. Miller

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**MATHEMATICS**

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.

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.

100. **College Algebra**  
**Fall, 5 Hours**

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: Plane geometry and one unit of high school algebra. Daily, 2.

Mr. Fulton
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: Plane geometry and one and one-half units of high school algebra. Daily, 3 or 5.
Mr. Fulton, Mr. Whitted

101A. Freshman Mathematics
Fall, 3 Hours

102A. Freshman Mathematics
Winter, 3 Hours

103A. Freshman Mathematics
Spring, 3 Hours
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. Fulton

103. Trigonometry
Winter, 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 and one-half units of high school algebra. Daily, 3 or 5.
Mr. Fulton, Mr. Whitted

103B. Trigonometry
Winter, 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

105. Analytical Geometry
Spring, 5 Hours
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, Mr. Whitted

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, 3 or 4.
Mr. Whitted

108. Calculus: Differential and Integral
Winter, 5 Hours
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 3 or 4.
Mr. Whitted

109. Calculus: Integral
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. Daily, 3 or 4.
Mr. Whitted
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. Whitted or 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

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. Whitted

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. Whitted

*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. Whitted

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. Whitted

215. **VECTOR ANALYSIS**  
Spring, 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. Whitted

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. Whitted or Mr. Fulton

*Not given in 1942-1943*
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 engineers and science majors. Prerequisite: High school physics and analytics. T. W. Th. F. 2. One three-hour laboratory period on M. T. W. Th. or F., 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**

A course dealing with the application of mathematics to physics and related sciences. Prerequisite: Physics 105 or 111 and calculus. Daily, 1.

Mr. Berger

**Spring, 5 Hours**

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.

Mr. Berger

Only one honor course open each year.

*Not given in 1942-1943*
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

122. Principles of Economics

123. Principles of Economics

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.

Fall, 3 Hours
Winter, 3 Hours
Spring, 3 Hours

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., 2 or 3.

Mr. Koch, Mr. Patton

*Not given in 1942-1943*
121. **Mathematics of Finance**
Spring, 5 Hours
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**
Fall, 3 Hours

132. **Principles of Accounting**
Winter, 3 Hours

133. **Principles of Accounting**
Spring, 3 Hours
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**
Fall, 3 Hours

222. **Business Law**
Winter, 3 Hours

223. **Business Law**
Spring, 3 Hours
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**
Fall, 5 Hours

232. **Advanced Accounting**
Winter, 5 Hours
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**
Spring, 3 Hours
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.

*234. **Analysis of Financial Statements**
Fall, 3 Hours
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.

235. **Federal Income Tax Accounting**
Spring, 5 Hours
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**
Fall, 3 Hours
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.

*Not given in 1942-1943*
237. **C. P. A. Problems**
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.

**SPRING, 5 Hours**
Mr. Koch

241. **Marketing**
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.

**FALL, 3 Hours**
Mr. Koch

*245. **Principles of Advertising**
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.

**FALL, 3 Hours**
Mr. Koch

246. **Salesmanship**
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.

**SPRING, 3 Hours**
Mr. Koch

*247. **Retailing**
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.

**WINTER, 3 Hours**
Mr. Koch

251. **Risk, Risk-Bearing, and Insurance**
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.

**FALL, 3 Hours**
Mr. Patton

**SECRETARIAL SCIENCE**
*(Commercial Education)*

101. **Typewriting**

102. **Typewriting**

103. **Typewriting**
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 B. A. degree. Daily, 6.

* Not given in 1942-1943
107. Typewriting  
108. Typewriting  
109. Typewriting  

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 B. A. degree. T. Th. F., 2. Miss Lewis  

110. Stenography  
111. Stenography  
112. Stenography  

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. Daily, 5. Miss Lewis  

115. Stenography  
116. Stenography  
117. Stenography  

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 Lewis  

130. Office Practice  

Spring, 3 Hours  
Theory and practice in office work. Students are assigned to offices on the campus, thus securing actual experience. By arrangement. Miss Lewis  

230. Special Methods in Teaching Commercial Subjects  

Fall, 3 Hours  
A study of the methods and technique of teaching commercial subjects in the high school. Required for commercial teachers. Time to be arranged. Miss Lewis  

240. Supervised Teaching in Commercial Education  

6 Hours  
Prerequisite: Special Methods 230. Given each quarter. Miss Lewis  

245. Problems in Commercial Teaching  

2-5 Hours  
Open to properly qualified seniors. By arrangement. Miss Lewis
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, volley ball, tennis, wrestling, boxing, and track.

INTERCOLLEGIATE ATHLETICS. The 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. Additions to the coaching
staff insure well trained and well coached representatives in all sports. In fact, Ohio Northern offers a wide opportunity for indoor and outdoor sports and takes just pride in maintaining varsity teams and an intramural program of high order.

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
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.
Mr. C. Lamb, Mr. H. Lamb
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

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.
Mr. C. Lamb, Mr. H. Lamb
Women—A continuation of course 103. Four sections. T. Th., 1, 2, 4, 6.
Miss Tolf

101A. PHYSICAL EDUCATION FOR MAJORS
102A. PHYSICAL EDUCATION FOR MAJORS
103A. PHYSICAL EDUCATION FOR MAJORS
104A. PHYSICAL EDUCATION FOR MAJORS
105A. PHYSICAL EDUCATION FOR MAJORS
106A. PHYSICAL EDUCATION FOR MAJORS
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. C. Lamb, Miss Tolf

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; M. W. F., 3.
Mr. C. 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.
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 Tolfe

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. C. 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 Tolfe

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. C. Lamb

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

202. **Principles and Methods of Physical Education**

203. **Methods of Physical Education**
Winter, 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. 4: practice, T. Th., 5. Mr. C. Lamb

221a. **Methods in Coaching Football**
Fall, 3 Hours
A course covering in detail, equipment, fundamentals of the game, kicking, passing, handling the hall, 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 generalship. T. Th. F., 4. Mr. H. Lamb

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 Tolfe

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. H. Lamb
Women—Volleyball, basketball, and handball. M. W. F., 6. Miss Tolfe

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. C. Lamb, Mr. H. Lamb
Women—Baseball, tennis, track, and field sports. M. W. F., 7. Miss Tolfe
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. C. 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. C. 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. C. 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. C. 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. C. 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. H. Lamb

**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.

HISTORY

104. **English History to 1558**

105. **English History: 1558-1783**

106. **English History: 1783 to the Present Time**

A general introductory study of the English people in their political, social and institutional development, followed by a survey of the growth of the British Empire and the evolution of the British Commonwealth of Nations. M. W. F., 6. 

Mr. Harrison

110. **History of Western Europe A. D. 1 to 1517**

111. **History of Western Europe 1517 to 1815**

112. **History of Western Europe 1815 to Present Time**

**Spring, 3 Hours**

An introductory survey of European history. The Mediaeval background, the Renaissance, the rise of international rivalry, the World War and its aftermath. Open to freshmen. T. Th. F., 1. and 5.

Mr. Harrison

113. **History of the United States to 1815**

114. **History of the United States: 1815 to 1865**

115. **History of the United States: 1865 to the Present Time**

**Spring, 3 Hours**

A study of the political, social and economic development of the United States from the discovery to the present time. Not open to freshmen. T. Th. F., 4.

Mr. Binkley

216. **Recent American History**

217. **Recent American History**

218. **Recent American History**

**Fall, 2 Hours**

**Winter, 2 Hours**

**Spring, 2 Hours**

An investigation and intensive study of some of the major movements of the United States since the Civil War. Prerequisite: History 113, 114, 115. T. Th., 5.

Mr. Binkley

*224. Constitutional History of the United States**

**Fall, 2 Hours**

*225. Constitutional History of the United States**

**Winter, 2 Hours**

**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. T. Th., 5.

Mr. Binkley

235. **Bourbon France and the Revolutionary Era**

**Fall, 2 Hours**

*Not given in 1942-1943*
236. **Bourbon France and the Revolutionary Era**

*Winter, 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**

*252. **Recent European History**

*253. **Recent European History**

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**

Individual investigation on a specific problem. Open to qualified seniors majoring in history. Any quarter.

**POLITICAL SCIENCE**

101. **American Government**

*Fall, 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.

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.

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 and 2.

*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.

208. **Comparative Government**

*Fall, 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.

*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.

211. **Political Science Problems**

*3 Hours*

Individual investigation in the field of political science. Open to qualified seniors majoring in this department. Any quarter.

*Not given in 1942-1943*
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. M. W. F., 2.

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.

Students who desire to major in this department will find it profitable to take courses in biology and such courses in mathematics as will aid in the use of statistical data. For those desiring to place major emphasis on sociology, a good background of history is essential.

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.
Mr. Ewing

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. Mr. Ewing

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.
Mr. Ewing

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.
Mr. Ewing

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.
Mr. Ewing
210. **Abnormal Psychology**
Spring, 5 Hours
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**
1-3 Hours
Minor investigation. Open only to qualified seniors. By arrangement.

**Sociology**

151. **General Sociology**
Fall, 3 Hours

152. **General Sociology**
Winter, 3 Hours
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.

153. **Social Pathology**
Spring, 3 Hours
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.

211. **Criminology**
Spring, 3 Hours
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.

*212. The Family*
Spring, 3 Hours
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*
Spring, 3 Hours
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.

**Fall, 3 Hours**

Mr. Potter

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.

**Winter, 3 Hours**

Mr. Potter

153. **The Life of Christ**
A study of the life and teaching of Christ 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.

**Spring, 3 Hours**

Mr. Potter

232. **The Life of Paul**

**Fall, 3 Hours**

Mr. Potter

**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.

**Fall, 3 Hours**

Mr. Potter

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.

**Winter, 3 Hours**

Mr. Potter

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.

**Spring, 3 Hours**

Mr. Potter

**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.

**Spring, 3 Hours**

Mr. Potter

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.

**Winter, 3 Hours**

Mr. Potter
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:

1. 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.
   Unrammeled Electives .................................................. 12 sem. hrs.
   TOTAL ................................................................. 124-140 sem. hrs.
## Two-Year Curriculum for Elementary Teachers

### 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>
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<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Zoology 101</td>
<td>Zoology 102</td>
<td>Zoology 103</td>
</tr>
<tr>
<td>Introduction to Political Science 104</td>
<td>Introduction to Political Science 105</td>
<td>Introduction to Political Science 106</td>
</tr>
<tr>
<td>Public School Music 124</td>
<td>Hygiene 151 (or Public School Music 154)</td>
<td>Public School Music 125</td>
</tr>
<tr>
<td>Teaching of Literature 220</td>
<td>Teaching of Arithmetic 221</td>
<td>Teaching of Reading 223</td>
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### 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>
<td>Geography 219</td>
<td>Psychology 135</td>
<td>English 122a</td>
</tr>
<tr>
<td>Introduction to Education and Principles of Education 205</td>
<td>Teaching of Geography 222</td>
<td>History 115</td>
</tr>
<tr>
<td>Principles of Teaching 206</td>
<td>United States History 114</td>
<td>Teaching of History 224</td>
</tr>
<tr>
<td>Industrial Art 126</td>
<td>English 122</td>
<td>Student Teaching 268</td>
</tr>
<tr>
<td></td>
<td>Organization and Administration 252</td>
<td>Plays and Games 156</td>
</tr>
<tr>
<td></td>
<td>Applied Design 127</td>
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## Three-Year Curriculum for Elementary Teachers

### First Year

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<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>
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</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>History 104 or 110</td>
<td>History 105 or 111</td>
<td>History 106 or 112</td>
</tr>
<tr>
<td>Zoology 101</td>
<td>Zoology 102</td>
<td>Zoology 103</td>
</tr>
<tr>
<td>Introduction to Political Science 104</td>
<td>Introduction to Political Science 105</td>
<td>Introduction to Political Science 106</td>
</tr>
<tr>
<td>Speech 101</td>
<td>Hygiene 115</td>
<td>Practical Arts 101</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td></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 121 or 103</td>
<td>English 122 or 104</td>
<td>English 122a or 105</td>
</tr>
<tr>
<td>Geography 219</td>
<td>Educational Psychology 135</td>
<td>Teaching of Reading 223</td>
</tr>
<tr>
<td>Introduction to Education 205</td>
<td>Teaching of Arithmetic 221</td>
<td>Public School Music 125</td>
</tr>
<tr>
<td>Public School Music 124</td>
<td>Teaching of Geography 222</td>
<td>Educational Psychology 136</td>
</tr>
<tr>
<td>General Psychology 101</td>
<td>Public School Music 154</td>
<td>Elective</td>
</tr>
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</tbody>
</table>
### Third Year

**Fall Quarter**
- History 113 3
- Professionalized Course in Industrial Arts 126 2
- Principles of Teaching 206 3
- Educational Measurements 229 3
- Teaching of Literature 220 4

**Winter Quarter**
- History 114 3
- Applied Design 127 2
- Teaching of Reading 225 2
- Student Teaching and Technique of Teaching 268 6
- School Organization and Administration 252 3

**Spring Quarter**
- History 115 3
- Teaching of History 224 2
- Theory and Practice of Plays and Games 156 3
- Professionalized Course in Industrial Arts 128 5
- Student Teaching and Technique of Teaching 268 6

### Four-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 3
- Elective 3

**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 103 or 121 3
- History 113 3
- General Psychology 101 5
- Professionalized Course in Industrial Arts 126 2
- Health Education 117 3

**Winter Quarter**
- Physical Education 105 1
- English 104 or 122 3
- History 114 3
- Educational Psychology 135 3
- Applied Design 127 2
- Elective 2

**Spring Quarter**
- Physical Education 106 1
- English 105 or 122a 3
- History 115 3
- Professionalized Course in Industrial Arts 128 5
- Local Flora 110 3

#### Third Year

**Fall Quarter**
- Introduction to Education 205 3
- Teaching of Literature 220 4
- Public School Music 124 3
- Economics 121 3
- Geography 219 3

**Winter Quarter**
- Teaching of Arithmetic 221 4
- Public School Music 154 3
- Economics 122 3
- Teaching of Elementary Geography 222 3
- School Organization and Administration 252 3

**Spring Quarter**
- Teaching of Reading 223 4
- Teaching of History 224 3
- Economics 123 3
- Educational Psychology 136 3
- Elective 3

#### Fourth Year

**Fall Quarter**
- *Student Teaching and Technique of Teaching 268 6
- Educational Measurements 229 3
- Principles of Teaching 206 3
- Practical Arts 235 3
- Sociology 151 3

**Winter Quarter**
- *Student Teaching and Technique of Teaching 268 6
- Sociology 152 3
- Teaching of Reading 225 2
- Elective 5

**Spring Quarter**
- *Student Teaching and Technique of Teaching 268 6
- Sociology 153 3
- Public School Music 125 3
- Theory and Practice of Plays and Games 156 3
- Elective 4

* 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

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 121 or American Government 101</td>
<td>Economics 122 or American Government 102</td>
<td>Economics 123 or American Government 103</td>
</tr>
<tr>
<td>History</td>
<td>History</td>
<td>History</td>
</tr>
<tr>
<td>Biology</td>
<td>Biology</td>
<td>Biology</td>
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<tr>
<td>Electives</td>
<td>Electives</td>
<td>Electives</td>
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<tr>
<td>3</td>
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<td>3</td>
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<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Educational Psychology 136</td>
<td>Electives</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td>4</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 210 or 214</td>
<td>English 211 or 215</td>
<td>Student Teaching 270</td>
</tr>
<tr>
<td>Educational Measurements 229</td>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
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<td></td>
<td>3</td>
<td>12</td>
</tr>
</tbody>
</table>

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>
</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>Biological Science or Physical Science</td>
<td>Biological Science or Physical Science</td>
<td>Biological Science or Physical Science</td>
</tr>
<tr>
<td>Social Science</td>
<td>Social Science</td>
<td>Social Science</td>
</tr>
<tr>
<td>Electives in line with student's objectives to complete the schedule.</td>
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</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 1 high school unit) .. 15 sem. hrs.
   2. Botany .................... 3 sem. hrs.
      (Or General Biology, 6 sem. hrs.)
   3. Pertinent electives ........ 9 sem. hrs.

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

C. Bookkeeping—Social Business
   2. Business Law
   3. Economic Geography
   4. Economics
   5. Business Organization
   6. Excess in above or pertinent 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 3 high school units) .. 15 sem. hrs.
   1. English Composition .. 6 sem. hrs.
   2. English and American Poetry ................. 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 2 high school units) .. 15 sem. hrs.
   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, 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).
   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.
1. College Algebra .... 3 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.
1. Principles, organization and administration of health and physical education .... 4 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.
1. Physics .... 6 sem. hrs.
2. Chemistry .... 6 sem. hrs.
3. Pertinent electives or excess in above .... 3 sem. hrs.

P. Salesmanship—Merchandising .... 20 sem. hrs.
1. Marketing Principles .... 3 sem. hrs.
2. Salesmanship .... 3 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)
1. Economics .... 3 sem. hrs.
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.
1. Shorthand .... 9 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.
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.
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 interscholastic 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, extemporaneous 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.
# College of Liberal Arts

## First Year

**Fall Quarter**
- Physical Education 101
- English Composition 101
- Mathematics 100 or 101
- Stenography 110
- Typewriting 101
- Biological Science

**Winter Quarter**
- Physical Education 102
- English Composition 102
- Mathematics 103b or 103
- Stenography 111
- Typewriting 102
- Biological Science

**Spring Quarter**
- Physical Education 103
- English Composition 102a
- Mathematics of Finance 121
- *Stenography 112
- *Typewriting 103
- Biological Science

## Second Year

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

**Winter Quarter**
- Physical Education 105
- Economics 122
- Accounting 132
- Stenography 116
- Typewriting 108
- Educational Psychology 135

**Spring Quarter**
- Physical Education 106
- Economics 123
- Accounting 133
- *Stenography 117
- *Typewriting 109
- Business Writing 118

## Third Year

**Fall Quarter**
- English 106 or 121
- Marketing 241
- Principles of Education 207
- Accounting 231
- Electives

**Winter Quarter**
- English 107 or 122
- Principles of Education 208
- Accounting 232
- Electives

**Spring Quarter**
- English 108 or 122a
- Office Practice 130
- Accounting 233
- Electives

## Fourth Year

**Fall Quarter**
- Business Finance 214
- Geography 219
- Special Methods 230
- Advertising 245
- Business Law 221

**Winter Quarter**
- **Student Teaching 240
- Retailing 247
- Business Law 222
- Salesmanship 246
- School Organization and Administration 252

**Spring Quarter**
- Public Finance 217
- Business Law 223
- Electives

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*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

45 Semester Hours

(68 Quarter Hours)

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.

### 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.

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

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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 104a</td>
<td>Physical Education 105a</td>
<td>Physical Education 106a</td>
</tr>
<tr>
<td>Comparative Anatomy 206</td>
<td>Anatomy and Physioloogy 213</td>
<td>Local Flora or Heredity or Evolution</td>
</tr>
<tr>
<td>Health Education 117</td>
<td>Health Education 152</td>
<td>Health Education 151</td>
</tr>
<tr>
<td>General Psychology 101</td>
<td>Educational Psychology 135</td>
<td>Adolescent Psychology 136</td>
</tr>
<tr>
<td>English</td>
<td>English</td>
<td>Body Mechanics 155</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>First Aid 158</td>
</tr>
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<td></td>
<td></td>
<td>English</td>
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<tr>
<th>FALL QUARTER</th>
<th>WINTER QUARTER</th>
<th>SPRING QUARTER</th>
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</thead>
<tbody>
<tr>
<td>Principles and Methods of</td>
<td>Principles and Methods of</td>
<td>Methods of Physical</td>
</tr>
<tr>
<td>Physical Education 201</td>
<td>Physical Education 202</td>
<td>Education 203</td>
</tr>
<tr>
<td>Football Coaching 221a or</td>
<td>Basketball Coaching 222 or</td>
<td>Baseball and Track Coaching</td>
</tr>
<tr>
<td>Coaching (Women) 221b</td>
<td>Coaching (Women) 222</td>
<td>(Women) 223</td>
</tr>
<tr>
<td>Principles of Education 207</td>
<td>Educational Methods 250</td>
<td>(Women) 223</td>
</tr>
<tr>
<td>Sociology 151</td>
<td>Sociology 152</td>
<td>Sociology 153</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
<td>Electives</td>
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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>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
</tr>
<tr>
<td>English 102</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>
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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>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></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></td>
</tr>
<tr>
<td>Materials of Industry 231</td>
<td>Metals 220</td>
<td>Industrial Arts Methods</td>
</tr>
<tr>
<td>Industrial Arts 126</td>
<td>Photography 225</td>
<td>and Organization 250</td>
</tr>
<tr>
<td>Elective</td>
<td>School Organization</td>
<td>Electrical Engineering 213</td>
</tr>
<tr>
<td></td>
<td>and Administration 252</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>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></td>
</tr>
<tr>
<td>Electrical Engineering 301</td>
<td>Elective</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>Methods and Organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and Organization 250</td>
</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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Winter Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing 111</td>
<td>4</td>
</tr>
<tr>
<td>Industrial Arts 101</td>
<td>5</td>
</tr>
<tr>
<td>Woods 115, 116</td>
<td>6</td>
</tr>
<tr>
<td>Metals 210</td>
<td>5</td>
</tr>
<tr>
<td>Photography 225</td>
<td>2</td>
</tr>
<tr>
<td>Crafts and Hobbies 235</td>
<td>3</td>
</tr>
<tr>
<td>Ceramics 240</td>
<td>5</td>
</tr>
<tr>
<td>Electrical Engineering 213</td>
<td>5</td>
</tr>
</tbody>
</table>

## INDUSTRIAL ARTS

### 111, 112. Drawing

(For description of these courses see Engineering section).

### Fall, Winter, 4 Hours

**Mr. Klein**
115. Drawing
(See Engineering section).

101. Industrial Arts Orientation Laboratory
Spring, 5 Hours
Spring, 5 Hours
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 Gieeting

127. Applied Design
Winter, 2 Hours
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
Spring, 5 Hours
See Electrical Engineering section for description. Daily, 3.
Mr. Lowman

225. Photography
Winter, 2 Hours
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
Fall, 2 Hours
A study of industrial materials, their characteristics, sources and uses. T. Th., 2.
Mr. Lowman

235. Crafts and Hobbies
Fall, 3 Hours
Work in copper, brass, wood, plastics, and other materials. M. W. F., 1 and 2.
Mr. Lowman

*240. Ceramics
Winter, 5 Hours
Work in clay, concrete and others. Daily, 7 and 8.
Mr. Lowman

242. Student Teaching in Industrial Arts Education
Fall, Winter, Spring, 6 Hours
Mr. Lowman.

Prerequisite: Industrial Arts 250.

*Not given in 1942-1943
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.

**Spring, 5 Hours**

Mr. Lowman

260. **Special Problems in Industrial Arts**

Time to be arranged. Offered any quarter.

301. **Elementary Alternating Currents**


**Fall, 3 Hours**

Mr. Pearson

333. **Machine Shop**

See Mechanical Engineering section for description. M. W. F., 6, 7, 8.

**Spring, 3 Hours**

Dean Needy and Assistants

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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>
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<tbody>
<tr>
<td>Physical Education</td>
<td>Physical Education</td>
<td>Physical Education</td>
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<tr>
<td>101</td>
<td>102</td>
<td>103</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
<td>English 102a</td>
</tr>
<tr>
<td>Sight Singing and</td>
<td>Sight Singing and Ed</td>
<td>Sight Singing and Ed</td>
</tr>
<tr>
<td>Ear 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>
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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>
<td>Physical Education</td>
<td>Physical Education</td>
</tr>
<tr>
<td>104</td>
<td>105</td>
<td>106</td>
</tr>
<tr>
<td>General Psychology</td>
<td>Educational Psychology</td>
<td>Voice Class</td>
</tr>
<tr>
<td>101</td>
<td>135</td>
<td>109</td>
</tr>
<tr>
<td>Sight Singing and</td>
<td>Sight Singing and Ed</td>
<td>Sight Singing and Ed</td>
</tr>
<tr>
<td>Ear Training 104</td>
<td>Training 105</td>
<td>Training 106</td>
</tr>
<tr>
<td>History and Appre-</td>
<td>History and Appre-</td>
<td>History and Appre-</td>
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<td>ciation 153</td>
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<td>ciation 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>Applied Music</td>
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<tr>
<td>Chorus</td>
<td>Chorus</td>
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<tr>
<td>Band or Orchestra</td>
<td>Band or Orchestra</td>
<td>Band or Orchestra</td>
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</tbody>
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Dean Needy and Assistants

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### Third Year

**Fall Quarter**
- Primary Methods 202
- Public Speaking 101
- Orchestral Instruments 220
- Principles of Education 207
- Applied Music
- English Literature
- Ensemble 

**Winter Quarter**
- Student Teaching 213
- Acting 113
- Orchestral Instruments 221
- Applied Music
- English Literature
- Elective
- Ensemble

**Spring Quarter**
- **Intermediate Methods
  - 203 (a) or (b)
- Orchestral Instruments 222
- Applied Music
- English Literature
- Elective
- Ensemble

### Fourth Year

**Fall Quarter**
- **Student Teaching 214
  - (a) or (b)
- Educational Methods 250
- History or Political Science
- Applied Music
- Elective
- Ensemble

**Winter Quarter**
- Junior and Senior High School Methods 204
- ♦Instrumental Ensemble
- Materials
- School Orchestration 251
- History or Political Science
- Applied Music
- School Organization and Administration 252
- Ensemble

**Spring Quarter**
- **Student Teaching 215
  - (a) or (b)
- Advanced Orchestration 252
- or Advanced Elective
- History or Political Science
- Applied Music
- Recital
- Elective
- Ensemble

†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.

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### Curriculum II

**For Teachers of Music in Public Schools**

*(Both Vocal and Instrumental Music)*

### First Year

**Fall Quarter**
- Physical Education 101
- English 101
- Sight Singing and Ear Training 101
- Harmony 111
- Applied Music
- Science
- Chorus
- Band or Orchestra

**Winter Quarter**
- Physical Education 102
- English 102
- Sight Singing and Ear Training 102
- Harmony 112
- Applied Music
- Science
- Chorus
- Band or Orchestra

**Spring Quarter**
- Physical Education 103
- English 102a
- Sight Singing and Ear Training 103
- Harmony 113
- Applied Music
- Science
- Chorus
- Band or Orchestra
Second Year

FALL QUARTER
- Physical Education 104
- General Psychology 101
- Sight Singing and Ear Training 104
- History and Appreciation 153
- Harmony 114
- Conducting 140
- Applied Music
- Chorus
- Band or Orchestra

WINTER QUARTER
1. Physical Education 105
2. Educational Psychology 135
3. Sight Singing and Ear Training 105
4. History and Appreciation 154
5. Keyboard Harmony 115
6. Conducting 141
7. Applied Music
8. Chorus
9. Band or Orchestra

SPRING QUARTER
1. Physical Education 106
2. Voice Class 109
3. Sight Singing and Ear Training 106
4. History and Appreciation 155
5. Conducting 142
6. Applied Music
7. Form and Analysis 211
8. Elective
9. Chorus
10. Band or Orchestra

Third Year

FALL QUARTER
- Primary Methods 202
- Public Speaking 101
- Orchestral Instruments 220
- Principles of Education 207
- Applied Music
- English Literature
- Ensemble

WINTER QUARTER
1. Student Teaching 213
2. Acting 113
3. Orchestral Instruments 221
4. Applied Music
5. English Literature
6. Elective
7. Ensemble

SPRING QUARTER
1. Intermediate Methods 203
2. Orchestral Instruments 222
3. Applied Music
4. English Literature
5. Elective
6. Ensemble

Fourth Year

FALL QUARTER
- Student Teaching 203 (b)
- Educational Methods 250
- History or Political Science
- Applied Music
- Elective
- Ensemble

WINTER QUARTER
1. Junior and Senior High School Methods 204 (a)
2. School Orchestration 251
3. History
4. Applied Music
5. School Organization and Administration 252
6. Ensemble

SPRING QUARTER
1. Student Teaching 215 (a)
2. Advanced Orchestration 252
3. History
4. Applied Music
5. Elective
6. Ensemble

Fifth Year

FALL QUARTER
- Student Teaching 215 (b)
- Applied Music
- Counterpoint
- French or German
- Composition
- *French or German
- Elective
- Foreign Language optional

WINTER QUARTER
1. Instrumental Ensemble Materials
2. Applied Music
3. Counterpoint
4. *French or German
5. Elective

SPRING QUARTER
1. Counterpoint
2. Composition
3. *French or German
4. Song Repertoire
5. Elective
6. Elective

For description of courses see Department of Music.
DESCRIPTION OF PROFESSIONAL COURSES
IN EDUCATION

EDUCATIONAL PSYCHOLOGY

135. Educational Psychology
Winter, 3 Hours
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
Mr. Ewing

136. Educational Psychology
Spring, 3 Hours
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.
Mr. Ewing

PRINCIPLES AND HISTORY OF EDUCATION

205. Principles of Education
Fall, 3 Hours
This course is an introduction to education. In addition to an overview of education, considera-
tion 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.
Miss Geeting

206. Principles of Teaching in the Elementary Grades
Fall, 3 Hours
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 administra-
tion of the elementary school. Prerequisite: Principles of Education 205. M. W. F., 7
Miss Geeting

207. Principles of Secondary Education
Fall, 3 Hours
The object of this course is to give a fundamental conception of the secondary school; the func-
tion 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.
Mr. Loy

208. Principles of Teaching (Secondary)
Winter, 3 Hours
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 reception 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.
Mr. Loy

238. History of Education
Spring, 3 Hours
A survey of ancient, mediaeval and modern education with the object of acquiring a better un-
Mr. Loy
SCHOOL ORGANIZATION AND ADMINISTRATION

229. Educational Measurements
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.
Mr. Ewing

252. School Organization and Administration
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., 7.
Mr. Loy

PROFESSIONALIZED SUBJECT MATTER COURSES

124. Public School Music
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
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. Observation is required. M. W. F., 2.
Mr. Watson

126. Professionalized Course in Industrial Arts
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
For description of course, see Industrial Arts section.

128. Professionalized Course in Industrial Arts
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
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
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
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 system 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.

250. **Teaching English**
Teaching History and Social Sciences
Teaching Mathematics
Teaching Latin
Teaching Modern Languages
Teaching Biology
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 (1¼) 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.
## First Year

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## 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

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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.
Ohio Northern University

**Third Year**

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<th>Fall Quarter</th>
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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, tele- typewriters, an artificial communication line, an oscillograph, and the necessary auxiliary equipment and instruments for thorough laboratory instruction.
### First Year

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### Fourth Year

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<th>Fall Quarter</th>
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<td>Electrical Engineering 411</td>
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<td>Elective or Electrical Engineering 441</td>
<td>Electrical Engineering 422</td>
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<td>Civil Engineering 322</td>
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<td>Mechanical Engineering 323</td>
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<td>Electrical Engineering 421</td>
<td>Seminar 101</td>
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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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<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
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<tbody>
<tr>
<td>Physical Education 101</td>
<td>Physical Education 102</td>
<td>Physical Education 103</td>
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<tr>
<td>Mathematics 101</td>
<td>Mathematics 103</td>
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<td>Chemistry 102a or 102</td>
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**Second Year**

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<tr>
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<tr>
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<td>Mechanical Engineering 101</td>
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**Third Year**

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<td>Physics 213</td>
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<td>Mechanical Engineering 311</td>
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<td>Mathematics 216 or Electrical Engineering 301</td>
<td>Mechanical Engineering 322</td>
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<td>Mechanical Engineering 321</td>
<td>Mechanical Engineering 101</td>
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Fourth Year

FALL QUARTER
Civil Engineering 411 or
Electrical Eng. 301 6-5
Mechanical Engineering 411 4
Mechanical Engineering 422 5
Mechanical Engineering 431 1
Civil Engineering 441 3
Mechanical Engineering 101 ½

WINTER QUARTER
Civil Engineering 322 5
Mechanical Engineering 412 4
Mechanical Engineering 421 4
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
DEFENSE TRAINING COURSES


No tuition is charged and no college credit is given for these courses. Most classes meet for three hours, three nights a week for sixteen weeks. Upon the completion of the course, the student receives a certificate of proficiency.

PILOT TRAINING

The College of Engineering offers instruction in the training of pilots under the Civil Aeronautics Authority. Students are required to pay a nominal fee to cover the costs of physical examinations and insurance.

Six hours of credit are granted students who successfully complete the course in ground school and flying. Subjects studied in ground school include Navigation, Meteorology, Civil Air Regulations, and Service of Aircraft. Ground 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

½ Hour
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.

Fall, 5 Hours
Mr. Webb

223. Surveying

Precise surveying, advanced topographic surveying, hydrographic surveying. Prerequisite: Surveying 221. Recitations, M. W. F., 1; laboratory, T, Th., 6, 7, 8.

Spring, 5 Hours
Mr. Webb

311. Railroad Engineering

Simple curves, compound curves, reverse curves, spirals, switches, and turnouts. Prerequisite: Surveying 221. Recitations, M. T. W. Th., 4; laboratory, F., 5, 6, 7.

Fall, 5 Hours
Mr. Webb

312. Mechanics of Materials

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.

Winter, 5 Hours
Mr. Pearson

313. 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.

Spring, 5 Hours
Mr. Pearson

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.

Fall, 2 Hours
Mr. Webb

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.

Winter, 5 Hours
Mr. Webb

323. Highway Engineering

Design, construction and maintenance of earth roads, paved roads, and streets. Prerequisite: Geology and Surveying 213. Recitations, M. W. F., 4.

Spring, 3 Hours
Mr. Webb

Winter, 3 Hours
Mr. Webb

332. Geology


Winter, 3 Hours
Mr. Webb

*Not given in 1942-1943
411. **Structural Engineering**  
_Fall, 6 Hours_  
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**  
_Winter, 6 Hours_  
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**  
_Spring, 6 Hours_  
Mr. Webb

421. **Reinforced Concrete**  
_Fall, 4 Hours_  
Mr. Webb

422. **Reinforced Concrete**  
_Winter, 4 Hours_  
Design of buildings. Prerequisite: Reinforced Concrete 421. Recitation, 2 hours; drafting room, 4 hours. T. Th., 5, 6, 7.  
Mr. Webb

423. **Reinforced Concrete**  
_Spring, 4 Hours_  
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**  
_Fall, 5 Hours_  
General course on sewerage system and disposal of sewerage. Prerequisite: Hydraulics 322. Daily, 2.  
Mr. Webb

432. **Water Supply**  
_Winter, 5 Hours_  
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**  
_Spring, 5 Hours_  
Theory and selection of reciprocating pumps, centrifugal pumps and hydraulic turbines. Prerequisite: Hydraulics 322. Daily, 3.  
Mr. Webb

*441. **Financial Engineering**  
_Fall, 3 Hours_  
Mr. Webb

442. **Foundations**  
_Winter, 3 Hours_  
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**  
_Spring, 3 Hours_  
A general course dealing with contracts, agency, mechanic's liens, negotiable instruments, and workmen's compensation.  
Mr. Webb

*Not given in 1942-1943*
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 1942-1943
413. **High Frequency Currents**
Spring, 5 Hours
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.
Mr. Pearson

421. **Illumination**
Fall, 3 Hours
Mr. Pearson

422. **Electrical Machine Design**
Winter, 4 Hours
A course in the detailed electrical calculation of direct current generators and controllers. Prerequisite: Direct Currents 411. Recitations, M. T. W. Th., 5.
Mr. Pearson

423. **Electrical Machine Design**
Spring, 3 Hours
The electrical design of alternating current generators, motors and transformers. Prerequisite: Alternating Current Machines 312. M. W. F., 4.
Mr. Pearson

431. **Electronics**
Fall, 5 Hours
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.
Mr. Pearson

441, 442. **Advanced Electrical Laboratory**
Fall, Winter, 3 Hours
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.
Mr. Pearson

**MECHANICAL ENGINEERING**

101. **A. S. M. E. Student Branch Meeting**
½ 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**
Fall, Winter, 4 Hours
Use of instruments, applied geometry, lettering, orthographic projection and pictorial drawing. Ten hours drafting work each week. Daily, 1, 3, 4; M. W. F., 6, 8; T. Th., 6, 8; S., 1, 4.
Mr. Klein

112. **Engineering Drawing**
Winter, 4 Hours
Developments, intersections, perspective and working drawings. Prerequisite: Engineering Drawing 111. Ten hours work in drafting room each week. Daily, 3, 4; M. W. F., 6, 8; T. S., 1, 4.
Mr. Klein

113. **Engineering Drawing**
Spring, 5 Hours
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. T. Th. F., 3; M. W., 6, 7, 8; S., 1, 4.
Mr. Klein

114. **Engineering Drawing**
Spring, 3 Hours
A course in technical drawing designed for chemical engineering students. One recitation and three two-hour laboratory periods each week. Prerequisite: Engineering Drawing 113. W., 3; T. Th., 6, 7; S., 3, 4.
Mr. Klein
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.

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
Winter, 4 Hours

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.

Mr. Needy

313. STEAM POWER PLANTS
Spring, 4 Hours

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.

Mr. Needy

321. MECHANICAL LABORATORY
Fall, 3 Hours

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.

Mr. Klein

322. MECHANICAL LABORATORY
Winter, 3 Hours

Boiler evaporative test, engine indicator and brake horsepower tests, indictor card analysis, efficiency tests of injector, electric motor, ventilating fan, centrifugal pump and automobile motor. Prerequisite: Mechanical Laboratory 321. T. Th., 6, 7.

Mr. Klein

323. MACHINE DESIGN
Spring, 4 Hours


Mr. Needy

332. MECHANISM
Winter, 5 Hours

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.

Mr. Klein

333. MACHINE SHOP
Spring, 3 Hours

Bench work in filing, chipping, and fitting. Machine work in threading, turning, boring, drilling, shaping, tool grinding. M. W. F., 6, 7, 8.

Mr. Lowman
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**  
Complete design and detail of machine units. M. T. W. Th., 4.  
Mr. *Needy*

421. **Gas and Oil Engines**  
**Winter, 4 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, 5 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 bal-
ances used.

The microscopic laboratory is equipped with tables, compound mi-
croscopes, 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 com-
pounding 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 ex-
temporaneous compounding and dispensing.

The Student Health Service Dispensary is administered by the regist-
ered 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 de-
partmental 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, Mon-
day, September 7, 1942, during the present emergency the student may
enter any quarter and complete the course of study by continuing in resi-
dence for twelve consecutive quarters. 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.
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. Examination. Candidates for admission who are deficient in high school units may be admitted upon examination. Entrance examinations are given by a regularly appointed examiner, as provided by law, known as the Entrance Examiner of the Ohio Board of Pharmacy.

3. 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 matriculate, prepare a schedule of study 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 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.

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 elect the 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 two hundred sixteen credit hours, including physical education, are to be selected from the schedule below for graduation.

**Required Basic Courses**

Chemistry 101, 102, 103, 206, 207, 208, or the equivalent ........................................ 30 Hours
English 101, 102, 102a or the equivalent ................................................................. 9 Hours
Mathematics .................................................................................................................. 9 Hours
Physics ......................................................................................................................... 6 to 9 Hours

**Required Professional Courses**

Pharmaceutical Chemistry 201, 202, 203, 251, 252, 253 ........................................... 24 Hours
Pharmacy 101, 103, 104, 105, 151, 152, 153, 203, 251, 252, 253, 254, 261, 262, 299 and electives .............................. 51 Hours
Pharmacognosy 101, 102, 103, 151, 152, 153 ................................................................. 24 Hours
Pharmacology 201, 202, 203, 211, 222, 223 ................................................................. 30 Hours

**Electives in the Basic Subjects**

French or German ................................................................. 9 Hours
Economics ................................................................................................................. 9 Hours
Biology ...................................................................................................................... 9 Hours
Botany ...................................................................................................................... 9 Hours
Zoology .................................................................................................................... 9 Hours

**Electives in the Professional and Applied Subjects**

Accounting ................................................................................................................ 6 Hours
Biological Assaying ................................................................................................. 3 Hours
Business Methods .................................................................................................... 9 Hours
Chemistry ................................................................................................................ 20 Hours
Pharmacy ................................................................................................................ 10 Hours
Pharmacognosy ...................................................................................................... 5 Hours
Pharmacology ......................................................................................................... 5 Hours
# Ohio Northern University

## Four-Year Course in Pharmacy

*Effective July 1, 1940*

### Degree: Bachelor of Science in Pharmacy

#### First Year

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<td>(Physiology) 211</td>
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<td>Pharmacy (Business) 203</td>
<td>Pharmacy (History) 105</td>
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Additional credit hours may be selected each quarter of the Senior year from the following subjects:

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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, and physiology. Certain basic courses in bacteriology, business, chemistry, foreign language, physics, 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

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*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
- Pharmacy (Manufacturing) 204
- Pharmaceutical Chemistry (Urinalysis) 271

**Winter Quarter**
- Pharmaceutical Chemistry (Bio-) 262
- Pharmacy (Manufacturing) 205
- Pharmaceutical Chemistry (Urinalysis) 271

**Spring Quarter**
- Pharmaceutical Chemistry (Bio-) 263
- Pharmacy (Manufacturing) 206
- Pharmaceutical Chemistry (Urinalysis) 271
- 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. M. W., 5, 6; F., 5; M. W., 7, 8; F., 7.

Mr. Dobbins

**110. Local Flora**
**Spring, 3 Hours**

A systematic study which acquaints the student with many of the native and introduced plants. A field course supplemented by greenhouse and herbarium studies. S., 1, 2, 3, 4; T. Th., 1.

Mr. Dobbins

**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**  
1-3 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.  
Mr. Huber or Mr. Dobbins

222. **Plant Physiology**  
Winter, 3 Hours  
Mr. Dobbins

**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.

101A. **Introductory Chemistry**  
Fall, 5 Hours

102A. **Introductory Chemistry**  
Winter, 5 Hours

103A. **Introductory Qualitative Analysis**  
Spring, 5 Hours  
A series of courses designed for students who do not present chemistry credit. Courses 101A and 102A consist of a careful study of the fundamental laws of chemistry and of the properties of the common metallic elements and their compounds; course 103A is an introductory study in qualitative analysis of acids and metals. A brief study is made of the properties 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. Harrod

101. **General Chemistry**  
Fall, 5 Hours

102. **General Chemistry**  
Winter, 5 Hours

103. **Qualitative Analysis**  
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. Harrod

104. **Quantitative Analysis**  
Fall, 5 Hours

105. **Quantitative Analysis**  
Winter, 5 Hours

106. **Quantitative Analysis**  
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, 24 hours; laboratory, M. W. F., 5, 6, 7, 108 hours.  
Mr. Miller
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. Harrod**

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 104 and 105. Lecture, M. W. F., 4, 36 hours; laboratory, M. W. F., 5, 6, 7, 108 hours.

**Mr. Miller**

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. Miller**

231. **Chemistry Problems**

3 Hours

Minor investigations for qualified seniors who are majoring in chemistry. Consult head of department.

**Mr. Harrod**

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**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**

**SPRING, 5 Hours**

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.

**Mr. McFadden**
251. **Inorganic Pharmaceutical Chemistry**  
**Fall, 3 to 5 Hours**
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.  
Mr. McFadden.

252. **Organic Pharmaceutical Chemistry**  
**Winter, 3 to 5 Hours**
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.  
Mr. McFadden.

253. **Natural Drug Principles**  
**Spring, 3 to 5 Hours**
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.  
Mr. McFadden.

261. **Biochemistry**  
**Fall, 3 Hours**
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.  
Mr. McFadden.

262. **Biochemistry**  
**Winter, 3 Hours**
A course in the chemistry of digestion and metabolism. Prerequisite: Biochemistry 261. Lectures and recitations, M. W. F., 5, 36 hours.  
Mr. McFadden.

263. **Biochemistry**  
**Spring, 3 Hours**
The chemistry of vitamins, sterols, hormones, and enzymes. Prerequisite: Biochemistry 262. Lectures and recitations, M. W. F., 5, 36 hours.  
Mr. McFadden.

271. **Urinalysis**  
**Any Quarter, 2 or 3 Hours**
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.  
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.
121. **Principles of Economics**

**Fall, 3 Hours**

122. **Principles of Economics**

**Winter, 3 Hours**

123. **Principles of Economics**

**Spring, 3 Hours**

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**

**Fall, 3 Hours**

132. **Principles of Accounting**

**Winter, 3 Hours**

133. **Principles of Accounting**

**Spring, 3 Hours**

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 Lewis**

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.

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**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**

**Fall, 3 Hours**

102. **Composition**

**Winter, 3 Hours**

102a. **Composition**

**Spring, 3 Hours**

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. Seven sections. M. W. F., 1, 2, 3, 4, 5, 6, 7.

**Mr. L. Freeman and Miss Gillespie**

118. **Business Writing**

**Spring, 3 Hours**

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**
HEALTH AND PHYSICAL EDUCATION

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.

FALL, 1 Hour

WINTER, 1 Hour

SPRING, 1 Hour

Mr. H. A. Lamb

MISS TOLF

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. Six sections. T. Th., 1, 2, 4, or 6.

FALL, 1 Hour

WINTER, 1 Hour

SPRING, 1 Hour

Mr. H. A. Lamb

MISS TOLF

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. M. W. F., 3 or T. Th. F., 4.

Mr. C. Lamb

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

158. FIRST AID

SPRING, 2 Hours

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.
MATHMATICS

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, 3 or 5.

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 or 4.

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.

108. CALCULUS: DIFFERENTIAL AND INTEGRAL  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.

109. CALCULUS: INTEGRAL  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 formulæ. 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, 4.
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
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.  
Mr. Herrick

GERMAN

101. Elementary German
102. Elementary German
103. Elementary German

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

117. Scientific German
118. Scientific German

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

PHARMACOGNOSY

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
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
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
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. Miss Landeen

151. Pharmacognosy
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 Landeen

152. Pharmacognosy
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 Landeen

153. Pharmacognosy
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 Landeen

201. Pharmacognosy
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. Miss Landeen
275. **Pharmacognosy Problems**  
Any Quarter, 1 to 5 Hours  
A course of special problems along advanced lines in the field, open to juniors and seniors who have shown ability to carry them to a satisfactory completion. Hours and time of work to be arranged.  
*Staff.*

**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).

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. Kramer*

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. Kramer*

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. Kramer*

*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 1942-1943*
275. **Pharmacology Problems**

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**

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**Pharmacy**

101. **Pharmacy**

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**

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**

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**

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**

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., 3; laboratory, T, Th., 2, 3, 4. **Mr. Neuroth**

152. **Pharmacy**

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**

This course includes a study of pharmaceutical preparations made by extraction; tinctures, fluidextracts, 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**

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  
FALL, 3 HOURS

205. Pharmacy  
WINTER, 3 HOURS

206. Pharmacy  
SPRING, 3 HOURS
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  
FALL, 3 HOURS

252. Dispensing Pharmacy  
WINTER, 3 HOURS

253. Dispensing Pharmacy  
SPRING, 3 HOURS
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  
SPRING, 3 HOURS
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.  
Mr. Neuroth

261. Pharmacy  
FALL, 3 HOURS

262. Pharmacy  
WINTER, 3 HOURS
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  
Any Quarter
Minor investigations for qualified students. Credit and fee depend on nature of work done.  
Staff

299. Pharmacy  
SPRING, 3 HOURS
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 who expects to do more com-
prehensive work in the sciences should arrange his schedule so as to include one year of college physics.

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.

109. GENERAL PHYSICS
110. GENERAL PHYSICS
111. GENERAL PHYSICS
Open to freshmen. Prerequisite: One year each of algebra and geometry. M. W. F., 4.

Mr. Berger

Fall, 3 Hours
Winter, 3 Hours
Spring, 3 Hours

109a. GENERAL PHYSICS
110a. GENERAL PHYSICS
111a. GENERAL PHYSICS
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

2 Hours
2 Hours
2 Hours

214. MATHEMATICS OF PHYSICS
A course dealing with the application of mathematics to physics and related sciences. Prerequisite: Physics 111 and Calculus. Daily, 1.

Mr. Berger

Spring, 5 Hours

220. MODERN PHYSICS
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

Winter, 3 Hours
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 during the national emergency, in order to meet the needs and requirements of students.

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 19
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.

Practice Court

There is a court room in the law building, completely and correctly furnished and equipped for modern court proceedings. Practice Court, under the direct supervision of the faculty, forms a regular part of the work in which each student must participate. Students are required to prepare all the papers necessary in the case, and to follow the customary order of procedure. Pleadings, writs, motions, and journal entries are thus prepared; juries impaneled, witnesses examined and cross-examined, arguments made to Court and jury, and in short, every step is taken in the moot case conforming to the procedure followed in a litigated action in a court of record. In a similar way, the Court requires practice in the Appellate courts, giving practical acquaintance with the proceedings and preparation of the necessary papers, in instituting and carrying on to completion cases appealed or brought up for review.
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 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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**Second Year**

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### FALL QUARTER
- **Code Pleading**
- **Conflict of Laws I**
- **Municipal Corporations**
- **Suretyship**

### WINTER QUARTER
- **Conflict of Laws II**
- **Legal Ethics**
- **Negotiable Instruments**
- **Trial Practice**
- **Trusts I**

### SPRING QUARTER
- **Trial and Appellate Practice**
- **Trusts II**
- **Electives**

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### Description of Courses

#### FIRST YEAR

**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. Fiddler*

#### 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. Fiddler*

#### Contracts I
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*

#### Contracts II

#### 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*

#### 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. Fiddler*

#### 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*

#### 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*
REAL PROPERTY II
Titles and their transfer by act of parties and operation of law. Case book to be announced.
   Mr. Pettit

TORTS I

TORTS II
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 reaity 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. Dickason

SECOND YEAR

CONSTITUTIONAL LAW I

CONSTITUTIONAL LAW II
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 especial 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
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. Fiddler

EQUITY I

EQUITY II
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. Fiddler

EVIDENCE I

EVIDENCE II
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, Cases on Evidence (1937).
   Mr. Pettit

PARTNERSHIP
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

Spring, 5 Hours

Fall, 3 Hours

Winter, 5 Hours

Fall, 3 Hours

Winter, 3 Hours

Winter, 3 Hours

Spring, 3 Hours

Winter, 3 Hours
PRIVATE CORPORATIONS I  
PRIVATE CORPORATIONS II
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).  
**Winter, 3 Hours**

WILLS AND ADMINISTRATION OF ESTATES
This course treats of the nature of testamentary dispositions. Mechem and Atkinson, *Cases on Wills and Administration* (2nd Edition).  
**Fall, 4 Hours**

THIRD YEAR

CODE PLEADING  
**Fall, 5 Hours**
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.  
Mr. Pettit

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).  
**Fall, 3 Hours**

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*.  
**Winter, 1 Hour**

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*.  
**Fall, 4 Hours**

NEGOTIABLE INSTRUMENTS
This course involves the consideration of the general principles governing bills of exchange, promissory notes and checks, and the uniform negotiable instruments law. Case book to be announced.  
**Winter, 5 Hours**

SURETYSHIP
This course includes the creation of the relationship, the contract, the statute of frauds, the rights and remedies, the defenses, guaranty contracts, and letters of credit, private and corporate sureties, and incidentally a consideration of the different kinds of bonds. Case book to be announced.  
**Fall, 3 Hours**

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*.  
**Spring, 5 Hours**

Mr. Everett
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.

Mr. Everett

TRUSTS I

TRUSTS II

Mr. Pettit

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. Fiddler

*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 anti-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

*Not given in 1942-1943*
*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).

*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).

*Not given in 1942-1943*
PRIZES ANNOUNCED ON UNIVERSITY RECOGNITION DAY
MAY 20, 1941

GENERAL PRIZES TO SENIORS

Dr. and Mrs. W. W. T. Duncan Prize - Fred Martin Ernsberger
Walter F. Rittman Prize - Merlin E. Scharer
C. R. Wilson Prize - Elmer Stanley Rubin
E. S. Matthias Prize - Charles R. Koch
* - Martha Bischoff

DEPARTMENTAL HONORS

College of Liberal Arts

Biology - Martha Bischoff
Chemistry - Fred Martin Ernsberger
Economics and Business Administration - Erie H. Thompson
Elementary Education - George Urich
English Language and Literature - Maxine Webber
Health and Physical Education - Robert Payne
History and Political Science - Robert G. Binkley
Mathematics - Edwin Treherne
Modern Foreign Language - Margaret Moore
Physics - Lowell M. Shuck

College of Engineering

Civil Engineering - Joseph Clark
American Society of Civil Engineering Award - Robert J. Lyman
Mechanical Engineering - Merlin E. Scharer

College of Pharmacy

Pharmacognosy - Elmer Stanley Rubin
Pharmaceutical Chemistry - Jack D. Stower
Pharmacy - Richard Cortney Warden
Lehn and Fink Gold Medal - Jack D. Stower
Kappa Psi Freshman Prize - Quentin Granville Maxfield

* Name of donor withheld by request
HONORARY DEGREES

1941

Benjamin Roland Lewis - Doctor of Literature
William P. Willis - Doctor of Engineering
Ralph O. Hibschman - Doctor of Education
George Melvin Wilson - Doctor of Divinity
Jay P. Taggart - Doctor of Laws

GRADUATES IN THE COLLEGE OF LIBERAL ARTS

CLASS OF 1941

Bachelor of Arts

Betty Lee Arbogast
Jack H. Birnbaum
*Martha Biscoff
John William Burke
John Marvin Byal
*Mario J. Cardone
Milton A. Ecker
**Fred Martin Ernsberger
††Mary Lou Gesling

Henry Stambaugh Graham
††Jessie Sherman Gundlach
††Evelyn Neiswander Halstead
Lowell Eugene Harris
††Albert Cornelius Héholt
††Robert Henry Hay
††Med Zane Huffman
Myron K. Hurley
*Lucy Margaret Inserra

**Margaret Elizabeth Moore
Willard A. Seitz
††William I. Teets
Erie H. Thompson
George Leslie Thompson
Maxine C. Webber
Joy O. Williamson
Vincent Zimpfer

BACHELOR OF SCIENCE IN EDUCATION

Joseph Amoroso
Phyllis Auten
Joseph Banks
Mary Elizabeth Barteldt
Esther Louise Booher
Loyd E. Chalfin
V. Harry Douvdjian
Marvin Vincent English
Dale Gorby
Janet Hafer

Harry Hagle
Helen Louise Hakala
Robert Rosi Holcomb
Ruth M. Hover
Mable A. Kelly
Marybelle McPeck
Henry L. Metzger
Carroll W. Palmer
Robert W. Payne
Mary Pease

Alfred J. Ponessa
Gray Ries
Mary Joan Shaw
Hylen Allen Souders
G. Wesley Sowards
Joan Stanfield
William F. Struna
Harry A. Tissari
Harry Yasgoor

GRADUATES IN THE COLLEGE OF ENGINEERING

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Jack Brogan

‡Forest Glenwood Gard

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Joseph Clark
Raymond V. Kline
Robert J. Lyman

Harry S. Myers
Rexford Rath
Robert C. Rogers

Leo Bruno Roivas
†James F. Roose
Robert E. Stalter

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Paul DeLamater
*With Distinction
**With High Distinction
††Deceased, December 5, 1940

††Completed work at end of Fall Quarter
††Work completed at end of Winter Quarter

James Vincent Noble
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Earl William Bosse
John R. Bowden
Elmer Fett, Jr.
John Joseph Gertz
Robert Edward Grady
Edwin H. Huston

Paul B. Messenger
Thomas W. Mohrberly
Gene Allen Nichols
Robert A. Quinn
Charles W. Rae
Eileen M. Rogers

Jack W. Runner
Merlin E. Scherer
Jack Schauweker
William M. Shook
James Albert Thomas
Harold Wilbur Wyatt

GRADUATES IN THE COLLEGE OF LAW

BACHELOR OF LAWS

Roland Eugene Beery
Frank C. Cunningham
†William Gibson Dornan
William Clark Foster
William H. Guyton, Jr.
Robert L. Harrington

Merle Willis Hart
†‡Charles R. Koch
William C. Marshall
Arthur S. Newcomer
James Byron O'Brien
Edward W. Rhode, Jr.

Thomas B. Runyan
Robert B. Spurlock
Robert Tait
†James Ugan
George F. Zimpfer

GRADUATES IN THE COLLEGE OF PHARMACY

BACHELOR OF SCIENCE IN PHARMACY

Ross Howard Armstrong
Raymond Robert Carlson
George Kay Cox
Leonard A. Davis
Emerson L. Finke
Willard M. Floyd, Jr.
John E. Hurst
Richard D. Keiter

Rudolph A. Kubasak
Walter John Lazzars
Dane B. Marshall
Mary Margaret Mathews
Elmer S. Rubin
William R. Shelton
Jack Douglas Stower

William Douglass Sutherin
E. Gehring Thomas
John Joseph Thomas
A. Charles Thompson
Helen Ver
Richard Courtney Warden
†George Richard Brickner

SUMMARY OF THE CLASS OF 1941
(Spring Only)

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*With Distinction
**With High Distinction
†Deceased, April 18, 1941
‡Completed Work at End of Fall Quarter
††Completed Work at End of Winter Quarter
GRADUATES, SUMMER, 1941

BACHELOR OF ARTS

Eugene Antoszewski
Robert Fair

Catherine Bluem Knisely
Clayton Kritzler

Earl M. Robinson
Robert Sambuchini

BACHELOR OF SCIENCE IN EDUCATION

Eleanor Arnold
Lela M. Brookshire
Leah Cordelia Carlton
Wendell H. Crider
Hazel Carey DeLong
Grace Levon Dempster
Rhea Weaver Earl
Nell Elizabeth Farrow
*Eugene Field Hemphill

Zora Wilson Hetzler
Margaret Adaline Hill
Gladys Ione Horst
George Austin Keel
*Kathryn E. Kelley
Ola Lucile Lanius
Mildred E. Lynch
Elizabeth Flora McBride
Hazel McClellan

Archie Roland Moore
Effie E. Oliphant
Helen Ruth Reed
Fred O. Rex
Bettie Irene Robinson
Charles Frederic Tschannen
Inez M. Wright
Glenn L. Zeller
Robert W. Lintz

THREE-YEAR ELEMENTARY EDUCATION

Bruce Wayne Botts
Wilma D. Crall

Harold Evert Murfin
Joan Meredith Weaver

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

James Morrell Eicher

BACHELOR OF LAWS

Robert S. Blackburn

Norman Charles Platz
Joseph D. Chamberlain, Jr.

BACHELOR OF SCIENCE IN PHARMACY

Lawrence Howard Beham

George Lee Cole

SUMMARY, SUMMER GRADUATES, 1941

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*With Distinction
REGISTER OF STUDENTS—1940-1941

REGISTER OF STUDENTS
1940-1941

FRESHMEN

COLLEGE OF LIBERAL ARTS

Alay, Teresa ................................ Habana, Cuba
Allcroft, James .............................. Kentworth, N. J.
Aquilla, Peter ............................... Jamestown, N. Y.
Arnett, Bettie ................................ Kenton
Arnett, Billie ................................ Kenton
Augustine, Rocco ........................... Steubenville
Barnes, Marjorie ............................. Lyons
Basinger, Kenneth .......................... Pandora
Baxter, Odus ................................ Rockford
Bogan, Glen ................................ North Robinson
Bosse, Martha ................................ Ada
Braschwitz, Russell ........................ Detroit, Mich.
Brown, Lucile I. ............................. Chippewa Lake
Burns, William .............................. DeGraff
Caine, William C. ........................... Antwerp
Carlson, Walter .............................. North Braddock
Carpenter, Norma Jean ..................... Celina
Casper, Warren .............................. Ada
Chaney, Emma Lorain ....................... Ada
Chontos, Ernest ............................. Martins Ferry
Clapper, Henry ................................ Akron
Clifton, Evelyn .............................. Swanton
Cobb, Richard ............................... Cleveland Heights
Cole, Irene ................................. W. Valley, N. Y.
Crawford, Kenneth .......................... Millersburg
Deatrick, Doris ............................... Cecil
Detter, Charles .............................. Willshire
Detwiler, Henry .............................. Kenton
Dorney, Die ................................. Arlington
DuMond, Mary Ann ......................... Painesville
Dye, Donald ................................. Mt. Gilead
Eisele, Edward .............................. Mansfield
Erickson, Edward W. ....................... Cleveland
Faber, Jean ................................. Mt. Sterling
Feigert, Eugene ............................ Van Wert
Fetter, Eugene .............................. Marion
Fox, Opal .................................. Lexington
Gambill, Oliver .............................. Dunkirk
Gaskey, Irwin L. ............................ Lima
Geiger, Glen A. ............................. Ft. Wayne, Ind.
Goforth, Richard E. ....................... Lorain
Green, Raymond ............................ Patterson
Harrod, Rachel M. ........................... Ada
Hathaway, Francis .......................... Greene, N. Y.
Heck, Charles W. ........................... Carey
Hirschfeld, Waneta ........................ Lima
Hoverman, William, Jr. .................. Rockford
Hubbell, Gilbert ........................... Bucyrus
Hughes, Gareth ............................ Bellefontaine
Jolley, James B. ............................ Akron
Joseph, Elwood Jay ......................... Cleveland Hts.
Kennedy, H. Pauline ....................... Marysville
Knapp, Dwight .............................. Garrettsville
Knorr, John C. .............................. Toledo
Kozelka, Celia .............................. Cleveland
Kunze, Jacob L. ............................. Chesterville
Lane, Jack .................................. Jamestown, N. Y.
Lawrence, Margie Ann ..................... Amherst
Leon, Irving Marcus ....................... Steubenville
Light, Sol ................................. Brooklyn, N. Y.
Lloyd, Robert .............................. Rockford
Luft, Arlene ................................. Ada
McGinnis, Howard ........................ Belle Center
Mckinney, Donovan ......................... LaFayette
Mahla, William ............................. Sandusky
Mampre, Albert ............................. Oak Park, Ill.
Mark, Burton ............................... Delevan, N. Y.
Mason, Edward P. .......................... Paulding
Mastellar, Bruce ........................... Conifer, N. Y.
Mathewson, Robert ........................ Bluffton
Maul, Karl .................................. Mansfield
Meihls, Harmon, Jr. ....................... Spencerville
Messenger, Richard ........................ Ada
Miller, Arlene .............................. Millersburg
Miller, Robert E. .......................... Elyria
Miller, Roylee .............................. Lima
Minke, Robert .............................. Lakewood
Modafferi, James ........................... Lakeview
Monbeck, Richard ........................... Lima
Morris, Quinton ............................ Spencerville
Mulhemian, Howard ....................... Lorain
Neiswander, Clair ......................... Ada
Pond, Velma ................................. Scott
Potter, Alban .............................. Ada
Potter, William ............................ Toledo
Pounds, Irene ............................... Otterbein
Reamsnyder, Emory ....................... Arlington
Riew, Helen ................................ Ada
Rice, Roger ................................. Tiltonsville
Richards, Helen ............................ Kenton
Richardson, John T. ....................... Ada
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**College of Engineering**

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REGISTER OF STUDENTS—1940-1941

COLLEGE OF LAW

(First Year)

Alaimo, Anthony Jamestown, N. Y.
Allison, Kenneth Auburn, Ind.
Arbaugh, David Mansfield
Brown, Robert L. Bucyrus
Brussesse, Joseph Steubenville
Carlin, Robert L. Findlay
Cavin, A. Francis Cadiz
Crabbe, Charles London
Diller, Milburn J. Bluffton
Foust, Howard D. Auburn, Ind.
Hall, Vance Toledo
Hunt, James Lima
Latta, Delbert McComb
McElroy, Elaine Ada
Mayer, James Joseph Shelby
Miller, Raymond Millersburg
Orphan, Gust G. Massillon
Rader, Fred H. Mansfield
Rady, Robert Sandusky
Rheuban, Abner Youngstown
Roe, Edwin Salesville
Rossel, Roy Upper Sandusky
Schmidt, Raymond New Carlisle
Sheafor, Rolland Leipsic
Shobe, Charles H. Lima
Smith, George A. Spring Valley
Spain, John R. Warren
Starn, John D. Greenfield
Tobin, Paul East Liverpool
Trier, Jack K. Youngstown
Trump, John H. Lima
Vaubel, Herman S. Wapakoneta
Wade, John Fostoria
White, Paul Detroit, Mich.
Zlotnick, Julius Youngstown

JUNIORS

COLLEGE OF LIBERAL ARTS

Amiet, Arthur Canton
Ansley, Helen Ridgeway
Bailey, Norma Jeanne Frederickstown
Beem, Betty Lou Delaware
Binkley, Robert G. Ada
Botts, Bruce W. Manchester
Boyer, Raymond W. Mansfield
Brown, Floyd Elmira, N. Y.
Casper, Mabel Jane Dola
Clark, Ione Metamora
Coffing, William Piqua
Collett, Rachel Ada
Conner, Josephine Ada
Cowen, Robert Willshire
Crall, Wilma Galion
Crosier, Bina May Ada
Davies, William H. Moscow, Pa.
DeCrow, Joseph Johnstown
Dray, Quincy Harrod
Duncan, Leona Faith Killbuck
Eddy, James Dean Kenton
Edwards, Robert Ada
Eley, Robert Toledo
Ferrall, Kenneth New Philadelphia
Folsom, Clay Youngstown
Foote, Jack Lima
Foos, Birdell Marion
Forsythe, Thurman Zanesville
Fryer, Melville S. Spencerville
Graybill, Doris Massillon
Hablitzel, Charles Ohio City
Hosenfeld, Charles Martins Ferry
Knisely, Catherine Lima
Kubasa, Emil Lorain
Kubbs, Francis Mt. Gilead
Lamale, William Ada
Lewis, Carrol Lima
Lloyd, Walter Marion
Lust, Kathryn McCutcheonville
Mallone, Bruno Geneva
Mayhew, Frederick Toronto
Meighan, Charles R. Ada
Messenger, Doris Ada
Moriarty, Robert Lorain
Morse, William Robert Niagara Falls, N. Y.
Murfin, Harold E. Otway
Oller, Randall Steubenville
Patterson, Herman A. Bucyrus
Peach, Olga San Francisco, Calif.
Person, June DuBois, Pa.
Pierson, Thomas Copley
Pletcher, Donald Lima
Porter, Jean Cortland
Pugh, Robert Akron
Rex, Fred O. Harrod
Rozak, Raymond Cleveland
Schoenberger, Loren .................. Upper Sandusky
Shaffer, Lowell ...................... Forest
Shank, Milton ....................... Lima
Shuck, Lowell ....................... Findlay
Silverstein, Irving .................. Cleveland
Sunday, Virgil ...................... Pettisville
Taylor, Hiram ....................... New Philadelphia
Thacker, Georges .................... Fostoria
Tivener, William .................... Ashland, Ky.

Townsend, Robert ................... Lima
Treherne, Edwin .................... Byesville
Trunk, William ..................... Lima
Urich, George ....................... Lima
Weaver, Jane ....................... Bryan
Weaver, Joan ....................... Lima
Wyler, Kathryn ..................... Dover
Zeiher, Arthur ..................... Sandusky

Baird, Merle ...................... Corning, N. Y.
Bauman, John ...................... Ada
Bender, Thomas ................ Maumee
Bischoff, Robert ................ Ada
Branstetter, Robert ............... McGuffey
Brewer, Charles ................ Rossburg
Brown, David C. .................. East Cleveland
Coleman, Robert ................ Dayton
Connor, William ................... Alger
Creeman, Warren ................ Lima
Downing, Richard ................. Columbus Grove
Durey, Jack ....................... Canada Lake, N. Y.
Fiedler, George A. ............... New Philadelphia
Filliez, Robert ..................... Lima
Fyke, Frank, Jr. ................. Elizabeth, N. J.
Halstead, Gerald .................. Hornell, N. Y.
Hopper, Standish ................. Springville, N. Y.
Huber, Paul ......................... Defiance

Hughes, Ned C. ................... Mansfield
Irey, Lawrence .................... Caledonia
Keller, Joel ....................... Lakewood
Lebold, Homer .................... Bottoa
Lindstrom, Ralph ................ Ashtabula
Neiheiser, William ............. Lima
Opdycke, Leonard ................. Bryan
Park, Herbert ..................... Youngstown
Reagan, Delmar ................... Lima
Rogers, R. Cloyd ................. Cadiz
Rogers, Otis ....................... Huntsville
Shusser, Robert ................... Van Wert
Taggart, Charles ................. East Cleveland
Umbraszun, Bollis ............... N. Middletown
Vincek, Cletus ..................... Lima
Wilson, Robert .................... Youngstown

Archinal, Dwight ................. Dover
Armstrong, James ............... Toledo
Barr, David ....................... Dover
Bowers, Jane ...................... Van Wert
Burley, Robert ..................... Zanesville
Burt, Charles R. .................. Akron
Capps, Robert ...................... Ashtabula
Cherry, Arthur ................... Kent
Dremmer, Isadore ............... Cleveland
Gray, Louis Robert ............... Cleveland Hts.
Harris, Betty Lou ............... Malta
Hawkey, George .................... Lima
Kasofsky, Hyman .................. Cleveland

Kennedy, Rachel ................... Marysville
Klein, Carl ......................... Warren
Kujawski, Stanley ............... Cleveland
Margolis, Jack ................... Cleveland
Orndorff, Robert ................. Delta
Parker, Martha ..................... Ashtabula
Patrick, Donald .................. Youngstown
Pritchard, Jack .................. Painesville
Resnick, Harold ................. Cleveland Hts.
Rice, Kenneth ..................... Tiltonsville
Singer, Sam ....................... Cleveland
Skelly, John ....................... Lima
Smith, William .................... Bucyrus

Bell, Rex ...................... Piqua
Bianco, Dominic ................. Steubenville
Chamberlain, Joseph .......... Dayton
Cole, Paulene .................... W. Valley, N. Y.
Crawmer, Curtis .................. Johnstown
Culbert, Robert .................. Fremont

Davis, William David ........... East Canton
Depler, George .................... Mansfield
Dollison, Ralph ................. Fairmont, W. Va.
Epstein, Stanley ................. Cleveland
Fetter, Thomas ................... Marion
Hicks, William ................... Springfield
Hoffman, Harry .................................. Springville, N. Y.  
Hover, G. William .................................. Findlay  
LaRock, John .................................. Sainte Marie, Mich.  
Liggett, Luther .................................. Marysville  
McCoy, Scott .................................. Springville, N. Y.  
Meals, James Edward .................................. Springfield  
Parrino, Thomas .................................. Cleveland  
Rockey, Paul J. .................................. Lima  
Sauer, George D. .................................. Marietta  
Spon, John .................................. Steubenville  
Stansel, Mary Jane .................................. Dayton  
Stroebel, G. Edward .................................. St. Marys  
Treherne, Alfred .................................. Byesville  
Williamson, Don .................................. Marion  
Witt, A. Marlowe .................................. Marion  
Worman, Philip .................................. Dayton  
Young, Vernon .................................. Seaman

SENIORS

Amoroso, Joseph .................................. Newburgh, N. Y.  
Antoszewski, Eugene .................................. Cleveland  
Arbogast, Betty Lee .................................. Ada  
Arnold, Eleanor .................................. West Unity  
Auten, Phyllis .................................. Rauson  
Banks, Joseph .................................. Sugar Creek  
Barteldt, Mary Elizabeth .................................. Forest  
Birnbbaum, Jack .................................. Cleveland  
Bischoff, Martha .................................. Ada  
Booher, Esther .................................. Middletown  
Brookshire, Lela .................................. Marion  
Burke, John .................................. Lima  
Byal, John Marvin .................................. McComb  
Cardone, Mario Joseph .................................. Lima  
Chalfin, Loyd .................................. McGuffey  
Crider, Wendell .................................. Beaverdam  
Douvacjian, Harry .................................. Lima  
Ecker, Milton .................................. Newburgh, N. Y.  
English, Marvin E. .................................. Troy, N. Y.  
Ersnberger, Fred M. .................................. Ada  
Fair, Robert J. .................................. Marion  
Gesling, Mary Lou .................................. Lancaster  
Gorby, Dale .................................. Rawson  
Graham, Henry .................................. Ada  
Gundlach, Mrs. Jessie .................................. Lima  
Hafer, Janet .................................. Argo, Ill.  
Hagle, Harry .................................. Newburgh, N. Y.  
Hakala, Helen .................................. Ashtabula  
Halstead, Evelyn .................................. Ada  
Harris, Lowell E. .................................. Ada  
Hay, Robert H. .................................. Lima  
Heholt, Albert .................................. Elizabeth, Pa.  
Hemphill, Eugene .................................. Wapakoneta  
Henkle, Elizabeth .................................. Ada  
Holcomb, Roberta .................................. Freeport, N. Y.  
Horst, Gladys .................................. Edgerton  
Hover, Ruth .................................. Ada  
Huffman, Med .................................. Columbus Grove  
Hurley, Myron .................................. Huntsville  
Inserra, Lucy .................................. Jamestown, N. Y.  
Keel, George .................................. Kenton  
Kelly, Mabel .................................. Ada  
Kritzler, Clayton .................................. Kenton  
Lintz, Robert .................................. Kenton  
McPeck, Marybelle .................................. Bellefontaine  
Metzger, Henry .................................. New Philadelphia  
Mohr, Ersel .................................. Van Wert  
Moore, Archie .................................. Rauenna  
Moore, Margaret .................................. Ada  
Oliphant, Effie .................................. Marion  
Palmer, Carroll W. .................................. West Union  
Payne, Robert .................................. Mt. Gilead  
Pease, Mary .................................. Belpsville  
Ponessa, Alfred .................................. Newburgh, N. Y.  
Ries, Gray .................................. Highland Park, Mich.  
Robinson, Bettie .................................. Fredericktown  
Robinson, Earl .................................. Queaker City  
Sambuchini, Robert .................................. Jamestown, N. Y.  
Seitz, Willard .................................. Buffalo, N. Y.  
Shaw, Joan .................................. Ada  
Souders, Hylen .................................. Bucyrus  
Sowards, Wesley .................................. Spencerville  
Stanfield, Joan .................................. Ada  
Struna, William F. .................................. Cleveland  
Tees, William .................................. High Bridge, N. J.  
Thompson, Erie .................................. Lima  
Thompson, Leslie .................................. Lima  
Tissari, Harry .................................. Ashtabula  
Tschaten, Charles .................................. Upper Sandusky  
Webber, Maxine .................................. Bellefontaine  
White, Walter .................................. Lima  
Williamson, Joy .................................. Cairo  
Yasgoor, Harry .................................. Newburgh, N. Y.  
Zeller, Glenn .................................. Versailles  
Zimpfer, Vincent .................................. Anna
### Ohio Northern University

#### College of Engineering

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<th>Name</th>
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<tr>
<td>Bosse, Earl</td>
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#### College of Pharmacy

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<td>Warden, Richard</td>
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#### College of Law

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<td>Rocky River</td>
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SPECIAL STUDENTS

COLLEGE OF LIBERAL ARTS

Abbott, Kathryn .................................. Ada
Auten, Vera ......................................... Rawson
Ayling, Mildred ..................................... Mayville, N. Y.
Binkley, Wilma ...................................... Ada
Bozarth, Doris ........................................... Alger
Bradley, Robert L. ................................ LaFayette
Colwell, Vera Pauline .............................. Defiance
Culleton, Catherine ................................. Wapakoneta
Dobbins, Esther ....................................... Ada
Dollison, Shirley ..................................... Ada
Golley, Anne E. ..................................... Chicago, Ill.
Hunt, Lola Jane ...................................... Lima
Huston, Alice ........................................ Ada
Jeffrey, Frank W. .................................. Convoy
Klotman, Robert ................................... Dola
Meszaros, Louis ..................................... Sharpsville, Pa.
Pease, Robert ........................................ Ada
Rew, Dorothy ......................................... Ada
Rider, Helen .......................................... Spencerville
Schatzley, Byron Lee ............................... West Milton
Snell, Richard ....................................... Ada
Snyder, Carolyn ..................................... Ada
Talbot, Frederick .................................... Lima
Wohl, Esther .......................................... Lima
Younkman, Walter .................................. LaFayette

COLLEGE OF ENGINEERING

Gilmore, Benjamin ................................ Ada

COLLEGE OF PHARMACY

Bykowski, Andrew ................................ Toledo
Mitchell, Dorothy ................................... Lima

COLLEGE OF LAW

Loy, Bertha ........................................ Findlay

SUMMARY, 1940-41

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<th>Freshmen</th>
<th>Sophomores</th>
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GEOGRAPHICAL DISTRIBUTION

JUNE, 1940—JUNE, 1941

By Counties in the State of Ohio

Allen .................. 88  Lake .................. 4
Hardin .................. 85  Mercer .................. 4
Cuyahoga .................. 44  Portage .................. 4
Hancock .................. 20  Sandusky .................. 4
Marion .................. 17  Union .................. 4
Summit .................. 15  Clark .................. 3
Crawford .................. 14  Defiance .................. 3
Mahoning .................. 14  Delaware .................. 3
Logan .................. 14  Shelby .................. 3
Lorain .................. 13  Medina .................. 3
Stark .................. 13  Seneca .................. 3
Fulton .................. 13  Adams .................. 3
Richland .................. 13  Green .................. 2
Jefferson .................. 12  Hamilton .................. 2
Belmont .................. 12  Ashland .................. 2
Lucas .................. 11  Carroll .................. 2
Tuscarawas .................. 11  Fayette .................. 2
Van Wert .................. 11  Huron .................. 2
Columbiana .................. 9  Licking .................. 2
Paulding .................. 9  Madison .................. 2
Wyandot .................. 9  Wayne .................. 2
Ashtabula .................. 8  Butler .................. 1
Morrow .................. 8  Clinton .................. 1
Williams .................. 7  Coshocton .................. 1
Putnam .................. 7  Darke .................. 1
Montgomery .................. 6  Gallia .................. 1
Muskogee .................. 6  Geauga .................. 1
Holmes .................. 5  Harrison .................. 1
Miami .................. 5  Henry .................. 1
Auglaize .................. 5  Jackson .................. 1
Trumbull .................. 4  Morgan .................. 1
Franklin .................. 4  Morrow .................. 1
Fairfield .................. 4  Ottawa .................. 1
Guernsey .................. 4  Putnam .................. 1
Highland .................. 4  Richland .................. 1
Knox .................. 4  Washington .................. 1

GEOGRAPHICAL DISTRIBUTION

By States

Ohio .................. 612  Massachusetts .................. 2
New York .................. 47  California .................. 2
Pennsylvania .................. 24  Rhode Island .................. 1
New Jersey .................. 7  Delaware .................. 1
Michigan .................. 6  Kentucky .................. 1
Indiana .................. 4  Virginia .................. 1
West Virginia .................. 3  Washington .................. 1
Illinois .................. 2

By Countries

Cuba .................. 2  Puerto Rico .................. 1
EXTENSION STUDENTS

1940-1941

Amstutz, Veldine ............................................. Pandora Kritzler, Clayton ............................................. Kenton
Baughman, Ruth .............................................. Lima Lamb, Dorothea .............................................. Lima
Beery, Naomi ..................................................... Lima Lohr, Don Alton .............................................. Elida
Billings, Nathaniel ........................................... Kenton Lynch, Mildred .............................................. Lima
Bischoff, Marguerite ......................................... Ada McBride, Reba .............................................. Lima
Black, Richard ................................................. LaFayette McClellan, Hazel ............................................ Lima
Blair, James ..................................................... LaFayette McColl, Florence ....................................... Marion
Bockey, Loretta ................................................ Delphos McKibben, Harriett ........................................ Lima
Brentlinger, James ............................................. Lima McMahan, Wanda ........................................... Marion
Brooks, Donald ................................................ Lima Mayan, Grace ................................................. Lima
Brookshire, Lela ............................................... Marion Meszaros, Louis ............................................. Sharpsville, Pa.
Brown, Juanita ................................................ Wapakoneta Middlestetter, Bonnie ...................................... Lima
Burke, Bernard ................................................ Lima Miltenberger, Emil .......................................... Lima
Byerly, Ruth .................................................... Lima Moenter, Helen .............................................. Delphos
Cannon, Yvonne ............................................... Wapakoneta Mosher, Byrle .............................................. Richwood
Carlton, Leah .................................................... Lima Myers, Estella ............................................... Marion
Chalfin, Loyd .................................................... McGuffey Nickerson, Henry ........................................ Marion
Clark, Nancy ..................................................... Lima Niswander, Lucille ........................................... Alger
Colton, Merritt ................................................ Lima Oliphant, Effie ............................................... Marion
Dempster, Grace ................................................ Lima Page, Dorothy ............................................... Lima
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Hamilton, Jean ................................................ Lima Scott, Aileen ............................................. Lima
Hardin, Helen .................................................... Lima Steinger, Stella ........................................... Pandora
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Hornish, Donald ............................................... Jewell Vogelsang, James ........................................ Lima
Howell, Giles H. ................................................ Lima Winegardner, Donald ........................................ Lima
Kiracofe, Calvin ............................................... Lima Wright, Inez ............................................... Spencerville
Knapke, Frank ................................................... Lima Youngman, Daniel ....................................... Beaverdam
Kramer, Iness ................................................... Lima Youngman, Walter ...................................... LaFayette
Kruskamp, Leo .................................................. Lima

SUMMARY OF EXTENSION STUDENTS

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EXTENSION

| Liberal Arts | 21   | 57   | 78   |

SUMMER SESSION, 1940

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| TOTAL        | 113  | 131  | 244  |
| GRAND TOTAL  | 729  | 347  | 1076 |
| MINUS DUPLICATES | 709 | 279 | 988 |

SUMMER, 1941

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Stang, Anna ..................  Botkins  Wentz, Fred ..................  Harrod
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Tschanen, Charles ..................  Ada  Zimmerman, Lawrence ..................  Youngstown

**College of Law**

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Chamberlain, Joseph ..................  Dayton  Platz, Norman ..................  Toledo
Conrad, Marjorie ..................  Lima  Rockey, Paul J. ..................  Lima
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Depler, George ..................  Mansfield  Shobe, Charles ..................  Lima
Hicks, William ..................  Springfield  Wade, John E. ..................  Postoria
Koch, Kenneth ..................  Ohio City  Williamson, Don ..................  Marion

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