he Strouss Memorial Auditorium, at Its Dedication, May 9, 1949

Commencement at Stambaugh Auditorium

Pages 174 - 192 Missing

Pictures + Historical Sketch also Missing

Youngstown College

1953 - 1955

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Tues. Sept 14

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Youngstown College Bulletin

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Youngstown, Ohio

Youngstown College is accredited by the Department of Education of the State of Ohio, the Ohio College Association, and the North Central Association of Colleges and Secondary Schools. It is a member of the American Council on Education, the Association of American Colleges, and the Association of Urban Universities. The School of Law is accredited by the League of Ohio Law Schools: Dana School of Music of Youngstown College is a member of the National Association of Schools of Music; and the college is on the approved list of the American Medical Association.

Youngstown College grants the degrees of Bachelor of Arts, Bachelor of Engineering, Bachelor of Laws, Bachelor of Music, Bachelor of Science, Bachelor of Science in Business Administration, and Bachelor of Science in Education.

THE COLLEGE CALENDAR, 1953-54

All Units except the School of Law

First Semester

1953

September 9, 10, 11, 12, Wednesday, Thursday, Friday (afternoon), Saturday ..... Registration
September 11, Friday ..... Freshman Day
September 14, Monday, 8:00 a. m. ..... Classes begin
November 25, Wednesday, 10:00 p. m. ..... Thanksgiving vacation begins
November 30, Monday, 8:00 a. m. ..... Thanksgiving vacation ends
December 19, Saturday, 12:00 noon ..... Christmas vacation begins

1954

January 4, Monday, 8:00 a. m. ..... Christmas vacation ends
January 20, Wednesday, 8:00 a. m. ..... Final examination begin
January 30, Saturday, 12:00 noon ..... First semester ends

Second Semester

January 30, February 1, 2, Saturday, Monday, Tuesday..... Registration
February 1, Monday, 8:00 a. m. ..... Second semester begins
April 15, Thursday, 10:00 p. m. ..... Easter vacation begins
April 19, Monday, 8:00 a. m. ..... Easter vacation ends
May 20, 21, 22, Thursday, Friday, Saturday..... Senior examinations
May 26, Wednesday, 8:00 a. m. ..... Final examinations begin
May 30, Sunday ..... Baccalaureate Service
May 31, Monday ..... Observation of Memorial Day (no classes)
June 3, Thursday, 10:00 p. m. ..... Second semester ends
June 4, Friday ..... Commencement

Summer Session

June 10, 11, 12, Thursday, Friday, Saturday ..... Registration
June 14, Monday, 8:00 a. m. ..... Summer session begins
July 5, Monday ..... Observation of Independence Day (no classes)
July 17, Saturday, 12:00 noon ..... First half of summer session ends
July 19, Monday, 8:00 a. m. ..... Second half of summer session begins
August 21, Saturday, 12:00 noon ..... Summer session ends

The School of Law

1953

September 28, Monday ..... Fall quarter begins
December 17, Thursday ..... Fall quarter ends

1954

January 4, Monday ..... Winter quarter begins
March 25, Thursday ..... Winter quarter ends
March 29, Monday ..... Spring quarter begins
June 17, Thursday ..... Spring quarter ends
July 7, Wednesday ..... Summer quarter begins
September 23, Thursday ..... Summer quarter ends

THE BOARD OF TRUSTEES

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President, The General Fireproofing Company

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Physician

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Clark and Collins, Certified Public Accountants

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Physician

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President and Attorney, The Home Savings and Loan Company

THOMAS H. MURRAY
President and Treasurer, The Heller-Murray Company

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President, The William B. Pollock Company

FRANKLIN B. POWERS
Manchester, Bennett, Powers, and Ullman

FRANK PURNELL†
Chairman of the Board, The Youngstown Sheet and Tube Company

WM. HAIG RAMAGE
President, Valley Mould and Iron Corporation

HENRY A. ROEMER
President, The Sharon Steel Corporation

† Died April 19, 1953.

CLARENCE J. STROUSS, JR.
The Northwestern Mutual Life Insurance Company

The Right Reverend Monsignor JOSEPH N. TRAINOR, V. F.
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CARL W. ULLMAN
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CHARLES G. WATSON
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JACOB C. BARRETT
Retired

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Judge, Mahoning County Common Pleas Court

J. EUGENE BENNETT
General Counsel and Secretary, The Youngstown Sheet and Tube Company

WILLIAM F. MAAG, JR.
Editor and Publisher, The Youngstown Vindicator

J. RUSSELL MCKAY
President and Attorney, The Home Savings and Loan Company

MRS. ALFRED E. REINMAN

THE FACULTY

HOWARD WATKIN JONES ..... *President*

A. B., Hiram College; A. M., Western Reserve University; D. Ped., Westminster College.

MABEL ARTMAN ALLAN*[4] ..... *Accounting*

B. S. in B. A., Ohio State University; A. M., Ohio State University. Graduate study: Columbia University.

J. LEONARD AZNEER* ..... *Philosophy and Religion*

A. B., Yeshiva College; Master of Hebrew Letters, Jewish Theological Seminary. Previous study: Temple University; Rabbi Isaac Elchanan Theological Seminary. Ordination as rabbi and graduate study: Jewish Theological Seminary.

THEODORE BAAR ..... *Music*

B. S., Kent State University. Graduate study: Western Reserve University. Previous study: Conservatory of Music, Vienna. Member of Vienna, Youngstown, and Cleveland symphony orchestras.

SAMUEL S. BADAL, JR.* ..... *Music*

Cincinnati Conservatory of Music; Cleveland Institute of Music. Pupil of Parvin Titus, Garth Edmundson, and Edwin Arthur Kraft.

JOHN WINCHELL BARE ..... *Psychology*

A. B., Ohio Wesleyan University; A. M., Ohio Wesleyan University; M. Ed., University of Pittsburgh.

MABEL LARIMER BATHAM*[2] ..... *Education*

B. S. in Ed., Youngstown College. Graduate study: John Herron Art School.

FRANK JOSEPH BATTISTI* ..... *Law*

A. B., Ohio University; LL. B., Harvard University.

RALPH BEARD ..... *Economics*

HEAD OF THE DEPARTMENT OF ECONOMICS

A. B., Hiram College; LL. B., University of Pennsylvania; A. M., University of Pennsylvania. Graduate study: University of Pittsburgh.

WILLIAM ANDREW BECKMAN ..... *Chemistry*

A. B., Youngstown College; M. S., State College of Washington. Graduate study: Western Reserve University.

DWIGHT VINCENT BEEDE ..... *Health and Physical Education*

B. S., Carnegie Institute of Technology.

NOTE. This section is based on the year extending from June 1952 to June 1953, unless otherwise noted. The significance of reference marks is as follows:

*Not carrying full teaching load.
[1]Summer 1952 only.
[2]Not teaching second semester 1952-53.
[3]Did not teach first semester 1952-53.
[4]Not teaching 1952-53.
[5]Until August 16, 1952.
[6]Began March 30, 1953.
[7]Beginning June 15, 1953.

KARL H. BENKNER ..... *Mechanical Engineering*
M. E., Military Technical Academy, Charlottenburg, Germany. Graduate study: Carnegie Institute of Technology.

MARGARET BINGHAM*[4] ..... *Education*
B. S. in Ed., Kent State University. Graduate study: Clark University; Columbia University; University of Chicago.

DONALD BLOCK* ..... *Industrial Engineering*
B. S. in I. E., Ohio University.

PAULINE ESTERHAY BOTTY ..... *Sociology*
DEAN OF WOMEN
HEAD OF THE DEPARTMENT OF SOCIOLOGY
B. S. in Ed., New York State Teachers College; LL. B., Youngstown College; A. M., Western Reserve University.

BETTY LIPPLY BOYER* ..... *Secretarial Studies*
A. B., Youngstown College.

FRANK MELVIN BRADEN* ..... *Advertising, Merchandising*
B. S. in B. A., Youngstown College; A. M., University of Pittsburgh. Graduate study: University of Pittsburgh.

JOSEPH KIRBY BRANSBY* ..... *Photography*
Certificate, Winona School of Photography. Previous study: Northwestern University; Kent State University.

ROBERT LEROY BRICKLEY*[1] ..... *Mathematics*
B. S. in Ed., Youngstown College. Graduate study: Purdue University.

CATHERINE MITCHELL BRIDGHAM ..... *Chemistry*
B. S., University of Michigan; Ph. D., University of Pittsburgh.

MARION KING BROWNE ..... *Merchandising*
A. B., Michigan State Normal College; M. S., New York University. Graduate study: New York University.

MCKINLEY BROWNE ..... *Merchandising*
B. S., Michigan State Normal College; M. S., New York University. Graduate study: New York University.

PHILIP P. BUCHANAN[4] ..... *Business Organization*
A. B., Hiram College; M. Ed., University of Pittsburgh.

HOWARD HENRY BURT*[3] ..... *Mathematics*
B. S., University of Pennsylvania; B. S., Massachusetts Institute of Technology.

HELEN CORLL BUZARD*[3] ..... *Education*
B. S. in Ed., Ohio University; A. M., Columbia University (Teachers College). Graduate study: University of Pittsburgh; Columbia University (Teachers College).

GEORGE FREDERICK CARL* ..... *Mathematics*
B. S. in C. E., University of Oregon; A. M., Ohio State University.

HAROLD REXFORD CARLE* ..... *Civil Engineering*
B. C. E., Ohio State University. Additional study: University of Pittsburgh, Youngstown College.

WILLIAM BELLAND CARSON*[3] ..... *Health and Physical Education*
B. S. in Ed., Youngstown College. Graduate study: Westminster College.

OLIVER PERRY CASH* ..... *Music Education*
B. S., Miami University; A. M., Ohio State University.

HELENE HULL CATHERMAN ..... *Library Service*
B. S., Western Reserve University; B. S. in L. S., Western Reserve University.

ALBERT LIVAIN CHAMBERS ..... *Social Science*
B. S. in Ed., Youngstown College; M. Ed., University of Pittsburgh.

GEORGE CHAMBERS* ..... *Biology*
B. S. in Ed., Kent State University; A. M., Ohio State University.

FRIEDA FRIEND CHAPMAN ..... *Education*
B. S. in Ed., Ohio University; A. M., Ohio State University. Graduate study: Columbia University.

MICHAEL JEAN CHARIGNON ..... *Mechanical and Electrical Engineering*
ASSISTANT DEAN OF WILLIAM RAYEN SCHOOL OF ENGINEERING
B. S. in Mech. E., North Dakota State College; B. S. in E. E., North Dakota State College; M. E., North Dakota State College; M. S., University of Pittsburgh. Graduate study: University of Pittsburgh. Registered Engineer.

CLOYCE ARTHUR CHRISTOPHER*[4] ..... *Education*
B. S., Kenyon College; M. Ed., University of Pittsburgh. Graduate study: University of Pittsburgh; Kent State University.

STEVEN EDWARD CHUEY* ..... *Accounting*
A. B., Youngstown College; LL. B., Western Reserve University.

DONNA PAULINE CHURCH*[2] ..... *Business Organization*
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IRWIN COHEN ..... *Chemistry*
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A. B., Catholic University; A. M., Catholic University; Ph. D., Western Reserve University.

HAROLD ROSS CRITES ..... *English*
A. B., Hiram College; A. M., Western Reserve University. Graduate study: Western Reserve University.

JOHN HUGH CULLEY* ..... *Civil Engineering*
B. S. in C. E., University of Pittsburgh.

KENDALL DATSON*[3] ..... *General Science*

B. S. in Ed., Ohio State University; M. Ed., University of Pittsburgh.

BENJAMIN JOHN DAVIES, JR.* ..... *Secretarial Studies*

B. S. in Ed., Youngstown College. Graduate study: University of Pittsburgh.

ANN DAVIS* ..... *Education*

B. S. in Ed., Kent State University; M. Ed., University of Pittsburgh.

NELLIE GWYNNE DEHNBOSTEL ..... *Music*

ACTING DEAN OF DANA SCHOOL OF MUSIC

Mus. B., Dana's Musical Institute; F. C. M., Dana's Musical Institute; Mus. M., Dana's Musical Institute; A. B., Kent State University; B. S. in Ed., Kent State University; A. M., Kent State University.

RAYMOND HENRY DEHNBOSTEL ..... *Music*

Mus. B., Dana's Musical Institute; Mus. M., Dana's Musical Institute; B. S. in Ed., Kent State University; A. M., Kent State University. Graduate study: Western Reserve University.

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MARY ANN POPE DOBRICH ..... *Psychology*

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A. B., University of Washington; A. M., Columbia University (Teachers College); Ed. D., Columbia University (Teachers College). Pupil of Daniel Bonade. Member of the Bremerton and Seattle Philharmonic symphony orchestras.

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B. S., University of Chicago. Graduate study: Columbia University. Pupil of Arthur Dow and Walter Sargent. Art study in Europe. Director of Art, The Butler Art Institute, 1919-1935.

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A. B., Kansas State Teachers College; M. D., University of Kansas.

RAYMOND LEONARD FALLS* ..... *Law*

DEAN OF THE SCHOOL OF LAW

A. B., Thiel College; LL. B., Western Reserve University.

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Mus. B., Beaver College; Mus. M., Beaver College. Graduate study: Juilliard School of Music; Columbia University; New England Conservatory of Music; Royal Academy of Music, London; University of St. Andrews, Glasgow. Pupil of Ernest Hutcheson and Rudolph Ganz.

EDWARD JOHN PAUL FISHER ..... *Metallurgical Engineering*

B. S., Worcester Polytechnic Institute. Graduate study: Columbia University (School of Mines and Metallurgy).

WILLIAM SEITZ FLAD ..... *Advertising*

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ROBERT LOGAN FLEMING*[1] ..... *Education*

B. S., Ohio State University; A. M., Ohio State University.

ANNE LOWERY FLOOD*[1] ..... *Education*

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†Retired August 16, 1952

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A. B., Youngstown College; A. M., University of North Carolina. Graduate study: Western Reserve University.

SMITH LEROY FOSTER* ..... *Education*

LL. B., Youngstown College; B. S. in Ed., Kent State University; M. S. in Ed., Ohio State University.

VIRGIL FREED* ..... *English*

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LL. B., University of Maryland.

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CLARENCE PEMBROKE GOULD ..... *History*

HEAD OF THE DEPARTMENT OF HISTORY

A. B., Johns Hopkins University; Ph. D., Johns Hopkins University.

ERNEST ARCHIBOLD GRIMES* ..... *Electrical Engineering*

B. E. E., University of Akron.

ARNOLD GROSS* ..... *Engineering Drawing*

B. M. E., Ohio State University.

KATHRYN TERESA GUARNIERI ..... *Music*

Mus. B., Dana's Musical Institute; F. C. M., Dana's Musical Institute; Mus. M., Dana's Musical Institute. Pupil of Enrichetta Lupi-Bosisio, Genoa; Theodore Bjorkstein, Paris; Oscar Saenger, Jacques Coini, and Frank LaForge, New York.

MARY ALICE HADDOW† ..... *Education*

B. S., New York University; A. M., New York University. Graduate study: Columbia University (Teachers College).

---

†Retired August 16, 1952

PHILIP JEROME HAHN ——— *Merchandising*
B. S. in Ec., Juniata College; M. B. A., Harvard University.

HILDA GEORGE HANNA ——— *Secretarial Studies*
A. B., Ohio State University. Graduate study: Kent State University.

BERNARD HIRSHBERG HARTZELL ——— *Business Organization*
A. B., University of Michigan; M. B. A., Western Reserve University.

HELENA HASTINGS*[2] ——— *Education*
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ZENOS ERIC HAWKINSON[5] ——— *History*
A. M., University of Chicago. Graduate study: University of Chicago.

TEDFORD MORGAN HENDRICKSON* ——— *Mechanical Engineering*
B. M. E., Ohio State University. Registered Engineer.

ADELAIDE SNYDER HESELOV* ——— *Communication*
A. B., Kent State University; A. M., Kent State University. Graduate study: Michigan State College.

SIDNEY HIRSOHN* ——— *Sociology*
A. B., West Virginia University; A. M., Clark University; A. M., University of Chicago.

CHESTER ANDRES HOLMQUIST* ——— *Sociology*
A. B., Capital University; B. D., Capital Theological Seminary; A. M. in Soc. Adm., Ohio State University.

ETHEL MARIE HOPKINS*[3] ——— *Biology*
B. S., Columbia University.

FRANCIS BLAKE HOPKINS* ——— *Biology*
A. B., Ohio Northern University; M. S., University of Michigan.

HUGH NELSON HOUCK* ——— *Industrial Engineering*
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HUBERT COLEMAN HOWARD ——— *English*
A. B., Ohio Wesleyan University; A. M., Ohio State University; Ph. D., Ohio State University.

ELMER WILLIAM HYKES* ——— *Accounting*
A. B., Bliss College; B. S., Bliss College. Graduate study: University of Denver; Ohio State University.

DAVID SCOTT IVES ——— *Greek, Humanities, Italian*
A. B., Baldwin-Wallace College; A. M., Western Reserve University. Graduate study: University of Chicago; Western Reserve University.

CLINGAN JACKSON*[2] ——— *Political Science*
A. B., University of Colorado.

JOHN MICHAEL JANOSIK* ——— *Secretarial Studies*
B. S. in Ed., Youngstown College; M. Ed., University of Pittsburgh.

VERA JENKINS ..... *Accounting*

A. B., Youngstown College; B. S. in Ed., Youngstown College; M. Ed., University of Pittsburgh. Graduate study: University of Pittsburgh.

MARY ELIZABETH JEWETT*[2] ..... *Education*

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HAROLD NELS JOHNSON* ..... *Engineering Drawing*

B. S. in Ed., Ohio State University; A. M., Ohio State University; LL. B., Youngstown College.

MARY FRANCES JOHNSON* ..... *Communication*

A. B., Ohio Wesleyan University; A. M., Kent State University. Graduate study: Ohio State University.

CHARLES EVANS HUGHES JONES ..... *Military Science and Tactics*

B. S., Virginia Polytechnic Institute. Major, Artillery, United States Army.

MARY WAGSTAFF JONES ..... *Communication*

A. B., Ohio State University; M. S. in Ed., Westminster College. Graduate study: Cornell University.

ESTHER MARY JOYCE* ..... *Communication*

A. B., Lake Erie College; M. Ed., University of Pittsburgh. Graduate study: Kent State University.

HARRY JOYCE* ..... *Music*

Chicago Conservatory of Music. Pupil of Fred Von Amberg, Leon LeRoy, C. L. Statts, and Anton Quitsau. Member of Youngstown Symphony Orchestra.

JOHN WALTER KERENSKY*[6] ..... *Law*

A. B., Westminster College; LL. B., Western Reserve University.

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B. S. in M. E., Carnegie Institute of Technology.

JANET GERWIG KIMBALL ..... *Communication*

A. B., University of Pittsburgh; A. M., University of Pittsburgh. Graduate study: New York University.

KENNETH RAYMOND KITCHEN ..... *Music*

B. Mus. Ed., Murray State College; Mus. M., University of Michigan. Graduate study: Cosmopolitan School of Music; University of Michigan. Pupil of Alexander Kipnis, M. O. H.

MICHAEL KLASOVSKY*[7] ..... *Geography*

B. S. in Ed., Bowling Green State University; A. M., Ohio State University.

EUGENE ALBERT KLINGSHIRN ..... *Electrical Engineering*

B. E. E., Fenn College; M. S., Ohio State University. Graduate study: University of Pittsburgh. Registered Engineer in Training.

RAYMOND EDWARD KRAMER ..... *Electrical Engineering*

B. S., Heidelberg College; M. S. in E. E., Case Institute of Technology. Graduate study: Case Institute of Technology.

FRANCIS KRAVEC* ..... *Biology*
B. S., Loyola University; M. S., Loyola University; M. D., Loyola University.

WILLIAM CHARLES KROEGER* ..... *Physics*
B. E., Youngstown College. Registered Engineer in Training.

BERTINA ANNE LABORDE ..... *Health and Physical Education*
DIRECTOR OF WOMEN'S PHYSICAL EDUCATION
B. S. in Ed., Ohio University; M. S., Ohio University.

EUGENE LOUIS LASH ..... *Military Science and Tactics*
HEAD OF THE DEPARTMENT OF MILITARY SCIENCE AND TACTICS
Lieutenant Colonel, Artillery, United States Army.

NAOMI MAY LAUGHBAUM ..... *Education*
B. S., Wittenberg College; A. M., Ohio State University. Graduate study: Columbia University (Teachers College).

OTTO LAUMANN* ..... *Business Organization*
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JOSEPH RICHARD LUCAS ..... *Philosophy and Religion*
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JOHN ALLAN ALTDOERFFER ..... *Visiting Lecturer in Psychology*
M. D., Northwestern University. Previous study: Ohio State University. Physician.

HENRY PHILIP BECKENBACH ..... *Visiting Lecturer in Psychology*
Youngstown College (School of Law). Judge, Mahoning County Common Pleas Court, Domestic Relations and Juvenile Division.

WILLIAM HALL BUNN ..... *Visiting Lecturer in Biology*
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Faculty Members Emeriti

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KATHLEEN A. ELENZ ..... *Supervisor of Machine Records*

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PAUL W. BLEVINS, Master Sergeant ..... *Administrative Chief*

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Athletics: Mr. Gould, Mr. Beard, Mr. Pickard, Mr. Scudder, Mr. J. E. Smith, Mr. Webster.

Credits and Admission: Mr. Buchanan, Mr. Dykema, Mr. Gould, Mrs. Smith.

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Library: Mr. Gould, Mrs. Dehnbostel, Mr. D'Isa, Mr. Fulkerson, Miss Jenkins, Mr. Mayer, Mr. O'Brien, Mr. Richardson, Mr. Westenfield, Mr. Worley.

Personnel: Mr. J. E. Smith, Mr. Gould, department head concerned.

Pre-Medical and Pre-Dental Studies: Mr. Webster, Mrs. Botty, Mr. Howard, Mr. Scudder.

Professional Forums: Mr. Crites, Mr. Kitchen, Mr. Malak, Mr. Reilly, Mr. Swartz.

Publications: Mr. Ives, Mrs. Botty, Mr. Dykema, Mr. Ellis, Miss Flint, Mr. Gould, Miss Jenkins, Mr. Kitchen, Mr. Marcy; *Jambar* adviser, *Neon* adviser.

R. O. T. C.: Mr. J. E. Smith, Lt. Col. Lash.

Scholarships: Mr. J. E. Smith, Mr. Buchanan, Mr. Gould, Mr. Pickard, Mrs. Smith.

Social: Mr. Benkner, Mr. Crites, Mr. D'Isa, Mr. Hahn, Miss Marks, Mr. Myerovich, Mr. Nelson, Mr. Rodgers, Mr. Skeggs.

Visual Education: Mr. Pirie, Miss Chapman, Mrs. Ebeling, Miss Jenkins, Mr. Elser, Mrs. Hanna, Mr. Worley.

Committees with Student Representation

Assemblies: Mr. Stearns, Mr. Elser, Mr. Foley, Mr. Kitchen, Mr. N. V. Ross, Mr. Rosselli, three students.

Co-ordination and Calendar: Miss Buehrle, Miss Flint, Mr. Foley, Mr. Kitchen, one student.

Curriculum: Mr. J. E. Smith, Mr. Charignon, Mrs. Dehnbostel, Mr. C. A. Evans, Mr. Howard, Mr. Ives, Mr. R. L. Miller, Mr. Reid, Mr. Scudder, Mr. E. B. Smith, Lt. Col. Lash, Mr. Wilcox, two students.

Discipline: Mr. J. E. Smith, Mr. Beard, Mrs. Botty, Mr. Foley, three students.

Faculty-Student Relations: Mr. J. E. Smith, Mrs. Dykema, Mr. Pickard, three students.

John Tod, a friend of the college and a leading Youngstown philanthropist.

The buildings close to the Main Building supplement the classroom and office space of the two schools in the central area and augment the facilities of the music school. Immediately north of the Main Building is the *Secretarial School* building, to the west is the *Women's Physical Education Building* (see below), and north of the latter is *West Hall*, all three formerly parts of private estates. North of West Hall are three interconnected units known collectively as the *Annex*. These structures, former barrack buildings remodeled and equipped in 1946 for college use, are scheduled for early removal as space becomes available elsewhere. Between West Hall and the Secretarial School building stands *Central Hall*, a large frame structure, on the first floor of which is a cafeteria, while on the second are music and other facilities.

Other classrooms and offices of the College of Arts and Sciences are in Pollock House and Ford Hall, which are described elsewhere, and in South Hall and Rayen Building.

Rayen Building is the former home of the old Rayen School, the first secondary school in Youngstown, founded and long maintained with private funds but eventually incorporated into the city's school system. After Rayen School had moved to larger quarters, the building, still affectionately known to hundreds of Youngstowners as "Rayen School," was made available to Youngstown College and now houses William Rayen School of Engineering as well as the physics department of the College of Arts and Sciences.

Further description of the engineering and music facilities will be found in the sections devoted to those schools.

The Women's Physical Education Building, recently remodeled and renovated, now provides offices, classrooms, a gymnasium, and showers for women's health and physical education activities. There is a playing field behind Ford Hall and a tennis court near the same building. The college also uses the facilities of the Y. M. C. A., about four blocks away, the Y. W. C. A. swimming pool, one block away, and Harrison Field, east of Wick Avenue. Varsity teams use Rayen Stadium and South Field House, by arrangement with the Youngstown

Board of Education, as well as municipal tennis courts and the Mahoning Country Club golf links.

The college has no dormitories, but women students who wish dormitory accommodations and activities may occupy a section of magnificently equipped Buechner Hall, a privately operated residence hall for women on Bryson Street near Spring Street, about a block from most parts of the college.

Mill Creek Park affords excellent facilities for biological study; through the social agencies of the city, sociology students may do practical social work; and all Youngstown radio and television stations grant the use of their equipment for various college purposes. Continuous or occasional use is also made of various other facilities of such agencies as the City of Youngstown, the Mahoning Chapter of the American Red Cross, the Mahoning County Tuberculosis and Health Association, the Public Library of Youngstown and Mahoning County, the Butler Art Institute, Stambaugh Auditorium, St. John's Protestant Episcopal Church, St. Joseph Roman Catholic Church, and First Presbyterian Church. Reciprocal agreements for the use of certain equipment are in effect with the Public Library, the Board of Education, and the Mahoning Law Library Association.

Youngstown College is grateful to these and other agencies for their generosity and helpfulness in meeting a community need. The spirit of co-operation thus manifested is a healthful one and engenders a favorable atmosphere in which to work and to carry forward the college's program.

Libraries

The new library building is described on page 34. Holdings total about 70,000 volumes, and are increased by about 4,000 each year. The periodical list includes nearly 500 titles.

Across Wick Avenue from the college is the main building of the Public Library of Youngstown and Mahoning County. Through a friendly, co-operative relationship, its 280,000 books and about 570 periodicals and newspapers are also available to the students and faculty of the college. Avoiding dupli-

cation so far as practicable, the Public Library supplements the college libraries in the general fields of study and in local history.

The law and engineering collections, formerly housed separately, have been brought to the new building and integrated with the other holdings, as have the larger sets from the Dana School of Music library, such as the complete works of Bach, Beethoven, Brahms, and Mozart. The Dana library retains a working collection of scores and recordings, and record-playing equipment. The law collection is further described in the School of Law section.

The Association of the Friends of Youngstown College Library, organized in 1938 by the Youngstown chapter of the American Association of University Women, has contributed through its annual drives more than $150,000 for books and equipment and for the new building.

Hours. From September to June the library is open from 8:45 a. m. to 10 p. m. Monday through Thursday and from 8:45 a. m. to 5 p. m. on Friday and Saturday. The hours for the summer and between terms may be learned at the circulation desk.

Loan Privileges. Students may take books out for at least two weeks at a time. Faculty members may retain them for a whole semester, subject to their recall if needed. Library privileges are extended to Youngstown College alumni and to members of the Association of the Friends of Youngstown College Library upon application.

Laboratories

Biology and chemistry laboratories are in the Main Building. Physics laboratories, including those for optics and for electricity and magnetism, are in Rayen Building, as are the engineering laboratories.

The *biology* laboratories are equipped for individual performance of standard exercises in all basic courses and in the more advanced phases of embryology, histology, and anatomy. The Ford Hall greenhouse facilitates the study of plant physiology. For the study of local flora and fauna, Mill Creek Park provides an excellent natural area of over three square miles and also a museum, in which are two well-equipped classrooms.

The *chemistry* laboratories have individual equipment for all standard experiments in general, biological, and physical chemistry, qualitative and quantitative analysis, organic preparations, and organic analysis. Furnaces, pulverizers, ultra-violet apparatus, and drying, vacuum, and high-temperature ovens make possible much research work. Such special equipment as the Beckman pH Meter, electric analyzer, Electropode, Geiger-Muller counter, polarimeter, spectrometer, and electric titrimeter affords extensive work in instrument analysis, preparing students for jobs for which they might otherwise not be considered.

The *physics* laboratory has all the apparatus for college-grade experiments as published by the Central Scientific Company, and all major equipment is kept permanently assembled. Direct current and single- and three-phase alternating current are provided. A special classroom, connected directly with the laboratory, is equipped for large-scale demonstrations, which are supplemented by motion pictures and other visual aids.

The optics laboratory is equipped for the measurement of the interference, diffraction, polarization, and reflection of light, and the reflection of stray light has been minimized. Besides a self-contained unit for the Fresnel biprism experiment, there are collimators, telescopes, microscopes, comparitors, and spectroscopes; a large selection of prisms, filters, lenses, and diffraction gratings and slits; light sources such as sodium vapor, carbon arc, and Geissler tubes; and specimens of the new type of reflection coating on glass.

The electricity and magnetism laboratory provides various bridges and standards for measurement of resistance, inductance, and capacitance; several laboratory potentiometers for precise voltage measurements and for the calibration of direct current instruments; decade resistance boxes, slide-wire resistors, galvanometers, permeameters, meters, and assorted auxiliary equipment.

The *engineering* laboratories are described in the William Rayen School of Engineering section.

R. O. T. C. Facilities

Equipment for instruction in military science and tactics is the most modern available and includes small arms, communications materiel, and anti-aircraft weapons ranging from ma-

chine guns to the 90-millimeter anti-aircraft guns and their associated fire control equipment. Additional items are procured as they become available from Army stocks. Drill periods are conducted at Harrison Field, just east of the main campus. Range facilities for firing the caliber .22 rifle are also available.

Ford Hall

Ford Hall, at 547 Wick Avenue, was given to the college in 1951 by Judge and Mrs. John W. Ford and Judge Ford's sister, Mrs. Benjamin Agler. It had been the Ford family home. Its grounds, together with those of Pollock House and Dana School of Music, form the spacious north campus of the college. The building's unique and interesting interior proved readily adaptable to its present use. Its first floor provides a home for the School of Law, while the second floor is occupied by the college's art department. The greenhouse is a highly useful addition to biology facilities, and the tennis team has at last a practice court.

Pollock House

Pollock House, at 603 Wick Avenue, across from Dana School of Music, provides a place where campus groups may have dinners, teas, and other social gatherings in pleasant and commodious surroundings. It was given to the college by its former owners, Mr. and Mrs. William B. Pollock II, in 1950.

Its two upper floors are used for classrooms and offices, but the spacious parlors, dining room, and kitchen are available to responsible groups for specific events. Its comfortable atmosphere makes the hall an appropriate setting for social occasions that has answered a long-standing campus need. A small fee is assessed each student toward its maintenance.

Strouss Memorial Auditorium

Clarence J. Strouss Memorial Auditorium was dedicated on May 9, 1949, in honor of Clarence J. Strouss, late president of the Strouss-Hirshberg Company and long a devoted friend and trustee of Youngstown College.

The hall is an enlargement of a much smaller unit originally contained in the Main Building, of which the new structure forms a wing. The present auditorium seats 800 people, 150

of them in a balcony, and with its ample stage provides vastly improved facilities for concerts, operas, plays, lectures, and college assemblies. The Drama Guild, with funds made available by Student Council and with the proceeds from dramatic productions, has been augmenting the theatrical equipment with the aim of making the auditorium one of the best-equipped college playhouses in the state. Some of the improvements are described on page 49.

SERVICES AND OPPORTUNITIES

The Bookstore

The Youngstown College Bookstore, on the first floor of the Main Building, is the agency through which most textbooks and other required supplies are sold. Other stores in the Youngstown area do not stock most college textbooks, and they are not authorized to issue books or materials on Veterans Administration book orders except for certain specifically authorized items.

On the other hand, the Bookstore does not attempt to compete with other stores in the area and carries very few items beyond those prescribed for courses. It does, however, stock in limited quantities a wide selection of standard works in inexpensive editions, because of their value as collateral reading. The Bookstore will order any book on specific request and a suitable down payment.

Normally it is open from 8:30 to 11:30 a. m. and 12:30 to 4:30 p. m. Monday through Friday, from 6:30 to 8:30 p. m. Monday through Thursday, and from 8:30 a. m. to noon on Saturday.

Cultural Opportunities

Students in Youngstown College have unusual opportunities for hearing a wide range of the best in music. Besides programs by the faculty, students, and organizations of Dana School of Music, there are concerts by the Youngstown Philharmonic Orchestra, concerts sponsored by the Monday Musical Club, and recitals under the auspices of the American Guild of Organists. These activities bring to Youngstown some of the world's greatest musical artists.

In the field of drama, students may enjoy not only college plays but also the productions of two praiseworthy theater groups of the vicinity. In the city itself, not far from its center, is the Playhouse, an amateur project in whose plays members of the college community frequently participate. Ten miles to the southwest are the Canfield Players, another amateur organization, open to students and, like the Playhouse, interested in quality production of worthwhile drama.

The Youngstown chapter of Composers, Authors, and Artists of America is open to all music, art, drama, and literature students who can qualify as creative writers or patrons.

Immediately adjacent to the college is the Butler Art Institute, a building of great architectural beauty, which contains valuable permanent collections of paintings and other art treasures and has frequent temporary exhibits of high importance.

Another civic building of rare beauty is Stambaugh Auditorium, which houses one of the great organs of the country and provides ample facilities for lectures, dances, musical programs, and other functions, including the college commencement exercises. The main hall, noted for its acoustic excellence, seats 2,600 people. Many great visiting artists have expressed their appreciation of this beautiful auditorium.

Religious Opportunities

The Young Men's Christian Association, the Young Women's Christian Association, and many churches are within easy walking distance of the college. Two religious counselors have full-time offices on the campus, one supported by the Roman Catholic Diocese of Youngstown and the other by the Council of Churches of Youngstown and Vicinity. The college has chapel services, and there are active student religious groups on the campus.

Social Opportunities

Youngstown College offers its students frequent social opportunities. Through the dances and receptions sponsored by Student Council, fraternities, and other campus groups, and through the other activities of these organizations and of the various special-interest clubs, opportunity is afforded to meet faculty members and fellow-students and to develop pleasant associations and friendships. Pollock House and the Student Counseling Center afford attractive settings for social hours; in the latter there are weekly teas for all students and faculty members; while the cafeteria in Central Hall provides between meal hours the casual atmosphere of a coffee shop and snack bar. In addition, activities at the Y. M. C. A., Y. W. C. A., and various churches are open to all who are interested, and women students living at Buechner Hall may participate in activities there.

Personal Counseling

Students who have personal problems or for any reason feel the need of advice or counsel may avail themselves freely of the time and services of the Dean of Women or of any of three other counselors, of whom one is a male faculty member and the other two are religious advisers. In addition, a fifth counselor is available to residents of Buechner Hall.

Health Service

To promote and maintain good health, every student is given a medical examination by the college physician upon entrance and once a year thereafter, as scheduled by the Director of Health. An examination is also required before participation in any physical education activity, including intramural and varsity sports. A chest x-ray is required annually and is provided on the campus through co-operation with the Mahoning County Tuberculosis and Health Association. A student with a suspected health defect is referred for further examination to his own physician and, if necessary, to a specialist. Psychiatric help is also available.

Every student receives at least two semester hours of instruction in health education, as part of the general college requirement in health and physical education.

The *Health Center* is on the second floor of Central Hall. A college nurse is on duty from 8 a. m. to 10 p. m. Monday through Friday and from 8 a. m. to noon on Saturday; she can always be located through the college switchboard operator. The Health Center provides emergency care; continued treatment, if necessary, is paid for by the student.

Group insurance to cover hospital and/or surgical care is available to all students at the time of registration, at a semi-annual fee payable in advance. The plans are voluntary, community-sponsored, and non-profit, with no occupational restrictions. Membership may be retained after leaving college. Students interested may inquire at the Registrar's Office.

The college is a member of the Ohio Student Health Association and the American Student Health Association.

Physical Education Program

The student's physical development is promoted through three means: required physical activity courses, intramural sports, and intercollegiate athletics.

The purpose of the first two is to enlist and hold the interest of every student in active participation in games of physical skill and pleasure. In the required courses there is a wide choice of forms of physical activity. The intramural program to date includes archery, basketball, bowling, golf, handball, softball, swimming, table tennis, tennis, and volleyball, and is prepared to embrace whatever sports there is interest in and facilities for. Students are encouraged to choose games and sports from which they are likely to derive healthful pleasure in later life.

Intercollegiate athletics are conducted at Youngstown College to enlist the interest of the entire student body in healthy amateur sport. Participation is open to any member of the student body who qualifies under the regulations of the Athletic Policy of Youngstown College. Intercollegiate competition is provided in football, basketball, swimming, baseball, tennis, and golf.

The college is a member of the National Collegiate Athletic Association.

Guidance and Testing Program

The college maintains a guidance and testing program, in charge of a trained psychometrist. It includes the entrance examinations administered to every entering student, in general intelligence and in proficiency in English, and the comprehensive examinations at the end of the sophomore year, for all students In addition, tests in intelligence, personality, mechanical comprehension, and special aptitudes may be taken by any student at any time. The English proficiency test may be re-taken at times announced by the Testing Office and the Division of Language and Literature.

The Testing Office is in Room 211, Main Building, and is open from 9 a.m. to noon and 1 p.m. to 5 p.m. Monday through Friday, 9 a.m. to noon on Saturday, and 6 p.m. to 8 p.m. on Tuesday.

Other Tests

The program described above is covered by the Guidance Fee paid each semester. Not included in that program are still other tests taken only by limited groups, such as the Graduate Record Examinations for those interested in graduate work and the Chartered Life Underwriters examinations taken by students of certain courses in business organization. The fees for such tests are not paid to or through the college business office; the student interested may inquire at the office of the Dean of the College for details.

Placement Service

With the co-operation of the Ohio State Employment Service, the college maintains a full-time Placement Office, whose services are free to undergraduates, graduating students, and alumni for either permanent employment, including teaching positions, or part-time work. It is on the second floor of Annex III and is open from 9 a. m. to 4 p. m. Monday through Friday and from 9 a. m. to 1 p. m. on Saturday.

Music students and alumni of Dana School of Music should also note the placement information in the School of Music section.

The Campus Bulletin

The *Campus Bulletin,* issued from the registrar's office Monday, Wednesday, and Friday from September to June, contains notices of all kinds relating to campus activity. Similar bulletins are issued from time to time during the summer session.

Self-Help

The central location of the college makes it possible for many students to earn part or all of their expenses by working in nearby stores and industrial plants. The Placement Office assists students seeking such employment.

However, if the student plans to do such work while enrolled in classes, he is advised to carry only a part-time college program, since the college accepts no substitute for satisfactory academic achievement. He should keep in mind that for each semester hour of credit, at least three hours of academic en-

deavor are expected weekly (see General Regulations), so that a 16-hour class schedule should take at least 48 hours a week for study and class meetings.

Room and Board

The college has no dormitories, but is glad to assist any student seeking desirable living quarters in a private home. For Buechner Hall (for women), see the index.

The college cafeteria, in Central Hall, serves meals at reasonable rates from 7 a. m. to 7 p. m. daily except Saturdays and Sundays. There are also several commercial restaurants near the campus.

Lockers

The college provides lockers for full-time students, without charge beyond a small sum to cover clerical costs. For this handling charge and the necessary deposit, see Fees and Expenses. Two students are assigned to each locker.

At the end of each term, or earlier if the student withdraws from college, all personal effects must be removed from every locker. The college assumes no responsibility for personal property left in a locker at any time.

Alumni

Alumni are kept informed of college events through the *Alumni News*, published by the Alumni Association.

An up-to-date record of the 3,723 graduates of Youngstown College is maintained in the Office of Public Relations. As far as possible, the graduate's record shows his place of employment and the type of work he is doing, in addition to other information. About half of the graduates live in Youngstown.

A group of artists among the alumni have formed the Youngstown Experimentalists and exhibit their work annually.

The Youngstown College Lettermen's Club is an organization of alumni and former students who have won letters in intercollegiate athletics at Youngstown College.

For alumni library privileges, see page 37.

The Alumni Association

The Youngstown College Alumni Association is the official organization of alumni of the college. Membership in it is extended to all graduates of Youngstown College and its predecessors and to all former students who were in attendance for two school years. .Dues are $2.00 a year, payable to the association's treasurer.

The officers for 1952-54 are Howard C. Rempes, Jr., '38, president; Bruce Black, '30, vice-president; Frank McLaughlin, '47, vice-president; John H. Herrlich, '32, vice-president; Nancy Fitori Kubina, '43, secretary; Rose Rosapepe D'Orazio, '40, treasurer.

For the Alumni Association of Dana School of Music, see the Dana School of Music section.

STUDENT ACTIVITIES

The college encourages student participation in extracurricular activities. However, since the student's scholastic standing is always of first importance, participation in extracurricular activities is limited to students whose point indexes are as high as their class rankings require, as stated under General Regulations. Thus a student on probation may not take part in such activities. Also, participation may be forbidden to any student as a disciplinary measure.

Honor Point System

Achievement in extracurricular activities together with scholarship is recognized through the Honor Point System, initiated by the Student Council and approved by the faculty. Each year the three graduates having the most points receive YC pins (see Awards and Prizes). A list of activities and the points awarded for them is available at the Dean's office.

Student Council

The student body of Youngstown College is represented in all affairs pertaining to it by Student Council, organized under a constitution and recognized by the administration. The council is composed of representatives from the four undergraduate units (the College of Arts and Sciences and the Schools of Business Administration, Engineering, and Music) in proportion to the enrollment in each. A member of the faculty and a member of the administrative staff are chosen by the administration to act as advisers to the group. All meetings of the council are open to all students, and any matter may be brought before a meeting by requesting that it be included in the agenda for the meeting.

Student Council exercises concurrently with the Faculty Executive Committee the power to charter all student organizations, to conduct student elections, to hear appeals from groups or individuals, to establish necessary disciplinary regulations, to appoint student members to joint faculty-student committees, and to supervise programs financed from its operating budget.

The financial support for activities sponsored by Student Council is the Student Activity Fund, into which goes all of

every Student Activity Fee. The fund is administered by the Faculty-Student Relations Committee, composed of three faculty members and three members of the council's finance committee. This faculty-student committee determines financial policies and approves the semester budgets, which are made up by the council treasurer and recommended to the committee by the council.

Of the Student Activity Fund, $5,000 is set apart as a standing reserve and an amount equal to 10% of the fee income of the preceding semester is set aside for minor varsity sports. Annual consignments are made to the cumulative reserves for the Student Union Fund and for band uniform replacement. The remainder is allocated through the operating budget.

Operating-budget allocations for student art shows, debate, dramatic productions, intramural sports, the *Jambar*, music organizations open to all students, and student radio programs, are administered by the groups to whom they are allotted. Student Council itself administers the appropriations for council expenses, the *Student Handbook*, student parking-lot maintenance, student all-college social functions, special projects, and matters connected with membership in the National Student Association.

Publications

The *Student Handbook* is published at the beginning of each college year by Student Council to inform new students about college activities and traditions.

The *Neon* is the college yearbook, published by a staff of students chosen by Student Council. The editors are usually seniors, but other positions are filled by lowerclassmen. This project gives students experience in editorial work and in advertising, financing, and other phases of business management.

The *Jambar* is a bi-weekly newspaper, published by a student staff chosen by the editor, who must be approved by Student Council. Students interested in journalism may serve on the staff to gain experience. The paper is supported partly by the Student Activity Fund and partly by advertising. It conducts a weekly radio program of sports and other college news over Radio Station WKBN.

The *Jambar* is a member of the Ohio College Newspaper Association, and at annual conventions of that group it has been awarded the Scripps-Howard trophy for the best bi-weekly college newspaper in Ohio in 1940, 1941, 1948, 1949, and 1953. It was voted second best in 1945 and 1950 and won first honorable mention in 1952. It has also, in competition with all college newspapers in the state, received frequent honors in news and editorial writing and advertising layout, including four such awards in 1952 and 1953.

Student publications serve as laboratories for journalism classes, with credit in limited amounts given for work on the publications.

Dramatics and Debate

The Drama Guild produces plays each year in co-operation with the Department of Speech and Dramatics, and for several years an all-college variety show has been staged annually. The college is also represented in intercollegiate debating and speech contests.

Among plays produced in recent years are Anouilh's *Antigone,* Wilde's *The Importance of Being Earnest,* Eliot's *Murder in the Cathedral,* and Wilder's *Skin of Our Teeth.*

The Drama Guild, as a service organization, maintains and constantly improves the theatrical facilities of Clarence J. Strouss Auditorium, where flexible arrangements of equipment now permit many unusual effects. Sound and light are controlled from the rear of the auditorium, so that operators can observe the effects. A private telephone system affords constant contact between control room, backstage area, dressing rooms, orchestra pit, and box office.

Important radio programs can be re-broadcast across the main campus and in the auditorium and the cafeteria. Tape recordings are made of plays, recitals, and other events and replayed for study and enjoyment.

Students operate all equipment, which to a great extent they have bought, built, gathered, and arranged. They have rigged over two thousand feet of fly-line and built an admirable array of sets, and are now collecting period costumes, furniture, and other properties.

Students who participate in these activities are automatically permitted to join the Drama Guild, whose purpose is to perform services that promote dramatic activity throughout Youngstown.

Musical Organizations

Many campus musical organizations are open to all students of the college. For a list of these, see the Dana School of Music section.

Art Exhibits

At the invitation of the Butler Art Institute, the Art Club has for many years sponsored an annual exhibition of the work of Youngstown College art students. The work is displayed at the institute for about a month in the early spring, with awards from various sources, including a $50 purchase prize given annually by Student Council to the winner in oils. Both students and alumni frequently exhibit work at the institute's Spring Salon and other showings.

Radio and Television Programs

In addition to the *Jambar* radio program on Station WKBN mentioned above, students of the college conduct a weekly quarter-hour program of music, news, and other entertainment over Radio Station WFMJ and other programs from time to time over Station WBBW. All programs are planned, written, produced, and announced entirely by students. Plans are under way for television programs.

Honorary and Professional Societies

Alpha Psi Omega is a national honorary dramatic fraternity, the local chapter of which was established in 1939. It gives recognition to those who have excelled on the college stage.

Phi Epsilon is a local honorary chemistry fraternity. When founded it was for the better students from all the sciences, but it has since restricted its membership to chemistry majors.

Omicron Lambda is a local honorary society for biology majors. Several field trips a year are a part of its instructional program.

Kappa Delta Pi is an honor society in education. Membership is by invitation and is restricted to junior, senior, and post-graduate students who plan to teach and whose grades place them in the highest quartile of the college.

Phi Mu Alpha Sinfonia is a national honorary music fraternity for men, of which Delta Eta chapter is at Dana School of Music.

Sigma Alpha Iota is a national honorary music fraternity for women, of which Alpha Nu chapter is at Dana School of Music.

Alpha Gamma Sigma is a local honorary business administration fraternity for women.

Alpha Tau Gamma is a local honorary accounting fraternity.

Alpha Mu is a local honorary advertising and merchandising fraternity.

Mu Pi Epsilon is a local honorary engineering fraternity.

The Youngstown College Chapter of the American Chemical Society, Student Affiliates, is composed of students interested in any phase of chemistry.

The Youngstown College Chapter of the American Society for Metals, Student Affiliates, is open to students interested in the manufacture and treatment of metals.

The Youngstown College Student Chapter of the Ohio Society of Professional Engineers is open to all engineering students in good standing, except freshmen. The society has as its aim the preservation of ethical and professional standards within its field.

Social Fraternities

The social fraternities in Youngstown College (local unless otherwise noted) are:

All-College

Alpha Phi Delta†
Beta Sigma Omicron†*
Gamma Sigma*
Kappa Alpha Psi†
Kappa Sigma Kappa†
Nu Sigma Rho
Omega Psi Phi†
Phi Gamma
Phi Lambda Delta*
Phi Mu†*
Phi Sigma Epsilon
Pi Beta Chi
Sigma Delta Beta
Sigma Sigma

Departmental or Otherwise Limited

Secretarial School:
Alpha Iota†*
Alpha Sigma Chi
Delta Chi Epsilon
Eta Delta Sigma
Omega Kappa Upsilon
Tau Kappa Nu*

School of Business Administration:
Sigma Kappa Phi†

Pan-Hellenic Council

Pan-Hellenic Council is composed of two representatives from each active all-college social fraternity and, with two faculty advisers appointed by the president of the college, supervises the relations of such fraternities among themselves and with other groups.

Other Student Organizations

Alpha Phi Omega†§
Alpha Pi Epsilon†§*
Art Club
Dana Music Forum
Drama Guild
Future Teachers of America
Gessner Law Club
International Relations Club
Make Democracy Work Club
Newman Club
Psychology Club
Religion in Life Club
Shenango Valley Youngstown College Students Club
Speech Society
Women's Recreation Association

†National fraternity *Women's fraternity §Service fraternity

AWARDS AND PRIZES

Winners of awards and prizes are announced each year at Commencement, unless otherwise indicated below.

The YC Pins. Youngstown College annually awards a pin to each of the three graduating students who have the largest numbers of honor points (see page 48) in scholastic and extracurricular activities. Each recipient must have earned the majority of his points in scholarship.

The pin is pearl-studded, in the form of a Y superimposed on a C. When the size of the graduating class warrants, the number of pins may be increased.

The Youngstown College Awards for Scholarship. Seven cash awards, donated by a friend of the college and totaling $1000, are made annually as follows:

To the best all-around student, $250, on the basis of academic achievement and extracurricular activity through four years of college.

In the humanities: to the student ranking first, $150, and to the student ranking second, $100, on the basis of four years of study.

In English: to the student ranking first, $150, and to the student ranking second, $100, on the basis of four years of study.

In the social science sequence courses: to the student ranking first, $150, and to the student ranking second, $100, on the basis of comprehensive examinations at the end of the second year.

The Greek Prize. An anonymous philhellene provides an award for the best student in elementary ancient Greek. The winner must have earned at least B in the course. In the absence of a deserving recipient, the prize may be awarded for excellence in advanced Greek.

The Roberts Deliberating Club Award in Social Sciences. The Roberts Deliberating Club of Youngstown annually awards $50 to the graduating student ranking highest in the social sciences.

The Chi Omega Alumnae Award. The Youngstown Chapter of the Chi Omega Alumnae gives an annual cash award to the highest-ranking woman student majoring in the social sciences.

The Omicron Lambda Honorary Biology Fraternity Award for Scholarship. Omicron Lambda Fraternity gives an annual cash award to the outstanding sophomore biology student.

The Scudder Award. Phi Epsilon Fraternity annually presents a certificate to the outstanding student in chemistry. The recipient must have a general average of B and have thirty hours in chemistry. The award is named for Dr. Eugene Dodd Scudder, head of the department of chemistry.

The McCall Prize in Art. A prize of $25 is provided by Mr. C. F. McCall for the best work exhibited by a student of Youngstown College in the Spring Salon of the Butler Art Institute. The winner is announced at the time of the exhibit.

The Sigma Kappa Phi Fraternity Scholastic Award. Sigma Kappa Phi Fraternity awards a certificate and an emblem each year to the member of the graduating class with the highest point average in all business administration subjects who has majored in accounting and fulfilled the requirements for a degree or title in business administration. The recipient must have completed at least 60 semester hours at Youngstown College.

The Professional Engineers Award. The Mahoning Valley Chapter of the Ohio Society of Professional Engineers, Tri-County Section, gives an annual award to the engineering student outstanding in academic achievement and personality over a period of four years. The student must have done all the study for his degree at Youngstown College.

The award is made in honor of the memory of Louis A. Deesz, the first dean of William Rayen School of Engineering.

The American Society of Mechanical Engineers, Youngstown Section, Awards in Mechanical Engineering. The American Society of Mechanical Engineers, Youngstown Section, grants an annual award to the outstanding graduate in mechanical engineering. In addition, awards made possible by Mr. Henrik Ovesen, a life member of the society, are given to the two students with the next highest standings.

The Land Title Guaranty and Trust Company Award. The Land Title Guaranty and Trust Company of Youngstown awards annually a prize of $100 to the student in the School of Law making the highest average grade in the regular course examinations in Real Property I, II, and III.

The winners of the following awards are sometimes announced at times other than Commencement:

The Nathan Hale Chapter, Sons of the American Revolution, Awards. The Nathan Hale Chapter, Sons of the American Revolution, annually awards a medal to each of two R. O. T. C. cadets, as follows:

To the cadet who completes the basic course with the most outstanding excellence in all academic subjects (exclusive of military), military science, leadership, and character.

To the cadet who completes the advanced course with the most outstanding excellence in all academic subjects, (exclusive of military), military science, leadership, and character.

The names of the recipients are inscribed on a plaque presented to Youngstown College by the donors. No student may receive either award unless he has completed one full year of the R.O.T.C. course at Youngstown College.

The Mahoning Chapter, Reserve Officers Association, R.O.T.C. Honor Awards. The Mahoning Chapter, Reserve Officers Association, annually awards a medal to each of two R.O.T.C. cadets, as follows:

To the cadet completing the basic course who is selected for and enrolls in the advanced course and who has best exhibited during his career at Youngstown College the qualities of leadership.

To the cadet completing the advanced course who is commissioned in the Officers' Reserve Corps of the Army of the United States and who has best exhibited during his career at Youngstown College the qualities of leadership.

Participation in extracurricular activities of the college for which honor points are awarded, as well as performance as a cadet, is considered in making selections for these awards.

The United States Anti-aircraft Association Medal. The United States Anti-aircraft Association awards a medal annually to the cadet completing the first year of the advanced course who is the most outstanding in all academic subjects (exclusive of military), military science, and personal qualifications, and who has completed one full year of the R. O. T. C. course at Youngstown College.

The Mahoning Chapter, Daughters of the American Revolution, Awards. The Mahoning Chapter, Daughters of the American Revolution, annually awards a medal to each of two freshmen completing the first year of the basic course, as follows:

To the cadet with outstanding excellence in all academic subjects (exclusive of military), military science, leadership, and character.

To the cadet who during the year has best exhibited the qualities of leadership. Participation in extracurricular activities of the college for which honor points are awarded, as well as performance as a cadet, is considered in making the selection for this award.

Essay Contests. From time to time various organizations sponsor essay contests among the student body. The pertinent information is disseminated through normal campus channels.

SCHOLARSHIPS AND LOAN FUNDS

All scholarships, grants-in-aid, and loans are under the supervision of the faculty Committee on Scholarships. Inquiries may be addressed to the Dean.

Scholarships for entering freshmen are granted on the basis of (1) the student's high school record, (2) the recommendation of his high school principal or teachers, (3) his standing in a standard college entrance test, and (4) his need. For students already enrolled, the basis is scholastic ability and need.

Grants-in-aid are awarded on the basis of (1) character, (2) need, and (3) ability to make a creditable academic record. The maximum amount of aid given is one-half of tuition.

Loans are based on a consideration of scholastic ability, character, and need.

The Youngstown College Student Scholarship Fund. This fund is financed by a group of prominent business and professional men and women of the Mahoning Valley for the purpose of aiding worthy students. Fifteen full scholarships and thirty half-scholarships were available for 1952-53, and were granted on the basis of high school record, competitive examination, and recommendation of the high school principal or teachers. Selection is made by the Committee on Scholarships.

The Youngstown Sheet and Tube Company Scholarships. These scholarships were established in 1951 by the Youngstown Sheet and Tube Company. Of the five offered each year, three are four-year scholarships for sons of company employees and provide tuition and fees for full-time study in the College of Arts and Sciences, the School of Business Administration, or William Rayen School of Engineering. The other two are for part-time study and are granted to employees on a year-to-year basis. Further details are available from the company, to which application is made and which makes recommendations to the Committee on Scholarships.

The Sharon Steel Corporation Scholarships. These three four-year scholarships were established in 1945 and 1946 by the Sharon Steel Corporation, which awards them each year to

sons and daughters of its employees who are interested in studying engineering, metallurgy, or business administration. Each scholarship provides for the recipient's tuition, fees, textbooks, and supplies at Youngstown College to the extent of $300 a year for four years. In addition, the Sharon Steel Corporation offers each winner part-time and vacation employment during his four years at Youngstown College.

The recipients are selected by the Committee on Scholarships on the basis of academic achievement, character, personality, and participation in extra-curricular activities in high school. Every applicant must be the son or daughter of an employee of Sharon Steel Corporation's Roemer Works, Lowellville Works, or main office, or one of its subsidiary companies: The Niles Rolling Mill Company, Niles, Ohio; Brainard Steel Company, Warren and Orwell, Ohio; or Sharonsteel Products Company, Farrell, Pennsylvania.

The William F. Maag, Jr., Scholarship. This scholarship was established in 1947 by the Chamber of Commerce of Youngstown in honor of Mr. William F. Maag, Jr. The revenue from invested capital pays the tuition and fees for one year of a student chosen annually on the basis of recommendations by Mr. Maag.

The President and Mrs. Howard W. Jones Scholarship. This scholarship has been provided since 1947 by the faculty of Youngstown College in honor of President and Mrs. Jones. The funds for it are contributed annually and it pays the tuition and fees for one year of a student chosen on the basis of recommendations by Dr. and Mrs. Jones.

The Benjamin T. Davis Scholarship. This scholarship was established in 1949 by Judge John W. Davis as a memorial to his brother. The stipend is $300. It is awarded annually to a boy graduate of Fitch High School, Austintown, chosen on the basis of recommendations by the Superintendent of Austintown Township schools, the principal of Fitch High School, and the president of the Austintown Township Board of Education.

The Rachel Davis Scholarship. This scholarship is like the Benjamin T. Davis Scholarship except that it is a memorial to Judge Davis's sister and is for a girl graduate, chosen similarly.

The Latin Culture Foundation Scholarship. An annual award of $200 is offered by the Latin Culture Foundation to an outstanding student of the Italian language and culture. Selection is made by the Committee on Scholarships on the basis of academic achievement and need.

R. O. T. C. Command Scholarships. Scholarships are granted to fourth-year military science students designated Cadet Lieutenant Colonel ($150) or Cadet Major ($100), in recognition of their extraordinary responsibilities in administering the Youngstown College Corps of Cadets. Recipients must have demonstrated outstanding leadership and scholastic ability, and must adequately perform their duties as cadet officers. Half of each scholarship is made available at the beginning of each semester.

The Westinghouse Achievement Scholarship in Electrical Engineering. This scholarship, established in 1952 by the Westinghouse Educational Foundation, is awarded annually to a junior majoring in electrical engineering, for high academic achievement and demonstrated qualities of leadership. The stipend is $500. The recipient is chosen on the basis of recommendations by the faculty of William Rayen School of Engineering.

The Westinghouse Achievement Scholarship in Mechanical Engineering. Like the Westinghouse Achievement Scholarship in Electrical Engineering, but for a junior majoring in mechanical engineering.

The Women's Auxiliary of the Mahoning Valley Chapter of the Ohio Society of Professional Engineers Scholarship Grant. An annual grant of $100 is given to a deserving junior in William Rayen School of Engineering by the Women's Auxiliary of the Mahoning Valley Chapter of the Ohio Society of Professional Engineers.

Music Scholarships. A limited number of scholarships are awarded by the college for proficiency in a band or orchestra instrument, singing, or accompanying. Applications may be sent to the dean of Dana School of Music, who makes recommendations to the Committee on Scholarships.

The Strouss-Hirshberg Music Center Scholarships. These scholarships have been made possible each year since 1947 by

the Strouss-Hirshberg Music Center. They provide annually one hundred dollars for each of four students in Dana School of Music. Applications may be sent to the dean of the School of Music, who makes recommendations to the Committee on Scholarships.

The Sigma Alpha Iota Scholarship. The local Alumni Chapter of Sigma Alpha Iota, honorary professional music fraternity for women, offers a scholarship available only to members of Alpha Nu, the local undergraduate chapter of the fraternity. The requirements for this scholarship may be learned from the chairman of the chapter's scholarship committee.

The William H. Dana Scholarship Loan Fund. This fund was established by the Alumni Association of Dana School of Music as a memorial to the school's founder. Information about loans may be secured from the association's secretary, at Dana School of Music.

The Salem Community Scholarship Association. Any student living in the Salem community who has satisfactorily completed at least two years of formal education beyond high school may apply to the president of the Salem Community Scholarship Association, Salem, Ohio, for a loan to help him complete his training.

Graduate Scholarships. Many graduate scholarships, fellowships, and assistantships are available from other institutions. Notices of these are frequently posted on the college bulletin boards.

Fulbright Scholarships. United States government scholarships for foreign study are available to undergraduates as well as to graduate students.

The Cecil Rhodes Scholarships. Men students of Youngstown College are eligible to apply for these scholarships, which provide for study at Oxford University in England. Scholarships are awarded each year to students selected through personal interviews by a regional committee.

General Requirements and Regulations

ADMISSION

Any graduate of a first grade high school or an accredited secondary school may be admitted to Youngstown College upon proper application and presentation of a satisfactory official transcript of his high school credits and evidence of his good character.

The applicant, if accepted, is admitted to the Lower Division of the college. He becomes a candidate for a degree when he has completed 60 semester hours of credit and has been admitted to the Upper Division.

Application

Application is made on a form available at the Registrar's office. It must be accompanied by an official statement of high school credits and by the Matriculation Fee of $5.00, and should be submitted to the Registrar as soon as possible after graduation from high school.

The office of the Registrar is on the first floor of the Main Building. It is open from 8 a.m. to 5 p.m. and from 6:30 p.m. to 8:30 p.m. Monday through Friday and from 8 a.m. to noon on Saturday.

Guidance Examinations

Every prospective freshman takes general examinations for guidance purposes. For fall enrollment, these are taken on Freshman Day (see the Calendar) ; for other terms, at designated times. An applicant who shows low results in these examinations or who stood in the lowest third of his high school class may be refused admission; if admitted, he will be on probation until he has demonstrated his ability to meet the demands of college study.

Entrance Requirements, and Deficiencies

The applicant must present 16 high school credits, including certain specified requirements which differ according to the degree sought. An applicant deficient in an entrance requirement

may be accepted, but must make up the deficiency before he can be admitted to the Upper Division. Means of making up such deficiences are indicated below.

Admission to the college does not mean that the student is equally qualified as a candidate for every degree offered. The student should have this in mind if he later changes the degree for which he is studying, since his high school credits may not satisfy the entrance requirements for his new objective, even though they were adequate for the former one.

For admission to courses leading to the various degrees, the entrance requirements are as follows:

For the degree of *Bachelor of Arts* or *Bachelor of Science*:

English	3 units
A foreign language†	2 units
United States history and civics	1 unit
Algebra*	1 unit
Geometry*	1 unit
A laboratory science*	1 unit
Others	7 units

For the degree of *Bachelor of Engineering*:

English	3 units
United States history and civics	1 unit
Algebra*	2 units
Plane geometry*	1 unit
Trigonometry*	½ unit
Physics*	1 unit
Others**	7½ units

For the degree of *Bachelor of Science in Business Administration* or *Bachelor of Science in Education*:

English	3 units
United States history and civics	1 unit
Mathematics*	1 unit
Science or additional mathematics*	1 unit
Others	10 units

†A high school graduate lacking this entrance requirement may make up the deficiency by taking a first-year foreign language course without college credit; see "Credit Evaluation for the Foreign Language Requirement" in the College of Arts and Sciences section. However, foreign language study is not required for the Bachelor of Science degree if the student is a registered nurse or is majoring in medical technology.

*A high school graduate who lacks this entrance requirement may make up the deficiency by taking the appropriate high-school-level course offered by the mathematics department or the physics department. No college credit is given for such a course.

**One unit of mechanical drawing is highly recommended.

For the degree of *Bachelor of Music*:

English	3 units
A foreign language†	2 units
Mathematics*	1 unit
Science or history	1 unit
Others	9 units

For the requirements in musical training and ability, see the Dana School of Music section.

For the suggested pre-law and pre-medical courses:

The same as for the Bachelor of Arts degree.

G. E. D. Test Credits

Certain credits for successful results in United States Army General Educational Development Tests may be accepted as high school credits toward meeting entrance requirements, but not as college credit.

Admission to Advanced Standing

A student applying for permission to transfer from another college must present, preferably one month before his enrollment, a transcript of all his previous high school and college records. He must present evidence of honorable dismissal from the college last attended; no applicant will be accepted who is not eligible to return to his former institution. His class standing at Youngstown College will depend on the quantity and quality of his previous credits. (For R. O. T. C. credit, see "Military Science and Tactics.") A transfer student with 45 or more hours of credit must file an application for admission to the Upper Division when he applies for admission to Youngstown College.

Special Students

Occasionally a student who is not a high school graduate, but who because of maturity seems capable of college study, may be admitted as a special student. He takes courses and receives grades like the ordinary student, but his credits can not be accepted toward a degree unless he completes the requirements for and receives his high school diploma.

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†See corresponding note on preceding page.

*See corresponding note on preceding page.

Registration of Freshmen

Although the student enrolling for the first time is instructed at the Registrar's office about scheduling his courses and registering, he will find it helpful to read the section "General Regulations". It may be pointed out here that an extra fee is charged for late registration, when that is permitted.

Freshman Day

Freshman Day is the day on which prospective freshmen for the fall semester take their guidance examinations and receive information helpful in enrolling and getting started properly. It occurs just before the opening of the fall semester; the date is given in the Calendar.

English Test Requirement

One of the tests given entering freshmen is a standardized test widely used among colleges to discover a student's competence in using and understanding the English language. The results indicate to the student and to his instructors his standing in these respects in relation both to his classmates and to other students throughout the nation. Any student may re-take the test to demonstrate improvement in his proficiency in English.

GENERAL REQUIREMENTS FOR GRADUATION

The requirements for graduation may be those stated in the catalog in effect at the time of the student's entrance into Youngstown College or those stated in any subsequent catalog; but the student must select *one* of the pertinent catalogs and complete the requirements as stated therein. This rule is not affected by a change in major.

Requirements for Any Degree or Title

A candidate for any degree or title must fulfill the following requirements:

Application. An application to graduate must be filed with the Dean of the College. For the time and fee for this procedure, see page 84. To avoid a penalty, it must be done by the first day of the last fall semester before the time of intended graduation. No application for graduation is accepted after March 31.

Residence. The last 30 semester hours leading to the degree or title must be completed at Youngstown College; except that in curriculums such as the pre-law and the pre-medical, which allow the student to earn his final credit hours *in absentia*, the last 30 hours prior to this final stage must be spent at Youngstown College. Any modification of this requirement must be approved by the Dean of the College.

Grades. The point index must be not less than 1.00 (see page 77).

Requirements for Any Degree

A candidate for a degree must also fulfill the following requirements:

Upper Division Status. The student is not a candidate for a degree until he has been admitted to the Upper Division of the college, as explained on page 74.

Entrance Deficiencies. Any deficiency in entrance requirements for the desired degree must be made up before the student is admitted to the Upper Division.

This is the student's responsibility. The entrance requirements for the several degrees differ; they are listed on pages 63-64 and should be read carefully. This is especially

important when a student changes the degree for which he is studying, as his high school credits, though satisfactory for his original objective, may not satisfy the entrance requirements for the new one. *The fact that a student has been admitted to the college does not mean that he is equally qualified to become a candidate for every degree the college offers.*

Course Levels. At least 60 semester hours must be completed in courses numbered 200 or higher, of which at least 40 hours must be in courses numbered 300 or higher.

Major and Minors. The proper major and minor requirements must be completed as described below.

Religion. The candidate must complete either a three-semester-hour course in the Department of Philosophy and Religion, or Humanities 401 or 402. (For convenience, this general requirement is repeated in the list of requirements for each degree.)

Additional Requirements for Each Degree

For the degrees of *Bachelor of Arts, Bachelor of Science,* and *Bachelor of Science in Education,* the requirements are given in the College of Arts and Sciences section.

For the degree of *Bachelor of Science in Business Administration,* the requirements are in the School of Business Administration section.

For the degree of *Bachelor of Engineering,* the requirements are in the William Rayen School of Engineering section.

For the degree of *Bachelor of Music,* the requirements are in the Dana School of Music section.

Modifications for R. O. T. C. Students

For the student in the R. O. T. C., certain courses that would otherwise be included in his curriculum may be waived, as follows:

a. A student completing Military Science 101, 102, 201, and 202 may omit Social Science 102 (3 hours), Physical Education 108 (1 hour), 1 hour in physical activity courses, and 3 other hours to be decided in consultation with his adviser. He may not omit any part of the science requirement for any degree.

b. A student completing Military Science 301, 302, 401, and 402 may omit Psychology 201 (except as a prerequisite to other courses) and 9 other hours to be determined in consultation with his adviser. For the degrees of Bachelor of Arts, Bachelor of Science in Business Administration, and Bachelor of Science in Education, the courses thus omitted may include 3 hours of science, provided that the candidate for the Bachelor of Arts degree takes 8 hours of biology, chemistry, or physics.

Unless specifically named above, no course required for the degree sought may be thus waived.

Major and Minor Requirements

Each student must complete a major and at least one minor within the semester hours of credit he needs for graduation.

A departmental major consists of at least 30 semester hours with grades of C or better in one department.* A combined major, for which the courses are in more than one department, consists of at least 45 semester hours with grades of C or better.

A minor consists of at least 15 semester hours with grades of C or better in a department other than that of the major.

The head of the student's major department determines the course requirements for both the major and the minor or minors and sees that they are met. He may require the student to do more, but not less, than the minimums stated above. Both major and minor must meet his approval.

As soon as a student has decided on his major, he should consult the head of the department in which his major study will be done. While no student is compelled to declare his major before he applies for admission to the Upper Division, in some departments it is essential that the planning be done not later than the beginning of the sophomore year, or in some cases earlier, to avoid delay in graduation.

Requirements for a Second Baccalaureate Degree

A student who has a degree from Youngstown College and desires a second degree must earn 18 semester hours of credit in

*For this purpose, Dana School of Music and William Rayen School of Engineering are departments, and each foreign language is a department.

addition to the total that he had when he completed the requirements for the first degree, meet all requirements for the second degree, and complete the requirements for another major.

A student who has a degree from another institution and desires a degree from Youngstown College must complete a total of 30 semester hours, meet all requirements for the second degree, and complete the requirements for a new major.

Curriculums to Meet Special Requirements

All states have detailed programs of courses necessary for teaching certificates; medical schools have specific requirements for pre-medical study; and many law, theological, technological, and graduate schools have more or less mandatory recommendations for those seeking admission. A prospective teacher, therefore, or anyone wishing to enter a professional, technological, or graduate school of any kind should consult the Dean of the College as early as possible. Such special needs can usually be met within the degree requirements of Youngstown College, but the proper selection of courses may have to begin in the freshman year.

Commencement Exercises

There is only one graduation ceremony each year: in June, at the end of the second semester of the academic year. A student who completes the requirements for a degree or title at the end of a first semester receives his diploma in June and is present, if at all possible, at the commencement exercises as a member of the graduating class. A student not eligible to graduate in June but planning to complete the necessary study during the ensuing summer session is present in cap and gown at the June ceremony but does not receive his diploma until he completes the requirements.

GENERAL REGULATIONS

Scheduling of Courses; Advisement

A student already attending college makes out his schedule of courses for the next semester during a period of the semester in progress designated as the Advisement Period. The student plans his schedule in consultation with his faculty adviser, and every student's schedule must have the signed approval of his adviser, even when a prescribed curriculum leaves him no actual choice of courses.

A student entering for the first time, or a former student wishing to re-enter, may get instructions for scheduling and advisement from the Registrar's office.

The student planning his program should understand that some courses are not offered every term. Those offered in a particular semester or summer session, with their times and places, can be ascertained from the *Schedule of Classes* for that term, which is published in time for use in advisement and scheduling for the term in question. For information as to what courses will be offered in the future, or when a particular course will be offered again, the student may consult the dean of the unit concerned.

Although the college tries, through the advisement system, to insure the student's taking all the courses needed for his degree, ***the ultimate responsibility for meeting any requirement rests with the student.*** He will do well to read the statements under "Candidacy for a Degree", below.

Some Definitions

The *class hour** is a 50-minute class period and is the basic unit of instruction. The term *semester hour** signifies one class hour a week carried for one 18-week semester (or the equivalent in a summer term). A *semester hour of credit*** is the amount of credit given for one semester hour successfully completed, and represents *three* hours of study and instruction time each week throughout the semester.

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*Often called simply "hour" when the meaning is clear.

**Often called simply "hour of credit." The expression "credit hour" sometimes means "semester hour of credit" and sometimes merely "semester hour."

The Time/Credit Ratio

As seen above, credit is based on a time/credit ratio of 3 to 1 (three hours a week of study and instruction to one semester hour of credit). Of these three hours, the class hour is one; the other two are the time spent by the student in preparing for the class hour, or in supplementing it. In other words, *for every class hour, two additional hours are expected to be spent outside of class* in reading, thinking, writing, solving problems, laboratory activity, or whatever the course calls for. The exact amount may vary from day to day, depending on the particular assignment, the individual student, and other factors; but assignments are normally made on this one-plus-two principle, and the student is responsible for completing them.

Thus, for example, a so-called "three-hour" course actually involves nine hours a week, consisting of at least 150 minutes of class sessions (that is, three class hours*) and six hours of study done out of class. If the course involves laboratory periods, these form a part of the weekly total of nine hours.

Accordingly, the student carrying a 16-hour schedule, for example, should count on devoting to it an average of 48 hours a week (exclusive of time spent in extra-curricular activity, commuting, eating, etc.) The slower student may find that more than 48 hours is necessary. These facts should be kept in mind especially by students planning to hold jobs while attending college.

The Student Load

The courses taken by a student during any semester constitute the *load* that he carries for that semester. The load is measured in semester hours. The size of the load a student is permitted to carry depends on the degree he is seeking (and hence on the curriculum he is following) and to some extent on his grade average, as follows:

a. A student following a business administration, engineering, or music curriculum may carry as many hours as the curriculum requires, on the approval of the dean of his school. Such approval ordinarily is given.

*In a three-hour course the class hours may take the form of three 50-minute sessions, or two 80-minute sessions, or (as in some laboratory courses) one or two 50-minute sessions and one or more laboratory periods which include instruction, or any other practicable form.

b. All other students are governed by the following regulations:

1. A student with a point index of 2.0 or better may carry 18 semester hours with his adviser's approval, which ordinarily is given.

2. No student may carry more than 18 semester hours, and no student whose point index is below 2.0 may carry more than 16 semester hours, unless his written request to do so is approved by his adviser and by the Committee on Academic Standards.

3. In determining a student's semester load, all courses are counted, whether they give credit toward graduation or not, except Orientation 100 and the general-requirement courses in health and physical education.

The form for an overload request is available at the Registrar's office. After grades for the preceding term are reported, a dean may reduce the schedule of any student in his unit whose record is poor.

Any student may, on his adviser's approval, carry a course in military science in addition to the semester load allowed him according to the preceding paragraphs.

Auditors

A student may register for and attend any course as an auditor. An auditor is not held responsible for the regular classwork and preparation of assignments and receives no credit for the course. However, he pays the regular tuition for the course, as well as any applicable course-fees, and it is counted in his load.

An auditor is not to be confused with a special student (see page 64).

Registration

Every student registers in person for the work of each session on or before a final registration date. Only under exceptional circumstances may a student register after that date, and one who does is charged a fee. One who has begun his registration before the deadline may complete it late, but must likewise pay a fee. There is no reduction of tuition or other fees because of late entrance into courses.

No student may enter a course after the first meeting of the third week of a semester or after the seventh calendar day of a summer term.

For freshman registration see page 65.

Change of Registration

A student wishing to alter his schedule after registration must fill out a Change of Registration form, have it signed by the instructor or instructors concerned, by his adviser, and by the business manager, and present it for approval by the Registrar. A mark of failure is recorded for a course dropped without this procedure, since such withdrawal is not official.

Anyone changing his registration after a date set by the administration pays a fee, unless the administration has requested the change.

Full-time Status

A full-time student is one carrying 12 or more semester hours in courses that give credit toward graduation.

Class Rank

A student who has from 29 to 60 semester hours of credit is a sophomore; one who has from 61 to 93 hours and has been admitted to the Upper Division is a junior; and one who has 94 or more and has been admitted to the Upper Division is a senior. The student must also have met the grade requirements for his class (see page 77).

Upper and Lower Divisions

Courses numbered from 100 to 199 are designed for the freshman level; from 200 to 299, the sophomore; from 300 to 399, the junior; and from 400 to 499, the senior. The freshman and sophomore levels constitute the Lower Division, and the junior and senior levels the Upper Division.

No freshman may take an Upper Division course without the approval of the Dean of the College. A senior taking a 100-level course will receive only two-thirds of the normal credit for it, unless the head of his major department waives this rule. For the amount of credit required at each level, see page 67.

Candidacy for a Degree

Any student who wishes to become a candidate for a degree from Youngstown College must file with the Dean of the College an application for admission to the Upper Division when he has completed from 45 to 60 semester hours. A transfer student with 45 or more semester hours must file such an application when he applies for admission to Youngstown College. Until admitted to the Upper Division, no student may be given junior or senior class standing or be considered a candidate for a degree.

His application form must indicate:

1. The degree for which he is a candidate. He may thereafter change his degree objective only by filing a new application for admission to the Upper Division as a candidate for the new degree.

2. That he has completed all entrance and Lower Division requirements for the degree he seeks, or that specified deficiencies exist of which the student's adviser certifies his awareness.

3. His major subject, with the signed approval thereof by the head of the major department. He may thereafter change his major only by formal application to the Dean of the College and with the approval of the heads of both the old and the new major departments.

Sophomore Examinations

Every sophomore must take comprehensive examinations before he can have junior ranking. (This rule has been temporarily suspended.)

Grading System

The grade for a course completed may be: A, excellent; B, good; C, average; D, poor but passing; or F, failure.

The grade of E is given to a student who has not completed a course (including the final examination) when grades are submitted. If he does not complete it within 60 days thereafter, the grade becomes an F unless circumstances warrant an extension of the time. The instructor is notified before such an F is recorded.

If a student has been absent without explanation and it is not known whether he has dropped the course, the grade of E may be given if, in the teacher's judgment, the part of the course missed can be practicably made up and a grade other than F is possible on its completion.

If a student has received an E in a prerequisite course and has been allowed to enter the following course, he should see that the E is removed by the end of the sixth week of the second course. Otherwise, if the E becomes a grade that does not satisfy the prerequisite, he will receive F in the second course for having to drop it later than the sixth week.

The grade of F can result from (1) unsatisfactory achievement; (2) failure to complete a course, as stated above; (3) dropping a course improperly (unofficial withdrawal); or (4) cheating, or dishonesty of any kind in the course.

Other marks recorded are:

AUD, signifying that the student has attended the class as an auditor (see page 72).

WP (withdrawal with passing status), representing official withdrawal from a course before the end of the sixth week of a semester, the first week of a five-week summer course, or the second week of a ten-week summer course.

WF (withdrawal with failing grade), representing official withdrawal from a course when WP is no longer applicable.

(WP and WF are determined and recorded by the registrar, not by the teacher.)

A student may appeal to the Committee on Credits and Admissions for reconsideration of any final grade, if he feels that the grade was given without proper regard for some pertinent factor or circumstance.

The distribution of grades follows in general the "Normal Curve", according to which from 5% to 10% of the grades in a class are A's, 20% to 25% B's, 40% C's, 20% to 25% D's, and 5% to 10% F's. The teacher, however, is expected to use his judgment and to regard the curve as a guide rather than as something to be rigidly imposed.

Teachers may use plus and minus modifications of the grades A, B, C, D, and F; but the Registrar does not record such modifications, and they are disregarded in calculating point indexes.

Grade Reports

A report of his grades is sent to every student as soon after the close of a semester as possible. A teacher may use any means agreeable to his class to provide such information more quickly.

The Point Index, and Scholastic Standing

The student's scholastic standing is indicated by his point index (also called "point average"). For determining this, every grade has a point value for each semester hour it represents, as follows: A, 3 points; B, 2 points; C, 1 point; D, no points; F or WF, −1 point. For example, an A in a 3-hour course is worth 9 points; an F in a 4-hour course means −4 points. To find the point index, the total number of points earned is divided by the number of semester hours completed with passing grades. Thus a student who successfully completes 16 semester hours and earns 24 points has a point index of 1.50. (See also Repetition of Courses, below.)

Courses that give no credit toward graduation, as well as the grades received in them, are not included in the computation of the point index.

The Honor Roll

The honor roll, announced once each year, consists of the five per cent of each class who have the highest point averages. Class rank is determined by the definitions found on page 66. A student with less than 12 semester hours of credit acquired at Youngstown College is not included in the roll.

For freshmen and sophomores, the top five per cent are determined on a college-wide basis; for juniors and seniors, those included are the five per cent who stand highest among the candidates for each degree.

A student with an E on his record at the time the calculations for the honor roll are made is necessarily excluded from consideration.

Grade Requirements

A student must have a point index of not less than 1.00 to be eligible for a degree.

A student whose cumulative point index is less than 0.50 at the end of either semester of his freshman year, or less than 0.75 at the end of either semester of his sophomore year, or less than 1.00 at the end of any semester thereafter, will be on probation the following semester; if he does not raise his point index to the required minimum during the probationary semester, he will not be readmitted.

A candidate for the degree of Bachelor of Engineering whose cumulative point index is less than 1.00 at the end of any semester will be on probation the following semester; if he fails to raise his point index to 1.00 during the probationary semester, he will not be readmitted as a candidate for the Bachelor of Engineering degree.

A student who receives grades of F in half, or more than half, of the total number of semester hours for which he is registered will not be readmitted.

Repetition of Courses

A student may repeat a course (except in military science) once. If the grade thus sought is prerequisite to another course, the repetition must be successfully completed before the other course is taken. No course may be repeated if the student has received credit for a more advanced course in the same subject.

If a course is repeated, only one of the two grades—the higher, if any—is used in calculating the point index, providing no F is involved; but if either grade is F or WF, both grades are reckoned in the point index.

Attendance

If a student is irregular in class attendance, the number of semester hours of credit he would otherwise earn may be reduced.

Absence from an Examination

A student must have the instructor's consent in order to take any examination at a time other than the scheduled one. The instructor, if he gives such consent, may waive the Fee for

Irregular Examination if such action seems warranted. If the test is to be taken at the Testing Office, the student presents there a permit signed by the instructor. Permit forms are available at the unit dean's or the Registrar's office.

Chapel and Assembly

Chapel meetings are at St. Joseph Roman Catholic Church, for Roman Catholic students; for Protestant students they are at St. John's Protestant Episcopal Church. Both churches are close to the campus.

College assemblies take place in Clarence J. Strouss Memorial Auditorium.

Honorable Dismissal

Ordinarily a transcript of credits serves as a statement of honorable dismissal except when such a statement is not merited, since a transcript bears indication of whether a student is withdrawing in good standing, as well as of any disciplinary action he may have incurred while attending Youngstown College, and since no transcript is issued to a student who has not met all his financial obligations to the college.

If a separate statement of honorable dismissal is needed, the Dean of the College will furnish one, provided the student is of good character, has a satisfactory record of conduct, has no financial obligations to the college, and is withdrawing voluntarily for acceptable reasons; and provided the student, if withdrawing during a term, follows the official procedure for a change of registration (see page 73). A statement of dismissal issued with any of these conditions unmet may be expected to include an explanation of the circumstances.

All tuition and fees for any term are due at the opening of that term. No student may attend classes until he has completed his registration by paying his tuition or arranging with the business manager for its payment. (Late registration entails a penalty fee; see page 83.) If payment is by installments there is a carrying charge on the unpaid balance, and lapse of payment results in suspension from classes; see "Tuition Payment by Installments," page 85.

No student may enroll for a new term until he has paid all his previous tuition. No student may graduate or receive a transcript of credits who has not met all his college obligations by May 1 of the year of his intended graduation or transfer, or by the previous December 1 if he intends to transfer at the end of the first semester.

The Business Office, including the cashier's window, is open during the following hours: 8:30-11:30 a.m., 12:30-4:30 p. m., and 6:30-8:30 p. m. Monday through Friday, and 8:30 to noon on Saturday.

Tuition and Fees for One Term

The rates in the following tables are for a single term (semester or quarter, as indicated). No tuition is charged for Orientation 100, Physical Education 125M, and music ensemble courses.

In determining the assessment of fees for services and activities, all courses are counted except Orientation 100 and music ensemble courses. The purposes of the fees are explained on pages 82ff.

For All Students in the College of Arts and Sciences, the School of Business Administration, and William Rayen School of Engineering, and for Part-time Students in Dana School of Music

Each semester:

Tuition: each semester hour	$ 10.00
Applied Music rates:	
One half-hour private lesson a week	54.00
Two half-hour private lessons a week	108.00

(Preparatory Department rates are $27.00 and $54.00.)

Fees for services and activities:

Payable by every student carrying 11 or more semester hours 22.50

This sum comprises the following regular fees:

Athletic Fee	$5.00	Library Fee	$5.00
Guidance Fee	1.00	*Neon* Fee	2.50
Health Fee	3.00	Student Activity Fee	5.00
Student Union Fee	1.00		

Payable by every student carrying from 6 to 10½ semester hours (inclusive) 5.00

This fee covers the privileges of the regular Athletic, Library, and Student Activity Fees. A student carrying less than 6 semester hours does not have to pay the fee but may enjoy its privileges by paying it.

For Full-time Students in Dana School of Music*

Each semester:

Tuition (11 to 15 semester hours) $110.00
Each semester hour over 15 ..... 10.00

Applied Music Charge, basic (3 lessons a week) † 120.00
Each additional lesson-per-week 40.00

Fees payable by every full-time music student 24.50

This sum comprises:

The seven fees paid by all other 11-hour students	22.50
Lecture-Recital Fee	2.00
	$254.50

*A full-time music student is a student enrolled in Dana School of Music and carrying 11 or more semester hours, inclusive of applied music but exclusive of Orientation 100 and music ensemble courses. A full-time music student who during a semester reduces his load to less than 11 hours is charged as a part-time student for the whole semester.

†*The Applied Music Charge and Hours of Credit.* Every music curriculum includes courses in applied music that require 3 private lessons a week, which are paid for at a reduced rate through the basic Applied Music Charge. The semester hours of credit that may be earned in such courses are included in the 11 or more hours covered by the tuition charge. The amount of the credit depends on the degree of proficiency and amount of practice demanded by the curriculum: a *voice, instrumental,* or *sacred music* major may enroll for and earn 4 semester hours of credit in applied music; a *theory, composition,* or *music education* major, 3 hours.

For refunds on withdrawal from applied music courses, see page 86.

In All Units
(except the School of Law)

Fees payable when applicable, each semester:

Gymnasium fee $7.50

This is a special course-fee for Physical Education 125M, the course taken by most men students to meet the college requirement in physical activity. There is no regular tuition charge for this course.

Laboratory or other special course-fees ..... see Courses of Instruction

Records and Reports Fee ..... $2.50 to $10.00

These and other special fees are explained on pages 83-85.

NOTE: It is understood that any or all exceptions to the payment of fees shall be determined by the business manager.

In the School of Law

Tuition (each quarter): each subject $35.00

Student Fee (each fall and winter quarter only) 5.00

This fee covers the privileges of the Student Activity, Library, and Athletic Fees.

Records and Reports Fee (each quarter, if applicable) ..... $2.50 to $7.50

This fee varies according to the load carried.

NOTE: It is understood that any or all exceptions to the payment of fees shall be determined by the business manager.

In the Secretarial School

See the special brochure issued for this school. For full-time work taken for college credit, the tuition and fees are the same as for the School of Business Adminstration.

Summer Session

The tuition rate for the summer session is $10.00 a semester hour, plus any additional course fees such as for laboratory courses. A special bulletin describing the summer session is published each April.

If a student who during the academic year is a full-time music student takes summer courses in applied music, he pays tuition at the regular rate for the semester hours of credit, plus applied music charges at the rate of $40.00 per credit hour or fraction thereof.

Audited Courses

A person auditing a course or courses pays tuition at the regular rate of $10.00 a semester hour, plus any laboratory or other special fees that may be applicable.

Regular Fees

Fees payable by every student carrying 11 or more hours support services and activities as follows:

The *Student Activity Fee* ($5.00) goes entirely into the Student Activity Fund, which provides most of the financial support for the activities sponsored and supervised by Student Council. For a list of these many activities and an explanation of how the fund is administered, see pages 48-49. Among other benefits, payment of the fee entitles the student, without further charge, to attend all-college social functions sponsored by Student Council and to receive a copy of each issue of the *Jambar* (the student newspaper); it also entitles him to reduced prices for admission to certain college plays.

The *Neon Fee* ($2.50) entitles the student to a copy of the *Neon*, the college yearbook.

The *Health Fee* ($3.00) makes possible, and entitles the student to the advantages of, the services described on page 43.

The *Athletic Fee* ($5.00) helps meet the cost of equipping, training, and transporting teams for participation in intercollegiate football and basketball events and of staging and advertising such events, and entitles the student to admission to Youngstown College football and basketball games in Youngstown.

The *Library Fee* ($5.00) contributes to the maintenance of library service, including books, periodicals, and other facilities, and entitles the student to full use of these facilities. They are described on pages 34 and 36-37.

The *Guidance Fee* ($1.00) makes possible the program of testing and guidance described on page 44. It also covers the cost of mimeographing final and other class examinations and of purchasing the standard tests frequently used.

The *Student Union Fee* ($1.00) is used to operate and maintain suitable centers for off-hour and relaxational student activity, including Pollock House.

A fee of $5.00 is paid by every student carrying from 6 to 10½ semester hours, inclusive. It covers the privileges of the Athletic, Library, and Student Activity Fees. The student carrying less than 6 semester hours does not have to pay this fee but may enjoy its privileges by paying it. A law student pays this fee each fall and winter quarter only.

Regular Fee for Music Students

Lecture-Recital Fee. A fee of $2.00, payable by each full-time music student, makes possible a series of lecture-recitals by prominent artists, composers, and musicologists.

Special Fees

The following fees are payable by those to whom they apply. Any exception is determined by the business manager.

Records and Reports Fee. A fee of from $2.50 to $10.00, depending on the number of semester hours carried, may be charged anyone whose work, status, and/or purposes are such as to involve an amount of processing, record-keeping, or other clerical expense beyond that ordinarily necessary.

Laboratory fees and similar special course-fees, indicated in the descriptions of the courses for which they are charged, cover the cost of materials consumed or other expenses peculiar to the courses concerned. The *gymnasium fee* is a special course-fee for Physical Education 125M; see page 128.

Matriculation Fee. A fee of $5.00 is charged every new student, once only, to cover the cost of his initial registration. It must accompany his application for admission.

Late Registration Fee. A fee of $2.00 is charged any student who completes his registration after the final registration date.

Change of Registration Fee. A fee of $2.00 is charged anyone changing his registration after a date fixed by the administration, unless he does so at the request of the administration.

Reinstatement Fee. A fee of $2.00 is charged anyone readmitted to classes after a suspension.

Fee for Credit by Equivalency or Examination. A tuition fee of $10.00 is charged for each hour of credit honored for graduation when such credit is given as the result of examination or equivalency evaluation without the student's having attended the regular classes for the course of instruction. This type of credit must have the approval of the department head, the division head or unit dean, and the dean of the college.

Fees for Irregular Examinations. When a student is allowed to take an examination at a time other than the scheduled one, a fee of $5.00 for a final examination or $3.00 for any other examination is charged at the discretion of the instructor, except in case of illness, when the student must present a letter from his physician.

Graduation Fee. A fee is charged anyone who is to receive a degree or a title. The fee, which includes cap and gown rental, must be paid by May 1 of the year of expected graduation, whether the degree is to be received in June or in August; the amount depends on when the application for graduation (see General Requirements for Graduation) is filed, as follows:

If the application for graduation is filed	*the fee is*
Before the last fall semester before graduation	$ 7.00
During the last fall semester before graduation	10.00
During the last February before graduation	15.00
During the last March before graduation	20.00

These fees apply for each degree or title granted (unless honorary), except that if two degrees are to be received by one person at the same commencement, the total fee is $5.00 more than the pertinent amount listed above.

Transcript of Credits Fee. One transcript of credits is furnished free of charge. A fee of $1.00 is charged for each additional or subsequent transcript.

Student Locker Deposit and Fee. A student assigned a locker deposits fifty cents at the time of assignment. At the end of the semester, or upon withdrawal from college, he is refunded the deposit less a handling charge of ten cents. For further information on lockers, see page 46.

Military Equipment Deposit and Fee. Every student taking military science deposits $12.50 at the beginning of the college year, toward coverage of the cost of United States gov-

ernment property assigned him. When he turns in all such property at the end of the year or upon withdrawal from college, he is refunded $10.00.

Band Uniform Rental Fee. Each member of the Marching Band is charged a uniform-rental fee of $2.00, of which $1.00 is refunded if the uniform is in good condition when returned.

Special Fees for Music Students. The following fees are stated more fully in the Dana School of Music section:

Piano Practice Fee, major	$ 5.00 a semester
" " ", minor	$ 2.00 a semester
Organ Practice Fee, major	$40.00 a semester
" " ", minor	$20.00 a semester
Instrument Rental Fee: each instrument	$ 5.00 a semester
Theory Placement Examination Fee	$5.00 (before taking examination)

Tuition Payment by Installments

Tuition (together with any other fees payable at the beginning of a term) may be paid in installments. The student electing to do so makes a down payment upon enrolling and arranges with the business office for payment of the balance. The business manager must approve the schedule of payments before the student may attend classes.

The minimum down payment for a student in the School of Law or a private student in the School of Music is 33⅓% of the total due; for others, 25%. There is a carrying charge of 10% on the unpaid balance remaining after the down payment; the minimum carrying charge is $1.00. Any installment contract must be paid in full before the expiration of two-thirds of the term for which it is made.

A student who fails to meet an installment payment when due is suspended from classes until payment has been made. He must then pay the Reinstatement Fee.

No student may enroll for a new term until all his previous tuition and fees have been paid.

Withdrawals and Refunds

No student may enroll for less than a full term. If a student must withdraw from a course or from the college on account of illness or other compelling cause, he must fill out an

official Change of Registration form and present it to the registrar and business manager. Failure to attend class or merely giving notice to the instructor is not an official notice of withdrawal.

If a student is permitted by the registrar to withdraw from a course or from the college, the tuition charge for the session, based on the date of the official acceptance of the change of registration or withdrawal, will be as follows:

Length of Term	16-19 Weeks Incl.	12-15 Weeks Incl.	9-11 Weeks Incl.	3-5 Weeks Incl.
One week or less	20%	20%	25%	50%
Between one and two weeks	20%	40%	50%	100%
Between two and three weeks	40%	60%	75%	100%
Between three and four weeks	60%	80%	100%	100%
Between four and five weeks	80%	100%	100%	100%
Over five weeks	100%	100%	100%	—

A student who, after registering, withdraws less than 30 days before the beginning of classes is assessed the minimum charges shown above.

If a course is canceled by the college, tuition paid for it will be refunded in full or credited against another course or courses, as the student wishes.

Applied music. The foregoing applies to all courses except those in applied music. An applied music course dropped is charged at $3.00 (Preparatory Department $1.50) times the number of lessons taken. A single semester hour of applied music is valued at $40.00.

Buechner Hall

The attractive facilities of Buechner Hall (see page 36) are available to women at the following rates: single rooms, $8.00 a week; large double rooms, $6.00 a person a week; small double rooms, $4.50 a person a week. Each guest must purchase weekly a non-transferable meal ticket, good for seven days, at a price of $6.00 (plus Ohio sales tax). All arrangements are made directly with the authorities of Buechner Hall, which is not a part of Youngstown College.

Cafeteria Service

Food at the College Cafeteria is served on a "pay-as-you-go" basis. No meal tickets are sold, nor are charge accounts maintained.

COURSE NUMBERS, ABBREVIATIONS, AND CHANGED COURSES

Course Numbers

Hyphen. A hyphen between numbers (e. g., 101-102), indicates that credit is not given toward graduation for the work of the first semester until the work of the second semester is completed, except when special permission is granted by the head of the department in which the course is given.

Comma. Ordinarily, a comma between numbers (e. g., 105, 106) indicates that the course extends throughout the year, but that credit toward graduation is given for either semester. If the first semester of such a course is prerequisite to the second, it is so designated.

Levels. Courses numbered from 100 to 199 are designed primarily for freshmen; 200 to 299, for sophomores; 300 to 399, for juniors; and 400 to 499, for seniors.

Abbreviations and Reference Marks

The abbreviation *"h. c."* at the end of a course description stands for "semester hour(s) of credit". Credit for a two-semester course is indicated by such a notation as *"3 + 3 h. c."*, meaning "three semester hours of credit each semester".

"Prereq." stands for "prerequisite".

An asterisk or other reference mark used in a curriculum ordinarily refers to a note immediately following that curriculum. Occasionally, however, such a note may be at the foot of the page.

Changed Courses

Changes such as the alteration of a course number, the replacing of one course by another, or the shifting of a course from one department to another, are not mentioned in course descriptions. Changes and deletions since 1949 include the following:

Former Course	*Changed to or Replaced by*	*Effective*
Accounting 201-202X	Accounting 201L-202L	1951-52
Accounting 205X	Accounting 205L	1951-52
Accounting 303-304	Accounting 303 and 304	1953-54
Accounting 308-309	Accounting 303-304	1949-50

Former Course	*Changed to or Replaced by*	*Effective*
Accounting 310	Accounting 410	1950-51
Accounting 401-402	Accounting 401	1950-51
Accounting 409-410	Accounting 407 and 408	1949-50
Accounting 421	Accounting 451	1951-52
Art 121	Education 124	1952-53
Art 150	Art 350	1953-54
Art 221	Education 224	1952-53
Art 321	Education 324	1952-53
Art 322, 323	Education 322, 323	1952-53
Art 332	Education 334	1952-53
Biology 120	dropped	1951-52
Biology 121	dropped	1951-52
Biology 231	dropped	1952-53
Biology 233	Biology 308	1952-53
Biology 260	Biology 406	1952-53
Biology 401, 402, 403, 404	Biology 414	1952-53
Biology 410	Biology 405	1949-50
Biology 411	Biology 413	1952-53
Business Organization 100	Business Organization 112	1953-54
Business Organization 101	Business Organization 111	1953-54
Business Organization 103	Business Organization 113	1953-54
Business Organization 104	Business Organization 114	1953-54
Business Organization 105	Business Organization 115	1953-54
Business Organization 110	Business Organization 120	1953-54
Business Organization 121	Business Organization 131	1953-54
Business Organization 224	Merchandising 224	1951-52
Business Organization 225	Merchandising 225	1951-52
Business Organization 227-228	Advertising 227-228	1951-52
Business Organization 303	Business Organization 202	1951-52
Business Organization 310	Economics 310	1951-52
Business Organization 311-312	Merchandising 311-312	1951-52
Business Organization 315	Economics 315	1950-51
Business Organization 325	Business Organization 225	1949-50
Business Organization 326	Merchandising 326	1951-52
Business Organization 327-328	Business Organization 227-228	1949-50
Business Organization 329	Advertising 329	1951-52
Business Organization 330	Advertising 330	1951-52
Business Organization 331	Merchandising 331	1951-52
Business Organization 332	Merchandising 332	1951-52
Business Organization 333	Merchandising 333	1951-52
Business Organization 401	Advertising 401	1951-52
Business Organization 409	Merchandising 409	1951-52
Business Organization 410	Merchandising 410	1951-52
Business Organization 411	Advertising 411	1951-52
Business Organization 411-412	Business Organization 411	1950-51
Business Organization 414	Advertising 414	1951-52
Business Organization 415	Advertising 415	1951-52
Business Organization 425	Merchandising 425	1951-52
Business Organization 431	Merchandising 431	1951-52
Business Organization 432	Merchandising 432	1951-52
Business Organization 451	Merchandising 451	1951-52

CHANGED COURSES

Former Course	*Changed to or Replaced by*	*Effective*
Chemistry 216	dropped	1951-52
Chemistry 317	dropped	1951-52
Chemistry 406	dropped	1952-53
Chemistry 408	dropped	1951-52
Economics 104	Business Organization 110	1950-51
Economics 310	Economics 319	1952-53
Economics 311	Economics 321-322	1950-51
Economics 312	Economics 325-326	1950-51
Economics 321-322	Business Organization 341-342	1951-52
Economics 323-324	Business Organization 343-344	1951-52
Economics 325-326	Business Organization 345-346	1951-52
Economics 327-328	Business Organization 347-348	1951-52
Education 302 and 303	Library Science 302	1950-51
Education 306	Education 311	1950-51
Education 306X	Education 311	1950-51
Education 309	dropped	1953-54
Education 311	Education 310	1953-54
Education 330 and 331	Education 330	1949-50
Education 441, 442	Education 441	1950-51
Engineering 102	Engineering 202	1950-51
Engineering 103 and 104	Engineering 203 and 204	1949-50
Engineering 105	dropped	1951-52
Engineering 125	Chemistry 103	1949-50
Engineering 201	Engineering 103	1950-51
Engineering 201-202	Engineering 301-302	1949-50
Engineering 203-204	Engineering 211-212	1949-50
Engineering 301	Engineering 303	1949-50
Engineering 302	Engineering 304	1949-50
Engineering 303	Engineering 371L	1950-51
Engineering 304	Engineering 470L	1950-51
Engineering 306	Engineering 360	1949-50
Engineering 308	Engineering 361	1949-50
Engineering 309	Engineering 362	1949-50
Engineering 313L	dropped	1952-53
Engineering 318	Engineering 374	1949-50
Engineering 319	Engineering 471	1949-50
Engineering 320	Engineering 472	1949-50
Engineering 324	Engineering 220	1949-50
Engineering 342	Engineering 350	1949-50
Engineering 343, 344	Engineering 351, 352	1949-50
Engineering 343-344	Engineering 343 and 344	1953-54
Engineering 345	Engineering 353	1949-50
Engineering 346	Engineering 354	1949-50
Engineering 350	Chemistry 250	1951-52
Engineering 350-351	Physics 426-427	1949-50
Engineering 353-354	Engineering 343-344	1949-50
Engineering 360	Engineering 440	1949-50
Engineering 360	Business Organization 310	1950-51
Engineering 373-374	Engineering 476-477	1949-50
Engineering 403	Engineering 473	1949-50
Engineering 405	Engineering 474	1949-50

Former Course	*Changed to or Replaced by*	*Effective*
Engineering 406	Engineering 475 and 475L	1949-50
Engineering 407	Engineering 372	1949-50
Engineering 408	Engineering 373	1949-50
Engineering 412 and 412L	dropped	1952-53
Engineering 418 and 418L	dropped	1951-52
Engineering 440	dropped	1950-51
Engineering 470-471	Engineering 401-402	1949-50
Engineering 476-477	dropped	1951-52
Engineering 478 and 478L	dropped	1951-52
English 101L	English 101R	1952-53
English 103-104	Communication 105-106-107	1952-53
English 115 and 116	Speech and Dramatics 115, 116	1951-52
English 213	Speech and Dramatics 213	1951-52
English 215, 216	Speech and Dramatics 215, 216	1951-52
English 217	Speech and Dramatics 217	1951-52
English 219, 220	Speech and Dramatics 219, 220	1951-52
English 221	Speech and Dramatics 221	1951-52
English 223, 224	Speech and Dramatics 223, 224	1951-52
English 315	Speech and Dramatics 315	1951-52
English 317	Speech and Dramatics 317	1951-52
English 319, 320	Speech and Dramatics 319, 320	1951-52
English 321	Education 321	1950-51
English 323	Speech and Dramatics 323	1951-52
English 355X, 355Y	English 355L	1951-52
English 356	dropped	1949-50
English 357X, 357Y	English 357L	1951-52
English 361	English 461 and 462	1950-51
English 363	English 463 and 464	1950-51
English 366 and 367	English 365	1953-54
English 419, 420	English 421 and 422	1950-51
English 421	Speech and Dramatics 421	1951-52
English 422	Speech and Dramatics 422	1951-52
French 203 and 204	French 201 and 202	1952-53
French 411	French 411, 412	1950-51
General Science 223	Education 223	1950-51
General Science 225	dropped	1951-52
General Science 246	dropped	1951-52
Geography 104	Business Organization 110	1950-51
German 203 and 204	German 201 and 202	1952-53
German 211, 212	German 215, 216	1950-51
Greek 203-204	Greek 201, 202	1952-53
History 315, 316	History 315	1951-52
Home Economics 101	Home Economics 101 and 101L	1951-52
Italian 203 and 204	Italian 201 and 202	1952-53
Italian 411	Italian 411, 412	1950-51

CHANGED COURSES

Former Course	*Changed to or Replaced by*	*Effective*
Law: Administration of Debtors' Estates	Creditors' Rights	1953-54
Carriers	dropped	1949-50
Common Law Procedure	Civil Procedure	1949-50
Jurisprudence	dropped	1950-51
*Real Property III	Future Interests	1953-54
Library Science 214	dropped	1951-52
Library Science 302	dropped	1951-52
Library Science 330	Library Service 330	1951-52
Library Science 402	dropped	1951-52
Mathematics 114	Mathematics 104	1953-54
Mathematics 120-121	Mathematics 109-110	1953-54
Mathematics 314	dropped	1951-52
Mathematics 315	Mathematics 309	1953-54
Mathematics 416	Mathematics 310	1953-54
Music 206	Music 205-206	1953-54
Music 207-208	Music 307-308	1953-54
Music 209-210	Music 335	1953-54
Music 334	Music 336	1953-54
Music 361-362	Music 361 and 362	1953-54
Nursing 403	Biology 383	1950-51
Orientation	Orientation 100	1951-52
Philosophy and Religion 105	Philosophy and Religion 303	1949-50
Philosophy and Religion 106	Philosophy and Religion 208	1949-50
Philosophy and Religion 201	dropped	1949-50
Philosophy and Religion 202	dropped	1950-51
Philosophy and Religion 221	dropped	1953-54
Philosophy and Religion 306	Philosophy and Religion 305	1949-50
Photography 151	Chemistry 125	1951-52
Photography 252	Chemistry 225	1951-52
Physical Education 101, 102	Physical Education 121, 122	1949-50
Physical Education 105	Physical Education 107 and 108	1951-52
Physical Education 106	Physical Education 107 and 108	1951-52
Physical Education 111, 112	dropped	1949-50
Physical Education 113, 114	Physical Education 121, 122	1949-50
Physical Education 115, 116	Physical Education 121, 122	1949-50
Physical Education 117, 118	Physical Education 121, 122	1949-50
Physical Education 119, 120	Physical Education 121, 122	1949-50
Physical Education 121 and 122	Physical Education 121C, 122C, 125M, and 33 other 100-level activity courses	1953-54
Physical Education 203	Physical Education 303C	1953-54
Physical Education 205, 206	Physical Education 221, 222	1949-50
Physical Education 211, 212	dropped	1949-50

*A course called Real Property III remains, but with new content. The course formerly called Real Property III is now offered under the title Future Interests, independently of the Real Property sequence.

Former Course	*Changed to or Replaced by*	*Effective*
Physical Education 213, 214	Physical Education 221, 222	1949-50
Physical Education 215, 216	Physical Education 221, 222	1949-50
Physical Education 217, 218	Physical Education 221, 222	1949-50
Physical Education 219, 220	Physical Education 221, 222	1949-50
Physical Education 221 and 222	Physical Education 125M, 221C, 222C, and 33 other 100-level activity courses	1953-54
Physical Education 311	Physical Education 311-312	1951-52
Physical Education 311-312	Physical Education 311	1949-50
Physical Education 400	dropped	1951-52
Physical Education 413	Physical Education 213	1952-53
Physical Education 416	Physical Education 418 and 428	1951-52
Physical Education 427	Physical Education 427M	1953-54
Physics 151	Photography 151	1949-50
Physics 252	Photography 252	1949-50
Physics 317 and 317L	Engineering 317 and 317L	1951-52
Political Science 404	dropped	1950-51
Psychology 427	dropped	1949-50
Russian 203 and 204	Russian 201 and 202	1952-53
Secretarial Studies 106	dropped	1949-50
Secretarial Studies 109	Secretarial Studies 202	1949-50
Secretarial Studies 301	Secretarial Studies 300-301	1949-50
Sociology 303	Sociology 409	1951-52
Sociology 402 and 403	Sociology 402-403	1950-51
Sociology 402-403	Sociology 312, 313	1951-52
Spanish 203 and 204	Spanish 201 and 202	1952-53
Spanish 203A, 204A	Spanish 203L, 204L	1951-52
Spanish 203L, 204L	Spanish 201L, 202L	1952-53
Spanish 411	Spanish 411, 412	1950-51
Speech and Dramatics 103-104	Communication 105-106-107	1952-53

The College of Arts and Sciences

ORGANIZATION AND DEGREES

Organization and Program

Work done primarily in the College of Arts and Sciences leads to one of three degrees: those of Bachelor of Arts, Bachelor of Science, and Bachelor of Science in Education. The major work may be in any of the departments listed below:

Division of Language and Literature
- Department of Ancient Languages
- Department of English
- Department of Modern Languages
- Department of Speech and Dramatics

Division of Social Sciences
- Department of Economics
- Department of History
- Department of Philosophy and Religion
- Department of Political Science
- Department of Psychology
- Department of Sociology

Departments of science and mathematics
- Department of Biology
- Department of Chemistry
- Department of Mathematics
- Department of Physics

Other departments
- Department of Art
- Department of Education
- Department of Library Service
- Department of Military Science and Tactics
- Department of Physical Education

Interdepartmental majors are possible in classical studies, humanities, military science, public relations, Romance languages, and social studies. Courses are also offered in astronomy, communication, general science, geology, geography, home economics, humanities, journalism, metallurgy, and nursing. Pre-law, pre-medical, and other pre-professional curriculums are available regularly. For other subjects the index may be consulted.

Requirements for Degrees

Following are the requirements for the degrees for which the study is entirely or primarily in this unit. It is the student's responsibility to see that he satisfies all graduation requirements.

The general requirements for all degrees are stated on pages 66ff. Students enrolled or planning to enroll in the R.O.T.C. should note the relevant information on pages 67-68.

The Degree of Bachelor of Arts

To be granted the degree of Bachelor of Arts, a student must have met the general requirements for all degrees (see pages 66ff.), have received credit for 125 semester hours, and have met the following requirements:

Communication—Satisfactory proficiency (8 or 9 hours)

The director of the Division of Language and Literature is the judge of this proficiency. Ordinarily, he will grant a certificate to a student who has received a grade of C or higher in the final semester of his required course in communication or its equivalent.

Health and Physical Education—4 hours

Physical Education 107 and 108 (health education), 2 hours; and four physical activity courses, totaling 2 hours. Any substitution of other courses for these requirements must be approved by the head of the Department of Health and Physical Education.

Orientation 100—Credit

Not required of night students.

Social Science 101 and 102—6 hours

Not required of transfer students with 30 or more hours of credit acquired elsewhere.

Religion—3 hours

A course in the Department of Philosophy and Religion, or Humanities 401 or 402.

Science—11 hours

Eight hours must be entirely in biology, in chemistry, or in physics. The other three hours may be in astronomy, biology, chemistry, geology, mathematics, or physics.

History 201 and 202—6 hours

Not required of transfer students with 60 or more hours of credit acquired elsewhere.

English—3 hours

Three hours of literature.

Psychology 201—3 hours

A foreign language—A reading knowledge (12 hours)

A reading knowledge is defined as the equivalent of what a student should know after two years of successful college study. A certificate indicating that the student has fulfilled this requirement must be obtained from the head of the Department of Ancient Languages or the Department of Modern Languages. For the application of high school language credits toward this requirement, see pages 97-98.

The Degree of Bachelor of Science

To be granted the degree of Bachelor of Science, a student must have completed the general requirements for all degrees; have received credit for 136 semester hours;* have completed a major in biology, chemistry, mathematics, metallurgy, military science, physics, or a pre-medical combination of sciences; and have completed the following requirements:

Communication.....Satisfactory proficiency (8 or 9 hours)

The director of the Division of Language and Literature is the judge of this proficiency. Ordinarily, he will grant a certificate to a student who has received a grade of C or higher in the final semester of his required course in communication or its equivalent.

Health and Physical Education.....4 hours

Physical Education 107 and 108 (health education), 2 hours; and four physical activity courses, totaling 2 hours. Any substitution of other courses for these requirements must be approved by the head of the Department of Health and Physical Education.

Orientation 100.....Credit

Not required of night students.

Social Science 101 and 102.....6 hours

Not required of transfer students with 30 or more hours of credit acquired elsewhere.

Religion.....3 hours

A course in the Department of Philosophy and Religion, or Humanities 401 or 402.

Science.....Completed through the major

History 201 and 202.....6 hours

Not required of transfer students with 60 or more hours of credit acquired elsewhere.

†A foreign language.....A reading knowledge of scientific French or German (12 hours)

A reading knowledge is defined as the equivalent of what a student should know after two years of successful college study. A certificate indicating that the student has fulfilled this requirement must be obtained from the head of the Department of Modern Languages. For the application of high school language credits toward this requirement, see pages 97-98.

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*To permit sufficient specialization without reducing too greatly the student's general education, more semester hours are required for this degree than for that of Bachelor of Arts or Bachelor of Science in Education, and the curriculums leading to it take longer than the usual eight semesters to complete. However, by attending summer sessions, any of the curriculums can be completed in four years.

†Not required of registered nurses, nor of students offering medical technology as the major. The student majoring in military science may meet this requirement with any modern foreign language.

The Degree of Bachelor of Science in Education

To receive the degree of Bachelor of Science in Education, the student must have met the general requirements for all degrees, have received credit for 125 semester hours, have completed a curriculum leading to a provisional teaching certificate, and have met the following requirements:

Communication.....Satisfactory proficiency (8 or 9 hours)

The director of the Division of Language and Literature is the judge of this proficiency. Ordinarily, he will grant a certificate to a student who has received a grade of C or higher in the final semester of his required course in communication or its equivalent.

Health and Physical Education.....4 hours

Physical Education 107 and 108 (health education), 2 hours; and four physical activity courses, totaling 2 hours. Any substitution of other courses for these requirements must be approved by the head of the Department of Health and Physical Education.

Orientation 100.....Credit

Not required of night students.

Social Science 101 and 102.....6 hours

Not required of transfer students with 30 or more hours of credit acquired elsewhere.

Religion.....3 hours

A course in the Department of Philosophy and Religion, or Humanities 401 or 402.

Science.....9 hours

The nine hours may be in any science or sciences.

History 201 and 202.....6 hours

Not required of transfer students with 60 or more hours of credit acquired elsewhere.

English.....3 hours

Three hours of literature, or (in certain curriculums) English 251.

The Combined Course Leading to the Degrees of Bachelor of Arts and Bachelor of Laws

A student who has completed in the College of Arts and Sciences at least 95 credit hours and has satisfied all requirements for the Bachelor of Arts degree except the completion of 125 hours of credit and the completion of a major, will be granted the degree of Bachelor of Arts on the satisfactory completion of two years of regular study in the law school. The student may satisfy his major requirements by utilizing the 32 semester hours of credit acquired in the law school toward a

combined major in social science, or by completing a major of 30 semester hours in some department of the College of Arts and Sciences. He may carry nine hours of undergraduate study a semester while in law school.

By this arrangement students are enabled to secure the arts degree after three years in the college followed by two years in the law school. The degree of Bachelor of Laws will be granted after the completion of three additional years in the law school. For the required course of study for the degree of Bachelor of Laws, see the curriculum in the School of Law section.

The Combined Liberal Arts-Professional Course for Medical Students

A student who has completed at least 100 credit hours toward the degree of Bachelor of Arts (or 111 hours toward the degree of Bachelor of Science) and has satisfied all requirements for the degree except the completion of the total number of credit hours required and the completion of a major, will be granted the degree of Bachelor of Arts (or Bachelor of Science) on the satisfactory completion of the remaining number of credit hours at any medical school granting the degree of Doctor of Medicine and approved by the American Medical Association, provided that he has been accepted for further study at the medical school. The student may satisfy his major requirement by utilizing the credit accepted for medical study toward a combined major in pre-medical sciences.

In this way the student is enabled to secure the Bachelor of Arts or Bachelor of Science degree after from three to three and a half years in the college followed by approximately a year in medical school.

Credit Evaluation for the Foreign Language Requirement

For the Bachelor of Arts degree, 4 high school credits, if all in the same language, will satisfy the requirement, with no further study in college. A student who has 3 high school credits in one language may meet the requirement by taking 1 semester of additional study in that language. A student with 2 high school credits in one language may meet the requirement by taking 2 semesters of additional study in that language. A student with 1 or no high school credits in language may meet

the requirement by taking 4 semesters of study in one language, but he receives college credit for only two of them, the other two serving to make up his entrance deficiency.

For the Bachelor of Science degree, the same principle applies. However, a student who wishes to meet the requirement for this degree with German and who does not take German 215-216, Chemical German, must pass an examination in scientific German in order to be certified.

The reading knowledge necessary for either degree may be acquired in any way the student chooses; but in the absence of high school or college credits as stated above, the student must pass an examination in order to be certified.

COURSES OF INSTRUCTION

and Curriculums

It is important that the student familiarize himself with the course-numbering system and its significance, as well as the abbreviations used to indicate the amount of credit. These are explained on page 87.

ANCIENT LANGUAGES AND LITERATURE

See Greek, Hebrew, and Latin. For literature in translation, see Humanities, and Philosophy and Religion 230, 303, 309, and 330.

Combined Major in Classical Studies

A combined major in classical studies consists of 45 semester hours in courses chosen from the following: Greek 101-102, 201, 202, 301, and 302; History 311 and 312; Humanities 401 and 402; Latin 101-102, 201, 202, 301, 302, 304, 305, 401, 402, 403, and 404; and Philosophy 301 and 309. The student should consult the director of the Division of Language and Literature before undertaking this major.

ART

A suggested curriculum for the degree of Bachelor of Arts with a major in art appears below, after the course descriptions. For the degree of Bachelor of Science in Business Administra-

tion with a major in business art, a required curriculum will be found in the School of Business Administration section; for the curriculum required for the degree of Bachelor of Science in Education with a major in art education, see Education.

Lower Division Courses

110, 111. COLOR AND DESIGN I. Experimentation with all kinds of materials and media. Realizing the effects of color with color, color into color, and light on color; creating collages and mobiles to realize space, and experiments with light on these; shadow forms; use of various textures in collages and in two-dimensional design; relation of light and dark; getting forceful and expressive shapes. 110 is prerequisite to 111. Fee: $1.00 each semester. *3 + 3 h. c.*

113, 114. HISTORY AND APPRECIATION OF ART: GENERAL. Lectures on what constitutes art: the plastic means rather than the subject matter, and the relationship of parts; attention to developments, influences, and experiments. Study of reproductions of museum collections and of surveys made. *3 + 3 h. c.*

201, 202. LIFE DRAWING AND PAINTING. Experience in drawing from the human figure. Attention to the power of line, the relation of shapes and colors, and their organization in established space. Reference to important historical styles influencing contemporary work. Fee: $2.00 each semester. *3 + 3 h. c.*

203, 204. DRAWING AND PAINTING. Space division, the plastic means, line, plane, volume; light and dark, color and texture, and their relation to form and pattern. Use of different media—pencil, charcoal, water color, opaque water color, pastel, oil, and collage—for still life, figure composition, life, landscape, and abstract forms, to develop a sense of plastic organization. Prereq.: Art 110, 111. 203 is prerequisite to 204. Fee $1.00 each semester. *3 + 3 h. c.*

211, 212. COLOR AND DESIGN II. The fine relationships of color, tone, line, shapes, notan, and texture, especially as applied to textiles; further experiments with collages and mobiles to develop sensitivity in combining materials; systems in pattern construction. Prereq.: Art 110, 111. 211 is prerequisite to 212. Fee: $1.00 each semester. *3 + 3 h. c.*

223, 224. ADVERTISING ART I. Practice with different styles of lettering; application of principles of Art 110, 111 to layouts; reproduction of silk screen, linoleum block, monoprint, and dry point; study of current tendencies. Prereq.: Art 110, 111, except that 111 is not required of candidates for the Bachelor of Science in Business Administration degree. 223 is prerequisite to 224. Fee: $1.00 each semester. *3 + 3 h. c.*

Upper Division Courses

301, 302. TECHNICAL PROBLEMS IN ART. Advanced technical problems in art for the art major. The student may elect to specialize in one of the following fields: fashion illustration, story illustration, textile design and production, furniture design, packaging, product design, exhibition display, or printmaking. He may continue in the same field the second semester, or elect a new one. Prereq.: Art 212. 301 is prerequisite to 302. Fee: $1.00 each semester. *3 + 3 h. c.*

303, 304. FIGURE DRAWING AND PAINTING I. Practice in oil painting. The student is encouraged to see significantly rather than imita-

tively, and to develop an explorative interest in techniques. Attention to the relation of shapes and volumes in the figure and in groups of figures, to achieve good organization. Prereq.: Art 203, 204. 303 is prerequisite to 304. Fee: $1.00 each semester. *3-or-4 + 3-or-4 h. c.*

305. HISTORY AND APPRECIATION OF ART: ITALIAN RENAISSANCE. Review of formalism, mysticism, and classicism; the new humanism; detailed study of the great artists and their connection with the history and philosophy of the times. Prereq.: Art 113, 114. *3 h. c.*

306. HISTORY AND APPRECIATION OF ART: MODERN. Viewing of art works through slides, prints, and originals to clarify ideas of the nature of creative art; classification according to trends and influences from earlier art expressions. Prereq.: Art 203, 204 or equivalent. *3 h. c.*

316, 317. INTERIOR DECORATING. Application of experiences in Art 110, 111 to rooms and furnishings; development of feeling of space in interiors. Study of period furnishings, new designs, and textiles; building of models to carry out decoration plans; new trends. Visits to houses with special arrangements or styles of furnishings. Prereq.: Art 110, 111. 316 is prerequisite to 317. Fee: $1.00 each semester. *3 +3 h. c.*

319, 320. JEWELRY AND METAL WORK I. Designing and shaping of copper ware; punching, etching, engraving. Jewelry design and fabrication. The properties and limitations of metals, learned through experience. Prereq.: Art 110, 111. 319 is prerequisite to 320. Fee: $1.00 each semester. *3 + 3 h. c.*

325, 326. POTTERY AND MODELING. Pottery-shaping: coiling, hand-building, pinching; decoration and glazing; fashioning figures and heads to arrive at sculptural form; mold-making and casting; bas-relief. Prereq.: Art 110, 111. 325 is prerequisite to 326. Fee: $2.00 each semester. *3 + 3 h. c.*

327, 328. ADVERTISING ART II. Modern layout practice and technique, with various media, including silk screen, air brush, collage; bookplates, trademarks, containers, illustration, booklets, menus; rapid and fine lettering; design as a basic element. Prereq.: Art 223, 224. 327 is prerequisite to 328. Fee: $1.00 each semester. *3 + 3 h. c.*

329, 330. SCULPTURE. A special discipline, correlated with some of the "form in space" problems dealt with in earlier design classes but here concentrated through a more specific medium. Each student has ample opportunity to model in clay or carve directly in wood or soft stone. Prereq.: Art 110, 111. Fee: $2.00 each semester. *3 + 3 h. c.*

350. MECHANICAL DRAWING. Proper use of instruments, correct drafting-room practice, conventional representation; lettering, free-hand sketching, geometric construction, orthographic and oblique projection, sectioning, and isometric drawing. Architectural drawing introduced. For the prospective art teacher. Not accepted for credit toward the Bachelor of Engineering degree. Fee: $1.00. *3 h. c.*

403, 404. FIGURE DRAWING AND PAINTING II. Continuation of Art 303, 304. 403 is prerequisite to 404. Fee: $1.00 each semester. *3 + 3 h. c.*

405. HISTORY AND APPRECIATION OF ART: ORIENTAL. The art of India, China, and Japan from the earliest times to the present, and its relation to the philosophies and religions of those countries; comparison of the characteristics of the great periods. Prereq.: Art 113-114, 305, and 306. *3 h. c.*

410, 411. ADVANCED MODELING. Application of the principles of Art 110, 111 to clay and plaster; abstract volumes and their relations; modern tendencies in pottery forms and figure work. Prereq.: Art 325, 326. 410 is prerequisite to 411. Fee: $2.00 each semester. *3 + 3 h. c.*

419. JEWELRY AND METAL WORK II. Advanced work in processes; new problems in brass, silver, copper, and gold. Prereq.: Art 319, 320. Fee: $1.00. *3 h. c.*

Suggested Curriculum for the Degree of Bachelor of Arts with a Major in Art

First Year	Hrs.
Art 110, 111 Color and Design I	6
Art 113, 114 History and Appreciation of Art: General	6
Comm. 105-106 Basic Course I-II	6
*Foreign language (or electives)	6
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Phys. Ed. 107 and 108 Health Ed.	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	33

Second Year	Hrs.
Art 203, 204 Drawing and Painting	6
Art elective (200 or above)	3
Comm. 107 Basic Course III	3
Engl. 200, 203, 204, 205, or 206	3
*Foreign language (or electives)	6
Hist. 201 and 202 The United States	6
Psych. 201 General Psychology	3
Physical Education (activity)	1
	31

Third Year	Hrs.
Art 301, 302 Technical Problems	6
Art 303, 304 Figure Drawing and Painting I	8-6
Art elective (200 or above)	3
History elective	3
Literature elective	3
Philosophy and Religion elective, or Humanities 401 or 402	3
*Science	8
	34-32

Fourth Year	
Art 305 History and Appreciation of Art: Italian Renaissance	3
Art 306 History and Appreciation of Art: Modern	3
*Mathematics or science	3
Sp. and Dram. 219, 220 Play Production I	6
Electives (Upper Division)	12-14
	27-29

*See the requirements for the Bachelor of Arts degree, on pages 97-98.

ASTRONOMY

See also General Science 121.

Lower Division Course

103. DESCRIPTIVE ASTRONOMY. A descriptive and non-mathematical study of the stars and the solar system. Analysis of present theories of the universe and some observation with telescope or field glass. *3 h. c.*

BIBLE

See Philosophy and Religion; also Humanities.

BIOLOGY

Biology courses are offered to meet the needs of the following students: those who want a general knowledge of the biological field; those who intend to do graduate or research work in any of the special branches of biology; those who desire to teach the biological sciences; and those who plan to enter pro-

fessional fields such as medicine, nursing, pharmacy, forestry, horticulture, and others requiring a knowledge of biology.

General biology majors must take Biology 103, 124, 125, 224, 225, and 321, and electives from Upper Division courses. Chemistry 321, 322, Biological Chemistry, may be counted toward a biology major.

Pre-medical students and co-operative nursing students should consult the special curriculums at the end of the College of Arts and Sciences section.

Lower Division Courses

100. FUNDAMENTALS OF BIOLOGY. An introduction to the general principles of biology, correlated with the development of techniques of microscopy and dissection. Eight laboratory-discussion hours a week. Fee: $6.00. *4 h. c.*

103. GENERAL BIOLOGY. A survey of biological principles, covering the morphology and physiology of chromosomes, cells, and tissues as manifested in animals, bacteria, and green plants. Three two-hour laboratory-discussion periods a week. Fee: $6.00. *3 h. c.*

116. WOODY PLANTS, WINTER. Classification of woody plants in winter condition. 54 contact hours. Latter half of fall semester or first half of spring semester. *1 h. c.*

117. SPRING FLORA. Classification of vernal flowering plants. 54 contact hours. Latter half of spring semester. *1 h. c.*

118. WOODY PLANTS, SUMMER. Classification of woody plants while in leaf. 54 contact hours. Latter half of spring semester, or summer school. *1 h. c.*

119. SUMMER FLORA. Identification of flowering plants exclusive of composites, umbels, and other difficult families. 54 contact hours. Summer school only. *1 h. c.*

124. BOTANY: LOWER FORMS. The thallophytes and bryophytes. Two two-hour laboratory-discussion periods a week. Prereq.: C or better in Biology 103. Fee: $6.00. *2 h. c.*

125. ZOOLOGY: INVERTEBRATES. Completion of comprehensive study of the invertebrates. Two two-hour laboratory-discussion periods a week. Prereq.: C or better in Biology 103. Fee: $6.00. *2 h. c.*

126. FRESH-WATER FISHES. An introduction to the classification, ecology, and conservation of local fishes. 108 contact hours in the field and laboratory. Summer school only. *2 h. c.*

127. LOCAL INSECTS. An introduction to the classification, ecology, and economic importance of local insects. 108 contact hours in the field and laboratory. Summer school only. *2 h. c.*

150. FUNCTIONAL ANATOMY OF THE HUMAN. A dissection of a mammal, to illustrate the structures of the human body. Considerations of the physiology of the major systems of the human. Two hours of lecture and four hours of laboratory-discussion a week. Prereq.: Biology 100 and Chemistry 100. Fee: $6.00. *4 h. c.*

160. MICROBIOLOGY. An introduction to the study of bacteria, and a consideration of members of the following that are pathogenic to the human: fungi and yeasts, rickettsia, spirochetes, protozoa, and viruses. Two hours of lecture and two hours of laboratory-testing a week. Prereq.: Biology 100 and Chemistry 100. Fee: $6.00. *3 h. c.*

175. GENERAL ZOOLOGY. A survey of the invertebrates and a comprehensive study of the vertebrates. Three two-hour laboratory-discussion periods a week. Prereq.: C or better in Biology 103; open only to students in nursing, physical education, and medical technology. Fee: $6.00. *3 h. c.*

219. ADVANCED SUMMER FLORA. Identification of the more difficult flowering plants. 54 contact hours. Summer school or first half of fall semester. Prereq.: Biology 119, or consent of instructor. *1 h. c.*

224. BOTANY: VASCULAR PLANTS. A comprehensive study of the pteridophytes and spermatophytes. Three two-hour laboratory-discussion periods a week. Prereq.: C or better in Biology 124. Fee: $6.00. *3 h. c.*

225. ZOOLOGY: VERTEBRATES. A comprehensive study of the morphology and taxonomy of the chordates. Three two-hour laboratory-discussion periods a week. Prereq.: C or better in Biology 125. Fee: $6.00. *3 h. c.*

230. ANATOMY AND PHYSIOLOGY I. The dissection and interpretation of the cat, with correlations with the structures of the human body. Three two-hour laboratory-discussion periods a week. Prereq.: C or better in Biology 175 or 225. Fee: $6.00. *3 h. c.*

250. ANATOMY AND PHYSIOLOGY II. Functions of the human body. Three one-hour lectures a week. Prereq.: C or better in Biology 230. *3 h. c.*

Upper Division Courses

301. BACTERIOLOGY. The fundamentals of bacteria, and methods of handling and growing micro-organisms. Two one-hour lectures and two three-hour laboratory periods a week. Prereq.: 12 semester hours of credit in biology, a knowledge of the principles of organic chemistry, and the consent of the instructor. Fee: $10.00. *5 h. c.*

304. PHYSICAL ANTHROPOLOGY. The origin and evolution of man as disclosed by fossil apes and early human types; prehistoric archaeology and the development of culture; the modern ethnic groupings of man. Three two-hour discussion-laboratory periods a week. Recommended to be taken concurrently with Sociology 204. Prereq.: permission of instructor. Listed also as Sociology 314. *3 h. c.*

308. VERTEBRATE EMBRYOLOGY. Germ cells, maturation, types of cleavage and gastrulation, and the development of the frog, chick, and mammal. Living material used in demonstration. Two one-hour lectures and two two-hour laboratory periods a week. Prereq.: C or better in Biology 225. Fee: $6.00. *4 h. c.*

309. VERTEBRATE ANATOMY I. A comparative study of the anatomical structures of a series of vertebrate animals exclusive of the mammals. Two one-hour lectures and one three-hour laboratory period a week. Prereq.: C or better in Biology 233. Fee: $10.00. *3 h. c.*

310. VERTEBRATE ANATOMY II. A study of the anatomy of mammals, based on the cat, with reference to Biology 309. Three two-hour laboratory-discussion periods a week. Prereq.: permission of the instructor. Fee: $8.50. *3 h. c.*

313. VERTEBRATE HISTOLOGY. The microscopic anatomy of mammalian tissue, including preparation of tissues for study. Two three-hour laboratory-discussion periods a week. Prereq.: C or better in Biology 308 (formerly 233). Fee: $8.50. *3 h. c.*

316. TAXONOMY OF MOSSES AND ALLIES. Identification in the field and in the laboratory. 54 contact hours. Offered in alternate years. Prereq.: Biology 124 and 219, or consent of instructor. *1 h. c.*

317. TAXONOMY OF FERNS AND ALLIES. Identification in the field and in the laboratory. 54 contact hours. Offered in alternate years. Prereq.: Biology 124 and 219, or consent of instructor. *1 h. c.*

318. TAXONOMY OF GRASSES. Identification of local grasses. 108 contact hours. Offered in alternate years. Prereq.: Biology 219 and 224, or consent of instructor. *2 h. c.*

321. GENETICS. Principles of inheritance, organic evolution, and eugenics. Three one-hour lectures a week. Prereq.: C or better in Biology 224 or 225. *3 h. c.*

321L. SPECIAL PROBLEMS IN GENETICS. An optional supplement to Biology 321; may be taken concurrently or later. Prereq.: C or better in Biology 224 or 225. Fee: $6.00. *2 h. c.*

331. PHYTOMORPHOLOGY. Comparative anatomy and histology of the vascular plants. Two one-hour lectures and two two-hour laboratory periods a week. Prereq.: C or better in Biology 224. Fee: $6.00. Offered in alternate years. *4 h. c*

332. PLANT PHYSIOLOGY. The chemistry, physics, and functions of green plants. Two one-hour lectures and two three-hour laboratory periods a week. Prereq.: C or better in Biology 224. Fee: $10.00. Offered in alternate years. *4 h. c.*

383. WARD MANAGEMENT AND TEACHING. The fundamental principles in the management of the head nurse unit and the duties of the head nurse as teacher; discussions of the various problems that arise in the head nurse unit. Not applicable toward a major in biology. Prereq.: standing as registered nurse. *3 h. c.*

405. GENERAL PHYSIOLOGY. An introduction to the basic processes common to all organisms. Five one-hour lecture demonstration periods weekly. Prereq.: two years of biology and one year of chemistry. *4 h. c.*

406. LIMNOLOGY. The study of microscopic fresh-water organisms and their physical environment. Two four-hour laboratory-discussion periods a week. Prereq.: junior standing and permission of the instructor. Fee: $6.00. Offered in alternate years. *4 h. c.*

408. BIOLOGICAL TECHNIQUES. The techniques of making microscopical preparations, plastic mounts, models, etc. Two three-hour laboratory periods a week. Prereq.: 20 semester hours of biology and permission of the instructor. Fee: $10.00. *2 h. c.*

412. PROBLEMS IN BIOLOGY. Special biological problems for which materials and equipment are available and for which the student is qualified. Available at all times. Prereq.: recommendation by staff. Fee: $9.00. *3 h. c.*

413. SEMINAR: HISTORICAL. Lectures, readings, and discussions relevant to the history of biology and to classics in the field. Six hours a week. Prereq.: permission of the staff. *2 h. c.*

414. SEMINAR: CURRENT. Examination of monographs, periodicals, pamphlets, etc. Written reports, with round-table discussions of them. One hour of class and five hours of assigned work a week. Prereq.: permission of the staff. *2 h. c.*

416. SYSTEMATIC BOTANY. The theory of plant taxonomy Prereq.: permission of instructor. *3 h. c.*

BOTANY

See Biology.

CHEMISTRY

A student for the degree of Bachelor of Science with a major in chemistry must take Chemistry 109 or 111, 110 or 112, 205, 206, 207, 208, 301, 302, 303, 304, 307, 311, 312, 319, 320, 401, 419, and 421, and from three to six hours each in two of the following fields: advanced inorganic chemistry, advanced organic chemistry, and biochemistry. Also required are two years of mathematics, including calculus; one year of physics; and a reading knowledge of scientific German. Further work in physics and a reading knowledge of French are recommended.

The student may take the degree of Bachelor of Arts with a major in chemistry, but the course leading to the degree of Bachelor of Science prepares him better for graduate study and for the more desirable industrial positions.

Curriculums are suggested below for the degree of Bachelor of Science with a major in chemistry and with a major in metallurgy. For chemical and metallurgical engineering, see the William Rayen School of Engineering section.

Where laboratory or other work is not specified in a course description, the class meets for 50 minutes of lecture and recitation a week for each hour of credit.

Lower Division Courses

100. INTRODUCTION TO CHEMISTRY. A presentation of the principles and laws of chemistry and their application. The chemistry and uses of fats, carbohydrates, proteins, vitamins, and hormones are considered. Two hours of lecture, one hour of recitation and quiz, and two hours of laboratory a week. A student completing this course may enter Chemistry 110 if sufficient competence has been shown. Fee: $5.00. *4 h. c.*

103. THE SLIDE RULE. Logarithms, significant numbers, and manipulation of the slide rule. Problems in chemistry are emphasized. *1 h. c.*

109-110. GENERAL CHEMISTRY. The fundamentals of chemistry, for those who have not studied chemistry in high school. Three lectures and recitations and four hours of laboratory a week, including a discussion period. Prerequisite: two years of high school mathematics. Fee: $7.00 each semester. *5 + 5 h. c.*

111-112. GENERAL CHEMISTRY. A more advanced course, for those who have had a satisfactory year of high school chemistry. Two lectures and recitations and four hours of laboratory a week, including one discussion period. Prerequisite: two years of high school mathematics. Fee: $7.00 each semester. *4 + 4 h. c.*

115-116. EVERYDAY CHEMISTRY. For students who wish to take chemistry for its cultural value. Emphasis is on the chemistry of the things with which we have daily contact in the home, the parks and fields, and business and industrial life. Only the simpler mathematical phases are involved. Not accepted for credit toward a major in chemistry or for engineering. A student who has taken this course may take additional courses in chemistry providing he first takes Chemistry 110. Three lectures and recitations and one three-hour laboratory period a week. Fee: $5.00 each semester. *4 + 4 h. c.*

119, 120. CHEMICAL MATHEMATICS. The mathematical aspects of first-year chemistry. Prerequisite or concurrent: first-year chemistry. *1 + 1 h. c.*

125. ELEMENTARY PHOTOGRAPHY. For the average camera enthusiast. A study of light, lenses, and the elementary chemistry of photography; demonstrations and practice in picture-taking, developing, printing, and enlarging, using various grades of film and paper. One hour of lecture and recitation and one two-hour laboratory period a week. Not applicable toward the science requirement for the Bachelor of Arts, Bachelor of Science, or Bachelor of Engineering degree. Fee: $5.00. *2 h. c.*

205. QUALITATIVE ANALYSIS. An extension of the study of atomic structure, valence, the periodic system, and chemical equilibrium and their applications to reactions, properties of elements and compounds, and analytical procedures. In the laboratory, cations, anions, and salts are systematically analyzed on a semi-micro basis. Spot testing is used only for confirmation. Two hours of lecture and recitation and two three-hour laboratory periods a week. Prereq.: Chemistry 109-110 or 111-112. A student expecting to take quantitative analysis should take Chemistry 206 concurrently with Chemistry 205. Fee: $7.00. *4 h. c.*

206. QUANTITATIVE ANALYSIS. An introduction to quantitative analysis, both volumetric and gravimetric, including use of the analytical balance; use of volumetric apparatus; calculations, errors, means of minimizing errors. One hour of lecture and one three-hour laboratory period a week. Prerequisite or concurrent: Chemistry 205. Fee: $7.00. *2 h. c.*

207. QUANTITATIVE ANALYSIS. Volumetric analysis. Acidimetry and alkalimetry; oxidation and reduction methods; water analysis (chemical) to determine very small concentrations of materials by colorimetric methods. One hour of lecture and two three-hour laboratory periods a week. Prereq.: Chemistry 206. Fee: $7.00. *3 h. c.*

208. QUANTITATIVE ANALYSIS. Gravimetric analysis. Principles and methods of gravimetric separations; analysis of ores, rocks, and minerals. One hour of lecture and two three-hour laboratory periods a week. Prereq.: Chemistry 206. Fee: $7.00. *3 h. c.*

225. ADVANCED PHOTOGRAPHY. The science underlying photography is emphasized: the chemistry and physics of emulsions, developing,

fixing, toning, color, and color compounds. Application of the theoretical principles to such techniques as the use of filters, lighting, and enlarging. One hour of lecture and recitation and one two-hour laboratory period a week. Prereq.: Chemistry 125 or its equivalent. Fee: $5.00. *2 h. c.*

226. STUDIO PHOTOGRAPHY. The art of composition and the technical procedure of studio photography. The lighting and posing of a subject, with use of models. The techniques of developing, printing, negative retouching, darkroom procedure, finishing, toning, dry mounting, and coloring. Prereq.: Chemistry 125 or equivalent. Fee: $7.50. *2 h. c*

250. METALLURGICAL ANALYSIS. Qualitative and quantitative analysis of natural ores, commercial alloys, and fluxes. One hour of lecture and two three-hour laboratory periods a week. Prereq.: Chemistry 207. Fee: $5.00. *2 h. c.*

Upper Division Courses

301, 302. ORGANIC CHEMISTRY. The nomenclature, properties, and deportments of the aliphatic and aromatic carbon compounds; general organic reactions, their applications, and the theories underlying them. Prereq.: Chemistry 205. 301 is prerequisite to 302. *3 + 3 h. c.*

303, 304. ORGANIC CHEMISTRY LABORATORY. The preparation and study of typical aliphatic and aromatic compounds, and introductory work in the separation, purification, and identification of simple compounds. Two three-hour laboratory periods a week, including a discussion period. Prerequisite or concurrent: Chemistry 301. 303 is prerequisite to 304. Fee: $9.00 each semester. *2 + 2 h. c.*

307. CHEMICAL LITERATURE AND TECHNICAL WRITING. Examination of standard reference works, periodicals, pamphlets, etc., with written reports following various technical writing procedures; translation of a short German article. One hour of class work and five hours of reference and composition work a week. *2 h. c.*

311, 312. PHYSICAL CHEMISTRY. The principles of theoretical chemistry, including the structure of matter, equilibria, chemical kinetics, chemical thermodynamics, electro-chemistry, catalysis, and mechanism of reactions. Prereq.: Chemistry 208. Prerequisite or concurrent: Mathematics 209-210 and Physics 201 and 202. 311 is prerequisite to 312. *3 + 3 h. c.*

319, 320. PHYSICAL CHEMISTRY LABORATORY. Quantitative investigation of gas laws, surface tension, speed of reaction, solutions, phase diagrams, electro-motive force, hydrogen ion concentration, and absorption. Two three-hour laboratory periods a week, including a discussion period. Prerequisite or concurrent: Chemistry 311-312. 319 is prerequisite to 320. Fee: $9.00 each semester. *2 + 2 h.c.*

321, 322. BIOCHEMISTRY. The analytical and physical chemistry of living organisms; comparative study of their physical and chemical processes in relations to their environments; preparation of products obtained from natural materials: and study of procedures of special use in biological chemistry. Prereq.: Chemistry 205, 206, and 301, and a course in biology, preferably in college. Two lectures and three hours of laboratory a week. Fee: $7.00 each semester. *3 + 3 h. c.*

330. CHEMICAL MICROSCOPY. Analysis by means of procedures carried out on slides and observed under the microscope. Precipitation, filtration, decantation, sublimation, fusion, etc., permit the identification of

the elements separately and from mixtures. Trace amounts of unknowns may be readily detected. One hour of lecture and six hours of laboratory a week. Prereq.: Chemistry 207, 208. *3 h. c.*

340-341. PRINCIPLES OF CHEMICAL ENGINEERING. Review of the principles of stoichiometry, with emphasis on the utility of the pound mol as a unit in calculation. Mathematical analysis of the phenomena accompanying the flow of heat and of liquids and the laws governing these operations. Detailed consideration of crushing and grinding processes, mechanical methods of separating materials, and forms of filtration. Processes dependent upon vaporization are treated in relation to vapor pressure equilibria. Humidification, dehumidification, water cooling, evaporation, and distillation. Prereq.: Chemistry 207 and 208. Listed also as Engineering 340-341. *3 + 3 h. c.*

343. GAS AND FUEL ANALYSIS. The analysis of natural and artificial gases, gas calorimetry, analysis and calorimetry of coal, and analysis and physical testing of oils. One lecture and two three-hour laboratory periods a week. Prereq.: Chemistry 208. Fee: $7.00. *3 h. c.*

345. THE RARER ELEMENTS. A study of the rarer elements, including preparation, properties, and qualitative separation. Prereq.: Chemistry 207 and 208. *2 h. c.*

347. INORGANIC SYNTHESIS. The preparation and purification of inorganic compounds, with a study of the principles involved. Six hours of laboratory a week, including discussion. Prereq.: Chemistry 207 and 208. Fee: $5.00. *2 h. c.*

401. ADVANCED QUANTITATIVE ANALYSIS. Colorimetric, turbidimetric, and electrometric titrations; the use of instruments is emphasized. Nine laboratory hours a week, including a discussion period. Prereq.: Chemistry 208 or its equivalent. Fee: $9.00. *3 h. c.*

404. ORGANIC ANALYSIS. Systematic methods of separating, purifying, and identifying organic compounds, and practice in the standard methods for quantitative analysis of such compounds. Twelve laboratory hours a week, including a discussion period. Prereq.: Chemistry 303. Fee: $9.00. *4 h. c.*

411. THERMODYNAMICS. The laws of thermodynamics and their application to entropy, free energy, and heat capacity. Prereq.: Chemistry 207 and 208, or junior standing with major in physics. Listed also as Physics 411. *2 h. c.*

412. THERMODYNAMICS. The application of thermodynamics to phase equilibria, fugacity, and activity; free energy and chemical reactions; solution activities. Debeye-Huckel theory, and electrical potential. Prereq.: Chemistry 411. Listed also as Physics 412. *2 h. c.*

415. ELECTRO-CHEMISTRY. The fundamental principles and applications of electro-chemistry; correlated laboratory experiments. Two lectures and two three-hour laboratory periods a week. Prereq.: Chemistry 207 and junior or senior standing. Fee: $5.00. *4 h. c.*

419. ADVANCED INORGANIC CHEMISTRY. Theories of inorganic chemistry. Prereq.: Chemistry 208. *2 h. c.*

421. ADVANCED ORGANIC CHEMISTRY. Theories of organic chemistry. Prereq.: Chemistry 302. *2 h. c.*

425. ORGANIC REACTIONS. A study of complex reactions emphasizing carbon-to-carbon bonds. Prereq.: Chemistry 302. *2 h. c.*

430. UNIT DESIGN. The development and study of apparatus to carry out laboratory-proved reactions. Prereq.: junior or senior standing, with major in chemistry, physics, or chemical engineering, and permission of department head. Fee: $5.00 for the first credit hour; $3.00 for each additional credit hour. *Hours and credit to be arranged.*

450. GROUP RESEARCH. Each student works on a different phase of a group problem; the work is co-ordinated and closely supervised by the instructor. Prereq.: senior standing, candidacy for the Bachelor of Science degree, and at least 30 semester hours of chemistry with a B average or better. Fee: $5.00 for the first credit hour; $3.00 for each additional credit hour. *Hours and credit to be arranged.*

Curriculums

NOTE. If either of these curriculums is to be completed in four years, some courses must be taken in summer terms to avoid overloading. It is recommended that these be non-science courses, such as Social Science 101 and 102 and the language courses. (A student may obtain by himself the required reading knowledge of chemical German; see page 98.)

In these curriculums, Mathematics 210 may count as an Upper Division course. English 101-102 and Speech and Dramatics 115, 116 (totaling 10 hours) may be substituted for Communication 105-106-107. The first-year mathematics may be either Mathematics 101, 102, College Algebra; 103, Trigonometry; and 104, Analytic Geometry (totaling 12 hours); or Mathematics 109-110, Freshman Mathematics (10 hours).

Chemistry

Suggested Curriculum Leading to the Degree of Bachelor of Science with a Major in Chemistry

First Year	Hrs.
Chem. 109-110 or 111-112 General Chemistry	10 or 8
Comm. 105-106 Basic Course I-II	6
Mathematics	12 or 10
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Phys. Ed. 107 and 108 Health Ed.	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	37 to 33

Second Year	Hrs.
Chem. 205 Qualitative Analysis	4
Chem. 206, 207, and 208 Quantitative Analysis	8
Comm. 107 Basic Course III	3
German 101-102 Elementary German	6
Hist. 201 and 202 The United States	6
Math. 209-210 Calculus I and II	10
Physical Education (activity)	1
	38

Third Year	Hrs.
Chem. 301, 302 Organic Chemistry	6
Chem. 303, 304 Org. Chem. Lab.	4
Chem. 401 Advanced Quantitative Analysis	3
German 215-216 Chemical German	6
Physics 201 and 202 General Physics	6
Physics 201L and 202L General Physics Laboratory	2
Biology or electives	3 to 7
	30 to 34

Fourth Year	Hrs.
Chem. 307 Chemical Literature and Technical Writing	2
Chem. 311, 312 Physical Chemistry	6
Chem. 319, 320 Phys. Chem. Lab.	4
Chem. 404 Organic Analysis	4
Chem. 419 Advanced Inorganic Chemistry	2
Chem. 421 Advanced Organic Chem.	2
Philosophy and Religion elective, or Humanities 401 or 402	3
Electives (Upper Division, if needed), as necessary	4 to 12
	27 to 35

Metallurgy

Suggested Curriculum Leading to the Degree of Bachelor of Science with a Major in Metallurgy

First Year	Hrs.
Chem. 109-110 or 111-112 General Chemistry	10 or 8
Comm. 105-106 Basic Course I-II	6
Engin. 101 and 103 Engineering Drawing	4
Mathematics	12 or 10
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Phys. Educ. 107 and 108 Health Ed.	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	41 to 37

Second Year	Hrs.
Chem. 205 Qualitative Analysis	4
Chem. 206 and 207 Quantitative Analysis	5
Comm. 107 Basic Course III	3
Engin. 251, 252 General Metallurgy	6
Math. 209-210 Calculus I and II	10
Physics 201 and 202 General Physics	6
Physics 201L and 202L General Physics Laboratory	2
Physical Education (activity)	1
	37

Third Year	Hrs.
Chem. 250 Metallurgical Analysis	3
Chem. 311, 312 Physical Chemistry	6
Engin. 351, 352 Physical Metallurgy	6
Engin. 351L, 352L Phys. Met. Lab.	3
German 101-102 Elementary German	6
Hist. 201 and 202 The United States	6
Physics 220 Analytical Mechanics: Statics	3
	33

Fourth Year	Hrs.
Engin. 301 Report Writing	2
Engin. 317 Applied Thermodynamics	4
Engin. 326 Strength of Materials	3
Engin. 326L Str. of Mat. Lab.	1
Engin. 453, 454 Advanced Metallography	6
German 215-216 Chemical German	6
Philosophy and Religion elective, or Humanities 401 or 402	3
Physics 325 Analytical Mechanics: Dynamics	3
Elective	0 or 1
	28 or 29

CLASSICAL LANGUAGES AND LITERATURE

See Ancient Languages and Literature.

COMMUNICATION

Communication 105-106-107 is the course ordinarily taken in order to meet the general requirement in communication. It may be counted toward a major in English, on the approval of the head of the Department of English.

Day students must take Orientation 100 in conjunction with Communication 105.

Non-credit Course

50. IMPROVEMENT OF ADULT READING ABILITY. The techniques involved in the improvement of reading skill for adults. Of interest to adults who wish to improve their own reading ability. Meets three hours a week. Total tuition and fee: $15.00. *No credit.*

Lower Division Courses

105-106-107. BASIC COURSE I-II-III. This course attempts to improve the effectiveness of the student's speech and writing, with emphasis on logical organization and accurate expression, and to make more aware of the nature, function, and significance of the various media of communication. A student who receives a grade of D in Communication 107 must take Communication 108. (For certification, graduation, and transfer pur-

poses, this course may be interpreted as six hours of composition and three hours of speech.) Concurrent with 105, for day students: Orientation 100. *3 + 3 + 3 h. c.*

108. REVIEW COURSE. A continuation and review of the material of Communication 105-106-107 for the student who receives a grade of D in Communication 107. A student taking this course must receive a grade of at least C in it in order to graduate. Prereq.: grade of D in Communication 107. *3 h. c.*

DRAMATICS

See Speech and Dramatics.

ECONOMICS

A major in economics consists of 24 semester hours in addition to Social Science 101 and 102 and History 201 and 202. Courses in other units and departments for which credit may be given toward the major in economics are History 301, Economic History of Europe; History 302, Economic History of the United States; Business Organization 221, Mathematics of Finance; Merchandising 224, Marketing; and Engineering 361, Motion and Time Analysis. The major is designed to prepare students for research and statistical work in business and government service and to give a foundation for graduate study in the field.

For economic geography, see Business Organization 120, and also Geography.

Lower Division Course

202. PRINCIPLES OF ECONOMICS. Economic theory; supplements Social Science 101 and 102. For economics, accounting, and merchandising majors only. *3 h. c.*

Upper Division Courses

303. FINANCIAL ORGANIZATION. Intended to furnish a foundation for the more technical studies in the field of finance, and to describe the financial institutions with which most people come in contact, such as the commercial bank, the building and loan association, and the finance company. *3 h. c.*

304. PUBLIC FINANCE. The development and present status of public finance; federal, state, and local taxation; public credit; the budget; financial administration. *3 h. c.*

305. ECONOMIC AND SOCIAL STATISTICS. Measurements and interpretation of economic and social data. Tabular and graphic presentations, averages, ratios and coefficients, dispersion, correlation, measurement of trends, and collection of statistical material. Listed also as Sociology 305. *3 h. c.*

309. ENGINEERING ECONOMICS. The economic theory and problems of engineering, with emphasis on the financing and organization of engineering enterprises, valuation, depreciation, and replacement. *3 h. c.*

315. CORPORATION FINANCE. Promotion of new industries, capital structure of corporations, evolution of a business, working capital, surplus, dividends, voting trusts, investment trusts, public utilities, co-operative plans, and reorganizations. Prereq.: Business Organization 202. *3 h. c.*

319. ECONOMICS OF AMERICAN INDUSTRY. A study of American manufacturing: the evolution of major industries, and their technological and economic growth, maturity, current problems, and outlook for the future. *3 h. c.*

401. LABOR PROBLEMS. The history of the labor movement in England and in this country is outlined as a background for discussion of present issues. *3 h. c.*

402. COMPARATIVE ECONOMIC SYSTEMS. A comparative study of American capitalism, Russian communism, and British socialism, with a consideration of the theory of the corporate state. Listed also as Sociology 412. *3 h. c.*

404. PERSONNEL MANAGEMENT. The background of labor management; selection and training of employees; maintenance of business relationships, including wages and hours policy, safety and health, benefits, and labor relations. Prereq.: Social Science 101 and 102 and History 201 and 202. *3 h. c.*

405, 406. CURRENT POLITICAL ECONOMY. Discussion of basic economic, political, and social problems as reflected in news magazines and newspapers. Prereq.: senior standing. *1 + 1 h. c.*

407, 408. SEMINAR. Readings in the history of economic thought. Prereq.: standing as senior economics major. *3 + 3 h. c.*

EDUCATION

Courses are offered leading to the degree of Bachelor of Science in Education with the major in art education, business education, elementary education, kindergarten-primary education, music education, nursing education, physical education, or secondary education, and to the degree of Bachelor of Arts with the major in either secondary education or a teaching subject. The curriculums for these majors are printed below, following the last education course description; they include a dual curriculum leading to both high school and elementary school certificates.

Each curriculum leads to an Ohio State Provisional Certificate. Requirements for teachers' certificates are determined by the Ohio State Department of Education; if those requirements change, the new requirements become effective immediately as requirements of the Department of Education of Youngstown College. To qualify for the Bachelor of Science in Education

degree, the student must complete one of the required curriculums, unless he already holds a provisional or higher certificate valid for teaching in Ohio.

Every student wishing to teach must file an application for admission to the Department of Education. Until the application has been approved, the student will not be admitted to education courses of 300 or 400 level. No student, whatever his major, can be registered in any education course except with the approval of the Department of Education.

Every candidate for the Bachelor of Science in Education degree must have his candidacy approved by the Department of Education.

A course in student teaching (Education 404 or 405) is required in each curriculum. Its admission requirements are high, and every student planning to complete the requirements for a certificate at Youngstown College is urged to read the description of Education 404.

A candidate for the Provisional High School Certificate must complete the requirements for at least three teaching fields. He should observe carefully the requirements in the various fields as stated in the *Guidance Form for the Provisional High School Certificate*. In view of prevailing conditions, he is urged to follow the dual curriculum leading to both the Provisional High School Certificate and the Provisional Elementary Certificate.

A student who expects to teach in high school or elementary school should consult with the head of the Department of Education to insure that his plans for professional preparation are satisfactory. He is urged to participate in extracurricular activities in college in order to be qualified to direct such activities in the public schools.

Every student who plans to teach must register with the Placement Office unless he is excused by the head of the Department of Education.

A major in education consists of 30 semester hours, and satisfies the major requirements of either the Bachelor of Arts or the Bachelor of Science in Education degree. Within the limits allowed by the certification requirements, credit toward an education major may be given for the following courses in other departments:

English 251, Modern American English
Music 315-316, Music in the First Six Grades
Music 321, Music Education for Elementary Teachers
Music 411-412, Teaching of Music in the Junior and Senior High Schools
Physical Education 321C, Health Teaching in Elementary Grades
Physical Education 322C, Games for Elementary Grades
Physical Education 415C, Health Teaching in Secondary Schools
Psychology 201, General Psychology
Psychology 202, Psychology of Education
Psychology 305, Child Psychology
Psychology 306, Psychology of Adolescence
Psychology 308, Personality and Mental Hygiene
Psychology 310, Psychological Aspects of Personnel Relations
Psychology 405, Interviewing and Counseling
Psychology 406, Vocational Guidance
Psychology 425, Guidance of High School Students
Psychology 426, Study of an Individual Child

Education 101 is prerequisite to any other course in education.

Lower Division Courses

101. INTRODUCTION TO EDUCATION. Thorough orientation in state, institutional, and departmental policies pertaining to graduation and certification requirements, and presentation of a broad background for subsequent courses in education, with wide supplementary reading. *3 h. c.*

124. GRAPHIC ART FOR ELEMENTARY TEACHERS. Drawing and painting with different media such as crayons, chalk, water color, show-card paints, and oils, to insure a broad knowledge of materials and ease in handling them. Making of friezes, wall panels, stage scenery, and illustrations to fill specific needs. Analysis of children's work. The student collects a portfolio of fine works of art to enrich his background. Fee: $1.00. *2 h. c.*

214. CHILDREN'S LITERATURE. Familiarization with children's literature; methods of helping children use and enjoy books, with emphasis on recent books. Principles of selection, historical development, authors, illustrators; visits to book departments, libraries, and classrooms. *3 h. c.*

223. TEACHING OF GENERAL SCIENCE. Study of the subject matter of general science courses, emphasizing classroom techniques, curriculum problems, and methods of approach. May be counted toward the science requirement for the Bachelor of Science in Education degree; but if taken by a prospective high school teacher, he can earn no credit in Education 400, Special Methods in General Science. *3 h. c.*

224. DESIGN FOR ELEMENTARY TEACHERS. Structural and decorative design; making simple motifs and repeat patterns; color study; lettering as design. Application of design principles to textiles, pottery, metal, weaving, and the decoration of tin and glass objects. Children's design and craft work shown. Fee: $1.00. *2 h. c.*

Upper Division Courses

301. PRINCIPLES OF TEACHING. General methods of high school teaching: classroom procedure, methods utilized by superior teachers, attention to individual differences, measuring the results of teaching, planning the instruction. Observation of teaching in high schools. Prereq.: junior or senior standing. *3 h. c.*

304. CLASSROOM MANAGEMENT. Problems of classroom administration, control, and organization: attendance, curriculum, program, procedure, and extracurricular activities in the light of a modern philosophy of education. Observation of teaching in public schools. Prereq.: junior or senior standing. *3 h. c.*

305. APPRENTICESHIP. For elementary school teachers. *3 h. c.*

307. HISTORY OF EDUCATION. The historical development of educational organizations, objectives, curriculums, and methods, studied with a view to a better understanding of modern educational conditions and problems. The place of education in various civilizations, especially modern Western civilization. May be counted also toward a major or minor in history. *2 or 3 h. c.*

308. EDUCATIONAL SOCIOLOGY. The sociological foundations of education; the relation of the individual and the social group; the school as a social institution; the relations between education and the home, the community, the state, social control, social progress, democracy, efficiency, and culture. The social aspects of specific school problems: the selection of educational objectives, the educative process, the curriculum, educational guidance, school control, moral education, and the selection and improvement of teachers. Listed also as Sociology 308. *3 h. c.*

310. EDUCATIONAL MEASUREMENT AND GUIDANCE. Construction, administration, scoring, and interpreting of the new-type objective examination; selection, administration, scoring, and interpretation of results of standardized tests and scales, and their use in vocational and educational guidance. Prereq.: junior or senior standing. Fee: $1.00. *3 h. c.*

312. THE TEACHING OF HANDWRITING. Methods of teaching penmanship; improving the student's own writing. *1 h. c.*

313. THE TEACHING OF SKILLS. Principles effective in the learning of skills, and their application to the teaching of spelling, arithmetic, writing, and language. *3 h. c.*

314. THE TEACHING OF CONTENT SUBJECTS. Principles effective in the learning of content subjects, and their application to the teaching of history, geography, and other content subjects. *3 h. c.*

317. EXTRACURRICULAR ACTIVITIES. Various points of view on extracurricular activities, development of satisfactory personal attitudes toward them, and discussion of the best practices in the organization, supervision, and administration of such activities as student council, dramatics, booster club, and bird club. *3 h. c.*

320. STATISTICAL METHODS IN EDUCATION. Frequency distributions, measures of central tendency, measures of variability, calculation and meaning of percentiles, the normal curve, reliability and validity of measures, and simple correlation. Identical with Psychology 320. Prereq.: Psychology 201. *3 h. c.*

321. SPEECH EDUCATION FOR THE CLASSROOM TEACHER. A consideration of both speech improvement for all pupils and speech correction for pupils with speech and hearing problems, on the kindergarten, elementary, and secondary levels. Types of speech and voice difficulties; techniques and materials for acquisition and continued use of good voice and acceptable speech. The class meets two hours a week; each student spends a minimum of two additional hours a week in observation or practical work with a pupil. Prereq.: junior standing. *3 h. c.*

322, 323. CRAFTS. Experience in many kinds of material used in elementary and high schools, and in many methods of using paper, cloth, wood, clay, metal, and plastics to provide art experience. 322 is prerequisite to 323. Fee: $2.50 each semester. *3 + 3 h. c.*

324. TEACHING OF ART IN THE ELEMENTARY SCHOOL. Materials and methods. A study of the art needs of children at different age levels and the means of providing desirable art experiences. The contribution of art to the elementary course of study. Objectives and procedures evaluated from the standpoint of the child's growth. Classroom contact with children's work and working situations. *2 h. c.*

330. AUDIO-VISUAL EDUCATION. The aims and theory of audio-visual aids, and the use of various kinds of materials and projectors; the relation of teaching practices to such aids, and their correlation with other aspects of teaching. Reports, demonstrations, and practice as operators. Listed also as Library Service 330. *3 h. c.*

332. THE EXCEPTIONAL CHILD IN THE REGULAR CLASSROOM. The fundamentals of special education for the classroom teacher. Discovering the exceptional child; the causes, prevention, and treatment of physical and mental handicaps in children; handling mentally gifted children and those who are behavior problems. Prereq.: Psychology 201. *3 h. c.*

334. TEACHING OF ART IN THE SECONDARY SCHOOL. The values of art expression for secondary school boys and girls, and the courses best adapted to specific age levels. Art services for the school and community: stage sets, murals, posters, and many other forms. Familiarization with the best literature on the subject. *3 h. c.*

400. SPECIAL METHODS. A study of problems involved in the teaching of different high school subjects. Each student specializes on the subject of his main interest. Observation of teaching in public secondary schools; reports; term paper. Each student confers each week with the head of the department of his major teaching subject, and at least one-fourth of the instruction in the course is given by that department head or by some teacher appointed by him. Prereq.: Education 301 and senior standing. *2 h. c.*

401. PRINCIPLES OF EDUCATION. An analysis of current education, its aims, its sources, its strength and weaknesses. Current practices are traced to their contributors, from Pestalozzi and Froebel to the modern group, but the focus is on the means by which modern education promotes the growth of the whole child in a democratic society. *3 h. c.*

404. SUPERVISED STUDENT TEACHING AND APPRENTICESHIP: HIGH SCHOOL. Observation and teaching of high school classes, under supervision. Taken in the last semester in college.

Application. Application to take this course must be made on a special form, not later than the end of the fourth week of the preceding semester.

Prerequisites. The applicant must have senior standing at the time of application; a point index of 2.0 in his teaching fields and 1.5 in all college work; a percentile rank of 34 or higher in the Ohio State University Psychological Test, and of 40 or higher in the American Council on Education Co-operative English Test; and the unqualified approval of the head of the department of each of his teaching fields and of the head of the Department of Education.

Quality and Nature of Work. Classroom teaching must be satisfactory at all times or it may be discontinued without warning. The apprenticeship part of the course is under the direction of the principal of the high school to which the student is assigned or under someone designated by the principal. Besides teaching, the apprentice teacher may be assigned to any duty that a regular teacher might have to perform.

Schedule. The applicant, if accepted, leaves a half-day free, every day, in his schedule for the semester in which he takes this course. One class meeting each week; individual conferences with the course instructor or with the regular classroom teacher, as needed. Fee: $10.00. *6 h. c.*

405. SUPERVISED STUDENT TEACHING: ELEMENTARY EDUCATION. The same as Education 404, but for the elementary grades. Fee: $10.00. *9 h. c.*

413. THE TEACHING OF READING. The principles and techniques of teaching reading, and the function of reading in the day's program. Oral, silent, and audience reading, and diagnostic and remedial measures. *3 h. c.*

420. PROBLEMS OF THE CLASSROOM TEACHER. Adjustment to teaching surroundings; seeking practical and acceptable solutions to problems through re-thinking of philosophy, instruction methods, and ethics; the professional, legal, and social status of the teacher, teacher-pupil relations, and other problems. *3 h. c.*

430. EDUCATIONAL PROGRAMS FOR CHILDREN IN ELEMENTARY SCHOOLS. Exploration of relationships with homes and other educational agencies; utilization of resources of the arts, subject matter fields, community and related areas. *3 h. c.*

431. CHILDHOOD EDUCATION I. Analysis of and provision for the physical, emotional, intellectual, and social needs of kindergarten-primary children. *3 h. c.*

432. CHILDHOOD EDUCATION II. The findings of Education 431 are applied to the practical and specific phases of the kindergarten-primary period, with attention to school and community environment, curriculum, equipment, daily program, and materials. *3 h. c*

433. TEACHING SLOW LEARNERS IN THE REGULAR CLASSROOM. Problems, techniques, and helps, with opportunity to study individual problems and attention to curricular units, guidance, and planning. *3 h. c.*

441. PUPIL PROBLEMS. The problems of school routine, such as discipline, attendance, public school delinquency, child labor, and school-parent relationship; practical cases. Social agencies as auxiliaries to the school program. *3 h. c.*

Education Curriculums

(An asterisk or other reference mark in any of these curriculums refers to a note immediately following the curriculum in which the mark is used.)

Art Education

Required Curriculum Leading to the Degree of Bachelor of Science in Education with a Major in Art Education and to a Provisional Special Certificate in Art Education

First Year	Hrs.
Art 110, 111 Color and Design I	6
Art 113, 114 History and Appreciation of Art: General	6
Comm. 105-106 Basic Course I-II	6
Educ. 101 Introduction to Education	3
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Science	3
Phys. Ed. 107 and 108 Health Ed.	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	33

Second Year	Hrs.
Art 203, 204 Drawing and Painting	6
Art 211, 212 Color and Design II	6
Comm. 107 Basic Course III	3
Engl. 200 Introduction to Literature	3
Hist. 201 and 202 The United States	6
Psych. 201 General Psychology	3
Psych. 202 Psychology of Education	3
Physical Education (activity)	1
	31

Third Year	Hrs.
Art 223 Advertising Art I	3
Art 303, 304 Figure Drawing and Painting	6
Art 350 Mechanical Drawing	3
Educ. 301 Principles of Teaching	3
Educ. 304 Classroom Management	3
Educ. 322 Crafts	3
Educ. 324 Teaching of Art in the Elementary School	2
Educ. 334 Teaching of Art in the Secondary School	3
Science	6
	32

Fourth Year	Hrs.
Art 305 History and Appreciation of Art: Italian Renaissance	3
Art 306 History and Appreciation of Art: Modern	3
Art 316 Interior Decorating	3
Art 319 Jewelry and Metal Work I	3
Art 325, 326 Pottery and Modeling	6
Educ. 404 Supervised Student Teaching and Apprenticeship: High School	6
Philosophy and Religion elective, or Humanities 401 or 402	3
Elective (Upper Division)	2
	29

Business Education

Required Curriculum Leading to the Degree of Bachelor of Science in Education with a Major in Business Education and to a Provisional Special Certificate in Business Education

First Year	Hrs.
Bus. Org. 111 Principles of Business	3
Bus. Org. 120 Economic Geography	3
Comm. 105-106 Basic Course I-II	6
Educ. 101 Introduction to Education	3
Science	6
Secr. St. 100, 101 Typewriting	4
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Phys. Ed. 107 and 108 Health Ed.	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	34

Second Year	Hrs.
Comm. 107 Basic Course III	3
Engl. 200 Introduction to Literature	3
Hist. 201 and 202 The United States	6
Psych. 201 General Psychology	3
Psych. 202 Psychology of Education	3
Science	3
Secr. St. 104-105 and 203 Bookkeeping, or Acctg. 201-202 Elem. Acctg.	6
Secr. St. 207 Business English and Correspondence	3
Physical Education (activity)	1
	31

Third Year	Hrs.
Acctg. 201-202 Elementary Acctg., or Acctg. 301-302 Intermedinte Acctg., or Acctg. 303, 304 Cost Accounting	6
Educ. 301 Principles of Teaching	3
Educ. 304 Classroom Management	3
*Mdsg. 224 Marketing	3
*Mdsg. 225 Salesmanship	3
Mdsg. 227-228 Advertising Principles and Practice	6
Secr. St. 200 Shorthand	4
Secr. St. 215 Office Machines	3
	31

Fourth Year	
Educ. 400 Special Methods (in Business Education)	2
Educ. 404 Supervised Student Teaching and Apprenticeship: High School	6
Mdsg. 311-312 Buying and Merchandising Methods	6
Philosophy and Religion (Upper Division) or Humanities 401 or 402	3
Secr. St. 208 Commercial Law	3
Secr. St. 300-301 Shorthand	4
Secr. St. 403 Office Practice	3
Elective	2
	29

*This course may be used for Upper Division credit in this curriculum.

Dual Curriculum

Required Curriculum Leading to the Degree of Bachelor of Science in Education with a Major in Education and to Both the Elementary and the High School Provisional Certificates

First Year	Hrs.
Comm. 105-106 Basic Course I-II	6
Educ. 101 Introduction to Education	3
Educ. 124 Graphic Art for Elementary Teachers	2
Mus. 121 Introduction to Music for Elementary Teachers	3
Science	3
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Phys. Ed. 107 and 108 Health Ed.	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
*Electives for teaching fields	9
	34

Second Year	Hrs.
Comm. 107 Basic Course III	3
Engl. 251 Modern American English	3
Educ. 214 Children's Literature	3
Hist. 201 and 202 The United States	6
Psych. 201 General Psychology	3
Psych. 202 Psychology of Education	3
Science	6
Physical Education (activity)	1
*Electives for teaching fields	3
	31

Third Year	Hrs.
Educ. 301 Principles of Teaching	3
Educ. 304 Classroom Management	3
Educ. 310 Educational Measurement and Guidance	3
Educ. 313 Teaching of Skills	3
Educ. 314 Teaching of Content Subjects	3
Educ. 324 Teaching of Art in the Elementary School	2
Mus. 321 Music Education for Elementary Teachers	2
Phys. Educ. 321 Health Teaching in Elementary Grades	3
Phys. Educ. 322 Games for Elementary Grades	3
*Electives for teaching fields	6
	31

Fourth Year	Hrs.
Educ. 322 Crafts	3
Educ. 400 Special Methods	2
Educ. 401 Principles of Education	3
Educ. 404 Student Teaching: High School	3
Educ. 405 Student Teaching: Elementary School	6
Educ. 413 Teaching of Reading	3
Philosophy and Religion elective, or Humanities 401 or 402	3
*Electives for teaching fields	6
	29

*The electives should be utilized to complete a strong high school teaching field or two teaching fields. The requirements in the various high school teaching fields are shown on the *Guidance Form for the Provisional High School Certificate.*

Elementary Education

Required Curriculum Leading to the Degree of Bachelor of Science in Education with a Major in Elementary Education and to a Provisional Elementary Certificate

Every candidate following this curriculum must take a comprehensive examination covering the content and skills of the elementary school. A student found deficient in any elementary school subject must take a review course in it until he reaches a satisfactory standard.

First Year	Hrs.
Comm. 105-106 Basic Course I-II	6
Educ. 101 Introduction to Education	3
Educ. 124 Graphic Art for Elementary Teachers	2
Geogr. 102 Principles of Geography	3
Mus. 121 Introduction to Music for Elementary Teachers	2
Science	6
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Phys. Ed. 107 and 108 Health Ed.	3
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
Elective	3
	34

Second Year	Hrs.
Comm. 107 Basic Course III	3
Educ. 214 Children's Literature	3
Educ. 224 Design for Elementary Teachers	2
Engl. 200 Introduction to Literature	3
Engl. 251 Modern American English	3
Hist. 201 and 202 The United States	6
Music 221 Music Literature and Appreciation for Elementary Teachers	2
Psych. 201 General Psychology	3
Psych. 202 Psychology of Education	3
Science	3
Physical Education (activity)	1
	32

Third Year	Hrs.
Educ. 304 Classroom Management	3
*Educ. 305 Apprenticeship	3
Educ. 310 Educational Measurement and Guidance	3
*Educ. 312 Teaching of Handwriting	1
Educ. 313 Teaching of Skills	3
Educ. 314 Teaching of Content Subjects	3
Educ. 322 Crafts	3
Educ. 324 Teaching of Art in the Elementary School	2
Mus. 321 Music Education for Elementary Teachers	2
Phys. Ed. 321 Health Teaching in Elementary Grades	3
Phys. Ed. 322 Games for Elementary Grades	3
Psych. 305 Child Psychology	3
	32

Fourth Year	Hrs.
Educ. 401 Principles of Education	3
Educ. 405 Supervised Student Teaching: Elementary School	9
Educ. 413 Teaching of Reading	3
Social Sciences elective (Upper Division)	3
Philosophy and Religion elective, or Humanities 401 or 402	3
Electives (Upper Division)	6
	27

*Elective

Kindergarten-Primary Education

A Kindergarten-Primary Certificate may be earned by taking Education 431 and 432 in addition to the elementary education curriculum, and taking 3 semester hours of the student teaching credit in student teaching in the kindergarten and 3 in a primary grade, preferably the first grade.

Health and Physical Education

For a health and physical education curriculum, see "Health and Physical Education" in the College of Arts and Sciences section.

Music Education

For music education curriculums, see the Dana School of Music section.

Public School Nursing

For the curriculum leading to the degree of Bachelor of Science in Education for public school nurses, the student may consult the head of the Department of Education.

Secondary Education

Required Curriculum Leading to the Degree of Bachelor of Arts* and a Provisional High School Certificate

The degree major may be in education or in a teaching field. Electives should be chosen carefully to provide three teaching fields, as required for the Provisional High School Certificate.

First Year	Hrs.
Comm. 105-106 Basic Course I-II	6
Educ. 101 Introduction to Education	3
**Foreign language (or elective)	6
**Science	8
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Elective	3
Phys. Ed. 107 and 108 Health Ed.	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	35

Second Year	Hrs.
Comm. 107 Basic Course III	3
Engl. 200, 203, 204, 205, or 206	3
**Foreign language (or elective)	6
Hist. 201 and 202 The United States	6
Psych. 201 General Psychology	3
Psych. 202 Psychology of Education	3
**Science	3
Physical Education (activity)	1
Electives	3
	31

Third Year	
Educ. 301 Principles of Teaching	3
Educ. 304 Classroom Management	3
Philosophy and Religion elective, or Humanities 401 or 402	3
Electives	22
	31

Fourth Year	
Educ. 400 Special Methods	2
Educ. 404 Supervised Student Teaching and Apprenticeship	6
Electives (Upper Division)	20
	28

*The student seeking the Bachelor of Science in Education degree should follow this curriculum with the exceptions that a foreign language is not required and that 9 hours of any sciences may be substituted for the 11 hours of sciences specified for the Bachelor of Arts degree.

**The student should read carefully the information on these degree requirements on pages 94 and 97-98.

ENGLISH

English majors are expected to complete at least one course in American literature, 12 hours in English literature, and English 351-352. Students who plan to teach high school English must complete courses 205 or 206, 351-352, and two courses in English literature which include the study of poetry and prose.

Communication 105-106-107, or English 101-102 and Speech and Dramatics 115, is required of all freshmen. (English 103-104 was replaced by Communication 105-106-107 in the fall of 1952. A student who has had only English 103 takes English 102 and Speech and Dramatics 116 to complete his basic requirement.)

English 101-102 or Communication 105-106-107 is prerequisite to all other English courses. English 200, 203, or 204 is prerequisite to other courses in English literature. Under special circumstances the head of the English department may accept other courses in lieu of these requirements.

Besides the courses described below, credit in English will be given for Humanities 401, Greek Classics and the Old Testament; Humanities 402, Roman, Medieval, and Renaissance Classics and the New Testament; Humanities 403, Early Modern Classics; and Humanities 404, Later Modern Classics.

Lower Division Courses

101-102. ENGLISH COMPOSITION. A study of the elementary principles of composition, to teach the habits of clear and correct expression. Reading of models, class discussions, and writing of themes *3 + 3 h. c.*

101R. ENGLISH COMPOSITION AND REMEDIAL READING. Same as English 101, with the addition of a remedial reading program and the use of corrective instruments and techniques. Meets 6 hours a week. Fee: $15.00. *3 h. c.*

105-106-107. BASIC COURSE in communication. See Communication (page 110).

200. INTRODUCTION TO LITERATURE. A non-technical, non-historical course in which important contemporary and older works of literature are read and discussed critically for the purpose of increased delight and understanding. *3 h. c.*

203, 204. SURVEY OF ENGLISH LITERATURE. First semester: from the beginnings through the eighteenth century. Second semester: from the nineteenth century to the present. *3 + 3 h. c.*

205, 206. SURVEY OF AMERICAN LITERATURE. First half: Colonial times to 1860. Second half: Civil War to the present. *3 + 3 h. c.*

251. MODERN AMERICAN ENGLISH. A brief survey of the earlier development of the English language, followed by a more thorough study of contemporary American pronunciation and usage. Not for English majors, who take English 351-352. *3 h. c.*

Upper Division Courses

351-352. HISTORY OF THE ENGLISH LANGUAGE. The development of the language from Old English to Modern English, with an intensive study of Modern English sounds, inflections, syntax, word meanings, and usage. *3 + 3 h. c.*

353, 354. ADVANCED COMPOSITION. A course in writing, for mature students, providing opportunity to develop creative ability. Conducted mainly through individual conferences. Registration only by permission of the instructor. Prereq.: preparation satisfactory to the instructor. *1 to 3 h. c.*

355. NEWS WRITING AND REPORTING. The organization and functions of a newspaper office, with special attention to reporting, writing the different types of news stories, and copy reading. Prereq.: junior or senior standing. *3 h. c.*

355L. NEWS WRITING AND REPORTING WORKSHOP. Application through student publications of the principles of English 355. Six hours of workshop activity a week. Prereq.: permission of instructor. Prerequisite or concurrent: English 355. May be repeated once. *1 h. c.*

357. EDITING AND MAKE-UP. The preparation of the printed page, with emphasis on the principles and mechanics of copyreading, editing, make-up, head writing, typography, the use of illustrations, and page layout. Prereq.: English 355. *3 h. c.*

357L. EDITING AND MAKE-UP WORKSHOP. Application through student publications of the principles of English 357. Six hours of workshop activity a week. Prereq.: permission of instructor. Prerequisite or concurrent: English 357. May be repeated once. *1 h. c.*

365. THE ROMANTIC PERIOD. A study of the works of the principal poets and prose writers of the period, with special attention to the factors that influenced their writing. *3 h. c.*

368. VICTORIAN PROSE. The prose works of Macaulay, Newman, Mill, Darwin, Ruskin, Arnold, Huxley, Rossetti, Morris, Pater, and Stevenson. *3 h. c.*

369. VICTORIAN POETRY. The Victorian poets, including Tennyson, Browning, Arnold, Fitzgerald, Clough, Rossetti, Morris, Swinburne, Dobson, Henley, Stevenson, Wilde, Yeats, and Kipling. *3 h. c.*

381. THE ENGLISH NOVEL. The history and development of the novel in England during the eighteenth and nineteenth centuries. *3 h. c.*

382. THE AMERICAN NOVEL. The history and development of the novel in the United States during the nineteenth and twentieth centuries. *3 h. c.*

400. CHAUCER AND HIS PERIOD. Reading of Chaucer's principal works, with a brief survey of his predecessors, contemporaries, and successors. *3 h. c.*

405. ENGLISH DRAMA. English drama from the sixteenth century to the nineteenth, excluding Shakespeare. Emphasis is mainly on the works of Elizabethan and Restoration writers. *3 h. c.*

406. CONTEMPORARY DRAMA. English, Irish, and American drama from the Ibsen revival to the present. Continental plays that have been influential are included, in translation. *3 h. c.*

409, 410. SHAKESPEARE. A critical study of the work of Shakespeare. *3 + 3 h. c.*

450, 451. METHODS OF RESEARCH. A seminar for English majors who expect to do graduate work. Prereq.: senior standing with major in English. *1 + 1 h. c.*

461. SPENSER AND HIS PERIOD. The more important non-dramatic works in prose and verse from the early humanists to 1600, with particular attention to Spenser. *3 h. c.*

462. MILTON AND HIS PERIOD. Milton and the non-dramatic literature from 1600 to 1660. *3 h. c.*

463. RESTORATION AND NEO-CLASSIC LITERATURE. Particular attention is given to the works of Dryden, Defoe, Addison, Steele, Pope, and Swift. *3 h. c.*

464. THE AGE OF JOHNSON. Particular attention is given to the works of Johnson, Goldsmith, Boswell, Gibbon, Fanny Burney, and Burns. *3 h. c.*

FOREIGN LANGUAGES AND LITERATURE

See French, German, Greek, Hebrew, Italian, Latin, Russian, and Spanish; for Portuguese, see Spanish. For literature in translation, see Humanities.

FRENCH

A major in French consists of 24 semester hours above the elementary level, plus 6 hours in Latin, Italian, or Spanish. For a combined major in humanities, see Humanities.

The prerequisite for any Upper Division course is French 202, or four years of high school French, or the consent of the instructor. Freshmen who satisfy this prerequisite may enter Upper Division courses.

Lower Division Courses

101-102. ELEMENTARY FRENCH. Fundamental principles of grammar and the reading of simple prose. No credit is given for this course if the student has credit for two years of high school French. *3 + 3 h. c.*

201. INTERMEDIATE FRENCH. Modern prose works are read and discussed. Grammar is reviewed briefly. Prereq.: C or better in French 102 or in second-year high school French. *3 h. c.*

202. INTERMEDIATE FRENCH. A continuation of French 201, using texts of increasing difficulty. Prereq.: French 201 or three years of high school French. *3 h. c.*

Upper Division Courses

325. ADVANCED FRENCH GRAMMAR. A review of the essential rules of French grammar, with particular stress on generic differences between French and English, especially as regards the verb. *3 h. c.*

326. FRENCH CIVILIZATION. A summary study of the geography, history, and traditions of contemporary France with a view to facilitating the reading of modern books and periodicals. *3 h. c.*

327. COURS DE STYLE. Through translation of English literary selections into French and of French passages into literary English, the relative differences in expression between the two languages are studied. *3 h. c.*

328. FRENCH LITERARY TRADITION. A brief survey of the principal significant writers of France together with the reading of selections from the great masterpieces of French literature. *3 h. c.*

329. CONVERSATIONAL FRENCH. One hour a week of systematic drill in pronunciation, and two hours of conversation based on composition exercises. *3 h. c.*

330. CONTEMPORARY FRENCH LITERATURE. A study of modern France in the writings of such contemporaries as Duhamel, Gide, Giraudoux, Romains, Valéry, and others. *3 h. c.*

411, 412. COMPARATIVE GRAMMAR OF THE ROMANCE LANGUAGES. First part: the phonetics and morphology of the chief Romance dialects. Second part: syntax and semantic development. Given only in summer sessions. Listed also as Italian 411, 412 and Spanish 411, 412. *3 + 3 h. c.*

GENERAL SCIENCE

Credit for these courses is not applicable toward the degree of Bachelor of Science or Bachelor of Engineering; it is applicable toward the Bachelor of Arts degree only if the courses form all or part of a teaching minor in general science.

Lower Division Courses

101. FOOD MANUFACTURE. Photosynthesis and the syntheses of complex carbohydrates, proteins, and lipids, with detailed treatment of the biological, chemical, and physical principles. *3 h. c.*

102. FOOD DIGESTION. The biology, chemistry, and physics of digestion in various organisms, especially the human being. Prereq.: General Science 101. *3 h. c.*

121. PHYSICAL SCIENCE. Astronomy and geology: the newer concepts of matter and energy revealed by physics and chemistry. Simple demonstrations; application to problems of the home, transportation, and communication. *3 h. c.*

122. PLANT AND ANIMAL LIFE. Biological principles of plant and animal life. Physiology, types, distribution, and ecology; relationship to human life and activity. *3 h. c.*

201. FUNCTIONAL MORPHOLOGY. The morphology of the human being and the physiological activities related to each structure, clarified by analogies with other organisms. Prereq.: General Science 102. *3 h. c.*

202. REPRODUCTION, EMBRYOLOGY, AND HEREDITY. The early ontogeny of the human being and its relationship to heredity. The basic principles of genetics, with examples drawn from man wherever possible. Prereq.: General Science 201. *3 h. c.*

224. ADVANCED PHYSICAL SCIENCE. A study of scientific principles, with emphasis on sound, electricity, communication, and transportation. Prereq.: General Science 121. *3 h. c.*

GEOGRAPHY

See also Business Organization 120 (Economic Geography).

Lower Division Courses

102. PRINCIPLES OF GEOGRAPHY. A study of causal relationships between life activities and their physical surroundings. *3 h. c.*

201. REGIONAL GEOGRAPHY OF ANGLO-AMERICA. The physical background of the English-speaking parts of North America and its relation to their economics and culture. The physiographic regions; the types of climate and their factors; natural vegetation; soils; the historical geography; the geographical regions. Prereq.: Geography 102. *3 h. c.*

202. REGIONAL GEOGRAPHY OF LATIN AMERICA. A regional approach to the economic and cultural backgrounds of the countries of South and Central America, stressing the application of geographic principles in Latin-American development and behavior. Prereq.: Geography 102. *3 h. c.*

203. OUR NATURAL RESOURCES AND THEIR CONSERVATION. The public domain of the United States: its nature, use, disposal, and conservation. The soil; erosion; lands; land reclamation; forests; water supply, waterways, flood control; mineral and other resources; wildlife and fisheries. Prereq.: Geography 102. *3 h. c.*

204. REGIONAL CLIMATOLOGY. The general principles of climatology. The nature and elements of climate; factors governing climatic types and their distribution; influences on soils, land forms, plants, and man; simplified classification of climates; detailed treatment of the major types of continents. Prereq.: Geography 102. *3 h. c.*

Upper Division Course

301. GEOGRAPHY OF WORLD WAR II. The distributions of raw materials; the need for markets; the German, Italian, and Japanese desire for empire; the British Commonwealth; America as world-wide producer and as a market; the battleground; and geographical problems at the peace table. *3 h. c.*

GEOLOGY

Lower Division Courses

101. FUNDAMENTALS OF GEOLOGY. Economic and physical geology: field trips; indoor study of rocks and minerals. Historical geology: fossil study and collection; industrial and other applications of geology. *3 h. c.*

205, 206. FIELD STUDY AND SPECIAL PROBLEMS. Geological study of the locality. Field trips in fall and spring; selected problems in winter. Prerequisite or concurrent: Geology 101. *1 + 1 h. c.*

GERMAN

A major in German consists of 24 semester hours above the elementary level, plus English 351-352. For a combined major in humanities, see Humanities.

The prerequisite for any Upper Division course is German 202, four years of high school German, or the consent of the instructor. Freshmen who satisfy this prerequisite may enter Upper Division courses.

101-102. ELEMENTARY GERMAN. The fundamentals of grammar, drill in inflectional forms, elementary conversation, and reading of easy prose and poetry. No credit is given for this course if the student has credit for two years of high school German. *3 + 3 h. c.*

201. INTERMEDIATE GERMAN. Elementary composition based on grammar review. Reading material is chosen both to furnish a basis for further study of German literature and to provide a working knowledge of the modern language. Prereq.: C or better in German 102 or in second-year high school German. *3 h. c.*

202. INTERMEDIATE GERMAN. A continuation of German 201, using texts of increasing difficulty; conversation and composition. Prereq.: German 201. *3 h. c.*

215-216. CHEMICAL GERMAN. A basic course designed to develop expeditiously an ability to read chemical literature in German. Prereq.: German 101-102 and Chemistry 111-112 or equivalent. *3 + 3 h. c.*

Upper Division Courses

325. GERMAN LITERARY TRADITION. A brief survey of significant German writers, illustrated by selections from their writings. Prereq.: German 204 or equivalent. *3 h. c.*

326. GERMAN CIVILIZATION. A study of the geography, history, and traditions of contemporary Germany, to provide a background for reading modern German authors. Prereq.: German 204 or equivalent. *3 h. c.*

327. GERMAN LITERARY STYLE. Through exercises in translation, modes of literary expression in German and English are compared. Prereq.: German 204 or equivalent. *3 h. c.*

328. GOETHE AND SCHILLER. Representative works of these two great German classical writers are read and discussed. Prereq.: German 204 or equivalent. *3 h. c.*

329. ADVANCED GERMAN GRAMMAR. A study of the most characteristic features of German word and sentence structure, with reference to analogies in English. Prereq.: German 204 or equivalent. *3 h. c.*

330. CONTEMPORARY GERMAN LITERATURE. Twentieth century writers and tendencies. Prereq.: German 204 or equivalent. *3 h. c.*

GREEK

A major in Greek is not offered, but credit in Greek may be counted toward a major in Latin and toward a combined major in classical studies or in humanities.

Lower Division Courses

101-102. ELEMENTARY GREEK. Grammar, syntax, and simple composition; reading selections from various Greek writers and the New Testament. Introduction to Greek literature, history, and civilization; attention to the Greek element in the English language. *3 + 3 h. c.*

201, 202. GREEK PROSE AND POETRY. Selections from prose writers, including Plato, and from poets, including a play of Euripides. Prereq.: Greek 101-102 or equivalent. *3 + 3 h. c.*

Upper Division Courses

301, 302. READINGS IN CLASSICAL GREEK AUTHORS. Readings from the principal Greek writers, selected with consideration for the students' tastes and interests. The course can be given on request, by arrangement with the director of the Division of Language and Literature. Prereq.: Greek 202 or equivalent, and consent of the instructor. *3 + 3 h. c.*

HEALTH AND PHYSICAL EDUCATION

The Department of Health and Physical Education offers two types of courses: (1) those through which the general requirement in health and physical education is met; (2) those designed for the training of teachers of health and physical education. (The term "Physical Education" is used for convenience to designate courses in this department regardless of whether they are in health education or physical education.)

I. Required Courses

Every student seeking a degree from Youngstown College must earn four semester hours of credit in health and physical education. Two hours are in health education (usually Physical Education 107 and 108); the other two, normally, are in physical activity (four one-semester courses, each providing one half-hour of credit).

The form of activity is chosen by the student; previous experience in it is not necessary. For men it may, and for women it must, differ each semester, except for music students, who ordinarily must take eurhythmics all four semesters. Members of the varsity baseball, basketball, football, golf, swimming, and tennis squads may receive physical activity credit through such participation.

Men and women students are scheduled in separate sections for Physical Education 107 and 108. Activity courses may be taken separately or coeducationally, depending on the activity. A woman student purchases a required uniform through her in-

structor; a man provides suitable clothing himself, but should consult his instructor first. The other equipment for required physical activities is available for use without charge. A student wishing to use his own racket, golf clubs, bow, etc., may do so, but he is advised to consult his instructor before buying new equipment.

If a student is excused from the regular activity courses for any reason, the head of the Department of Health and Physical Education may substitute suitable courses. Night students are ordinarily permitted such substitution if they prefer it. Handicapped students and those needing remedial work are given special attention.

In addition to the regular tuition charge ($5.00 for one half-hour of credit), there is a course fee of $2.50 for each half-hour activity course taken, with the exception of Physical Education 125M, for which there is no tuition charge but the course fee is $7.50.* Thus the total charge for any half-hour activity course is $7.50.

Lower Division Courses Meeting the College Requirement

FOR MEN

107M. HEALTH EDUCATION I. Personal health and good community living, including study of such common disorders as heart disease, cancer, and tuberculosis, and of other communicable diseases and their control. *1 h. c*

108M. HEALTH EDUCATION II. Home nursing, including care of the sick and the sickroom, bedfast patients, and infants and children. *1 h. c.*

Activity courses:

116M. FOOTBALL. Fee: $2.50. *½ h. c.*

117M. BASKETBALL. Fee: $2.50. *½ h. c.*

118M. BASEBALL. Fee: $2.50. *½ h. c.*

125M. GYMNASIUM SPORTS. Calisthenics and one or more of the following: basketball, soccer, softball, squash, swimming, touch football, volleyball. Two hours a week, at the Y. M. C. A. (There is no tuition charge for this course beyond the course fee. The fee makes most other Y. M. C. A. activities and facilities available to the student who pays it, although course credit is given only for the activities specified.) Fee: $7.50. *½ h. c.*

135M. GOLF. Fee: $2.50. *½ h. c.*

137M. TENNIS. Fee: $2.50. *½ h. c.*

152M. SWIMMING. Fee: $2.50. *½ h. c.*

*Called the *gymnasium fee* in the Fees and Expenses section. Physical Education 125M is charged for in this special way because Y. M. C. A. facilities rather than college facilities are used for it.

COEDUCATIONAL

206C. HEALTH PRINCIPLES. The basic principles of personal and community health, including home nursing techniques. May be taken in place of Physical Education 107 and 108, on the approval of the head of the Department of Health and Physical Education. Prereq.: sophomore standing. *2 h. c.*

213C. SPORTS APPRECIATION. The rules, mechanics, skills, social benefits, contemporary status, and other aspects of baseball, football, golf, tennis, skiing, sailing, fishing, and many other sports. May be taken in place of activity courses by students excused from physical activity. Fee: $2.00. *2 h. c.*

Activity courses:

121C. EURHYTHMICS I. The first of four courses in eurhythmics taken by students for the Bachelor of Music degree. Fee: $2.50. *½ h. c.*

122C. EURHYTHMICS II. The second of four courses in eurhythmics taken by students for the Bachelor of Music degree. Fee: $2.50. *½ h. c.*

130C. ARCHERY. Fee: $2.50. *½ h. c.*

131C. BADMINTON. Fee: $2.50. *½ h. c.*

132C. BEGINNING BADMINTON AND ARCHERY. Fee: $2.50. *½ h. c.*

134C. FENCING. Fee: $2.50. *½ h. c.*

135C. GOLF. Fee: $2.50. *½ h. c.*

137C. BEGINNING TENNIS. Fee: $2.50. *½ h. c.*

155C. FOLK AND SQUARE DANCING. Fee: $2.50. *½ h. c.*

157C. BEGINNING TAP DANCING. Fee: $2.50. *½ h. c.*

159C. BEGINNING MODERN DANCING. Fee: $2.50. *½ h. c.*

160C. INTERMEDIATE MODERN DANCING. Fee: $2.50. *½ h. c.*

221C. EURHYTHMICS III. The third of four courses for students for the Bachelor of Music degree. Fee: $2.50. *½ h. c.*

222C. EURHYTHMICS IV. The fourth of four courses for students for the Bachelor of Music degree. Fee: $2.50. *½ h. c.*

FOR WOMEN

107W. HEALTH EDUCATION I. Principles of personal health, including posture and body mechanics, body care, nutrition, and the study of such common disorders as heart disease, cancer, tuberculosis, and poliomyelitis. *1 h. c.*

108W. HEALTH EDUCATION II. Home nursing, including care of the sick and the sickroom, bedfast patients, and infants and children. *1 h. c.*

Activity courses:

110W. TEAM SPORTS. Fee: $2.50. *½ h. c.*

130W. ARCHERY. Fee: $2.50. *½ h. c.*

131W. BADMINTON. Fee: $2.50. *½ h. c.*

132W. BEGINNING BADMINTON AND ARCHERY. Fee: $2.50. *½ h. c.*

133W. BOWLING. Fee: $2.50. *½ h. c.*

134W. FENCING. Fee: $2.50. ½ *h. c.*
135W. GOLF. Fee: $2.50. ½ *h. c.*
136W. GYMNASTICS. Fee: $2.50. ½ *h. c.*
137W. TENNIS. Fee: $2.50. ½ *h. c.*
145W. BEGINNING SWIMMING. Fee: $2.50. ½ *h. c.*
146W. INTERMEDIATE SWIMMING. Fee: $2.50. ½ *h. c.*
147W. ADVANCED WIMMING I. Fee: $2.50. ½ *h. c.*
148W. ADVANCED SWIMMING II. Fee: $2.50. ½ *h. c.*
155W. FOLK AND SQUARE DANCING. Fee: $2.50. ½ *h. c.*
157W. BEGINNING TAP DANCING. Fee: $2.50. ½ *h. c.*
159W. BEGINNING MODERN DANCING. Fee: $2.50. ½ *h. c.*
160W. INTERMEDIATE MODERN DANCING. Fee: $2.50. ½ *h. c.*

II. Professional Courses

Youngstown College is approved by the Ohio State Department of Education for the training of health and physical education teachers for public schools. Although the approval is only for the state teaching minor, a college major is offered, for which a suggested curriculum follows the course descriptions.

FOR MEN

Lower Division Course

250M. LIFE-SAVING METHODS. Techniques of life saving, with American Red Cross methods as the basis of instruction. Upon satisfactory completion, Red Cross certification is granted. Three class hours a week. Prereq.: permission of instructor. *1 h. c.*

Upper Division Courses

309M. INTRAMURAL SPORTS: ORGANIZATION AND ADMINISTRATION. The principles and problems of conducting an intramural sports program, including pupil participation, awards, tournaments, types of officiating, publicity, sportsmanship, and other details. *3 h. c.*

350M. WATER SAFETY METHODS FOR INSTRUCTORS. Techniques of organizing and teaching swimming, diving, and life-saving activities. Red Cross instructor's certificate is awarded upon satisfactory completion. Prereq.: current certification as Red Cross Senior Life Saver. *2 h. c.*

370M. THEORY OF CAMP COUNSELING. Camp administration, program planning, objectives, and camp craft as related to camp leadership. Trips to nearby camps and camp sites afford practical experience. Prereq.: permission of instructor. Fee: $5.00. *3 h. c.*

403M. HEALTH AND PHYSICAL EDUCATION: ORGANIZATION AND ADMINISTRATION. Study and practice of techniques involved in the organization and administration of the school health and physical education program. Prereq.: Physical Education 303C. *2 h. c.*

409M. COACHING OF BASEBALL AND TRACK AND FIELD. Prereq.: Physical Education 311C or 312C. *3 h. c.*

410M. COACHING OF FOOTBALL AND BASKETBALL. Prereq.: Physical Education 311C or 312C. *3 h. c.*

418M. REMEDIAL AND CORRECTIVE PHYSICAL EDUCATION. The organization of physical education programs adapted to the individual needs of handicapped persons. Consideration of abnormal conditions such as posture defects, cardiac defects, foot defects, post-operative cases, and certain orthopedic conditions. Evaluation of therapeutic exercises and activities. Prereq.: Physical Education 417C. *3 h. c.*

427M. SEMINAR IN ATHLETICS. Study of special problems pertaining to athletics. Prereq.: senior standing. *2 h. c.*

FOR MEN AND WOMEN

Lower Division Courses

200C. INTRODUCTION TO HEALTH, PHYSICAL EDUCATION, AND RECREATION. A content survey of the areas of health, physical education, and recreation. Introduction to professional preparation. *2 h. c.*

201C. FIRST AID AND CARE OF ATHLETIC INJURIES. The best safety and first aid procedures, especially for injuries a physical education teacher should be prepared to treat. Principles and methods of taping are demonstrated and practiced. The Red Cross Manual is followed and Red Cross First Aid Certificates are awarded. *2 h. c.*

Upper Division Courses

301C. FIRST AID METHODS FOR INSTRUCTORS. Materials for and techniques of teaching first aid to children and adults. Red Cross instructor's certification is awarded upon satisfactory completion. Prereq.: Physical Education 201C. *2 h. c.*

303C. HISTORY AND PRINCIPLES OF HEALTH AND PHYSICAL EDUCATION. The historical development and biological, sociological, psychological, and educational principles related to the field of health and physical education. Prereq.: Biology 103 and Psychology 202. *3 h. c.*

306C. ADVANCED HEALTH EDUCATION. Personal and community health, mental and social hygiene, nutrition, disease control, and home nursing. The course includes facts and details necessary for teachers of health and hygiene courses. Prereq.: standing as sophomore health and physical education major or minor. *2 h. c.*

307C. COMMUNITY HEALTH AGENCIES. The administrative interrelationships of special agencies dealing with community health. Prereq.: Physical Education 306C. *2 h c.*

311C, 312C. TEACHING OF INDIVIDUAL AND DUAL SPORTS. Methods of playing and teaching various individual and dual sports, including tennis, badminton, fencing, gymnastic exercises, stunts, tumbling, apparatus work, and archery. Prereq.: sophomore standing. Fee: $1.50 each semester. *3 + 3 h. c.*

321C. HEALTH EDUCATION IN ELEMENTARY GRADES. Health habits and their motivation and inculcation, including their projection into the home. Use of the Snellen chart and auditory acuity tests; proper seating, lighting and air space; recognition of common disorders and malnutrition in children. Prereq.: sophomore standing. *3 h. c.*

322C. GAMES FOR ELEMENTARY GRADES. Study of an extensive program of low-organization games, rhythms, plays, and stunts, their purposes, and methods of teaching them to children. The teacher-in-training learns the games and participates in them. Prereq.: sophomore standing. Fee: $1.50. *3 h. c.*

404C. PLAYGROUNDS: ORGANIZATION AND ADMINISTRATION. Study and practice of techniques involved in the organization and administration of playgrounds. Prereq.: junior standing. *3 h. c.*

405C. RECREATIONAL ACTIVITIES: ORGANIZATION AND ADMINISTRATION. The relation of physical education to recreation. The principles and aims of recreation; finding material for recreational group activities, and organizing and administering them. Prereq.: junior standing. Fee: $3.00. *3 h. c.*

415C. HEALTH TEACHING IN SECONDARY SCHOOLS. Techniques for discovering the health needs and prevalent defects of students, ascertaining the environmental and other factors, and organizing functional health teaching accordingly. Prereq.: Physical Education 321C. *3 h. c.*

417C. KINESIOLOGY AND APPLIED ANATOMY. Muscular structure and function in relation to physical movement; analysis of fundamental movements. Prereq.: Biology 230. *2 h. c.*

419C, 420C. TEACHING OF RHYTHMIC ACTIVITIES. Methods of performing and teaching folk, tap, modern, and social dancing. Prereq.: Physical Education 311C or 312C. Fee: $1.50 each semester. *3 + 3 h. c.*

425C. SEMINAR IN PHYSICAL EDUCATION. Study of special problems pertinent to physical education. Prereq.: senior standing. *2 h. c.*

426C. SEMINAR IN HEALTH EDUCATION. Study of special problems pertinent to health education. Prereq.: senior standing. *2 h. c.*

428C. NORMAL AND PHYSICAL DIAGNOSIS. A study of common physical deficiencies and defects that influence physical, mental, and social development. Techniques of conducting health examinations, clinical services, and other procedures. Prereq.: Physical Education 418M or 418W. *2 h. c.*

FOR WOMEN

Lower Division Course

250W. LIFE-SAVING METHODS. Techniques of life saving, with American Red Cross methods as the basis of instruction. Upon satisfactory completion, Red Cross certification is granted. Three class hours a week. Prereq.: permission of instructor. Fee: $1.50. *1 h. c.*

Upper Division Courses

350W. WATER SAFETY METHODS FOR INSTRUCTORS. Techniques of organizing and teaching swimming, diving, and life-saving activities. Red Cross instructor's certificate is awarded upon satisfactory completion. Prereq:. current certification as Red Cross Senior Life Saver. Fee: $1.50. *2 h. c.*

370W. THEORY OF CAMP COUNSELING. Camp administration, objectives, activities, program planning, and camp craft as related to camp leadership. Trips to nearby camps and camp sites afford practical experience. Prereq.: junior standing and permission of instructor. Fee: $11.00. *3 h. c.*

403W. HEALTH AND PHYSICAL EDUCATION: ORGANIZATION AND ADMINISTRATION. Study and practice of techniques involved in the organization and administration of the school health and physical education program. Prereq.: Physical Education 303C. Fee: $4.00. *3 h. c.*

407W, 408W. TECHNIQUES OF OFFICIATING. The theory and practice of officiating in field hockey, soccer, basketball, volleyball, softball, tennis, and badminton. Fee: $1.50 each semester. *2 + 2 h. c.*

411W, 412W. TEACHING OF TEAM SPORTS. The theory and practice of teaching field hockey, soccer, basketball, volleyball, softball, and track and field. Prereq.: Physical Education 311C or 312C. Fee: $1.50 each semester. *3 + 3 h. c.*

418W. REMEDIAL AND CORRECTIVE PHYSICAL EDUCATION. The organization of physical education programs adapted to the individual needs of handicapped persons. Consideration of abnormal conditions such as posture defects, cardiac defects, foot defects, dysmenorrhea, post-operative cases, and certain orthopedic conditions. Evaluation of therapeutic exercises and activities. Prereq.: Physical Education 417C. *3 h. c.*

Curriculum

Suggested Curriculum Leading to the Degree of Bachelor of Science in Education and a Provisional High School Certificate, for Teachers of Health and Physical Education

The major is in physical education, with a minor in health education.

First Year

First Semester	Hrs.	Second Semester	Hrs.
Biol. 103 General Biology	3	Biol. 175 General Zoology	3
Comm. 105 Basic Course I	3	Comm. 106 Basic Course II	3
Educ. 101 Introduction to Education	3	Phys. Ed. 200C Introduction to Health, Physical Education, and Recreation	2
Home Ec. 101 Food and Nutrition	2	Psych. 201 General Psychology	3
Soc. Sci. 101 Introduction to the Social Sciences I (economics)	3	Soc. Sci. 102 Introduction to the Social Sciences II (Political science)	3
Physical Education (team activity)	½	Physical Education (team activity)	½
Physical Education (activity)	½	Physical Education (activity)	½
Orientation 100 Freshman Or.	Credit		
	15		15

Second Year

Biol. 230 Anatomy and Physiology I.	3	Biol. 250 Anatomy and Physiology II	3
Comm. 107 Basic Course III	3	Engl. 200, 203, 204, 205, 206, or 251	3
Hist. 201 The United States to 1865	3	Hist. 202 The U. S. since 1865	3
*Phys. Ed. 201C First Aid and Care of Athletic Injuries	2	Phys. Ed. 306C Advanced Health Ed.	2
Phys. Ed. 311C Teaching of Individual and Dual Sports	3	Phys. Ed. 312C Teaching of Individual and Dual Sports	3
Psych. 202 Psychology of Education	3	Phys. Ed. 322C Games for Elementary Grades	3
	**17		**17

Third Year (Men)

Educ. 301 Principles of Teaching	3	Educ. 304 Classroom Management	3
Phys. Ed. 201C First Aid and Care of Athletic Injuries	2	Phys. Ed. 307C Community Health Agencies	2
Phys. Ed. 303C History and Principles of Health and Physical Ed.	3	Phys. Ed. 309M Intramural Sports	3
Phys. Ed. 321 Health Education in the Elementary Grades	3	Phys. Ed. 370C Theory of Camp Counseling, or 404C Playgrounds, or 405C Recreational Activities	3
Phys. Ed. 410M Coaching of Football and Basketball	3	Phys. Ed. 409M Coaching of Baseball and Track and Field	3
Phys. Ed. 417C Kinesiology and Applied Anatomy	2	Phys. Ed. 418M Remedial and Corrective Physical Education	3
	16		**17

Third Year (Women)

Educ. 301 Principles of Teaching	3	Educ. 304 Classroom Management	3
Phys. Ed. 303C History and Principles of Health and Physical Ed.	3	Phys. Ed. 307C Community Health Agencies	2
Phys. Ed. 321C Health Education in the Elementary Grades	3	Phys. Ed. 370W Theory of Camp Counseling	3
Phys. Ed. 407W Techniques of Officiating	2	Phys. Ed. 408W Techniques of Officiating	2
Phys. Ed. 411W Teaching of Team Sports	3	Phys. Ed. 412W Teaching of Team Sports	3
Phys. Ed. 417C Kinesiology and Applied Anatomy	2	Phys. Ed. 418W Remedial and Corrective Physical Education	3
	16		16

Fourth Year

Philosophy and Religion elective, or Humanities 401 or 402	3	**(Men)**	
Phys. Ed. 415C Health Education in the Secondary Schools	3	Educ. 404 Student Teaching	6
Phys. Ed. 419C Teaching of Rhythmic Activities	3	Phys. Ed. 403M Health and Physical Ed.: Organiz'n and Administr'n	3
Psych. 305 Child Psychology (3 hrs.) or Psych. 306 Psychology of Adolescence (3 hrs.) or Phys. Ed. 423C Normal and Physical Diagnosis (2 hrs.)	2 or 3	Electives	7 or 6
Psych. 308 Personality and Mental Hygiene	3		16 or 15
	14 or 15	**(Women)**	
		Educ. 404 Student Teaching	6
		Phys. Ed. 403W Health and Physical Ed.: Organiz'n and Administr'n	3
		Phys. Ed. 420C Teaching of Rhythmic Activities	3
		Electives	3 or 2
			15 or 14

*Not taken by men in this semester; the semester total for men is thus 15 hours.

**Only 16 hours may be carried if the grade average is below 2.0.

HEBREW

Lower Division Courses

101-102. ELEMENTARY HEBREW. Fundamental principles of grammar and the reading of simple prose, in preparation for reading narrative portions of the first five books of the Old Testament. Introduction to elementary conversational Hebrew. *3 + 3 h. c.*

201, 202. INTERMEDIATE HEBREW. Reading of selections from the Book of Genesis. Acquisition of a sufficient vocabulary for simple Hebrew conversation. Prereq.: Hebrew 101-102 or equivalent. *3 + 3 h. c.*

HISTORY

A major in history consists of History 105, 106 and 24 semester hours in courses above the 100 level.

Courses in other departments for which credit may be given toward a history major are: Political Science 304, 305, International Relations; Political Science 307, American Political Parties; Education 307, History of Education; a maximum of six semester hours in the history of art, and of four semester hours in humanities. One-third credit is allowed toward a major in history for any courses listed under Humanities.

Lower Division Courses

105, 106. EUROPE SINCE THE FALL OF ROME. European civilization from 476 to the present. *3 + 3 h. c.*

201. THE UNITED STATES TO 1865. The general, political, social, and economic development of the United States from the beginning of our history to the end of the Civil War. Listed also as Social Science 201. *3 h. c.*

202. THE UNITED STATES SINCE 1865. A continuation of History 201, emphasizing the period following the Civil War. Listed also as Social Science 202. *3 h. c.*

215, 216. CONSTITUTIONAL HISTORY OF ENGLAND. The unfolding of Anglo-Saxon governmental and legal institutions from early Germanic times to the present day. Development of the court system, common law, representative government, the cabinet system, and imperial federation. Especially recommended to pre-law and political science students. 215 is prerequisite to 216. *3 + 3 h. c.*

Upper Division Courses

301. ECONOMIC HISTORY OF EUROPE. A brief account of economic history from primitive times to the sixth century A. D., followed by a detailed study of succeeding systems; the more advanced nations of each period are chosen for study. *3 h. c.*

302. ECONOMIC HISTORY OF THE UNITED STATES. The influence of economic forces on the evolution of our national life and their effect upon our religious and social developments. *3 h. c.*

304, 305. INTERNATIONAL RELATIONS. Identical with Political Science 304, 305. *3 + 3 h. c.*

308. THE FAR EAST. A brief survey of the early history and civilization of China, Japan, and their dependencies, followed by a more detailed study stressing East-West relationships. Prereq.: History 105, 106. *3 h. c.*

309, 310. CONSTITUTIONAL HISTORY OF THE UNITED STATES. The formation, amendment, and interpretation of the Constitution of the United States. Of special interest to pre-law students. Prereq.: Social Science 101 and 102; prerequisite or concurrent: History 201 and 202. 309 is prerequisite to 310. *3 + 3 h. c.*

311. GREECE AND THE ANCIENT NEAR EAST. A survey of the pre-Greek world, followed by a closer study of ancient Greece, with attention to her cultural and intellectual relationships both to the ancient Orient and to later Western civilization. *3 h. c.*

312. HISTORY OF ROME. The first republic, the growth of the city of Rome and the Mediterranean states, the early imperial system, the rule of the Caesars, and the decline of the empire. *3 h. c.*

313, 314. ENGLISH HISTORY. From the earliest times to the present, with emphasis on social, industrial, and commercial development, the growth of parliament, the contest for religious freedom, and the literary and intellectual development of the British people. *3 + 3 h. c.*

315. LATIN AMERICA. The political, economic, and social institutions and problems of the Latin-American nations from their beginning to the present, with special attention to inter-American relationships. *3 h. c.*

317. THE CIVIL WAR AND RECONSTRUCTION. The period from 1848, when the Wilmot Proviso stirred the North and the South to

question the value of the Union, to the Cleveland era, when the South begins to emerge from the darkness of Reconstruction days. Intensive study of the outstanding figures of the Civil War and the Reconstruction. Prereq.: History 201 and 202. *3 h. c.*

318. THE UNITED STATES SINCE 1918. The period from the Peace of Versailles to the present time, with special attention to economic problems and the New Deal. Prereq.: History 201 and 202. *3 h. c.*

319. THE REVOLUTION AND THE CONSTITUTION. A brief survey of the colonial background, the causes and events of the Revolution, the conditions leading to the Convention of 1787, and the formation of the Constitution. Prereq.: History 201 and 202. *3 h. c.*

320. RUSSIA AND EASTERN EUROPE. The history of the Slavic peoples from their invasion of Europe to the present day, with emphasis on the period since Peter the Great. Prereq.: History 201 and 202. *3 h. c.*

321. NINETEENTH CENTURY EUROPE. Europe from the Congress of Vienna to the first World War, with emphasis on the rise of the unified state-nation and modern nationalism, the development of social and historical thought, and the expansion and solidification of imperialism. Prereq.: History 105, 106. *3 h. c.*

333. HISTORY OF THE UNITED STATES AND PENNSYLVANIA. The history of the State of Pennsylvania with emphasis on its position in general American history. Satisfies a requirement for a teacher's certificate in Pennsylvania. Prereq.: History 201 and 202. *3 h. c.*

340. HISTORY OF EUROPEAN RELIGIONS. Introduction of Christianity; conflict with Judaism, paganism, and other sects; formation and development of the medieval church; the Eastern Orthodox Church; the Reformation; split-up of Protestantism; the Catholic Reformation and later developments. *3 h. c.*

350. THE FRENCH REVOLUTION. After a review of the causes, the course of the revolution is followed to the close of the Napoleonic era. Some comparisons with other revolutions are noticed. *3 h. c.*

400. THE TWENTIETH CENTURY WORLD. A factual, historical approach to the problems of imperialism, conflicting ideologies, causes of world war, and recent tendencies toward international co-operation and world government. Prereq.: History 201 and 202. *3 h. c.*

401. HISTORICAL METHOD. A laboratory course, including lectures on historiography and the techniques of using original sources. The student completes a project involving original research in historical materials. For students majoring in history or related subjects who expect to continue in graduate study. Prereq.: History 201 and 202. *3 h. c.*

HOME ECONOMICS

Lower Division Courses

101. FOOD AND NUTRITION. The principles of nutrition, composition of foods, and food selection with a view to good health. Meal planning and preparation for individual needs. The scientific processes involved in the preparation and preservation of foods. *2 h. c.*

101L. FOOD AND NUTRITION LABORATORY. Two one-hour laboratory periods a week. May be taken concurrently with Home Economics 101. Fee: $5.00. *1 h. c.*

102. FOOD PREPARATION AND SERVICE. Application of the principles of nutrition to family meal service. Food for special occasions; marketing; care of food in the home. Laboratory techniques are emphasized. One two-hour lecture and one two-hour laboratory period a week. Fee: $5.00. *3 h. c.*

203. CLOTHING APPRECIATION AND CONSTRUCTION. How to plan, purchase, and care for a satisfactory wardrobe for a college girl. Good taste in dress; selection of clothes from the standpoint of color, material, and design; construction of plain garments. One two-hour lecture and one two-hour laboratory period a week. Fee: $2.50. *3 h. c.*

204. CLOTHING SELECTION AND CONSTRUCTION. Factors in the wise choice of clothing for the family. Line, design, and color; practical work in garment construction using commercial patterns; fitting and altering ready-made garments; the clothing budget, accessories, and wardrobe care and upkeep. One two-hour lecture and one two-hour laboratory period a week. Fee: $2.50. *3 h. c.*

Upper Division Courses

301. TEXTILES AND CLOTHING. Consumer problems in textiles, such as identification of fibres, quality in relation to price, labels, color design, and finishes. Development of technique in using wool, silk, and synthetic materials. One two-hour lecture and one two-hour laboratory period a week. Prereq.: Home Economics 203 and 204. Fee: $2.50. *3 h. c.*

302. ADVANCED DRESSMAKING. Application of the principles of costume design to pattern alteration and designing. Development of specialized techniques in tailoring through the construction of a coat or suit; use of sewing machine attachments; economics of clothing. One two-hour lecture and one two-hour laboratory period a week. Prereq.: Home Economics 203 and 204. Fee: $2.50. *3 h. c.*

305. CHILD PSYCHOLOGY. Identical with Psychology 305.

306. PSYCHOLOGY OF ADOLESCENCE. Identical with Psychology 306.

307. PSYCHOLOGY OF MARRIAGE AND FAMILY RELATIONS. Identical with Psychology 307.

308. PERSONALITY AND MENTAL HYGIENE. Identical with Psychology 308.

401. ADVANCED MEAL PLANNING. Selection and use of equipment for family food preparation. Financial and managerial problems in home food service; work simplification. Food flavors and herbs; advanced nutrition. Term paper. One two-hour lecture and one two-hour laboratory period a week. Prereq.: Home Economics 101 and 102. Fee: $5.00. *3 h. c.*

HUMANITIES

The material of the four courses in Humanities is drawn from the great writings of Western culture. The primary purpose of the readings is to arouse the students morally, intellectually, and aesthetically through the stimulus of these writings. An important secondary purpose is to acquaint them with a body of writing which has been extremely influential in the development of Western culture and to relate that material to the society in which it was produced and to our present society.

Credit in these courses is acceptable toward a major in any of the following subjects, to the extent indicated: English, full credit; history, 1/3 credit; philosophy, 1/3 credit; political science, 1/6 credit; sociology, 1/6 credit. Should a student be doing major work in both English and one of the other departments mentioned, he may (a) apply credit in humanities courses entirely toward his English major, or (b) apply part of it toward his other major and the balance toward his English major. Humanities 401 and 402 give full credit toward the college requirement in religion.

The only prerequisite for any of the courses is junior or senior standing. None of the courses is prerequisite to another.

Upper Division Courses

401. GREEK CLASSICS AND THE OLD TESTAMENT. The Old Testament, Homer, Greek drama, Herodotus, Thucydides, Plato, Aristotle, Plutarch. Prereq.: junior or senior standing. *3 h. c.*

402. ROMAN, MEDIEVAL, AND RENAISSANCE CLASSICS AND THE NEW TESTAMENT. The New Testament, Cicero, Catullus, Lucretius, Virgil, Horace, Ovid, Augustine, Dante, Boccaccio, Chaucer, Machiavelli, Erasmus, More, Rabelais, Montaigne, Cervantes. Prereq.: junior or senior standing. *3 h. c.*

403. EARLY MODERN CLASSICS. Shakespeare, Descartes, Milton, Molière, Spinoza, Locke, Racine, Voltaire, Fielding, Rousseau, Adam Smith, Gibbon. Prereq.: junior or senior standing. *3 h. c.*

404. LATER MODERN CLASSICS. Goethe, Balzac, Mill, Thackeray, Dostoevsky, Huxley, Ibsen, Tolstoy, Henry Adams, Hardy, William James, Shaw. Prereq.: junior or senior standing. *3 h. c.*

Combined Major in Humanities

A combined major in humanities consists of Humanities 401, 402, 403, and 404, and 33 hours chosen from the following courses:

English 101-102 (or its equivalent), 200, 203, 204, 205, 206, 366, 367, 368, 369, 381, 382, 400, 405, 406, 409, 410, 462, 463, 464.

French 101-102, 201, 202, 328, 330.

German 101-102, 201, 202, 325, 328, 330.

Greek 101-102, 201, 202, 301, 302.

Italian 101-102, 201, 202, 328, 330.

Latin 101-102, 201, 202, 301, 302, 304, 305, 401, 402, 403.

Philosophy and Religion 230, 303, 309, 330.

Russian 101-102, 201, 202, 305, 306.

Spanish 101-102, 201, 202, 328, 330, 401.

Courses (totaling not more than 9 hours) in certain related fields, such as history, with the approval of the adviser.

Of these, 15 hours must constitute a concentration unit chosen from one of the following groups:

a. English 200, 203, 204, 205, 206, 366, 367, 368, 369, 381, 382, 400, 405, 406, 409, 410, 462, 463, 464.

b. French 328, 330; German 325, 328, 330; Italian 328, 330; Russian 305, 306; Spanish 328, 330, 401.

c. Greek 201, 202, 301, 302; Latin *201, *202, 301, 302, 304, 305, 401, 402, 403; Philosophy and Religion 230, 303, 309, 330.

ITALIAN

A major in Italian consists of 24 semester hours above the elementary level, plus 6 hours in Latin, French, or Spanish. For a combined major in humanities, see page 138.

The prerequisite for any Upper Division course is either Italian 202 (or its equivalent) or the consent of the instructor. Freshmen who satisfy this prerequisite may enter Upper Division courses.

Lower Division Courses

101-102. ELEMENTARY ITALIAN. The fundamentals of grammar, with attention to correct pronunciation and diction; reading of simple modern texts. No credit is given for this course if the student has credit for two years of high school Italian. *3 + 3 h. c.*

201. INTERMEDIATE ITALIAN. Grammar review; elementary composition. Modern texts are read and used as a basis for conversation in Italian. Prereq.: C or better in Italian 102 or second-year high school Italian. *3 h. c.*

202. INTERMEDIATE ITALIAN. A continuation of Italian 201, with stories and plays studied both as literature and as language. *3 h. c.*

Upper Division Courses

325. ADVANCED ITALIAN GRAMMAR. A review of the essentials through grammatical analysis of a modern text. *3 h. c.*

326. ITALIAN CIVILIZATION. A study of the geography, history, and traditions of modern Italy with a view to understanding its influence on our own civilization. *3 h. c.*

327. CORSO DI STILE. Through translation of English masterpieces into Italian and models of Italian style into English, the means of expression in both languages are compared and contrasted. *3 h. c.*

328. ITALIAN LITERARY TRADITION. A brief survey of the principal writers of Italy, with special attention to Dante. *3 h. c.*

329. CONVERSATIONAL ITALIAN. Thorough drill in pronunciation, and conversation based on a composition text. *3 h. c.*

330. CONTEMPORARY ITALIAN LITERATURE. A study of modern Italian literary tendencies as expressed in the principal writers of the twentieth century, using the anthology *Poeti d'Oggi*. *3 h. c.*

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*At the discretion of the adviser.

411, 412. COMPARATIVE GRAMMAR OF THE ROMANCE LANGUAGES. Identical with French 411, 412; listed also as Spanish 411, 412.

JOURNALISM

See English. Besides a major in English, the student of journalism should secure a broad education in the liberal arts with emphasis on the social sciences and the humanities.

LATIN

A major in Latin consists of 18 hours of Latin of 300 or 400 level plus 12 hours (of any level) of Latin, Greek, and/or other pertinent courses acceptable to the Director of the Division of Language and Literature. For a combined (45-hour) major in classical studies, see page 98; for one in humanities, see page 138.

The prerequisite for any Upper Division course is two years of high school Latin plus Latin 201 and 202; or three years of high school Latin plus Latin 202; or four years of high school Latin; or the consent of the instructor. A freshman satisfying either of the latter two prerequisites may enter an Upper Division course.

Lower Division Courses

101-102. ELEMENTARY LATIN. Essentials of Latin grammar and some reading of connected prose. Designed for pre-law students and majors in English and modern languages as well as for students planning to continue work in Latin. No credit is given for this course if the student has credit for two years of high school Latin. *3 + 3 h. c.*

201. CICERO; PROSE COMPOSITION. Selections from Cicero's letters and orations. Prereq.: Latin 101-102 or two years of high school Latin. *3 h. c.*

202. VIRGIL; PROSE COMPOSITION. Selections from the *Aeneid*, books I-VI. Prereq.: Latin 201 or three years of high school Latin. *3 h. c.*

Upper Division Courses

301. OVID'S *METAMORPHOSES*; PROSE COMPOSITION. *3 h. c.*

302. CICERO'S *DE AMICITIA* AND *DE SENECTUTE*. *3 h. c.*

304. LATIN LYRIC POETRY: HORACE AND CATULLUS. *3 h. c.*

305. PLINY'S *LETTERS*; PROSE COMPOSITION. *3 h. c.*

401. ROMAN HISTORIANS. Selected passages from Sallust, Livy, and Tacitus. *3 h. c.*

402. VIRGIL AND LUCRETIUS. The emphasis is on Virgil: the *Aeneid* (all twelve books), the *Georgics*, and the *Eclogues*. Some study of Lucretius' *De Rerum Natura*. *3 h. c.*

403. HISTORY OF LATIN LITERATURE. A study of the development of Latin literature from its beginning through the Silver Age. *3 h. c.*

404. LATIN SYNTAX AND ADVANCED COMPOSITION. A review of the principles of Latin syntax with practice in the writing of Latin. *3 h. c.*

LAW

A pre-law curriculum is suggested in the School of Law section, where the student may also benefit from reading the admission requirements. See also page 96.

LIBRARY SERVICE

Library service courses are designed for those desiring to become children's librarians, librarians in public libraries, or school librarians. Curriculums for public library and children's library work are given below; for school library work, the department head may be consulted.

Since this program was first offered in 1951-52, courses will at first be organized only as they are needed by students who have undertaken one of the curriculums.

Lower Division Course

101. USE OF BOOKS AND LIBRARIES. A survey of library resources and services; what the library is and how to use it; arrangement of books in the library; the card catalog; general reference sources and aids in special fields. Designed to aid the college student in his study and research. *1 h. c.*

Upper Division Courses

301. HISTORY OF BOOKS, PRINTING, AND LIBRARIES. The development of man's earliest records; the alphabet; ancient writing; manuscript books; printing and its effect on bookmaking; modern book production; the growth of libraries from ancient times to the present; the modern library movement. *2 h. c.*

302. CATALOGING AND CLASSIFICATION. The organization of library materials for availability, through cataloging, classification, and subject analysis; emphasis is on flexibility in applying standard practices to different needs. *3 h. c.*

303. REFERENCE AND BIBLIOGRAPHY. Selection and use of the principal reference and bibliographical tools, methods of effective reference service, and the function of the reference department. *3 h. c.*

304. REFERENCE AND BIBLIOGRAPHY. Study of reference and bibliographical materials in special fields, and practice in reference and research methods. Prereq.: Library Service 303. *3 h. c.*

305. BOOK SELECTION. The principles of book selection for library purchase. Study of the field of popular literature, especially fiction, travel, biography, humor, current affairs, bibliographic aids, and book reviewing and evaluation. *3 h. c.*

306. BOOK SELECTION. Evaluation of standard works in the various fields of learning, with attention to the outstanding foreign books available in English translations. Prereq.: Library Service 305. *3 h. c.*

307. COMMUNICATION AND THE LIBRARY IN SOCIETY. The library as an educational and cultural institution in society past and present: the various media of mass communication in print—books, newspapers, periodicals—together with radio and motion pictures, are considered with their implications as library materials. *2 h. c.*

308. INTERPRETATION OF BOOKS. Methods of introducing books to people: the personal approach to the individual reader, displays, book lists, radio and newspaper publicity, contacts through groups, book reviewing. *2 h. c.*

309. FIELD WORK. Practical work in a library, generally of the type in which the student's interests indicate that he will probably spend his professional career. The purpose is to enable the student to learn by doing, to observe library operations at first hand, and to relate what he has learned in the classroom to actual situations, needs, and problems. The student's work is supervised, and he reports on his experiences. Prereq.: permission of the department head. *4 h. c.*

330. AUDIO-VISUAL EDUCATION. Identical with Education 330.

401. BOOKS FOR CHILDREN. An introduction to children's books and reading: the history of children's literature in relation to present reading interests; standards for evaluating new publications; and a study of popular classics. *3 h. c.*

402. BOOKS FOR CHILDREN. Evaluation of standard titles in the various subject fields of children's literature as a guide to the selection of a juvenile collection. Prereq.: Library Service 401. *3 h. c.*

403. BOOKS FOR YOUNG PEOPLE. Critical evaluation of current and classic literature in terms of the interests and reading ability of high school readers; special requirements of book reviewing for their age groups. *2 h. c.*

404. STORY-TELLING. The technique of telling stories to children; study of traditional and modern folk literature; and practice in telling stories and presenting book talks before children's groups. *2 h. c.*

405. ADMINISTRATION OF THE CHILDREN'S ROOM. Problems of administering the children's room in a public library: reading guidance, promotion of the use of books, book buying, care of books, the planning, equipment, and conduct of the children's room, and relationships with parents and teachers. *2 h. c.*

406. SCHOOL LIBRARY SERVICE. The organization and administration of school libraries. Consideration of such problems as: planning and equipping the library; personnel; selection of educational materials; budgets; library instruction; the library's relation to the school program and to the community; and other problems involved in giving proper school library service. *3 h. c.*

407. PUBLIC LIBRARY SERVICE. Administration of public libraries; the library as a governmental unit, its requirements for support, its proper activities, the organization of its functions, supervision of its staff; the design and operation of its buildings. *3 h. c.*

Curriculums

Public Library Service

Required Curriculum Leading to the Degree of Bachelor of Arts with a Major in Library Service (Concentration in Public Library Service)

First Year	Hrs.
Art 113, 114 History and Appreciation of Art	6
Comm. 105-106 Basic Course I-II	6
*Foreign language (or elective)	6
Hist. 105, 106 Europe from the Fall of Rome	6
Lib. Serv. 101 Use of Books and Libraries	1
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Phys. Ed. 107 and 108 Health Ed.	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	34

Second Year	Hrs.
Comm. 107 Basic Course III	3
Engl. 203, 204 Survey of English Literature	6
Engl. 205, 206 Survey of American Literature	6
*Foreign language (or elective)	6
Hist. 201 and 202 The United States	6
Psych. 201 General Psychology	3
Physical Education (activity)	1
	31

Third Year	Hrs.
English elective	3
Lib. Serv. 301 History of Books, Printing, and Libraries	2
Lib. Serv. 302 Cataloging and Classification	3
Lib. Serv. 303 and 304 Reference and Bibliography	6
Lib. Serv. 305 and 306 Book Selection	6
Lib. Serv. 309 Field Work	4
Science	8
	32

Fourth Year	Hrs.
Hum. 401 and 402 (Greece-1600)	6
Hum. 403 and 404 (1600-present)	6
Lib. Serv. 307 Communication and the Library in Society	2
Lib. Serv. 308 Interpretation of Books	2
Lib. Serv. 407 Public Library Service	3
Library Service electives	5
Science	3
Electives	1
	28

*See page 97.

Children's Library Service

Required Curriculum Leading to the Degree of Bachelor of Arts with a Major in Library Service (Concentration in Children's Library Service)

First Year	Hrs.
Comm. 105-106 Basic Course I-II	6
*Foreign language (or elective)	6
Hist. 105, 106 Europe from the Fall of Rome	6
Science	8
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	33

Second Year	Hrs.
Comm. 107 Basic Course III	3
Engl. 203, 204 Survey of English Literature	6
*Foreign language (or elective)	6
Hist. 201 and 202 The United States	6
Lib. Serv. 101 Use of Books and Libraries	1
Science	3
Psych. 201 General Psychology	3
Phys. Ed. 107 and 108 Health Ed.	2
Physical Education (activity)	1
	31

Third Year	Hrs.
Engl. 205, 206 Survey of American Literature	6
English elective	3
Lib. Serv. 301 History of Books, Printing, and Libraries	2
Lib. Serv. 302 Cataloging and Classification	3
Lib. Serv. 303 Reference and Bibliography	3
Lib. Serv. 305 Book Selection	3
Lib. Serv. 307 Communication and the Library in Society	2
Lib. Serv. 308 Interpretation of Books	2
Lib. Serv. 309 Field Work	4
Psych. 305 Child Psychology	3
	31

Fourth Year	Hrs.
Hum. 401 and 402 (Greece-1600)	6
Hum. 403 and 404 (1600-present)	6
Lib. Serv. 401 and 402 Books for Children	6
Lib. Serv. 403 Books for Young People	2
Lib. Serv. 404 Story-telling	2
Lib. Serv. 405 Administration of the Children's Room	2
Library Service elective	2
Electives	4
	30

*See page 97.

METALLURGY

See Chemistry; also the William Rayen School of Engineering section.

MILITARY SCIENCE AND TACTICS

A unit of the Reserve Officers' Training Corps was established at Youngstown College in 1950 and is administered as the Department of Military Science and Tactics.

A student enrolled in the R. O. T. C. is not a member of the Army. He is instructed, however, from the latest Army textbooks by Army officers. Instruction is based on the latest methods and theories evolved during and after World War II, and includes practical exercises in many fields, utilizing the most modern army equipment as well as facilities of the college.

Every graduate of the R. O. T. C. program, after successfully completing four years of academic study at college level, is tendered a commission as a second lieutenant in the United States Army Reserve. A graduate may, at his request, be commissioned in any arm or service (of the Army) for which he is professionally qualified.

A cadet who distinguishes himself in academic and military subjects, and who demonstrates outstanding qualities of character and leadership, may, at the end of his junior year, be designated a distinguished military student and may then apply for a Regular Army commission. This opportunity is open to any qualified individual, regardless of the degree toward which he is working.

The military science program consists of two courses: the basic course, comprising the first two years; and the advanced course, comprising the last two years. Each two-year course may be elected separately, but only in its entirety. Only under unusual circumstances may a student drop a two-year course in military science, once he has elected it. In such cases no credit is granted for previously completed semesters of the same two-year course. No two semesters of the basic course may be taken simultaneously.

Study in military science and tactics done in other institutions is credited as follows:

a. A student who has done one year's work receives credit for it upon completing the basic course.

b. A student with two years' work receives credit for the basic course.

c. A student with three years' work receives credit for the basic course on entering and credit for the third year upon completing the advanced course.

The basic course is available to any male student of Youngstown College who

(1) is a citizen of the United States not less than 14 years of age.

(2) is physically qualified,

(3) has not reached his 23rd birthday at the time of initial enrollment, and

(4) has at least three academic years remaining in his course at this institution.

The advanced course is available to any male student of the college who

(1) is a citizen of the United States,

(2) is physically qualified,

(3) has not reached his 27th birthday,

(4) has successfully completed the two years of the basic course or has received credit in lieu thereof for 12 months or more of active military service in the Army, Navy, Marine Corps, or Coast Guard during World War II,

(5) has been selected for the course by the president of the college and the professor of military science,

(6) executes a written agreement with the government that, in consideration of commutation of subsistence to be furnished in accordance with law, he will complete the advanced course at this institution or at any other institution where such a course is given and pursue the course of camp training during the period prescribed,

(7) has at least two academic years to complete for graduation, and

(8) agrees to accept appointment in the United States Army Reserve if tendered.

Military science students are organized into a Corps of Cadets, commanded and administered by students designated cadet officers and cadet non-commissioned officers. In order to encourage development of characteristics of leadership, cadet officers and non-commissioned officers are given the maximum possible responsibility and authority in training and administering the cadet corps. Scholarships are awarded to students selected for the highest positions of cadet leadership (see page 60).

No compensation is paid the student by the government during the basic course. An advanced-course student receives an allowance from the government in lieu of subsistence, which presently amounts to 90 cents a day for not more than 570 days during the two academic years.

By agreement between the United States government and the college, the Army furnishes instructors, equipment, text-

books, student uniforms, etc., while the college furnishes all other facilities for the four-year program. A deposit of $12.50 is required of each student in military science, $10.00 of which is returned to him when he turns in, at the end of the school year (or upon withdrawal from school), the government property which has been issued him by the college.

Each advanced military science student must attend one summer camp of about six weeks' duration. He is paid $78 a month while there and allowed travel expense at 5 cents a mile to and from camp.

Students enrolled or considering enrollment in R. O. T. C. should read the pertinent information on pages 67-68 and 72.

A curriculum leading to the degree of Bachelor of Science with a major in military science is offered for the student who wishes to prepare himself specifically for a military career. Students who wish such a curriculum should consult the head of the Department of Military Science and Tactics.

Lower Division

101, 102. BASIC COURSE, FIRST YEAR. Introduction to military science; leadership, drill, and the exercise of command. *2 + 2 h c.*

201, 202. BASIC COURSE, SECOND YEAR. Characteristics, capabilities, and limitations of anti-aircraft artillery weapons; introduction to field artillery; leadership, drill, and the exercise of command. Prereq.: Military Science 101 and 102, or credit granted on the basis of active military service. *2 + 2 h. c.*

Upper Division

301, 302. ADVANCED COURSE, FIRST YEAR. Artillery tactics; basic gunnery; communication; motors and transportation; troop movements; advanced map-reading; leadership, drill, and the exercise of command. Prereq.: Military Science 101, 102, 201, and 202, or credit granted on the basis of active military service. *3 + 3 h. c.*

401, 402. ADVANCED COURSE, SECOND YEAR. Advanced artillery tactics and gunnery; military teaching methods; military law; military administratoin; geographcial foundations of national power; psychological warfare; command and staff; leadership, drill, and the exercise of command. Prereq.: Military Science 301 and 302. *3 + 3 h. c.*

MODERN LANGUAGES AND LITERATURE

See English, French, German, Italian, Russian, and Spanish; Portuguese is under Spanish. For literature in translation, see Humanities.

MUSIC

A major in the history and literature of music is acceptable for the degree of Bachelor of Arts. For the music courses for such a major, see the section on Dana School of Music.

Various courses at Dana School of Music may be taken as electives by students in other units.

NURSING

Information on courses for those interested in nursing training or public school nursing, as well as on programs for graduate nurses who wish to complete the requirements for a bachelor's degree, will be found near the end of the College of Arts and Sciences section. See also Biology 383.

ORIENTATION

Orientation 100 is required of every day freshman and is taken in conjunction with Communication 105. No semester hours of credit are granted for it, but a student who does not take it or whose attendance in it is unsatisfactory must earn an extra semester hour of credit for graduation. Satisfactory completion is recorded by the notation "Credit."

Lower Division Course

100. FRESHMAN ORIENTATION. A lecture course designed to help the freshman adjust himself to college. Discussion of such matters as the relation of college to society, organization of Youngstown College, entrance and graduation requirements, employment opportunities for college graduates, studying in college, etc. One hour a week. *Credit: see above.*

PHILOSOPHY AND RELIGION

Philosophy is the traditional major of pre-ministerial students. While admission to accredited theological schools may be granted upon completion of practically any college major, it is generally conceded that a thorough familiarity with the major problems which have occupied human thought, together with the solutions which have historically been offered to such problems, is a highly desirable foundation for theological studies. In many seminaries such knowledge is assumed and the ministerial student is at a disadvantage without it.

The major in philosophy has been planned in recognition of these needs, as well as those of the student who plans to make philosophy his life work. It consists of thirty hours in

the department, including Philosophy and Religion 203, 220, 301, 302, and 305.

A major in religion, for the student desiring to prepare himself for social work, church school work, or related professional activity, may be planned in consultation with the head of the department and the director of the Division of Social Sciences.

The student is assumed to understand that the approach made to the subject matter in any course, or section of a course, will be that of the teacher in charge.

One-third credit toward either the philosophy or the religion major will be allowed for any courses listed under Humanities.

The three-hour college requirement in religion may be met by taking any course in the Department of Philosophy and Religion. Humanities 401 and 402 also meet this requirement.

Lower Division Courses

201. CONTEMPORARY RELIGION AND ITS BACKGROUNDS. An exposition of Judaism, Roman Catholicism, and Protestantism: their beliefs, rituals, and usages; their origins and historical development; and their approaches to the problems of man in modern society. The semester is divided equally among Rabbi Azneer, Father Lucas, and Dr. Riley. *3 h. c.*

203. INTRODUCTION TO PHILOSOPHY. The methods, problems, and fundamental conceptions of philosophy, and the significance of the higher values of life—moral, aesthetic, and religious. Dr. Riley or Father Lucas. *3 h. c.*

207. THE CHRISTIAN ETHIC. A study of the records of the New Testament, with the object of discovering Jesus' conception of life, and the ethical principles revealed in both His life and teachings; the relation of these principles, in terms of agreement, difference, and transcendence, to other major systems of ethical theory, and their relevance for present conduct. Dr. Riley. *3 h. c.*

208. THE BEGINNING OF CHRISTIANITY. The Palestinian environment, the Jewish tradition, the Greco-Roman culture of the age, the career and teaching of Jesus, the organization of the Church, and its expansion in the Roman Empire. Dr. Riley. *3 h. c.*

212. CHURCH HISTORY I. The history of the Christian Church from its origin to the Reformation. Father Lucas. *3 h. c.*

213. CHURCH HISTORY II. A continuation of Philosophy and Religion 212. The rise and development of Protestantism. The counter-reformation. The major Protestant denominations, and the influences operative in their origins. Present tendencies in world Christianity. Dr. Riley. *3 h. c.*

220. LOGIC. The laws that lie behind all our thought processes. The nature of concept and the divisions of its expression, the term. Judgment and the valid forms of immediate inference. Reasoning and its laws; formal and material fallacies; inductive reasoning. Dr. Riley or Father Lucas. *3 h. c.*

222. CHRISTIAN APOLOGETICS. The relation of reason and revelation. The natural and supernatural orders. Revelation and mysteries. The possibility and necessity of revelation. Miracles and prophecies. The authenticity and historicity of the New Testament. Christ. His miracles and prophecies. Father Lucas. *3 h. c.*

230. INTRODUCTION TO BIBLICAL LITERATURE. A survey of the literature of the Old and New Testaments, with attention to the authorship and purpose of the various books, the history of their compilation into the present canon, their structure and style, and the applicability of their teachings to the problems of today. Dr. Riley. *3 h. c.*

Upper Division Courses

301. HISTORY OF PHILOSOPHY. The development of philosophic thought from early Greek times through the Middle Ages. Dr. Riley or Dr. O'Brien. *3 h. c.*

302. HISTORY OF PHILOSOPHY. Continuation of Philosophy and Religion 301 from the end of the Middle Ages to the present. Dr. Riley or Dr. O'Brien. *3 h. c.*

303. OLD TESTAMENT. Reading of the Old Testament, with attention to the nature of the Bible; the authorship, origin, and meaning of the various books; the development of religious and ethical ideas throughout the Old Testament period; the significance of the law and of the prophets in Hebrew life; and the contribution of the Hebrews to the life of mankind. Dr. Riley or Rabbi Azneer. *3 h. c.*

304. PHILOSOPHY OF RELIGION. The meaning of religion, and its relation to other aspects of culture. The function and evaluation of religious experience. The existence and nature of God; the problem of evil; the soul, with the problems of freedom and immortality. Prayer. Current trends toward skepticism and faith. Dr. Riley, Father Lucas, or Rabbi Azneer. *3 h. c.*

305. ETHICS. A study of human nature, biological and psychological bases of behavior, duty, conscience, habit, freedom, the nature of right and wrong, and the principal ethical theories. Dr. Riley. *3 h. c.*

306. PSYCHOLOGY OF RELIGION. Identical with Psychology 303. Dr. Riley.

307. TYPES OF PHILOSOPHY. The principal approaches to the problems of philosophy, and their differences; an outline of the historical answers to the questions indicated in Philosophy and Religion 203. Prereq.: Philosophy and Religion 203. Dr. Riley. *3 h. c.*

308. PROPHETIC RELIGION. A social and psychological analysis of the prophetic mentality; the differences between the prophetic approach to religion and that of the priest; an analysis of great prophetic books with a view to the sociological and psychological factors involved; an attempt to delineate the essential elements in prophecy. Rabbi Azneer. *3 h. c.*

309. AESTHETICS. Classical and modern philosophies of beauty, especially as they apply in criticism of the fine arts. The problem of the relative and the absolute in judgments of taste. Reading in aesthetics from such writers as Plato, Aristotle, Longinus, Kant, and Croce. Dr. O'Brien. *3 h. c.*

310. MAKING OF THE MODERN MIND. The philosophic, religious, scientific, political, and social developments out of which our present patterns of thought have arisen. Rabbi Azneer. *3 h. c.*

315. HISTORY OF RELIGION. An introductory course. The mechanisms of religious origins; primitive religion and its concepts; comparison of ethnic and prophetic religions; the classic religions of the ancient world, and their contributions to Judaism and Christianity; an introductory historical review of living religious systems. Dr. Riley. *3 h. c.*

322. PHILOSOPHY OF MAN. A discussion of the sentient, emotional, and rational life of man. Life: mechanism vs. vitalism. Sensation and its philosophical explanations. Rational life and its principles. Freedom of the will vs. determinism. The human soul, and its origin and destiny. A philosophical discussion of evolution. Father Lucas. *3 h. c.*

323. THEORIES OF KNOWLEDGE. The epistemological problem and its attempted solution. The position of the skeptic, the pragmatist, the sensist, the idealist; the moderate realist's solution. Truth and certitude: their nature, sources, and ultimate criterion. Prereq.: Philosophy and Religion 220. Father Lucas. *3 h. c.*

324. PHILOSOPHY OF BEING. The metaphysical concept of abstract being. Essence and existence; act and potency; substance and accident; the possibles. Cause and causality; the meaning and nature of relations. Father Lucas. *3 h. c.*

325. METAPHYSICS OF MATTER. A philosophical consideration of the nature and constitution of matter. Hylomorphism; the origin of the physical universe; physical laws; miracles; space-time concepts. Father Lucas. *3 h. c.*

326. PHILOSOPHY OF GOD. Proofs for the existence of God; the nature of God and his attributes; God's knowledge and its media; the *scientia media;* providence and the problem of evil; miracles. Father Lucas. *3 h. c.*

330. PHILOSOPHICAL CLASSICS. Reading and discussion of some of the great documents of philosophy: Plato's *Republic,* Aristotle's *Nicomachean Ethics,* Descartes' *Meditations,* Kant's *Critique of Pure Reason,* and James' *Essays,* or alternative selections of comparable significance. Dr. Riley or Dr. O'Brien. *3 h. c.*

409. HISTORY OF SOCIAL PHILOSOPHIES. Identical with Sociology 409. Mrs. Botty.

427. MORAL CONDUCT: BASIC PRINCIPLES. The definition of moral good and moral evil established by positive proof. The nature and true norm of morality; false norms. The "Eternal and Natural Laws"; obligation and sanction of the "Natural Law"; conscience; the nature of rights and duties; the existence of natural rights. Father Lucas. *3 h. c.*

428. MORAL CONDUCT: SPECIFIC APPLICATIONS. The application of the "Natural Law" to human activities. Man's duties to God; the natural right to property; rights and duties of conjugal society; marriage and divorce. Industrial ethics; the solution of the communist; wages, strikes, labor unions. The nature of civil society. Father Lucas. *3 h. c.*

431. THE PSYCHO-SOCIAL DYNAMICS OF RELIGION. An objective examination of religious institutions and practices in relation to the human problems to which they correspond. A comparative appraisal of their effectiveness in meeting the psychic and environmental needs of their adherents. Reasons for their success or failure, in terms of depth psychology, sociology, and anthropology. Several of the classic religions are studied. Prereq.: Philosophy and Religion 315 or 306 and the consent of the instructor. Dr. Riley. *3 h. c.*

432. THE PSYCHO-SOCIAL DYNAMICS OF RELIGION. The same considerations as in Philosophy and Religion 431, applied to present-day religious cults. Prereq.: Philosophy and Religion 315 or 306, and the consent of the instructor. Listed also as Psychology 432 and Sociology 432. Dr. Riley. *3 h. c.*

PHYSICAL EDUCATION

See Health and Physical Education.

PHYSICS

Physics courses are organized with the following aims: (1) to acquaint the non-specializing student with scientific methods and with the place of physics in the modern world; (2) to provide basic training for engineering and pre-medical students; (3) to provide well-rounded training in physics for those needing it for secondary school teaching, commercial work, or graduate study.

Following the course descriptions below are the curriculums required for the degrees of Bachelor of Arts and Bachelor of Science with the major in physics. A student desiring to teach physics in the public schools should consult the head of the Department of Education.

Non-credit Course

The following course is offered for students with entrance deficiencies in physics. It provides no credit toward graduation from college.

20. HIGH SCHOOL PHYSICS. Three hours a week, second semester, at night. Evaluated as 1 high school credit.

Lower Division Courses

101-102. FUNDAMENTALS OF PHYSICS. The elementary laws of physics, illustrated through elementary mechanics, sound, light, heat, and electricity. Not open to mathematics or physics majors or to engineering students; however, it is recommended that the student have had a year of high school physics, or Physics 20. *3 + 3 h. c.*

101L-102L. FUNDAMENTALS OF PHYSICS LABORATORY. Two hours a week; taken concurrently with Physics 101-102. Fee: $7.50 each semester. *1 + 1 h. c.*

201. GENERAL PHYSICS: MECHANICS, HEAT, AND SOUND. Composition and resolution of forces; Newton's laws of force and motion; accelerated motion, circular and simple harmonic motion; molecular forces in liquids and solids; surface phenomena; fluids at rest and in motion; expansion and thermometry; heat energy and calorimetry; the kinetic theory of matter; elementary thermodynamics; transfer of heat and radiation; wave motion and vibration; sound and hearing; combination of sound waves. Prerequisite: one year of high school physics, or Physics 20. Prerequisite or concurrent: Mathematics 209. *3 h. c.*

201L. GENERAL PHYSICS LABORATORY. Three hours a week; taken concurrently with Physics 201. Fee: $8.00. *1 h. c.*

202. GENERAL PHYSICS: LIGHT AND ELECTRICITY. Propagation of light by wave motion; mirrors and lenses; reflection, refraction, absorption, and dispersion of light; diffraction and interference; optical instruments; fundamental phenomena of charge at rest; introduction to current electricity; electric current and its production; magnetic phenomena; Ohm's and Kirchhoff's laws; measurements in simple circuits, electrical energy, and power; elementary electrical oscillations. Prereq.: Physics 201. *3 h. c.*

202L. GENERAL PHYSICS LABORATORY. Three hours a week; taken concurrently with Physics 202. Fee: $8.00. *1 h. c.*

220. ANALYTICAL MECHANICS: STATICS. The fundamental principles of mechanics and their practical application. Forces, components, vectors, moments, couples, cables, and friction. Moments of inertia are introduced in preparation for study of the strength of materials. Prereq.: Physics 201 and 201L and Mathematics 209; prerequisite or concurrent: Physics 202 and 202L and Mathematics 210. Identical with Engineering 220. *3 h. c.*

225. GENERAL METEOROLOGY. An introductory course dealing with cloud types, pressure, temperature, humidity, precipitations, atmospheric composition and circulation, types of stability, air mass analysis, and analysis of surface maps. Prereq.: sophomore standing. *3 h. c.*

Upper Division Courses

303. ELECTRICITY AND MAGNETISM. The fundamental laws of electrostatics and electromagnetism. Prereq.: Mathematics 209-210 and Physics 201 and 202. *3 h. c.*

303L. ELECTRICITY AND MAGNETISM LABORATORY. Experiments in measuring the electrical quantities: resistance, current, voltage, capacitance, inductance, and impedance, in both direct and alternating current circuits; comparison of the unknown quantity with a laboratory standard, using the bridge, or "null", method. Two hours a week; taken concurrently with Physics 303. Fee: $5.00. *1 h. c.*

322. PHYSICAL OPTICS AND ADVANCED LIGHT. Elementary theory of thick and thin lenses, interference, diffraction, and polarization phenomena; wave surfaces, resolving power of optical instruments. Prereq.: Physics 201 and 202 and Mathematics 209-210. *3 h. c.*

322L. PHYSICAL OPTICS AND ADVANCED LIGHT LABORATORY. Experiments relating to the principles studied in Physics 322, with the emphasis on physical optics: wave propagation, interference, diffraction, refraction, dispersion, polarization, radiation, and spectroscopic analysis of line band spectra. Two hours a week; taken concurrently with Physics 322. Fee: $10.00. *1 h. c.*

325. ANALYTICAL MECHANICS: DYNAMICS. All motions of a particle, dynamics of moving bodies, Newton's Laws, simple harmonic motion, mechanical vibrations, impulse and momentum, balancing, the gyroscope, governors, and work and energy. Prereq.: Physics 220. Identical with Engineering 325. *3 h. c.*

401-402. THESIS. The student investigates a subject, selected by either the student or the head of the Department of Physics, and submits a written report, of at least 2,500 words, in three bound copies according to specifications available to him on request. For credit, the thesis must be accepted by the head of the Department of Physics. Prereq.: senior standing. Estimated thesis expense: $50-$60. *2 + 2 h. c.*

411, 412. THERMODYNAMICS. Identical with Chemistry 411 and 412.

424. HISTORY OF PHYSICS. The history of physics from early times, the lives of the great physicists, and the development of the physical laboratory. Prereq.: consent of the department head. *3 h. c.*

425. THEORY OF HEAT TRANSMISSION. The theory of heat transmission for radiation, convection, and conduction. Development of dimensional analysis and heat transfer. Prerequisite or concurrent: Mathematics 310 or 420, and Physics 411-412. *3 h. c.*

426-427. ELEMENTS OF NUCLEAR PHYSICS. A study of the sub-atomic particles of matter essential for the understanding of modern concepts of atomic structure, covering the electron, the electric discharge, cathode rays, isotopes, natural radiation activities, atomic nuclei, and artificial disintegration. Prereq.: consent of instructor. *3 + 3 h. c.*

Suggested Curriculum for the Degree of Bachelor of Arts with Major in Physics

For the General Degree Requirements

Course or Subject	Hours
Communication 105-106-107	9
Physical Education	4
Orientation 100	Credit
English 200	3
Humanities 401	3
History 201 and 202	6
Psychology 201	3
Social Science 101 and 102	6
Chemistry 109-110	10
Physics 325	3
A foreign language (see pages 94 and 97)	12

For the Major

Physics 201, 201L, 202, 202L	8
Physics 220	3
Physics 303	3
Physics 322, 322L	4
Physics 411, 412	4
Physics 424	3
Physics 426, 427	6

For the Minor

Mathematics 109-110	10
Mathematics 209-210	10

Additional Courses

Economics 305	3
English 381 and 382	6
Humanities 403 and 404	6

Suggested Curriculum for the Degree of Bachelor of Science with Major in Physics

For the General Degree Requirements

Course or Subject	Hours
Communication 105-106-107	9
Physical Education	4
Orientation 100	Credit
English 200	3
Humanities 401	3
History 201 and 202	6
Social Science 101 and 102	6
A foreign language (see pages 95 and 97)	12

For the Major

Physics 201, 201L, 202, 202L	8
Physics 220	3
Physics 303	3
Physics 322, 322L	4
Physics 411, 412	4
Physics 424	3
Physics 426, 427	6

For the Minor

Mathematics 109-110	10
Mathematics 209-210	10

Additional Courses

Biology 103 and 125	5
Chemistry 109-110	10
Economics 305	3
English 381 and 382	6
Humanities 403 and 404	6
Mathematics 309 and 310	6
Physics 325	3
Psychology 201	3

A semester-by-semester version of each of these curriculums is available at the office of the Department of Physics in Rayen Building.

NOTE. If the curriculum for the Bachelor of Science degree is to be completed in four years, some courses must be taken in summer terms to avoid overloading. It is recommended that these be non-science courses, such as Social Science 101 and 102 and the language courses. A student may obtain by himself the required reading knowledge of French or German; see pages 97-98.

POLITICAL SCIENCE

A major in political science consists of 24 semester hours in addition to Social Science 101 and 102 and History 201 and 202. The major is designed to prepare students for graduate study in political science or law, and to provide a background for the student interested in a career in government or politics.

Courses in other departments for which credit may be given toward the political science major are: Economics 304, Public Finance; Economics 402, Comparative Economic Systems; History 308, The Far East; History 215, 216, Constitutional History of England; and History 309, 310, Constitutional History of the United States. One-sixth credit will be allowed toward a major in political science for any courses listed under Humanities.

Lower Division Courses

201. AMERICAN NATIONAL GOVERNMENT AND POLITICS. The historical background, form, structure, administrative organization, and expanding activities of the Federal Government. *3 h. c.*

202. AMERICAN STATE AND LOCAL GOVERNMENT. The form, structure, administrative organization, and functioning of state, county, and municipal government in the United States. Prereq.: Political Science 201. *3 h. c.*

Upper Division Courses

301. COMPARATIVE STATE GOVERNMENT. A comparison of the Ohio constitution with other state constitutions, to acquaint the student with the need for revising the Ohio constitution. Prereq.: Political Science 202 or consent of the instructor. *3 h. c.*

304, 305. INTERNATIONAL RELATIONS. The main motives in modern international politics, imperialism, the economic background, the first World War, the League of Nations, the United States and Europe, the United States and the Far East, the second World War, postwar problems, the United Nations organization. Prereq.: Social Science 101 and 102; also History 201 and 202, or 105, 106. Listed also as History 304, 305. *3 + 3 h. c.*

307. AMERICAN POLITICAL PARTIES. The origin, functions, and development of the political party, with emphasis on its relation to practical politics, propaganda, and pressure groups. Prereq.: Social Science 101 and 102; prerequisite or concurrent: History 201 and 202. *3 h. c.*

308. PUBLIC ADMINISTRATION. The organization and practice of national, state, and local administration, including problems of governmental reorganization, civil service, budget procedures, and administrative law. Prereq.: Political Science 201 and 202. Listed also as Sociology 318. *3 h. c.*

311. DEVELOPMENT OF AMERICAN FOREIGN POLICY. The diplomatic problems that have confronted the United States from the American Revolution to the present. Prereq.: History 201 and 202. *3 h. c.*

312. MUNICIPAL GOVERNMENT AND ADMINISTRATION. The principles and forms of city government in the United States. Problems

of the modern city: home rule, public utilities, administrative organization, finance, city planning, public health and recreation, school systems. Prereq.: Social Science 101 and 102. *3 h. c.*

403. COMPARATIVE GOVERNMENT. The structure and functioning of the principal types of national governments, with emphasis on the governments of the western European nations and of Soviet Russia. Prereq.: one of the following: Political Science 201, History 201, 202, 309, 310, Economics 402. *3 h. c.*

405, 406. DEVELOPMENT OF POLITICAL THOUGHT. Political theories from antiquity to modern times, with emphasis on their practical applications and the resulting relationship of individual and state. Prereq.: two of the following: Political Science 201, 202, 403, History 215, 216, 311, 312. *3 + 3 h. c.*

PORTUGUESE

See Spanish.

PRE-LAW WORK

A suggested curriculum for the pre-law student is provided in the School of Law section. See also pages 96-97.

PRE-MEDICAL WORK

Suggested pre-medical curriculums are at the end of the College of Arts and Sciences section. See also page 97.

PSYCHOLOGY

A major in psychology consists of 30 semester hours including Psychology 201, 301, 302, and 320. Biology 321, Philosophy and Religion 432, and Sociology 405 may be counted toward the major.

Psychology 201 is prerequisite to all other psychology courses except Psychology 101.

Lower Division Courses

101. INTRODUCTION TO PSYCHOLOGY. The basic principles of behavior. Motivation and learning; individual development; the role of conflict; the problems of human adjustment. Not applicable toward a major or minor in psychology. Prereq.: Sociology 100. *3 h. c.*

201. GENERAL PSYCHOLOGY. The fundamental principles of human behavior. The relationship of physiological structure to behavior; the nature and development of perception, emotion, behavior, and other factors in the integration of personality. Prereq.: Social Science 101 and 102. Fee (for educational film): $1.00. Not open to freshmen. *3 h. c.*

202. PSYCHOLOGY OF EDUCATION. The psychological principles in learning, teaching, and the growth of a successful personality. Prereq.: Psychology 201. *3 h. c.*

211. GENERAL EXPERIMENTAL PSYCHOLOGY. An introduction to the experimental study of behavior: methods and apparatus, design of experiments, and treatment of data; laboratory problems in such areas as sensory functions, discriminative processes and capacities, learning, emotion, and social interaction. Prereq.: Psychology 201. Fee: $5.00. *4 h. c.*

Upper Division Courses

300. SOCIAL PSYCHOLOGY. The underlying psychological principles that give rise to the self, personality, and social-cultural reality; aspects of human conflict such as prejudice, revolution, and war; mass behavior: the crowd, fashion, public opinion, and propaganda; the psychology of social control and power. Prereq.: Psychology 201. Listed also as Sociology 300. *3 h. c.*

301. APPLIED PSYCHOLOGY. The psychological factors in the human relationships of everyday living; psychological principles applied to individual development, education, religion, and various vocations. Prereq.: Psychology 201. *3 h. c.*

302. PSYCHOLOGY OF THE ABNORMAL. The causes, nature, and trend of mental maladjustments and injured personality, especially the major illnesses; the place of mental hygiene. Prereq.: Psychology 201. *3 h. c.*

303. PSYCHOLOGY OF RELIGION. The psychological principles affecting religious experiences, sense of sin, conversion, character changes, faith, worship, development of personality, and mental adjustments as a hygiene for dynamic, useful, and happy living. Prereq.: Psychology 201. Listed also as Philosophy 306. *3 h. c*

304. PSYCHOLOGY OF MUSIC. A study of important psychological investigations bearing upon musical composition, performance, and appreciation, as an aid to the understanding of individual differences in musical capabilities and to the application of such an understanding in teaching. Current psychological tests and measurements in music are also studied. Prereq.: Psychology 201. *3 h. c.*

305. CHILD PSYCHOLOGY. A genetic study of child development from the prenatal period to puberty, stressing the characteristic behavior and suitable training methods for each period of development. Prereq.: Psychology 201. Listed also as Home Economics 305. *3 h. c.*

306. PSYCHOLOGY OF ADOLESCENCE. Characteristics and behavior problems of teen-age children. Prereq.: Psychology 201. Listed also as Home Economics 306. *3 h. c.*

307. PSYCHOLOGY OF MARRIAGE AND FAMILY RELATIONS. The social and psychological factors contributing to marital success and happiness, including sex relations, eugenics, mental hygiene, child training, home financing, and community usefulness. Talks by a staff of visiting lecturers. Prereq.: Psychology 201 and junior standing. Fee: $5.00. Listed also as Home Economics 307 and Sociology 307. *3 h. c.*

308. PERSONALITY AND MENTAL HYGIENE. The principles and habits that insure a well-balanced personality and a sound mind. Prereq.: Psychology 201. Fee: $1.00. Listed also as Home Economics 308. *3 h. c.*

309. PSYCHOLOGY OF PERSONNEL SELECTION AND PLACEMENT. The application of the principles and techniques of psychology to business, industry, and management, particularly to selecting and training personnel and to working conditions. Prereq.: Psychology 201. Fee: $2.00. *2 h. c.*

310. PSYCHOLOGICAL ASPECTS OF PERSONNEL RELATIONS. How people get along with each other, and why they don't. Underlying personality needs; essential elements in interviews and group discussions; aids to understanding human behavior. Prereq.: Psychology 201. *2 h. c.*

311. MENTAL AND EDUCATIONAL MEASUREMENT. The construction, administering, scoring, and interpreting of the new-type objective examination; the selection, administering, scoring, and interpretation of results of standardized tests and scales, and their use in vocational and educational guidance. Prereq.: junior or senior standing. Fee: $1.00. *3 h. c.*

312. INDUSTRIAL PSYCHOLOGY. An attempt to bring into a meaningful whole the major aspects of individual differences, improvement of work methods, training, fatigue, accident prevention, motivation, attitudes, morale, personnel counseling, labor relations, and supervision. Prereq.: Psychology 301. *3 h. c.*

320. STATISTICAL METHODS IN PSYCHOLOGY. An introductory course in frequency distributions, measures of central tendency, measures of variability, calculation and meaning of percentiles, the normal curves, reliability and validity of measures, and simple correlation. Identical wtih Education 320. Prereq.: Psychology 201. *3 h. c.*

332. PSYCHOLOGY OF EXCEPTIONAL CHILDREN. The discovery, psychology, and treatment of children having inferior or superior intellectual ability, defects of vision, hearing, or speech, or neurological or orthopedic handicaps; delinquent children. Their emotional needs, and programs of educational treatment and training. Prereq.: Psychology 305. *3 h. c.*

401. BUSINESS PSYCHOLOGY. The psychological factors in employment, selling, and advertising. Prereq.: Psychology 301. *3 h. c.*

405. INTERVIEWING AND COUNSELING. The basic principles, purposes, and psychological problems of interviewing; special-purpose interviews and counseling; recording and evaluation of facts. Reporting and discussion of actual interviews; discussion of problems of class-members. Prereq.: Psychology 201. *3 h. c.*

406. VOCATIONAL GUIDANCE. Techniques of vocational guidance and their application to high school students, college students, vocational rehabilitation subjects, and adults in general. Prereq.: Psychology 301. *3 h. c.*

407. CLINICAL TRAINING. Clinical experience for a limited number of qualified students of mental and physical illness and delinquency. Hospital and institutional work is supplemented by seminar sessions. Prereq.: Psychology 302 and consent of instructor. *3 h. c.*

425. GUIDANCE OF HIGH SCHOOL STUDENTS. Principles and procedures in vocational, educational, personal, and social counseling at high school level. The discovery of students' problems and needs; methods of interviewing and testing; classroom procedures and organization of guidance programs. Prereq.: Psychology 202. *2 h. c.*

426. STUDY OF AN INDIVIDUAL CHILD. Special problems. The purpose is to assist teachers, social workers, parents, and prospective parents in studying and working with individual children who present special problems. Interviews, records, test interpretation, corrective procedures, and adjustments of problems, with some attention to remedial work in school subjects. Prereq.: Psychology 305. *2 h. c.*

428. PHYSIOLOGICAL PSYCHOLOGY. The structuro-functional relationships of the various divisions and sub-divisions of the neural system, their relationships to the organism as a whole, and their contributions to human behavior. Prereq.: Psychology 301 and 302 and Biology 103. *3 h. c.*

429. INTRODUCTION TO PSYCHIATRY. The fundamental psychoses and psychoneuroses, with special attention to schizophrenia, manic-depressive psychosis, alcoholism, and psychopathic personalities. Electro-shock, insulin, and others forms of psychotherapy. Prereq.: Psychology 300, 302, and 308. *3 h. c.*

430. CONTEMPORARY SCHOOLS OF PSYCHOLOGY. A survey of psychological theories: their evolution, salient principles, and current status of acceptance. Prereq.: Psychology 301 and 302. *3 h. c.*

432. THE PSYCHO-SOCIAL DYNAMICS OF RELIGION. Identical with Philosophy 432; listed also as Sociology 432.

PUBLIC RELATIONS

A suggested curriculum leading to the degree of Bachelor of Science in Business Administration with the major in public relations will be found in the School of Business Administration section. It may be added that in view of the many kinds of public relations work that exist, the student, especially if his interest is not primarily in business or industry, should also consult members of the faculties of the Divisions of Language and Literature and of Social Sciences before planning a curriculum.

RELIGION

See Philosophy and Religion.

ROMANCE LANGUAGES AND LITERATURE

See French, Italian, Portuguese, and Spanish separately. For literature in translation, see Humanities.

R. O. T. C.

See Military Science and Tactics.

RUSSIAN

Lower Division Courses

101-102. ELEMENTARY RUSSIAN. The fundamental differences between Russian and English are explained graphically so as to afford a simplified approach to easy scientific texts and minimize the time needed for acquiring the essential vocabulary of conversation. No credit will be given for this course if the student has credit for two years of high school Russian. *3 + 3 h. c.*

201. INTERMEDIATE RUSSIAN. Elementary composition based on grammar review. Reading material is chosen with the double purpose of furnishing a basis for the further study of Russian literature and providing practice in technical reading for those who wish it. Prereq.: C or better in Russian 102 or in second-year high school Russian. *3 h. c.*

202. INTERMEDIATE RUSSIAN. A continuation of Russian 201, using texts of increasing difficulty; conversation and composition. Prereq.: Russian 201 or three years of high school Russian. *3 h. c.*

Upper Division Courses

305, 306. RUSSIAN LITERARY TRADITION. A survey of the important writers of Russia up to the Revolution, with special attention to Pushkin, Turgenev, Tolstoy, Dostoyevsky, and Chekhov. Prereq.: Russian 202 or equivalent. *3 + 3 h. c.*

307. CONTEMPORARY RUSSIAN LITERATURE. Readings in the works of Russian writers, both in the Soviet Union and abroad, since the Revolution. Prereq.: Russian 202 or equivalent. *3 h. c.*

308. INFORMATIVE READINGS IN RUSSIAN. Reading of books and articles that serve the interests and requirements of the individual student. Prereq.: Russian 202 or equivalent. *3 h. c.*

SOCIAL SCIENCE

Every student in Youngstown College working for a degree takes Social Science 101, 102, 201, and 202, with the following exceptions:

a. An engineering student takes only 101 and 102.

b. A transfer student with less than 60 but not less than 30 hours of credit acquired elsewhere takes only 201 and 202.

c. A transfer student with at least 60 semester hours of credit acquired elsewhere takes none of these courses.

d. A student completing the basic R. O. T. C. course may omit 102 (see page 67).

Lower Division Courses

101. INTRODUCTION TO THE SOCIAL SCIENCES I. A study of the principles of economics against a sociological background. (For certification and transfer purposes, this is regarded as a course in economics.) *3 h. c.*

102. INTRODUCTION TO THE SOCIAL SCIENCES II. An introduction to the factors influencing social life, with emphasis on American institutions. (For certification and transfer purposes, this is regarded as a course in political science.) *3 h. c.*

201. THE UNITED STATES TO 1865. Identical with History 201. *3 h. c.*

202. THE UNITED STATES SINCE 1865. Identical with History 202. *3 h. c.*

Combined Major in Social Sciences

A combined major in the social sciences consists of 45 semester hours in courses in the Division of Social Sciences, which comprises the departments of economics, history, philosophy and religion, political science, psychology, and sociology. Courses should be selected in consultation with the head of one

of these departments. A student taking the arts-law course may apply toward such a major the 32 hours of credit obtainable in his first two years of law school.

SOCIOLOGY

A major in sociology consists of 24 semester hours in addition to Social Science 101 and 102 and History 201 and 202. The major is designed to furnish useful background for students contemplating professional training in social work, law, the teaching of sociology, and allied fields.

One-sixth credit will be allowed toward a major in sociology for any courses listed under Humanities.

Lower Division Courses

100. INTRODUCTION TO SOCIOLOGY. An analysis of the broad structure of American society and culture; of the regularities, causes, and consequences of social behavior: of the values, social processes, and interrelationships that modify human behavior; of social change. *3 h. c.*

203. PRINCIPLES OF SOCIOLOGY. Underlying principles of the science of society, with reference to types of societies, groups, and classes; development of culture; laws of population; structure and organization of social institutions; dynamics of social change. Prerequisite: Social Science 101 and 102. *3 h. c.*

204. CULTURAL ANTHROPOLOGY. An approach to a science of culture. The origin, diffusion, and continuity of primitive social institutions, and their relation to contemporary social phenomena. Prerequisite: Social Science 101 and 102. *3 h. c.*

Upper Division Courses

300. SOCIAL PSYCHOLOGY. Identical with Psychology 300.

301. CRIME AND PENAL INSTITUTIONS. The nature and causes of crime and criminals, our present methods of apprehending the criminal, and the problems connected with our penal institutions. Prerequisite: Social Science 101 and 102. *3 h. c.*

302. SOCIAL PATHOLOGY. The causes and present status of a selected number of social maladjustments, and possible remedies for them. Defective social structure and control in their relation to youth, war, poverty, vice, suicide. Prerequisite: Sociology 203. *3 h. c.*

305. ECONOMIC AND SOCIAL STATISTICS. Identical with Economics 305.

307. MARRIAGE AND FAMILY RELATIONS. Identical with Psychology 307.

308. EDUCATIONAL SOCIOLOGY. Identical with Education 308.

311. JUVENILE DELINQUENCY. Social and psychological factors underlying delinquency; the juvenile court and probation; treatment in the community and in institutions; preventive measures. Prereq.: Social Science 101 and 102. *3 h. c.*

312, 313. HISTORICAL INTRODUCTION TO SOCIAL WELFARE. An examination of the political, social, economic, and cultural forces which have led to the evolution of modern social welfare institutions; the historical background of social work as it functions in the United States. A survey of social and public welfare services, with analysis of programs of local agencies and their interrelationships with national welfare services and with other local organizations. Visits to local social agencies. Prerequisite: Sociology 203. *3 + 3 h. c.*

314. PHYSICAL ANTHROPOLOGY. Identical with Biology 304.

318. PUBLIC ADMINISTRATION. Identical with Political Science 308.

324. CULTURAL ANTHROPOLOGY: NEW WORLD ETHNOGRAPHY. An analysis of the origins, culture, and achievements of the Inca, Mayan, and Aztec civilizations and selected Central and North American Indian groups, with special emphasis on their art, symbolism, and social institutions. Prereq.: Social Science 101 and 102. *3 h. c.*

404. MODERN SOCIAL MOVEMENTS. A study of 19th and 20th century social movements, with emphasis on the United States: consideration of the communistic communities, co-operatives, and the labor movement. Prerequisite: Social Science 101 and 102, History 201 and 202, and Sociology 203. *3 h. c.*

405. SOCIAL CONTROL. Means of control in primitive and advanced societies. The role of the family, school, church, clubs, leagues, corporations, labor unions, trade and professional associations, the press, radio, and movies. The modification of individual and group behavior by group valuations, praise, ridicule, rewards, punishments, symbols, slogans, and propaganda. Prerequisite: Sociology 203 and Psychology 201. *3 h. c.*

406. SOCIAL RESEARCH. Seminar in methods of obtaining, interpreting, and presenting sociological data through the use of case studies, social surveys, etc. Each student makes an intensive study of an existing situation. Prerequisite: Sociology 305, senior standing with major in sociology or social science, and consent of instructor. *3 h. c.*

407-408. INTRODUCTION TO SOCIAL WORK METHODS. Outline of the development of social work as a profession; analysis of the major processes employed in case work, group work, community organization, and social action; relation of social work methods to areas other than social work. Prerequisite: Sociology 312 and 313, or senior standing with major in sociology. *3 + 3 h. c.*

409. HISTORY OF SOCIAL PHILOSOPHIES. The evolution of social theory, with emphasis upon various present-day schools of thought. Prerequisite: Sociology 203 and 9 semester hours of Upper Division sociology courses. Listed also as Philosophy 409. *3 h. c.*

410. AMERICAN MINORITY GROUPS. A survey of the origin, characteristics, status, and adjustment of national and racial minority groups in the United States, with emphasis on the significance of membership in such a group to the in-group, the out-group, and community solidarity. Prereq.: Sociology 203 or consent of the instructor. *3 h. c.*

412. COMPARATIVE ECONOMIC SYSTEMS. Identical with Economics 402.

432. THE PSYCHO-SOCIAL DYNAMICS OF RELIGION. Identical with Philosophy 432; listed also as Psychology 432.

SPANISH

A major in Spanish consists of 24 semester hours above the elementary level, plus 6 hours in Latin, French, or Italian. For a combined major in humanities, see page 138.

The prerequisite for any Upper Division course is Spanish 202, or four years of high school Spanish, or the consent of the instructor. Freshmen who satisfy this prerequisite may enter Upper Division courses.

Lower Division Courses

101-102. ELEMENTARY SPANISH. The essentials of Spanish grammar, taught through written and oral exercises and the reading of simple texts. No credit is given for this course if the student has credit for two years of high school Spanish. *3 + 3 h. c.*

201. INTERMEDIATE SPANISH. Review of grammar, with imitative exercises in composition. Reading of selected classics of Spanish and Spanish-American prose narration. Prereq.: C or better in Spanish 102 or in second-year high school Spanish. *3 h. c.*

202. INTERMEDIATE SPANISH. A continuation of Spanish 201, using modern stories and plays and conversational exercises based on the text. *3 h. c.*

201L, 202L. SPANISH CONVERSATION. A laboratory course in oral Spanish, with the instructor using the direct conversational approach to help the student speak Spanish in practical, everyday situations. Prerequisite or concurrent: Spanish 201, 202. *1 + 1 h. c.*

205. ORAL PRACTICE IN LATIN-AMERICAN COUNTRIES. Two weeks in one or more Spanish-speaking countries, accompanied by an instructor. One and a half hours of instruction daily for twelve days. Prereq.: Spanish 101-102, or consent of the instructor, with whom arrangements should be made. The student pays his own expenses. (Will be given next in summer of 1954, probably in Mexico.) *1 h. c.*

Upper Division Courses

325. CONVERSATIONAL SPANISH. One hour a week of exercises designed to facilitate the acquisition of a correct pronunciation; two hours of conversation based on composition assignments. *3 h. c.*

326. SPANISH CIVILIZATION. A study of the traditions, history, and geography of Spain and Spanish-speaking countries—material fundamental to the understanding of Spanish books and periodicals. *3 h. c.*

327. CURSO DE ESTILO. Through translations from English to Spanish and from Spanish to English an insight is given into the fundamental differences in expression between the two languages. *3 h. c.*

328. SPANISH LITERARY TRADITION. A brief survey of the principal writers of Spain together with the study of selections from some of their principal works. *3 h. c.*

329. JOURNALISTIC AND COMMERCIAL SPANISH. A study of selected periodicals from Mexico and other Spanish-American countries, with special attention to the vocabulary of advertising. One hour a week is devoted to practice in commercial correspondence. *3 h. c.*

330. CONTEMPORARY LITERATURE IN SPANISH. The principal writers of the twentieth century: Baroja, Unamuno, Valle-Inclán, Azuela, Goy de Silva, and others. *3 h. c.*

331. PORTUGUESE. The basic elements, with practice in easy conversation and exercises in the written language. Reference is made constantly to variations from Spanish idiom and resemblances to old Castilian. *3 h. c.*

332. PORTUGUESE AND BRAZILIAN READINGS. Selections from the modern literature of Portugal and Brazil. *3 h. c.*

400. COMMERCIAL SPANISH. Continuation of Spanish 329, with practice in the translation of business letters. *3 h. c.*

401. CLASSICAL SPANISH LITERATURE. The literature of the Golden Age, with special emphasis on Cervantes, Lope de Vega, and Calderon. *3 h. c.*

411, 412. COMPARATIVE GRAMMAR OF THE ROMANCE LANGUAGES. Identical with French 411, 412; listed also as Italian 411, 412.

SPEECH AND DRAMATICS

Majors are expected to complete the basic requirements for the English major as stated on page 121. Courses in speech and dramatics may be counted toward a major in English, on the approval of the head of the Department of English.

The prerequisite to all other courses in speech is Speech and Dramatics 115 and 116, or Communication 105-106-107, or preparation satisfactory to the instructor.

Lower Division Courses

105-106-107. BASIC COURSE in communication. See Communication (page 110).

115, 116. FUNDAMENTALS OF SPEECH. This course aims to develop self-expression through mind, body, and voice, by means of a study of proper speech habits and practice in the delivery of numerous extemporaneous and prepared speeches. 115 is prerequisite to 116. (The combination of this course with English 101-102 is equivalent to Communication 105-106-107.) *2 + 2 h. c.*

213. PUBLIC SPEAKING. The effective construction and delivery of speeches. Frequent presentation of short talks before the class. Adaptable to the needs of professional and business men. *2 h. c.*

215, 216. PUBLIC SPEAKING AND ORAL INTERPRETATION. A continuation of Speech and Dramatics 115, 116 on a more advanced level. Those who wish may concentrate on oral interpretation. *2 + 2 h. c.*

217. RADIO WORKSHOP. A review of the essential principles of effective public speaking, and practice in their application to radio, with attention to pertinent factors in transmission and reception, studio facilities and equipment, the preparation of continuity, microphone technique, radio dramatics, and actual broadcasting. *2 h. c.*

219, 220. PLAY PRODUCTION I. This course has three purposes: to develop interest in and appreciation of legitimate drama, particularly as found in the little theaters of today; to instruct in the production of such

drama; and to provide practical experience through producing plays in class and for the public. Two hours of lecture and two hours of laboratory. *3 + 3 h. c.*

221. THEATER SPEECH. Development of voice and diction for the theater and related fields. *2 h. c.*

223, 224. REHEARSAL AND PERFORMANCE. Detailed study of a play or opera through preparing it for public performance. Class is formed after casting and continues through final production date. May be repeated. *½ to 2 + ½ to 2 h. c.*

Upper Division Courses

315. DEBATING AND PUBLIC DISCUSSION. The principles of argumentative and deliberative speaking, with practical training in analyzing questions, finding and selecting evidence, debating, and public discussion. *2 h.c.*

317. ACTING I. Rehearsal and classroom performance of scenes and pantomimes. Students of Speech and Dramatics 421 and 422 assist in directing, under faculty supervision. *2 h. c.*

319, 320. PLAY PRODUCTION II. Theory and practice of staging, scene design, lighting, and costuming of period productions. Construction of stages in miniature from drawings, after research into method. Prereq.: Speech and Dramatics 219, 220. *3 + 3 h. c.*

323. APPLIED PUBLIC SPEAKING. Preparation of speeches and their delivery before various groups. Conducted mainly through individual conferences. Prereq.: consent of instructor. *2 or 3 h. c.*

421. THEATER DIRECTING I. The director's interpretation of the play: its setting, movement, and dialogue. Class-members assist in the work of Speech and Dramatics 317. Prereq.: Speech and Dramatics 219, 220 and 319, 320; or consent of instructor. *2 h. c.*

422. THEATER DIRECTING II. An advanced approach to the work of Speech and Dramatics 421. Each student directs a play. Prereq.: Speech and Dramatics 421. *2 h. c.*

TEACHER TRAINING

See Education.

ZOOLOGY

See Biology.

PRE-MEDICAL STUDY AND ALLIED FIELDS

Following are curriculums recommended for students planning to enter schools of medicine, nursing, and allied fields. The student following one of these curriculums should consult with his adviser, who will be a member of the department indicated below for each field.

Suggested Pre-Medical and Pre-Veterinary Curriculum for the Degree of Bachelor of Arts

The major is a combined major of at least 45 hours in biology, chemistry, and physics, varying with the requirements

of the medical school to which entrance is sought. Advisement is provided by the biology department.

The college will accept a maximum of 25 credit hours of study in an approved medical school toward the completion of such a pre-medical curriculum; see page 97.

First Year	Hrs.
Biol. 103 General Biology	3
Biol. 125 Zoology: Invertebrates	2
Comm. 105-106 Basic Course I-II	6
Math. 101, 102 College Algebra	6
Math. 103 Trigonometry	3
Math. 104 Analytical Geometry	3
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Phys. Ed. 107 and 108 Health Ed.	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	32

Second Year	Hrs.
Biol. 225 Zoology: Vertebrates	3
Biol. 308 Vertebrate Embryology	4
Chem. 109-110 General Chemistry	10
Comm. 107 Basic Course III	3
Hist. 201 The U. S. to 1865	3
Physics 101-102 Fundamentals of Physics	6
Physics 101L-102L Fund. of Phys. Lab.	2
Physical Education (activity)	1
	32

Third Year	Hrs.
Biol. 309 Vertebrate Anatomy I	3
Biol. 310 Vertebrate Anatomy II	2
Chem. 205 Qualitative Analysis	4
**Chem. 206 Quantitative Analysis	2
Chem. 301 Organic Chemistry	3
Chem. 303 Org. Chem. Laboratory	2
English elective (Upper Division)	3
*Foreign language (or elective)	6
Psych. 201 General Psychology	3
Hist. 202 The U. S. since 1865	3
	31

Fourth Year	Hrs.
**Biol. 313 Vertebrate Histology	3
**Biol. 321 Genetics	3
**Chem. 302 Organic Chemistry	3
**Chem. 304 Org. Chem. Laboratory	2
*Foreign language (or elective)	6
Philosophy and Religion elective (Upper Division) or Humanities 401 or 402	3
Electives (Upper Division)	12
	32

*See pages 94 and 97.

**Recommended but not required. However, there must be a minimum of 40 semester hours in Upper Division courses.

Pre-Dentistry, Pre-Pharmacy, Pre-Chiropody, and Pre-Osteopathy

The two-year curriculums suggested for these purposes are similar to the first two years of the pre-medical curriculum. For details, the head of the biology department may be consulted.

Nursing

1. Pre-clinical Nursing.

For the student wishing two years of college as preparation for entering a nursing school, the following curriculum is suggested:

First Year	Hrs.
Biol. 103 General Biology	3
Biol. 175 Zoology	3
Chem. 109-110 General Chemistry	10
Comm. 105-106 Basic Course I-II	6
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Phys. Ed. 107 & 108 Health Ed. I & II	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	31

Second Year	Hrs.
Biol. 230 Anatomy and Physiology I.	3
Biol. 250 Anatomy and Physiology II.	3
Comm. 107 Basic Course III	3
Engl. 200 Introduction to Literature	3
Hist. 201 and 202 The United States	6
Psych. 201 General Psychology	3
Physical Education (activity)	1
Electives	10
	32

Advisement for a student following this curriculum is provided by the Department of Biology.

The first-year student in the Youngstown Hospital Association School of Nursing takes:

a. A course at the nursing school in orientation to the nursing arts and techniques. In time, this course is the equivalent of two semester hours each semester, but it provides no college credit.

b. The following courses at Youngstown College:

First Semester	Hrs.
Biol. 100 Fundamentals of Biology	4
Chem. 100 Introduction to Chemistry	4
Comm. 105 Basic Course I	3
Soc. 100 Introduction to Sociology	3
Physical Education (activity)	½
	14½

Second Semester	Hrs.
Biol. 150 Functional Anatomy of the Human	4
Biol. 160 Microbiology	3
Home Ec. 101 Food and Nutrition	2
Home Ec. 101L Food and Nutrition Laboratory	1
Psych. 101 Introduction to Psychology	3
Phys. Ed. 107 Health Education I	1
Physical Education (activity)	½
	14½

Advisement for such a student is provided by the Dean of Women and the Department of Biology.

Should a student following either of these pre-nursing curriculums wish, after obtaining the nurse's certificate, to complete the requirements for the degree of Bachelor of Arts or of Bachelor of Science as stated in section 3 below, the credits obtained in the pre-nursing college courses may be applied thereto.

2. Public School Nursing.

For the curriculum leading to the degree of Bachelor of Science in Education for public school nurses, the student may consult the head of the Department of Education.

3. For the Registered Nurse.

Program Leading to the Degree of Bachelor of Science or the Degree of Bachelor of Arts

A registered nurse is allowed credit, on the basis of standard achievement tests, for study at an accredited nursing school. A balance of 90 or more semester hours must be completed in college, including:

a. One acceptable academic major.

b. Biology 383 (Ward Management and Teaching).

c. All other requirements for either (1) the degree of Bachelor of Science (see page 95), except those in foreign language and physical education, or (2) the degree of Bachelor of Arts (see page 94), except those in physical education.

General advisement for a student following this program is provided by the Dean of Women and the head of the Department of Biology.

Medical Technology

The major and the minor in medical technology are in the same field, a combined field which includes the courses in biology and chemistry listed below (except those of 100 level) and the technical training, which is to be undergone in a medical laboratory accredited by the Registry of Medical Technologists of the American Society of Clinical Pathologists. Advisement is provided by the chemistry department.

The foreign language requirement is waived for students following this curriculum.

Required Curriculum Leading to the Degree of Bachelor of Science with a Major in Medical Technology

First Year	Hrs.
Biol. 103 General Biology	3
Biol. 175 General Zoology	3
Chem. 109-110 General Chemistry	10
Comm. 105-106 Basic Course I-II	6
Math. 101, 102 College Algebra	6
Phys. Ed. 107 and 108 Health Ed.	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	31

Second Year	Hrs.
Biol. 230 Anatomy and Physiology I	3
Biol. 250 Anatomy and Physiology II	3
Chem. 205 Qualitative Analysis	4
Chem. 206 Quantitative Analysis	2
Chem. 207 Quantitative Analysis	3
Comm. 107 Basic Course III	3
Engl. 200, 203, 204, 205, or 206	3
Hist. 201 The United States to 1865	3
Psych. 201 General Psychology	3
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Physical Education (activity)	1
	**34

Third Year	Hrs.
Technological training, credited as 30 semester hours, of which 15 are evaluated as 200-level and 15 as 300-level.	
	30

Fourth Year	Hrs.
Hist. 202 The U. S. since 1865	3
Philosophy and Religion elective (300 or above) or Humanities 401 or 402	3
Physics 101-102 Fundamentals of Physics	6
Physics 101L-102L Fund. of Phys. Lab.	2
Selection 1 or 2 below	27
	*41

Selection 1: Chemistry 301, 302; 16 hours of electives of 300 level or above; and 5 hours of electives at any level.

Selection 2: Biology 308; 18 hours of electives of 300 level or above; and 5 hours of electives at any level.

*Since this is an overload, some work must be taken in a summer session. It is recommended that such work be non-science courses, such as social science, history, English, and psychology. The adviser should be consulted.

**This total results in an overload for one or both semesters, unless the student's grade index is 2.0 or better.

The School of Business Administration

ORGANIZATION AND DEGREES

The School of Business Administration is divided into five departments: Accounting, Advertising, Business Organization, Merchandising, and Secretarial Studies.

Majors are offered in accounting, advertising, business art, general business, merchandising, public relations, and secretarial studies. Minors are offered in those subjects and in business organization, insurance, and transportation.

The degrees to which courses in these fields may lead are that of Bachelor of Science in Business Administration, the requirements for which are listed below, and that of Bachelor of Science in Education with a major in business education, for which see pages 96 and 118. A two-year curriculum leading to the title of Associate in Business Administration is also offered (see page 171).

Following are the requirements for the degree for which the study is done primarily in this unit, and for the title. It is the student's responsibility to see that he satisfies all graduation requirements. The general requirements for all degrees are stated on pages 66ff. Students enrolled or planning to enroll in the R. O. T. C. should note the relevant information on pages 67-68.

The Degree of Bachelor of Science in Business Administration

To receive the degree of Bachelor of Science in Business Administration, a student must have met the general requirements for all degrees, have 125 semester hours of credit, have a major in accounting, advertising, business art, general business, merchandising, public relations, or secretarial studies, have a minor in a related field, and have met the following requirements:

Communication—Satisfactory proficiency (8 or 9 hours)

The director of the Division of Language and Literature is the judge of this proficiency. Ordinarily, he will grant a certificate to the student who has

received a grade of C or higher in the final semester of his required course in communication or its equivalent.

Health and Physical Education ..... 4 hours

Physical Education 107 and 108 (health education), 2 hours; and four physical activity courses, totaling 2 hours. Any substitution of other courses for these requirements must be approved by the head of the Department of Health and Physical Education.

Orientation 100 ..... Credit

Not required of night students.

Social Science 101 and 102 ..... 6 hours

Not required of transfer students with 30 or more hours of credit acquired elsewhere.

Religion ..... 3 hours

A course in the Department of Philosophy and Religion, or Humanities 401 or 402.

Science ..... 8 or 9 hours

For the major in secretarial studies: either 8 hours of biology, of chemistry, or of physics, or 9 hours in other science courses. For any other major: Business Organization 131 (Mathematics of Business, 3 hours) and 6 hours in science courses.

History 201 and 202 ..... 6 hours

Not required of transfer students with 60 or more hours of credit acquired elsewhere.

English ..... 3 hours

Three hours of literature, or English 251.

Psychology ..... 6 hours

Business Organization 201 and 202 ..... 6 hours

Accounting ..... 6 hours

The Title of Associate in Business Administration

The title of Associate in Business Administration will be granted to a student having a total of 60 semester hours of acceptable academic credit with a point average of not less than 1.0, including English 101-102 or its equivalent; Social Science 101; Business Organization 201 and 202; and either a major in accounting, advertising, or merchandising, or a combined major in business art or general business.

The title of Associate in Business Administration will also be granted to a student who completes the first two years of the four-year curriculum in secretarial training (see page 187).

The grade in English 101-102 or its equivalent must be C or better in order to be certified in English proficiency by the director of the Division of Language and Literature.

Requirements for Awards Offered by the National Institute of Credit

Youngstown College co-operates with the Youngstown Association of Credit and the National Institute of Credit in preparing members for the awards of Associate and Fellow of the National Institute of Credit. A student who completes the program and fulfills all requirements qualifies for a diploma awarded by the Institute. The Institute requires that the student be registered as a member of the National Institute of Credit in order to qualify for either of the certificates. Transfer of credits may be arranged.

Associate Award Program. A basic program in credit and financial fundamentals. The following required courses are all given at Youngstown College: general or business economics (two semesters), introductory accounting (two semesters), credits and collections principles (one semester), and advanced credits (one semester).

After completing the courses, the candidate for the Associate Award is required to pass an examination given by the National Institute of Credit and must present evidence of three years' working experience in credit, sales, accounting, financial, or general office functions.

Fellow Award Program. An advanced program preparing for supervisory and managerial responsibilities. The Associate Award is a prerequisite to the Fellow Award, but the courses for them may be taken concurrently. The required courses and many of the elective courses are given at Youngstown College.

Required Courses for All Students. One semester each in law of contracts and agency, law of business transactions, public speaking, salesmanship, credit management problems, financial statement analysis, applied psychology, and technique of supervision.

Elective Courses. The student must choose at least two additional semester courses from the following: money and credit, business correspondence, marketing methods, business or

corporation finance, financial management, office management, business conditions, purchasing, intermediate accounting, advanced accounting, cost accounting, international trade.

After completing the required courses and two elective courses, the candidate must pass a comprehensive examination given by the National Institute of Credit and must present evidence of six years' working experience in credit, sales, accounting, financial, or general office functions, of which three years may have been offered in fulfillment of the Associate Award.

Award for Scholarship

The Sigma Kappa Phi Fraternity Scholastic Award. The Sigma Kappa Phi Fraternity awards annually a certificate and an emblem to the member of the graduating class with the highest point index in all business administration subjects who has majored in accounting and fulfilled the requirements for a degree or title in business administration. The recipient must have completed at least 60 semester hours at Youngstown College.

COURSES OF INSTRUCTION

and Curriculums

It is important that the student familiarize himself with the course-numbering system and its significance, as well as the abbreviations used to indicate the amount of credit. These are explained on page 87.

Following the course descriptions for each department is the curriculum required or suggested for a student majoring in that department. Curriculums for business art, general business, and public relations majors are under Business Organization.

ACCOUNTING

Accounting courses provide a study of bookkeeping methods, and the presentation, analysis, and interpretation of financial data. They also cover cost analysis, consolidated statements, auditing, taxes, systems of accounting, and other advanced work. They are designed for students who wish to become private accountants in business and industrial firms; to prepare for certification through experience in the employ of certified public accountants; to become cost analysts or general business executives; or to teach bookkeeping or accounting.

A major in accounting consists of 34 semester hours above the 100 level, including Accounting 201-202, 301-302, 303, 304, 401, 403, 404, 407, 410, and 415. A student majoring in accounting must have a minor of 15 hours in a related field.

A grade of C in Accounting 202 is prerequisite to all more advanced courses in accounting. A point index of at least 2.0 in accounting is necessary to carry two accounting courses the following year.

Lower Division Courses

201-202. ELEMENTARY ACCOUNTING. The theory and use of balance sheets, operating accounts, and working papers, with special attention to books of original entry and special ledger accounts. Setting up accounts and adjusting and closing books at the end of the fiscal period are developed through practice sets and problems. Day students in this course must take Accounting 201L-202L concurrently. *3 + 3 h. c.*

201L-202L. ELEMENTARY ACCOUNTING LABORATORY. For day students in Accounting 201-202. The class meets two hours a week, for work equivalent to that for one hour of credit. *No credit.*

205. ELEMENTARY INDUSTRIAL ACCOUNTING. A concentrated course in accounting, designed for engineering and merchandising majors. Basic instruction in the theory of journals, ledgers, and financial statements, to develop an appreciation and understanding of the processes and executive uses of accounting. Day students in this course must take Accounting 205L concurrently. *3 h. c.*

205L. ELEMENTARY INDUSTRIAL ACCOUNTING LABORATORY. For day students in Accounting 205. Meets two hours a week, for work equivalent to that for one hour of credit. *No credit.*

Upper Division Courses

301-302. INTERMEDIATE ACCOUNTING. Financial statements, classification of real and nominal accounts, and special features pertaining to partnerships and corporations. The theoretical background of accounting principles and procedures, with emphasis on profits, surplus, dividends, depreciation, funds, and reserves. Prerequisite: a grade of C or better in Accounting 202. *3 + 3 h. c.*

303. BASIC COST ACCOUNTING. The principles of cost-finding for manufacturing accounts, including the threefold division of costing: material accounting, payroll records, and the recording and applying of manufacturing expense. Job order and process costs are covered, with emphasis on budgeting as a means of overhead control. Appropriate problems and practice sets are used. Prereq.: C or better in Accounting 201-202. *3 h. c.*

304. ADVANCED COST ACCOUNTING. A continuation of Accounting 303, covering estimating, standard, distribution, differential, and by-product costing, with emphasis on the use of cost data as a means of managerial control. Appropriate problems and a standard practice set are used. Prereq.: C or better in Accounting 303. *3 h. c.*

305. INDUSTRIAL COST ACCOUNTING. A concentrated course in cost-finding principles, designed for engineering and merchandising majors, using appropriate problems and a practice set. The various cost systems are treated, with explanation of material accounting, payroll records, and the distribution of overhead expenses. Special emphasis is placed on using cost data as a business control in administering the business enterprise. Prerequisite: a grade of C or better in Accounting 205. *3 h. c.*

401. ADVANCED ACCOUNTING. Partnerships and liquidations in installments; joint ventures; installment sales; insurance; receivership; estates and trusts; branch accounting; consolidations and mergers. Prereq.: C or better in Accounting 302. *3 h. c.*

403. FEDERAL TAXES. The principles underlying our income tax law as it pertains to the individual. The student files specimen returns based on actual case studies. Prerequisite: a grade of B or better in Accounting 201-202, or senior standing. *3 h. c.*

404. FEDERAL TAXES. The federal income tax for partnerships and corporations; the gift tax, the estate tax, and social security taxes. The student files specimen returns based on actual case studies. Prerequisite: Accounting 403. *3 h. c.*

405. STATE AND LOCAL TAXES. A condensed study of all Ohio taxes, including sales, tangible and intangible, personal property, franchise, stamp, and other related taxes. The student fills out forms required of business by various governmental agencies. Prerequisite: a major in accounting and senior standing. *3 h. c.*

407. AUDITING. Methods of auditing, with emphasis on the verification of balance sheets and operating statements and the analysis and use of prepared statements. Prereq.: grades of C or better in Accounting 304 and 401. *2 h. c.*

408. AUDITING PRACTICE AND REPORT WRITING. A practical case in auditing is worked through with emphasis on the special recommendations for procedures used in actual practice. Prereq.: Accounting 407. *2 h. c.*

410. STATEMENT ANALYSIS. The flow of funds as reflected in financial statements. The use of ratios and other indices in interpreting a concern's financial position, trends, and other variations. Each student prepares an analysis of some prominent corporation and makes comparisons with its principal competitors. Prereq.: Accounting 401 and 403. *2 h. c.*

411, 412. C.P.A. PROBLEMS. All types of accounting and auditing problems are solved and discussed from the standpoints of both theory and practice, with special emphasis on accuracy and clarity in such problems as are encountered in C.P.A. examinations. Prereq.: grade of C or better in Accounting 407. Offered on demand. *3 + 3 h. c.*

415. SYSTEMS. Principles underlying the design and installation of accounting systems to meet the needs of all types of business concerns. Machine accounting methods and manuals of procedure are also studied. Prereq.: Accounting 304. *3 h. c.*

417. CONTROLLERSHIP. The duties and responsibilities of the chief accounting officer in a private business concern. The use of accounting and statistical data in the planning, co-ordination, control, and protection of business. Prereq.: Accounting 304 and 401. *3 h c.*

451. SEMINAR. Individual research in accounting problems. The student chooses his topics and prepares papers and talks for the benefit of the group. Prereq.: Accounting 304 and 401, and senior standing. *1 to 3 h. c.*

Required Curriculum Leading to the Degree of Bachelor of Science in Business Administration with a Major in Accounting

First Year	Hrs.
Acctg. 201-202 Elementary Accounting	6
Bus. Org. 112 Sources of Business Information	1
Bus. Org. 131 Mathematics of Business	3
*Comm. 105-106 Basic Course I-II	6
Science	6
Soc. Sci. 101 and 102 Introduction to the Social Sciences	6
Phys. Ed. 107 & 108 Health Ed. I & II	2
Physical Education (activity)	1
Orientation 100 Freshman Or.	Credit
	31

Second Year	Hrs.
Acctg. 301-302 Intermediate Accounting	6
Bus. Org. 201 and 202 Business Law	6
Bus. Org. 210 Public Relations, or Mdsg. 225 Salesmanship	3
Bus. Org. 212 Business Letters and Reports	2
*Comm. 107 Basic Course III	3
Econ. 202 Principles of Economics	3
Hist. 201 and 202 United States	6
Mdsg. 224 Marketing	3
Physical Education (activity)	1
	33

Third Year	Hrs.
Acctg. 303 Basic Cost Accounting	3
Acctg. 304 Advanced Cost Accounting	3
Acctg. 401 Advanced Accounting	3
Bus. Org. 322 Credits and Collections	3
Econ. 303 Financial Organization	3
Econ. 305 Economic and Social Statistics	3
Econ. 315 Corporation Finance	3
Engl. 200, 203, 204, 205, 206, or 251	3
Psych. 201 General Psychology	2
Electives	8
	39

Fourth Year	Hrs.
Acctg. 403, 404 Taxes	6
Acctg. 407 Auditing	2
Acctg. 410 Statement Analysis	2
Acctg. 415 Systems	3
Econ. 401 Labor Problems, or Econ. 404 Personnel Management	3
Philosophy and Religion elective, or Humanities 401 or 402	3
Psych. 401 Business Psychology or 301 Applied Psychology	3
Electives	9
	31

*English 101-102 and Speech and Dramatics 115, 116 may be substituted for Communication 105-106-107.

ADVERTISING

Advertising courses provide a study of the forms, methods, costs, and uses of advertising. They are designed both for students who plan to enter the advertising field and for those who wish a knowledge of advertising for other purposes.

A major in advertising consists of 30 semester hours; it includes Advertising 227-228, 329, 330, 401, 411, 415 and Art 223, and 6 hours in courses chosen from the following: Advertising 405, 414, and 451 and Art 224, 327, and 328.

Lower Division Course

227-228. PRINCIPLES AND PRACTICE OF ADVERTISING. A survey of advertising as an instrument of modern business, including its economics, media, methods, and psychology, with discussion of copy-writing, layout, and the graphic arts. In the second semester are treated such problems as the study of the product, selection of media, determination of appeals to be made, and various types of campaigns. Prerequisite: sophomore standing or higher. *3 + 3 h. c.*

220. ANALYTICAL MECHANICS: STATICS. The fundamental principles of mechanics and their application to problems of engineering. Forces, components, vectors, moments, couples, cables, and friction. Moments of inertia are introduced in preparation for the strength of materials course. Prerequisite: Mathematics 209 and Physics 201 and 201L. Prerequisite or concurrent: Mathematics 210 and Physics 202 and 202L. Identical with Physics 220. *3 h. c.*

230. ROUTE SURVEYING. Preliminary route location, with the necessary office and field work, including curves used in railroad and highway construction and earth work. Prereq.: Engineering 130. Fee: $5.00. *3 h. c.*

251, 252. GENERAL METALLURGY. The principles of metallurgical processes, with emphasis on iron and steel manufacture. Essentials of metallurgical reactions, refractories for metallurgical furnaces, furnaces and fuels, raw materials of the iron and steel industry, the iron blast furnace, the Bessemer converter, acid and basic open hearths and electric furnaces, manufacturing costs, and marketing of steel products. Prerequisite: Chemistry 109-110 or equivalent. *3 + 3 h. c.*

255. METALLOGRAPHIC TECHNIQUE. The techniques of preparation, examination, and photography of iron and steel samples. Acquaintance with typical steel structures; heat treatments and their general principles; identification of non-metallic inclusions; study of defective steels. Two hours of laboratory work a week, including a discussion period. Prerequisite: Chemistry 205. Fee: $5.00. *2 h. c.*

Upper Division Courses

301. REPORT WRITING. The content of the engineering report, and methods of presenting it; construction of a comprehensive report, using data from previous studies. Prereq.: advanced standing in engineering. *2 h. c.*

311. ALTERNATING CURRENT CIRCUITS. Sinusoidal currents and voltages; vector representation; solution of series and parallel circuits; real and apparent power; voltage and current loci; balanced and unbalanced polyphase circuits; power in polyphase systems; Fourier analysis of non-sinusoidal waves. Prereq.: Engineering 313, Mathematics 210, Physics 202 and 202L. *3 h. c.*

311L. ALTERNATING CURRENT CIRCUITS LABORATORY. Three hours a week; taken concurrently with Engineering 311. Fee: $5.00. *1 h. c.*

312. ELECTRICAL NETWORKS. Network theorems; methods of network solution; resonance phenomena; coupled circuits and impedance transformation; filter design and analysis; transmission lines, infinite line and reflection, transient and steady-state behavior of lines. Prereq.: Engineering 311 and 311L. *3 h. c.*

312L. ELECTRICAL NETWORKS LABORATORY. Three hours a week; taken concurrently with Engineering 312. Fee: $5.00. *1 h. c.*

313. FUNDAMENTALS OF ELECTRICAL ENGINEERING. An introductory course in electrical engineering. Conductors and insulators; network solution of direct current circuits; network theorems; magnetic fields, inductance, solution of magnetic circuits; electric fields and capacitance; simple transients; electrodynamic principles; elementary theory of alternating current circuits. Prereq.: Mathematics 209, Physics 201 and 201L. Prerequisite or concurrent: Mathematics 210, Physics 202 and 202L. *4 h. c.*

355. METALLURGICAL CALCULATIONS. Calculations in thermo-chemistry, including those of blast furnace charges, open hearth charges, heat transfer, and chimney design, and of the efficiency of blowing engines, blast furnaces, Bessemer converters, and reheating furnaces. The course covers both ferrous and non-ferrous metallurgy. Prereq.: Mathematics 209-210 and Chemistry 205 and 206. *3 h. c.*

361. MOTION AND TIME ANALYSIS. Fundamentals and elements of motion study, construction and use of process charts and operation analysis, work simplification and standardization, characteristics of motions, and basic divisions of accomplishment. Visits to local plants are arranged. Prereq.: Mathematics 109-110. *3 h. c.*

362. TIME STUDY AND FORMULA-MAKING. Tools and methods of time study, practice in making time-study observations, determination of constants and variables, leveling for efforts and skill allowances for delays and fatigue, construction and use of formula standards. Time studies are made of actual plant operations. Prereq.: Mathematics 109-110. *3 h. c.*

363. PRINCIPLES OF INDUSTRIAL ENGINEERING AND MANAGEMENT. The general principles of industrial engineering and the basic principles of industrial management. Prereq.: junior standing. *3 h. c.*

371. ELEMENTARY MACHINE DESIGN. A study of the design of basic machine elements, including springs, shafts, screw fastenings, belts, brakes, and clutches. Prerequisite: Engineering 202, 326, and 326L. *2 h. c.*

371L. ELEMENTARY MACHINE DESIGN LABORATORY. Designing of machine elements, such as shafts, belt drives, gears, and cams; layouts for cam profiles and gear teeth; study of displacements, velocities, and accelerations associated with machine elements. Taken concurrently with Engineering 371. Fee: $2.50. *1 h. c.*

372. IRON FOUNDRY. The theory and practice of the foundry of ferrous and non-ferrous metals; heat requirements; a first-hand study of foundry practice in core-making. Study of various mouldings and castings. *3 h. c.*

373. STEEL FOUNDRY. Sand mixtures and their functions. Founding: floor, bench, and machine moulding; centrifugal casting; heading and gating; cleaning and preparing castings for shipment. Design: pattern and casting. Melting practice: crucible, converter, open hearth, and electric; acid and basic practices, and chemical reaction. Heat treatment: annealing, normalizing, and air, oil, and water quenching of carbon and alloy steels. Specifications and uses of various types of alloy steels. Prerequisite: Engineering 372. *3 h. c.*

374. HEAT ENGINEERING. Practical application of thermodynamic principles to steam, air, and gas power. Prereq.: Engineering 317. *3 h. c.*

374L. HEAT ENGINEERING LABORATORY. Three hours a week; taken concurrently with Engineering 374. Prerequisite: Engineering 317L. Fee: $10.00. *1 h. c.*

401-402. THESIS. The student prepares a written report, of at least 2,500 words, of an investigation of a subject selected by either the student or the dean of the engineering school. Three bound copies are required; specifications are available on request. For credit, the thesis must be accepted by both the dean and the adviser. Prereq.: senior standing. Estimated thesis expense: $50.00-$60.00. *2 + 2 h. c.*

411. DIRECT CURRENT MACHINES. Dynamo principles; armature windings; armature reaction; voltage characteristics of generators; speed-torque characteristics of motors; starting and speed control of motors; ratings, losses, and efficiencies; special direct current machines such as Amplidyne, Rototrol, and others. Prereq.: Engineering 313. *3 h. c.*

411L. DIRECT CURRENT MACHINES LABORATORY. Three hours a week; taken concurrently with Engineering 411. Fee: $10.00. *1 h. c.*

413-414. ALTERNATING CURRENT APPARATUS. The theory, operation, and analysis of transformers, alternators, synchronous motors, synchronous converters, polyphase induction motors, single-phase motors, and motor controls. Prereq.: Engineering 311 and 311L, 411 and 411L. *3 + 3 h. c.*

413L-414L. ALTERNATING CURRENT APPARATUS LABORATORY. Three hours a week; taken concurrently with Engineering 413-414. Fee: $10.00 each semester. *1 + 1 h. c.*

415. ELECTRONIC CIRCUIT ELEMENTS. A study of the theory of high vacuum, gaseous, thermionic, and photoelectric tubes. Contingent field theory, electron ballistics and optics, emission at metallic surfaces, gaseous conduction, construction of electronic circuit elements, parametric circuit equations of tubes, characteristic curves, rating and efficiency, basic utilization circuits. Prereq.: Mathematics 315 and Engineering 311-312 and 311L-312L. (Formerly "Electron Dynamics".) *3 h. c.*

415L. ELECTRONIC CIRCUIT ELEMENTS LABORATORY. Two hours a week; taken concurrently with Engineering 415. Fee: $10.00. *1 h. c.*

416. ELECTRONIC APPLICATIONS. Theory and design of amplifiers, rectifiers, and oscillators. Survey of pulse forming, triggering, and timing circuits. Examination or analysis of typical control and regulation circuits, induction heating and welding, radiation detectors, principles of radar utilization of communication facilities and the decibel convention. Prereq.: Engineering 415 and 415L, or equivalent. *3 h. c.*

416L. ELECTRONIC APPLICATIONS LABORATORY. Three hours a week; taken concurrently with Engineering 416. Fee: $10.00. *1 h. c.*

417. ELECTRIC POWER TRANSMISSION. Transmission line parameters; solution of the short and long line; circle diagrams; symmetrical components and their application to fault calculations and sequence impedance of machines; and other topics relating to power transmission. Prereq.: Engineering 312, 413. *3 h. c.*

418. ELECTROMAGNETIC FIELD THEORY. Definitions of fields and potentials, study of the static electric and magnetic field, steady currents and the associated magnetic field, changing electric and magnetic fields, Maxwell's equations and their applications to waves in dielectric and conducting media, reflection, radiation, Poynting's vector. Vector notation is used throughout the course. Prereq.: Mathematics 315, Engineering 311. *3 h. c.*

430. CONCRETE CONSTRUCTION. The properties of concrete; the design and construction of concrete walls, slabs, girders, beams, and columns. Prereq.: Engineering 326 and 326L. *4 h. c.*

431. CONSTRUCTION OF BUILDINGS. The materials, structural elements and details, utilities, and services involved in building construction. Prerequisite: Engineering 331. *3 h. c.*

432. WATER SUPPLY. Public and industrial water supply systems and methods of purification; construction and operation of distribution systems. Prereq.: Chemistry 109-110 or 111-112. *3 h. c.*

433. INDETERMINATE STRUCTURES. Analysis of statically indeterminate structures: elastic arches, closed rings, rigid frames, continuous beams. Prerequisite: Engineering 330, 331, and 430. *3 h. c.*

434. SOIL MECHANICS. The mechanical properties of soils, soil classification; capillarity and permeability, stresses and strains, consolidation, shear; stability of footings, retaining walls, cuts, and embankments. Prerequisite: Engineering 325. *3 h. c.*

451, 452. METALLOGRAPHY. The principles and application of metallography and heat treatment of iron and steel. Application of commercial laboratory methods to study of complaints and defects in "unknown" samples. Two hours of lecture and recitation and three hours of laboratory a week. Prerequisite: Engineering 351, 352 and 351L, 352L. Fee: $10.00 each semester. *3 + 3 h. c.*

453, 454. ADVANCED METALLOGRAPHY. Group work in the techniques of selecting, processing, sectioning, grinding, polishing, etching, and photomicrography of metallographic specimens. Correlation of physical properties and micro-structure of ferrous and nonferrous metal and alloy specimens and preparation of project reports, including photomicrographic illustrations. Projects cover heat treatment of cast, forged, hot-rolled, extruded, and coldworked steels and commercial alloys of copper, aluminum, nickel, zinc, tin, and other metals. One hour of lecture and four hours of laboratory a week. Prerequisite: Engineering 351, 352 and 351L, 352L. Fee: $10.00 each semester. *3 + 3 h. c.*

455. IRON AND STEEL METALLURGY. Study of the raw materials required for the production of iron and steel. Ore concentration, by-products, ovens, blast furnaces, Bessemer processes, open hearth, and refractories. Prerequisite: Engineering 251, 252. *3 h. c.*

456. NONFERROUS METALLURGY. The production of nonferrous metals, including cadmium, chromium, copper, aluminum, gold, silver, tin, and zinc. Types of ores, types of blast furnace melting, converters; continuous decantation and cyanide processes. Prerequisite: Engineering 251, 252. *3 h. c.*

457. NONFERROUS METALLURGY: RARE METALS. A study of the production, properties, and uses of the lesser-known nonferrous elements: beryllium, calcium, tantalum, columbium, molybdenum, titanium, zirconium, tungsten, etc. Prerequisite: Engineering 252. Prerequisite or concurrent: Engineering 456. *3 h. c.*

458. MECHANICAL METALLURGY: HOT WORKING. The theory and practice of the hot working of metals and alloys with emphasis on iron and steel, including forging, extrusion, rolling, swaging, and other operations. Study of roll design, equipment design, mill layout, and the physical metallurgy involved. Prerequisite or concurrent: Engineering 351, 352 and 351L, 352L. *3 h. c.*

459. MECHANICAL METALLURGY: COLD WORKING. The theory and practice of the cold working of metals and alloys with emphasis on iron and steel, including the cold drawing of wire, bars, tubes, and special shapes; the cold rolling of strip and sheet; and the related heat treatments. Consideration of reduction schedules used in successive drawing or rolling passes and of the design and utilization of cold-working equipment. Prerequisite or concurrent: Engineering 351, 352 and 351L, 352L. *3 h. c.*

461, 462. PRODUCTION PLANNING AND CONTROL. The fundamentals and techniques of planning and control required in the co-ordination of product engineering, production engineering, quality control, material control, expediting, purchasing, scheduling, and dispatching. Applications to seasonal and non-seasonal business. Economic lot size calculations and formulas. Plant capacity and plant layout; material handling. Prereq.: Business Organization 310. *3 + 3 h. c.*

463. JOB ANALYSIS. The fundamentals and techniques of job descriptions, job specifications, salary determination, and the use of charts in setting up labor grades, locality surveys, and merit ratings for purposes of wage determination, with examples from actual practice. Prerequisite: Engineering 361. Prerequisite or concurrent: Engineering 362. *3 h. c.*

470. ADVANCED MACHINE DESIGN. A continuation of Engineering 371, including the designing of bearings, gears, cams, thick-walled pressure vessels, flywheels, and other machine elements. Prereq.: Engineering 371. *2 h. c.*

470L. ADVANCED MACHINE DESIGN LABORATORY. A continuation of Engineering 371L. Includes the design of an entire machine. Taken concurrently with Engineering 470. Fee: $2.50. *1 h. c.*

471. HEATING, VENTILATING, AND AIR CONDITIONING I. The essentials of heating and ventilating, with attention to the essential definitions, laws, and properties of various media: factors affecting human comfort; heat transmission and air infiltration in buildings; calculation and estimation of building heat losses and gains; heat disseminators, radiators, and convectors; fuels, combustion, draft, chimneys; steam and hot water heating; piping, steam flow, insulation. Prereq.: Engineering 317 and 317L. *3 h. c.*

472. HEATING, VENTILATING, AND AIR CONDITIONING II. Air conditioning in relation to heating and ventilating problems and the processing of materials. Air conveying and air cleaning; air-flow, fans, duct design, air cleaners, gravity-flow, unit systems of ventilation; heating with warm-air furnace systems, central hot-blast systems, and unit heaters; air humidification and dehumidification, drying of materials, control of air temperature and humidity, summer cooling of buildings. Prerequisite: Engineering 471. *3 h. c.*

473. REFRIGERATION. Application of the thermodynamic theory to refrigeration; pumps, centrifugal and reciprocal; compressors; refrigerants and their properties; compression and absorption systems. Prerequisite: Engineering 317 and 317L. *3 h. c.*

474. TURBINES AND JETS. Theory of the turbine, thermodynamic study of the flow of gaseous mixtures through nozzles; design of blades: efficiency; governing. Prereq.: Engineering 374 and 374L. *3 h. c.*

475. INTERNAL COMBUSTION ENGINES. Thermodynamic analysis of internal combustion engine cycles; fuels; combustion; carburetion, cooling, lubrication, and effect of supercharging on engine performance. Prereq.: Engineering 374 and 374L. *3 h. c.*

475L. INTERNAL COMBUSTION ENGINES LABORATORY. Two hours a week; taken concurrently with Engineering 475. Fee: $10.00. *1 h. c.*

476. MECHANICAL VIBRATIONS. The causes, effects, and control of vibration in machine elements and foundations. Vibrations with and without damping. Vibration of systems with several degrees of freedom. Vibration isolation and absorption, with the application of modern methods in this field. Prereq.: Mathematics 315. *3 h. c.*

CURRICULUMS

Below are the required curriculums leading to the degree of Bachelor of Engineering. In the first section are listed the 109 semester hours of courses taken by all engineering students;* in the second are the additional courses for the major in each special branch.

I. Courses Common to All Engineering Curriculums

The 109 semester hours listed below are required in all engineering curriculums, unless an exception is indicated.

A. Non-Science and Non-Technical Courses

Basic

Course	Hours
Communication 105-106-107, Basic Course I-II-III	9
Orientation 100, Freshman Orientation	Credit
Physical Education 107 and 108, Health Education I and II	2
Physical Education (activity)	2

General

Humanities 401, Greek Classics and the Old Testament	3
Social Science 101 and 102, Introduction to the Social Sciences I and II	6

Professional

Business Organization 201 and 202, Business Law I and II	6
Economics 309, Engineering Economics	3
Engineering 301, Report Writing	2
	33

B. Basic Science and Mathematics Courses

Chemistry 109-110, General Chemistry	10
Mathematic 109-110, Freshman Mathematics	10
Mathematics 209-210, Calculus I and II: Differential and Integral	10
**Mathematics 309, Differential Equations	3
**Mathematics 310, Partial Differential Equations	3
Physics 201, General Physics: Mechancis, Heat, and Sound	3
Physics 201L, General Physics Laboratory	1
Physics 202, General Physics: Light and Electricity	3
Physics 202L, General Physics Laboratory	1
	44

C. Engineering Courses

Engineering 101, Elementary Engineering Drawing	2
Engineering 103, Advanced Engineering Drawing	2

*Except chemical engineering students, who take only 96 of them.

**Except for chemical engineering.

Engineering 202, Engineering Drawing: Descriptive Geometry	3
Engineering 220, Analytical Mechanics: Statics	3
Engineering 251, General Metallurgy	3
Engineering 313, Fundamentals of Electrical Engineering	4
†Engineering 314, Elements of Electrical Machines	3
†Engineering 314L, Elements of Electrical Machines Laboratory	1
*Engineering 325, Analytical Mechanics: Dynamics	3
*Engineering 326, Strength of Materials	3
*Engineering 326L, Strength of Materials Laboratory	1
Engineering 401-402, Thesis	4
	32

II. Additional Courses for Each Major Field

In addition to the 109 semester hours listed above (96 for chemical engineering), one of the following groups of courses is required, according to the student's major:

Chemical Engineering

Chemistry 205, Qualitative Analysis	4
Chemistry 206, Quantitative Analysis	2
Chemistry 207, Quantitative Analysis	3
Chemistry 208, Quantitative Analysis	3
Chemistry 301, 302, Organic Chemistry	6
Chemistry 303, 304, Organic Chemistry Laboratory	4
Chemistry 311, 312, Physical Chemistry	6
Chemistry 411, Thermodynamics	2
Chemistry 412, Thermodynamics	2
Chemistry 419, Advanced Inorganic Chemistry	2
Chemistry 430, Unit Design	3
Engineering 252, General Metallurgy	3
Engineering 302, Report Writing	2
Engineering 328, Hydraulics	3
Engineering 328L, Hydraulics Laboratory	1
Engineering 340-341, Principles of Chemical Engineering	6
Engineering 374, Heat Engineering	3
Engineering 374L, Heat Engineering Laboratory	1
	56

Civil Engineering

Engineering 130, Surveying	3
Engineering 230, Route Surveying	3
Engineering 323, Graphic Solutions	2
Engineering 328, Hydraulics	3
Engineering 328L, Hydraulics Laboratory	1
Engineering 330, Theory of Structures	3
Engineering 331, Design of Steel Structures	4
Engineering 332, Highway Construction	3
Engineering 333, Sewage Disposal	3
Engineering 430, Concrete Construction	4
Engineering 431, Construction of Buildings	3
Engineering 432, Water Supply	3
Engineering 433, Indeterminate Structures	3
Engineering 434, Soil Mechanics	3
	41

†Except for electrical engineering majors, who take Engineering 315, Electrical Measurement, instead.

*Except for chemical engineering.

Electrical Engineering

Engineering 311-312, Electric Circuits	6
Engineering 311L-312L, Electric Circuits Laboratory	2
Engineering 315, Electrical Measurements	3
Engineering 317, Applied Thermodynamics	3
Engineering 317L, Applied Thermodynamics Laboratory	1
Engineering 374, Heat Engineering	3
Engineering 374L, Heat Engineering Laboratory	1
Engineering 411, Direct Current Machines	3
Engineering 411L, Direct Current Machines Laboratory	1
Engineering 413-414, Alternating Current Apparatus	6
Engineering 413L-414L, Alternating Current Apparatus Laboratory	2
Engineering 415, Electronic Circuit Elements	3
Engineering 415L, Electronic Circuit Elements Laboratory	1
Engineering 416, Electronic Applications	3
Engineering 416L, Electronic Applications Laboratory	1
Engineering 417, Electric Power Transmission	3
Engineering 418, Field Theory	3
	45

Industrial Engineering

Accounting 205, Elementary Industrial Accounting	3
Accounting 205L, Elementary Industrial Accounting Laboratory	0
Accounting 305, Industrial Cost Accounting	3
Business Organization 315, Corporation Finance	3
Economics 303, Financial Organization	3
Economics 319, Economics of American Industry	3
Economics 401, Labor Problems	3
Engineering 317, Applied Thermodynamics	3
Engineering 317L, Applied Thermodynamics Laboratory	1
Engineering 361, Motion and Time Analysis	3
Engineering 362, Time Study and Formula-Making	3
Engineering 363, Principles of Industrial Engineering and Management	3
Engineering 461, 462, Production Planning and Control	6
Engineering 463, Job Analysis	3
Speech and Dramatics 215, Public Speaking and Oral Interpretation	2
	42

Mechanical Engineering

Engineering 317, Applied Thermodynamics	3
Engineering 317L, Applied Thermodynamics Laboratory	1
Engineering 323, Graphic Solutions	2
Engineering 328, Hydraulics	3
Engineering 328L, Hydraulics Laboratory	1
Engineering 343, Fuels	3
Engineering 344, Furnaces	3
Engineering 371, Elementary Machine Design	2
Engineering 371L, Elementary Machine Design Laboratory	1
Engineering 374, Heat Engineering	3
Engineering 374L, Heat Engineering Laboratory	1
Engineering 470, Advanced Machine Design	2
Engineering 470L, Advanced Machine Design Laboratory	1
Engineering 471, Heating, Ventilating, and Air Conditioning I	3
Engineering 473, Refrigeration	3
Engineering 474, Turbines and Jets	3
Engineering 475, Internal Combustion Engines	3
Engineering 475L, Internal Combustion Engines Laboratory	1
Engineering 476, Mechanical Vibrations	3
	42

Metallurgical Engineering

Chemistry 205, Qualitative Analysis	4
Chemistry 206, Quantitative Analysis	2
Engineering 252, General Metallurgy	3
Engineering 343, Fuels	3
Engineering 344, Furnaces	3
Engineering 351, 352 Physical Metallurgy	6
Engineering 351L, 352L Metallography Laboratory	3
Engineering 355, Metallurgical Calculations	3
Engineering 453, 454 Advanced Metallography	6
Engineering 455, Iron and Steel Metallurgy	3
Engineering 456, Nonferrous Metallurgy	3
Engineering 458, Mechanical Metallurgy: Hot Working	3
Engineering 459, Mechanical Metallurgy: Cold Working	3
	45

Semester-by-semester versions of these curriculums are available at the office of William Rayen School of Engineering.

Dana School of Music*

General Information

ORGANIZATION AND PURPOSE

Dana School of Music of Youngstown College began in 1869 as Dana's Musical Institute in Warren, Ohio. It was merged with Youngstown College in 1941. The former Charles S. Thomas mansion at 616 Wick Avenue, a block north of the main campus, became its home and remains its principal building.

The school offers instruction for both professional and avocational needs. Moreover, since a program of general education is available in the College of Arts and Sciences, the student who has studied voice or an instrument while in high school may continue his music study, whatever his purpose, without overlooking the broader aspects of his education.

The School of Music offers courses leading to the degree of Bachelor of Music, with the major in piano, organ, voice, any standard string or wind instrument, percussion, theory, composition, sacred music, or music education. It also provides the courses for the major in the history and literature of music for the degree of Bachelor of Arts. A preparatory department is maintained for pre-college students.

The music education department prepares students for certification as music teachers in public schools, and also provides the music courses needed for the general elementary teaching certificate. Music education students have ample opportunity for practice teaching, since close co-operation is maintained between the college and the public schools of Youngstown and vicinity.

Credit in music is allowed in varying amounts toward the other degrees granted by Youngstown College.

*Dana School of Music is a member of the National Association of Schools of Music.

FACILITIES

Buildings

The school's main building, at 616 Wick Avenue, contains the administrative offices, thirteen studios, four classrooms, four soundproof record-playing rooms, and the record library. The Dana Annex, directly behind the main music building, contains twenty soundproof practice rooms and a pipe organ practice room. In the second story of Central Hall, on the main campus, are one studio and classroom, a large soundproof rehearsal and recital hall seating three hundred, and the instrumental and choral libraries.

Equipment

Equipment includes fifteen grand pianos and twenty-seven uprights, a Moeller two-manual pipe organ, a Hammond model E electric organ, and band and orchestral instruments. A three-manual Austin organ at the First Presbyterian Church, close to the campus, is also available for both practice and teaching.

Libraries

The library of band, orchestral, and choral music, mentioned above, contains about a thousand titles. In the central collection of the college there are about twenty-five hundred books on music. The phonograph record library, in the main Dana building, contains records valued at twenty-five hundred dollars, nearly half of them having been presented to Dana School of Music as a gift in 1948. Covering the entire field of music history, they are invaluable for both listening and teaching.

Scholarships and Loans

The School of Music has at its disposal a number of scholarships, which are awarded, after competitive auditions, on the basis of talent, intelligence, and need. Applications should be directed to the dean of Dana School of Music.

College Scholarships. A limited number of scholarships are awarded for proficiency in a band or orchestral instrument, singing, or accompanying. The stipends vary.

The Strouss-Hirshberg Music Center Scholarships. These scholarships were presented to the School of Music in 1947 by

the Strouss-Hirshberg Music Center for the use of worthy students of the Greater Youngstown area. They provide a stipend of one hundred dollars a year for each of four students.

The Sigma Alpha Iota Scholarship. The local Alumnae Chapter of Sigma Alpha Iota, honorary professional music fraternity for women, offers a scholarship available only to members of Alpha Nu Chapter of the fraternity. The requirements for this scholarship can be learned from the chairman of the chapter's scholarship committee.

The William H. Dana Scholarship Loan Fund. This fund was established by the Alumni Association of Dana School of Music as a memorial to the school's founder. Information about loans may be secured from the secretary of the association, at Dana School of Music.

Self-Help

See page 45.

Placement Service

Through its many alumni, the school can give its graduates considerable assistance in finding professional positions. Its contacts extend through forty-two states, and each year requests for graduates are received from all branches of the profession.

In addition, the college maintains a placement service for students and graduates, for all types of positions; see page 45.

ACTIVITIES

Musical Activities

Dana School of Music supplements the concert activities of the Monday Musical Club and the Youngstown Symphony Society with a series of lecture-recitals by outstanding artists, composers, and musicologists. In addition, the faculty presents a series of complimentary programs for the general public.

Student recitals afford additional training through experience in public performance. Besides graduation recitals, there are informal student recitals every Tuesday and Thursday at 11 a. m.

Attendance at recitals is obligatory for music students. Additional hours of credit in the student's major applied field may be required for non-attendance.

The *College Bands* are an integral part of the campus life. The Marching Band functions during the football season and is open to all students of the college who can qualify. The Concert Band presents a series of concerts through the year, playing various types of band music. Students of the college are chosen for this group through auditions. The Laboratory Band is for students who need additional training to qualify for the Concert Band.

The *Symphony Orchestra* provides opportunity for musical growth and development in its presentations of symphonic works. It possesses an adequate library of symphonic and chamber music. It is open to all students of the college who can qualify.

The *A Cappella Choir* offers, to all students of the college who can qualify, the opportunity to participate in unaccompanied singing of sacred and secular compositions from all periods of musical history, including the contemporary.

The *Mixed Chorus* is a group of men and women chosen for their vocal and musical ability and is open to any student of the college who can qualify. Larger choral works are studied and presented through the year. The group also forms the nucleus of operatic presentations.

The *Madrigal Singers* are a group of sixteen selected voices from the School of Music. The group studies and sings *a cappella* compositions of the English madrigal school, modern arrangements of folk tunes, and suitable contemporary works.

The String Quartet and the *Brass* and *Woodwind Ensembles* are likewise restricted to students of the School of Music.

Opera is a tradition in Youngstown College. Casts are selected through competitive audition, and productions are staged in collaboration with the Departments of Art, of Speech and Dramatics, and of Health and Physical Education of the College of Arts and Sciences. The Mixed Chorus plays an important part in these presentations.

Professional Fraternities

Alpha Nu Chapter of Sigma Alpha Iota, an honorary professional music fraternity for women, and Delta Eta Chapter of Phi Mu Alpha Sinfonia, an honorary professional music fraternity for men, are chartered to Dana School of Music.

Dana Music Forum

The Dana Music Forum is an organization of all full- and part-time students of Dana School of Music. Its purpose is to promote the advancement and appreciation of all forms of music. The Forum sponsors social functions and musical programs and assists in recitals and concerts of the School of Music.

Other Student Activities

Students of the School of Music may take part in other activities of Youngstown College on an equal basis with other students. These activities are described on pages 48-53. The Youngstown Chapter of Composers, Authors, and Artists of America is also open to Youngstown College students.

The Alumni Association

Dana School of Music has a large and active Alumni Association, formed many years ago during the school's independent existence. The organization is the means of a continuing relationship between the school and its graduates, and its services are continually increasing.

TUITION AND FEES

All tuition charges and fees are explained in detail in the general section on Fees and Expenses (pages 79-86).

Full-time Students†

The rates for full-time music students are stated and explained on page 80. The semester charge of $254.50 includes tuition fees for both applied music and other courses to the extent stated, as well as regular fees for student activities, library use, health service, guidance, athletics, social and recreational facilities, and music lectures and recitals. In applied

†A full-time music student is a student enrolled in Dana School of Music and carrying 11 or more semester hours, inclusive of applied music courses but exclusive of Orientation 100 and music ensemble courses.

220. ANALYTICAL MECHANICS: STATICS. The fundamental principles of mechanics and their application to problems of engineering. Forces, components, vectors, moments, couples, cables, and friction. Moments of inertia are introduced in preparation for the strength of materials course. Prerequisite: Mathematics 209 and Physics 201 and 201L. Prerequisite or concurrent: Mathematics 210 and Physics 202 and 202L. Identical with Physics 220. *3 h. c.*

230. ROUTE SURVEYING. Preliminary route location, with the necessary office and field work, including curves used in railroad and highway construction and earth work. Prereq.: Engineering 130. Fee: $5.00. *3 h. c.*

251, 252. GENERAL METALLURGY. The principles of metallurgical processes, with emphasis on iron and steel manufacture. Essentials of metallurgical reactions, refractories for metallurgical furnaces, furnaces and fuels, raw materials of the iron and steel industry, the iron blast furnace, the Bessemer converter, acid and basic open hearths and electric furnaces, manufacturing costs, and marketing of steel products. Prerequisite: Chemistry 109-110 or equivalent. *3 + 3 h. c.*

255. METALLOGRAPHIC TECHNIQUE. The techniques of preparation, examination, and photography of iron and steel samples. Acquaintance with typical steel structures; heat treatments and their general principles; identification of non-metallic inclusions; study of defective steels. Two hours of laboratory work a week, including a discussion period. Prerequisite: Chemistry 205. Fee: $5.00. *2 h. c.*

Upper Division Courses

301. REPORT WRITING. The content of the engineering report, and methods of presenting it; construction of a comprehensive report, using data from previous studies. Prereq.: advanced standing in engineering. *2 h. c.*

311. ALTERNATING CURRENT CIRCUITS. Sinusoidal currents and voltages; vector representation; solution of series and parallel circuits; real and apparent power; voltage and current loci; balanced and unbalanced polyphase circuits; power in polyphase systems; Fourier analysis of non-sinusoidal waves. Prereq.: Engineering 313, Mathematics 210, Physics 202 and 202L. *3 h. c.*

311L. ALTERNATING CURRENT CIRCUITS LABORATORY. Three hours a week; taken concurrently with Engineering 311. Fee: $5.00. *1 h. c.*

312. ELECTRICAL NETWORKS. Network theorems; methods of network solution; resonance phenomena; coupled circuits and impedance transformation; filter design and analysis; transmission lines, infinite line and reflection, transient and steady-state behavior of lines. Prereq.: Engineering 311 and 311L. *3 h. c.*

312L. ELECTRICAL NETWORKS LABORATORY. Three hours a week; taken concurrently with Engineering 312. Fee: $5.00. *1 h. c.*

313. FUNDAMENTALS OF ELECTRICAL ENGINEERING. An introductory course in electrical engineering. Conductors and insulators; network solution of direct current circuits; network theorems; magnetic fields, inductance, solution of magnetic circuits; electric fields and capacitance; simple transients; electrodynamic principles; elementary theory of alternating current circuits. Prereq.: Mathematics 209, Physics 201 and 201L. Prerequisite or concurrent: Mathematics 210, Physics 202 and 202L. *4 h. c.*

314. ELEMENTS OF ELECTRICAL MACHINES. A course in direct and alternating current machines for non-electrical majors. Theory and application of direct current motors and generators, transformers, alternators, synchronous motors and converters, and induction motors. Prereq.: Engineering 313. *3 h. c.*

314L. ELEMENTS OF ELECTRICAL MACHINES LABORATORY. Three hours a week; taken concurrently with Engineering 314. Fee: $10.00 *1 h. c.*

315. ELECTRICAL MEASUREMENTS. Electrical units and standards, experimental procedure in measurements, methods of measuring the various electric and magnetic quantities and circuit parameters. Theory and use of potentiometers, A. C. bridges, indicating instruments, instrument transformers, etc. Two hours of theory and three hours of laboratory a week. Prereq.: Engineering 311 and 311L. Fee: $10.00. *3 h. c.*

317. APPLIED THERMODYNAMICS. The law of conservation of energy and its illustration in the transformation of energy. General energy equations, the characteristic and energy equations of a perfect gas, reversible non-flow processes of gases, the Carnot cycle; heat power plants; steam and steam calorimetry, steam fuels and combustion, steam boilers, steam generator auxiliaries; feedwater treatment, feedwater heaters; draft apparatus, chimneys, fans. Prereq.: Physics 201 and 202 and Mathematics 209-210. *3 h. c.*

317L. APPLIED THERMODYNAMICS LABORATORY. Three hours of laboratory a week; taken concurrently with Physics 317. Fee: $10.00. *1 h. c.*

323. GRAPHIC SOLUTIONS. The fundamental principles of graphic statics and engineering mechanisms. Force systems, trusses, cranes, and derricks; displacements, velocities, accelerations, relative motion, and machines. One hour of lecture and two hours of drawing laboratory a week. Prereq.: Engineering 220; prerequisite or concurrent: Engineering 325. Fee: $2.50. *2 h. c.*

325. ANALYTICAL MECHANICS: DYNAMICS. The motions of a particle, the dynamics of moving bodies, Newton's Laws, simple harmonic motion, mechanical vibrations, impulse and momentum, balancing, the gyroscope, governors, and work and energy. Prereq.: Engineering 220. Identical with Physics 325. *3 h. c.*

326. STRENGTH OF MATERIALS. Application of advanced mechanical principles to problems of stress and strain, including resistance to direct force, bending, torque, shear, eccentric load, beam deflection, and compounded stress. Prereq.: Engineering 220. *3 h. c.*

326L. STRENGTH OF MATERIALS LABORATORY. Determination of mechanical properties of materials in direct tension and compression, transverse and torsional shear, and bending; testing of wood, brick, concrete, and ferrous and non-ferrous metals. Three hours a week; taken concurrently with Engineering 326. Fee: $10.00. *1 h. c.*

328. HYDRAULICS. The laws of fluid mechanics and their application; properties of fluids; statics of fluids, compressible and incompressible; accelerated liquids; dynamics of fluids; flow of fluids in pipes; flow with free surface; orifices and nozzles; impulse and momentum; resistance to immersed and floating bodies; dynamical similitude. Prereq.: Engineering 220. *3 h. c.*

328L. HYDRAULICS LABORATORY. Two hours a week; taken concurrently with Engineering 328. Fee: $10.00. *1 h. c.*

330. THEORY OF STRUCTURES. Reactions, shears, bending moments, and deflections in beams and trusses due to external fixed and moving loads; design of simple trusses and beams; analytical and graphical methods of solution. Three hours of lecture and recitation a week. Prereq.: Engineering 220. *3 h. c.*

331. DESIGN OF STEEL STRUCTURES. The theory and design of beams, girders, steel bridges, and steel roofs. Three hours of lecture and recitation and three hours of design and calculation a week. Prereq.: Engineering 326 and 326L. Fee: $2.50. *4 h. c.*

332. HIGHWAY CONSTRUCTION. The design and construction of roads and pavements; the materials used in their construction; their location and maintenance. Prereq.: Engineering 220. *3 h. c.*

333. SEWAGE DISPOSAL. The collection, treatment, and disposal of sewage, with special attention to municipal sewerage and the construction of disposal plants. Prereq.: Chemistry 109-110 or 111-112, and Engineering 328 and 328L. *3 h. c.*

340-341. PRINCIPLES OF CHEMICAL ENGINEERING. Identical with Chemistry 340-341. *3 + 3 h. c.*

343. FUELS. The origins, production, and combustion of natural and manufactured fuels, and the chemical principles involved; the utilization of fuel and burners in metallurgical furnaces. Prereq.: Engineering 251 and 317. *3 h. c.*

344. FURNACES. The design and efficiency of various furnace structures, including electric furnaces; calculation of furnace efficiency, heat losses, and furnace capacities; recuperation and regeneration, heat flow, and rate of heat transfer; and study of materials used in furnace construction. Prereq.: Engineering 343. *3 h. c.*

351, 352. PHYSICAL METALLURGY. The crystal structure of pure metals and alloys, the freezing of metals, phase diagrams for metallic systems, solid solution alloys, intermetallic compounds, eutectic systems, the plastic deformation of metals and the principles of hot and cold working, recrystallization, x-ray diffraction for study of metal structures, diffusion in metals, the mechanical properties of metals and alloys, flow of heat in metals, magnetic properties, damping capacity, other physical properties of metals, powder metallurgy. Prereq.: Engineering 251, 252. *3 + 3 h. c.*

351L, 352L. METALLOGRAPHY LABORATORY. Study of the more common micro-structures of both ferrous and nonferrous metals and alloys. The student studies approximately fifty prepared specimens under the microscope, writes a description of each, and draws its typical micro-structure. Instruction in microscope technique. Taken concurrently with Engineering 351, 352. One three-hour period a week. Fee: $5.00 each semester. *1½ + 1½ h. c.*

353. METALLURGY. The crystalline structure of metals, their freezing, age hardening, etc. Review of the most common nonferrous alloys and their properties and uses. Development of the iron carbon equilibrium diagram and the significance of the thermal critical points. Two hours of lecture and recitation and three hours of laboratory a week. Fee: $5.00. *3 h. c.*

354. METALLURGY. The effects of the various elements on the mechanical properties of steel; testing; calculating hardenability; study of steel complaints and defects observed in laboratories. Strip and sheet mill processing. Two hours of lecture and three hours of laboratory a week. Fee: $5.00. *3 h. c.*

355. METALLURGICAL CALCULATIONS. Calculations in thermo-chemistry, including those of blast furnace charges, open hearth charges, heat transfer, and chimney design, and of the efficiency of blowing engines, blast furnaces, Bessemer converters, and reheating furnaces. The course covers both ferrous and non-ferrous metallurgy. Prereq.: Mathematics 209-210 and Chemistry 205 and 206. *3 h. c.*

361. MOTION AND TIME ANALYSIS. Fundamentals and elements of motion study, construction and use of process charts and operation analysis, work simplification and standardization, characteristics of motions, and basic divisions of accomplishment. Visits to local plants are arranged. Prereq.: Mathematics 109-110. *3 h. c.*

362. TIME STUDY AND FORMULA-MAKING. Tools and methods of time study, practice in making time-study observations, determination of constants and variables, leveling for efforts and skill allowances for delays and fatigue, construction and use of formula standards. Time studies are made of actual plant operations. Prereq.: Mathematics 109-110. *3 h. c.*

363. PRINCIPLES OF INDUSTRIAL ENGINEERING AND MANAGEMENT. The general principles of industrial engineering and the basic principles of industrial management. Prereq.: junior standing. *3 h. c.*

371. ELEMENTARY MACHINE DESIGN. A study of the design of basic machine elements, including springs, shafts, screw fastenings, belts, brakes, and clutches. Prerequisite: Engineering 202, 326, and 326L. *2 h. c.*

371L. ELEMENTARY MACHINE DESIGN LABORATORY. Designing of machine elements, such as shafts, belt drives, gears, and cams; layouts for cam profiles and gear teeth; study of displacements, velocities, and accelerations associated with machine elements. Taken concurrently with Engineering 371. Fee: $2.50. *1 h. c.*

372. IRON FOUNDRY. The theory and practice of the foundry of ferrous and non-ferrous metals; heat requirements; a first-hand study of foundry practice in core-making. Study of various mouldings and castings. *3 h. c.*

373. STEEL FOUNDRY. Sand mixtures and their functions. Founding: floor, bench, and machine moulding; centrifugal casting; heading and gating; cleaning and preparing castings for shipment. Design: pattern and casting. Melting practice: crucible, converter, open hearth, and electric; acid and basic practices, and chemical reaction. Heat treatment: annealing, normalizing, and air, oil, and water quenching of carbon and alloy steels. Specifications and uses of various types of alloy steels. Prerequisite: Engineering 372. *3 h. c.*

374. HEAT ENGINEERING. Practical application of thermodynamic principles to steam, air, and gas power. Prereq.: Engineering 317. *3 h. c.*

374L. HEAT ENGINEERING LABORATORY. Three hours a week; taken concurrently with Engineering 374. Prerequisite: Engineering 317L. Fee: $10.00. *1 h. c.*

401-402. THESIS. The student prepares a written report, of at least 2,500 words, of an investigation of a subject selected by either the student or the dean of the engineering school. Three bound copies are required; specifications are available on request. For credit, the thesis must be accepted by both the dean and the adviser. Prereq.: senior standing. Estimated thesis expense: $50.00-$60.00. *2 + 2 h. c.*

411. DIRECT CURRENT MACHINES. Dynamo principles; armature windings; armature reaction; voltage characteristics of generators; speed-torque characteristics of motors; starting and speed control of motors; ratings, losses, and efficiencies; special direct current machines such as Amplidyne, Rototrol, and others. Prereq.: Engineering 313. *3 h. c.*

411L. DIRECT CURRENT MACHINES LABORATORY. Three hours a week; taken concurrently with Engineering 411. Fee: $10.00. *1 h. c.*

413-414. ALTERNATING CURRENT APPARATUS. The theory, operation, and analysis of transformers, alternators, synchronous motors, synchronous converters, polyphase induction motors, single-phase motors, and motor controls. Prereq.: Engineering 311 and 311L, 411 and 411L. *3 + 3 h. c.*

413L-414L. ALTERNATING CURRENT APPARATUS LABORATORY. Three hours a week; taken concurrently with Engineering 413-414. Fee: $10.00 each semester. *1 + 1 h. c.*

415. ELECTRONIC CIRCUIT ELEMENTS. A study of the theory of high vacuum, gaseous, thermionic, and photoelectric tubes. Contingent field theory, electron ballistics and optics, emission at metallic surfaces, gaseous conduction, construction of electronic circuit elements, parametric circuit equations of tubes, characteristic curves, rating and efficiency, basic utilization circuits. Prereq.: Mathematics 315 and Engineering 311-312 and 311L-312L. (Formerly "Electron Dynamics".) *3 h. c.*

415L. ELECTRONIC CIRCUIT ELEMENTS LABORATORY. Two hours a week; taken concurrently with Engineering 415. Fee: $10.00. *1 h. c.*

416. ELECTRONIC APPLICATIONS. Theory and design of amplifiers, rectifiers, and oscillators. Survey of pulse forming, triggering, and timing circuits. Examination or analysis of typical control and regulation circuits, induction heating and welding, radiation detectors, principles of radar utilization of communication facilities and the decibel convention. Prereq.: Engineering 415 and 415L, or equivalent. *3 h. c.*

416L. ELECTRONIC APPLICATIONS LABORATORY. Three hours a week; taken concurrently with Engineering 416. Fee: $10.00. *1 h. c.*

417. ELECTRIC POWER TRANSMISSION. Transmission line parameters; solution of the short and long line; circle diagrams; symmetrical components and their application to fault calculations and sequence impedance of machines; and other topics relating to power transmission. Prereq.: Engineering 312, 413. *3 h. c.*

418. ELECTROMAGNETIC FIELD THEORY. Definitions of fields and potentials, study of the static electric and magnetic field, steady currents and the associated magnetic field, changing electric and magnetic fields, Maxwell's equations and their applications to waves in dielectric and conducting media, reflection, radiation, Poynting's vector. Vector notation is used throughout the course. Prereq.: Mathematics 315, Engineering 311. *3 h. c*

430. CONCRETE CONSTRUCTION. The properties of concrete; the design and construction of concrete walls, slabs, girders, beams, and columns. Prereq.: Engineering 326 and 326L. *4 h. c.*

431. CONSTRUCTION OF BUILDINGS. The materials, structural elements and details, utilities, and services involved in building construction. Prerequisite: Engineering 331. *3 h. c.*

432. WATER SUPPLY. Public and industrial water supply systems and methods of purification; construction and operation of distribution systems. Prereq.: Chemistry 109-110 or 111-112. *3 h. c.*

433. INDETERMINATE STRUCTURES. Analysis of statically indeterminate structures: elastic arches, closed rings, rigid frames, continuous beams. Prerequisite: Engineering 330, 331, and 430. *3 h. c.*

434. SOIL MECHANICS. The mechanical properties of soils, soil classification; capillarity and permeability, stresses and strains, consolidation, shear; stability of footings, retaining walls, cuts, and embankments. Prerequisite: Engineering 325. *3 h. c.*

451, 452. METALLOGRAPHY. The principles and application of metallography and heat treatment of iron and steel. Application of commercial laboratory methods to study of complaints and defects in "unknown" samples. Two hours of lecture and recitation and three hours of laboratory a week. Prerequisite: Engineering 351, 352 and 351L, 352L. Fee: $10.00 each semester. *3 + 3 h. c.*

453, 454. ADVANCED METALLOGRAPHY. Group work in the techniques of selecting, processing, sectioning, grinding, polishing, etching, and photomicrography of metallographic specimens. Correlation of physical properties and micro-structure of ferrous and nonferrous metal and alloy specimens and preparation of project reports, including photomicrographic illustrations. Projects cover heat treatment of cast, forged, hot-rolled, extruded, and coldworked steels and commercial alloys of copper, aluminum, nickel, zinc, tin, and other metals. One hour of lecture and four hours of laboratory a week. Prerequisite: Engineering 351, 352 and 351L, 352L. Fee: $10.00 each semester. *3 + 3 h. c.*

455. IRON AND STEEL METALLURGY. Study of the raw materials required for the production of iron and steel. Ore concentration, by-products, ovens, blast furnaces, Bessemer processes, open hearth, and refractories. Prerequisite: Engineering 251, 252. *3 h. c.*

456. NONFERROUS METALLURGY. The production of nonferrous metals, including cadmium, chromium, copper, aluminum, gold, silver, tin, and zinc. Types of ores, types of blast furnace melting, converters; continuous decantation and cyanide processes. Prerequisite: Engineering 251, 252. *3 h. c.*

457. NONFERROUS METALLURGY: RARE METALS. A study of the production, properties, and uses of the lesser-known nonferrous elements: beryllium, calcium, tantalum, columbium, molybdenum, titanium, zirconium, tungsten, etc. Prerequisite: Engineering 252. Prerequisite or concurrent: Engineering 456. *3 h. c.*

458. MECHANICAL METALLURGY: HOT WORKING. The theory and practice of the hot working of metals and alloys with emphasis on iron and steel, including forging, extrusion, rolling, swaging, and other operations. Study of roll design, equipment design, mill layout, and the physical metallurgy involved. Prerequisite or concurrent: Engineering 351, 352 and 351L, 352L. *3 h. c.*

459. MECHANICAL METALLURGY: COLD WORKING. The theory and practice of the cold working of metals and alloys with emphasis on iron and steel, including the cold drawing of wire, bars, tubes, and special shapes; the cold rolling of strip and sheet; and the related heat treatments. Consideration of reduction schedules used in successive drawing or rolling passes and of the design and utilization of cold-working equipment. Prerequisite or concurrent: Engineering 351, 352 and 351L, 352L. *3 h. c.*

461, 462. PRODUCTION PLANNING AND CONTROL. The fundamentals and techniques of planning and control required in the co-ordination of product engineering, production engineering, quality control, material control, expediting, purchasing, scheduling, and dispatching. Applications to seasonal and non-seasonal business. Economic lot size calculations and formulas. Plant capacity and plant layout; material handling. Prereq.: Business Organization 310. *3 + 3 h. c.*

463. JOB ANALYSIS. The fundamentals and techniques of job descriptions, job specifications, salary determination, and the use of charts in setting up labor grades, locality surveys, and merit ratings for purposes of wage determination, with examples from actual practice. Prerequisite: Engineering 361. Prerequisite or concurrent: Engineering 362. *3 h. c.*

470. ADVANCED MACHINE DESIGN. A continuation of Engineering 371, including the designing of bearings, gears, cams, thick-walled pressure vessels, flywheels, and other machine elements. Prereq.: Engineering 371. *2 h. c.*

470L. ADVANCED MACHINE DESIGN LABORATORY. A continuation of Engineering 371L. Includes the design of an entire machine. Taken concurrently with Engineering 470. Fee: $2.50. *1 h. c.*

471. HEATING, VENTILATING, AND AIR CONDITIONING I. The essentials of heating and ventilating, with attention to the essential definitions, laws, and properties of various media: factors affecting human comfort: heat transmission and air infiltration in buildings: calculation and estimation of building heat losses and gains; heat disseminators, radiators, and convectors: fuels, combustion, draft, chimneys; steam and hot water heating; piping, steam flow, insulation. Prereq.: Engineering 317 and 317L. *3 h. c.*

472. HEATING, VENTILATING, AND AIR CONDITIONING II. Air conditioning in relation to heating and ventilating problems and the processing of materials. Air conveying and air cleaning; air-flow, fans, duct design, air cleaners, gravity-flow, unit systems of ventilation; heating with warm-air furnace systems, central hot-blast systems, and unit heaters; air humidification and dehumidification, drying of materials, control of air temperature and humidity, summer cooling of buildings. Prerequisite: Engineering 471. *3 h. c.*

473. REFRIGERATION. Application of the thermodynamic theory to refrigeration; pumps, centrifugal and reciprocal; compressors; refrigerants and their properties; compression and absorption systems. Prerequisite: Engineering 317 and 317L. *3 h. c.*

474. TURBINES AND JETS. Theory of the turbine, thermodynamic study of the flow of gaseous mixtures through nozzles; design of blades; efficiency; governing. Prereq.: Engineering 374 and 374L. *3 h. c.*

475. INTERNAL COMBUSTION ENGINES. Thermodynamic analysis of internal combustion engine cycles; fuels; combustion; carburetion, cooling, lubrication, and effect of supercharging on engine performance. Prereq.: Engineering 374 and 374L. *3 h. c.*

475L. INTERNAL COMBUSTION ENGINES LABORATORY. Two hours a week; taken concurrently with Engineering 475. Fee: $10.00. *1 h. c.*

476. MECHANICAL VIBRATIONS. The causes, effects, and control of vibration in machine elements and foundations. Vibrations with and without damping. Vibration of systems with several degrees of freedom. Vibration isolation and absorption, with the application of modern methods in this field. Prereq.: Mathematics 315. *3 h. c.*

CURRICULUMS

Below are the required curriculums leading to the degree of Bachelor of Engineering. In the first section are listed the 109 semester hours of courses taken by all engineering students;* in the second are the additional courses for the major in each special branch.

I. Courses Common to All Engineering Curriculums

The 109 semester hours listed below are required in all engineering curriculums, unless an exception is indicated.

A. Non-Science and Non-Technical Courses

Basic

Course	Hours
Communication 105-106-107, Basic Course I-II-III	9
Orientation 100, Freshman Orientation	Credit
Physical Education 107 and 108, Health Education I and II	2
Physical Education (activity)	2

General

Humanities 401, Greek Classics and the Old Testament	3
Social Science 101 and 102, Introduction to the Social Sciences I and II	6

Professional

Business Organization 201 and 202, Business Law I and II	6
Economics 309, Engineering Economics	3
Engineering 301, Report Writing	2
	33

B. Basic Science and Mathematics Courses

Chemistry 109-110, General Chemistry	10
Mathematic 109-110, Freshman Mathematics	10
Mathematics 209-210, Calculus I and II: Differential and Integral	10
**Mathematics 309, Differential Equations	3
**Mathematics 310, Partial Differential Equations	3
Physics 201, General Physics: Mechancis, Heat, and Sound	3
Physics 201L, General Physics Laboratory	1
Physics 202, General Physics: Light and Electricity	3
Physics 202L, General Physics Laboratory	1
	44

C. Engineering Courses

Engineering 101, Elementary Engineering Drawing	2
Engineering 103, Advanced Engineering Drawing	2

*Except chemical engineering students, who take only 96 of them.

**Except for chemical engineering.

Engineering 202, Engineering Drawing: Descriptive Geometry	3
Engineering 220, Analytical Mechanics: Statics	3
Engineering 251, General Metallurgy	3
Engineering 313, Fundamentals of Electrical Engineering	4
†Engineering 314, Elements of Electrical Machines	3
†Engineering 314L, Elements of Electrical Machines Laboratory	1
*Engineering 325, Analytical Mechanics: Dynamics	3
*Engineering 326, Strength of Materials	3
*Engineering 326L, Strength of Materials Laboratory	1
Engineering 401-402, Thesis	4
	32

II. Additional Courses for Each Major Field

In addition to the 109 semester hours listed above (96 for chemical engineering), one of the following groups of courses is required, according to the student's major:

Chemical Engineering

Chemistry 205, Qualitative Analysis	4
Chemistry 206, Quantitative Analysis	2
Chemistry 207, Quantitative Analysis	3
Chemistry 208, Quantitative Analysis	3
Chemistry 301, 302, Organic Chemistry	6
Chemistry 303, 304, Organic Chemistry Laboratory	4
Chemistry 311, 312, Physical Chemistry	6
Chemistry 411, Thermodynamics	2
Chemistry 412, Thermodynamics	2
Chemistry 419, Advanced Inorganic Chemistry	2
Chemistry 430, Unit Design	3
Engineering 252, General Metallurgy	3
Engineering 302, Report Writing	2
Engineering 328, Hydraulics	3
Engineering 328L, Hydraulics Laboratory	1
Engineering 340-341, Principles of Chemical Engineering	6
Engineering 374, Heat Engineering	3
Engineering 374L, Heat Engineering Laboratory	1
	56

Civil Engineering

Engineering 130, Surveying	3
Engineering 230, Route Surveying	3
Engineering 323, Graphic Solutions	2
Engineering 328, Hydraulics	3
Engineering 328L, Hydraulics Laboratory	1
Engineering 330, Theory of Structures	3
Engineering 331, Design of Steel Structures	4
Engineering 332, Highway Construction	3
Engineering 333, Sewage Disposal	3
Engineering 430, Concrete Construction	4
Engineering 431, Construction of Buildings	3
Engineering 432, Water Supply	3
Engineering 433, Indeterminate Structures	3
Engineering 434, Soil Mechanics	3
	41

†Except for electrical engineering majors, who take Engineering 315, Electrical Measurement, instead.

*Except for chemical engineering.

Electrical Engineering

Engineering 311-312, Electric Circuits	6
Engineering 311L-312L, Electric Circuits Laboratory	2
Engineering 315, Electrical Measurements	3
Engineering 317, Applied Thermodynamics	3
Engineering 317L, Applied Thermodynamics Laboratory	1
Engineering 374, Heat Engineering	3
Engineering 374L, Heat Engineering Laboratory	1
Engineering 411, Direct Current Machines	3
Engineering 411L, Direct Current Machines Laboratory	1
Engineering 413-414, Alternating Current Apparatus	6
Engineering 413L-414L, Alternating Current Apparatus Laboratory	2
Engineering 415, Electronic Circuit Elements	3
Engineering 415L, Electronic Circuit Elements Laboratory	1
Engineering 416, Electronic Applications	3
Engineering 416L, Electronic Applications Laboratory	1
Engineering 417, Electric Power Transmission	3
Engineering 418, Field Theory	3
	45

Industrial Engineering

Accounting 205, Elementary Industrial Accounting	3
Accounting 205L, Elementary Industrial Accounting Laboratory	0
Accounting 305, Industrial Cost Accounting	3
Business Organization 315, Corporation Finance	3
Economics 303, Financial Organization	3
Economics 319, Economics of American Industry	3
Economics 401, Labor Problems	3
Engineering 317, Applied Thermodynamics	3
Engineering 317L, Applied Thermodynamics Laboratory	1
Engineering 361, Motion and Time Analysis	3
Engineering 362, Time Study and Formula-Making	3
Engineering 363, Principles of Industrial Engineering and Management	3
Engineering 461, 462, Production Planning and Control	6
Engineering 463, Job Analysis	3
Speech and Dramatics 215, Public Speaking and Oral Interpretation	2
	42

Mechanical Engineering

Engineering 317, Applied Thermodynamics	3
Engineering 317L, Applied Thermodynamics Laboratory	1
Engineering 323, Graphic Solutions	2
Engineering 328, Hydraulics	3
Engineering 328L, Hydraulics Laboratory	1
Engineering 343, Fuels	3
Engineering 344, Furnaces	3
Engineering 371, Elementary Machine Design	2
Engineering 371L, Elementary Machine Design Laboratory	1
Engineering 374, Heat Engineering	3
Engineering 374L, Heat Engineering Laboratory	1
Engineering 470, Advanced Machine Design	2
Engineering 470L, Advanced Machine Design Laboratory	1
Engineering 471, Heating, Ventilating, and Air Conditioning I	3
Engineering 473, Refrigeration	3
Engineering 474, Turbines and Jets	3
Engineering 475, Internal Combustion Engines	3
Engineering 475L, Internal Combustion Engines Laboratory	1
Engineering 476, Mechanical Vibrations	3
	42

Metallurgical Engineering

Chemistry 205, Qualitative Analysis	4
Chemistry 206, Quantitative Analysis	2
Engineering 252, General Metallurgy	3
Engineering 343, Fuels	3
Engineering 344, Furnaces	3
Engineering 351, 352 Physical Metallurgy	6
Engineering 351L, 352L Metallography Laboratory	3
Engineering 355, Metallurgical Calculations	3
Engineering 453, 454 Advanced Metallography	6
Engineering 455, Iron and Steel Metallurgy	3
Engineering 456, Nonferrous Metallurgy	3
Engineering 458, Mechanical Metallurgy: Hot Working	3
Engineering 459, Mechanical Metallurgy: Cold Working	3
	45

Semester-by-semester versions of these curriculums are available at the office of William Rayen School of Engineering.

Dana School of Music*

General Information

ORGANIZATION AND PURPOSE

Dana School of Music of Youngstown College began in 1869 as Dana's Musical Institute in Warren, Ohio. It was merged with Youngstown College in 1941. The former Charles S. Thomas mansion at 616 Wick Avenue, a block north of the main campus, became its home and remains its principal building.

The school offers instruction for both professional and avocational needs. Moreover, since a program of general education is available in the College of Arts and Sciences, the student who has studied voice or an instrument while in high school may continue his music study, whatever his purpose, without overlooking the broader aspects of his education.

The School of Music offers courses leading to the degree of Bachelor of Music, with the major in piano, organ, voice, any standard string or wind instrument, percussion, theory, composition, sacred music, or music education. It also provides the courses for the major in the history and literature of music for the degree of Bachelor of Arts. A preparatory department is maintained for pre-college students.

The music education department prepares students for certification as music teachers in public schools, and also provides the music courses needed for the general elementary teaching certificate. Music education students have ample opportunity for practice teaching, since close co-operation is maintained between the college and the public schools of Youngstown and vicinity.

Credit in music is allowed in varying amounts toward the other degrees granted by Youngstown College.

*Dana School of Music is a member of the National Association of Schools of Music.

FACILITIES

Buildings

The school's main building, at 616 Wick Avenue, contains the administrative offices, thirteen studios, four classrooms, four soundproof record-playing rooms, and the record library. The Dana Annex, directly behind the main music building, contains twenty soundproof practice rooms and a pipe organ practice room. In the second story of Central Hall, on the main campus, are one studio and classroom, a large soundproof rehearsal and recital hall seating three hundred, and the instrumental and choral libraries.

Equipment

Equipment includes fifteen grand pianos and twenty-seven uprights, a Moeller two-manual pipe organ, a Hammond model E electric organ, and band and orchestral instruments. A three-manual Austin organ at the First Presbyterian Church, close to the campus, is also available for both practice and teaching.

Libraries

The library of band, orchestral, and choral music, mentioned above, contains about a thousand titles. In the central collection of the college there are about twenty-five hundred books on music. The phonograph record library, in the main Dana building, contains records valued at twenty-five hundred dollars, nearly half of them having been presented to Dana School of Music as a gift in 1948. Covering the entire field of music history, they are invaluable for both listening and teaching.

Scholarships and Loans

The School of Music has at its disposal a number of scholarships, which are awarded, after competitive auditions, on the basis of talent, intelligence, and need. Applications should be directed to the dean of Dana School of Music.

College Scholarships. A limited number of scholarships are awarded for proficiency in a band or orchestral instrument, singing, or accompanying. The stipends vary.

The Strouss-Hirshberg Music Center Scholarships. These scholarships were presented to the School of Music in 1947 by

the Strouss-Hirshberg Music Center for the use of worthy students of the Greater Youngstown area. They provide a stipend of one hundred dollars a year for each of four students.

The Sigma Alpha Iota Scholarship. The local Alumnae Chapter of Sigma Alpha Iota, honorary professional music fraternity for women, offers a scholarship available only to members of Alpha Nu Chapter of the fraternity. The requirements for this scholarship can be learned from the chairman of the chapter's scholarship committee.

The William H. Dana Scholarship Loan Fund. This fund was established by the Alumni Association of Dana School of Music as a memorial to the school's founder. Information about loans may be secured from the secretary of the association, at Dana School of Music.

Self-Help

See page 45.

Placement Service

Through its many alumni, the school can give its graduates considerable assistance in finding professional positions. Its contacts extend through forty-two states, and each year requests for graduates are received from all branches of the profession.

In addition, the college maintains a placement service for students and graduates, for all types of positions; see page 45.

ACTIVITIES

Musical Activities

Dana School of Music supplements the concert activities of the Monday Musical Club and the Youngstown Symphony Society with a series of lecture-recitals by outstanding artists, composers, and musicologists. In addition, the faculty presents a series of complimentary programs for the general public.

Student recitals afford additional training through experience in public performance. Besides graduation recitals, there are informal student recitals every Tuesday and Thursday at 11 a. m.

Attendance at recitals is obligatory for music students. Additional hours of credit in the student's major applied field may be required for non-attendance.

The *College Bands* are an integral part of the campus life. The Marching Band functions during the football season and is open to all students of the college who can qualify. The Concert Band presents a series of concerts through the year, playing various types of band music. Students of the college are chosen for this group through auditions. The Laboratory Band is for students who need additional training to qualify for the Concert Band.

The *Symphony Orchestra* provides opportunity for musical growth and development in its presentations of symphonic works. It possesses an adequate library of symphonic and chamber music. It is open to all students of the college who can qualify.

The *A Cappella Choir* offers, to all students of the college who can quality, the opportunity to participate in unaccompanied singing of sacred and secular compositions from all periods of musical history, including the contemporary.

The *Mixed Chorus* is a group of men and women chosen for their vocal and musical ability and is open to any student of the college who can qualify. Larger choral works are studied and presented through the year. The group also forms the nucleus of operatic presentations.

The *Madrigal Singers* are a group of sixteen selected voices from the School of Music. The group studies and sings *a cappella* compositions of the English madrigal school, modern arrangements of folk tunes, and suitable contemporary works.

The String Quartet and the *Brass* and *Woodwind Ensembles* are likewise restricted to students of the School of Music.

Opera is a tradition in Youngstown College. Casts are selected through competitive audition, and productions are staged in collaboration with the Departments of Art, of Speech and Dramatics, and of Health and Physical Education of the College of Arts and Sciences. The Mixed Chorus plays an important part in these presentations.

Professional Fraternities

Alpha Nu Chapter of Sigma Alpha Iota, an honorary professional music fraternity for women, and Delta Eta Chapter of Phi Mu Alpha Sinfonia, an honorary professional music fraternity for men, are chartered to Dana School of Music.

Dana Music Forum

The Dana Music Forum is an organization of all full- and part-time students of Dana School of Music. Its purpose is to promote the advancement and appreciation of all forms of music. The Forum sponsors social functions and musical programs and assists in recitals and concerts of the School of Music.

Other Student Activities

Students of the School of Music may take part in other activities of Youngstown College on an equal basis with other students. These activities are described on pages 48-53. The Youngstown Chapter of Composers, Authors, and Artists of America is also open to Youngstown College students.

The Alumni Association

Dana School of Music has a large and active Alumni Association, formed many years ago during the school's independent existence. The organization is the means of a continuing relationship between the school and its graduates, and its services are continually increasing.

TUITION AND FEES

All tuition charges and fees are explained in detail in the general section on Fees and Expenses (pages 79-86).

Full-time Students†

The rates for full-time music students are stated and explained on page 80. The semester charge of $254.50 includes tuition fees for both applied music and other courses to the extent stated, as well as regular fees for student activities, library use, health service, guidance, athletics, social and recreational facilities, and music lectures and recitals. In applied

†A full-time music student is a student enrolled in Dana School of Music and carrying 11 or more semester hours, inclusive of applied music courses but exclusive of Orientation 100 and music ensemble courses.

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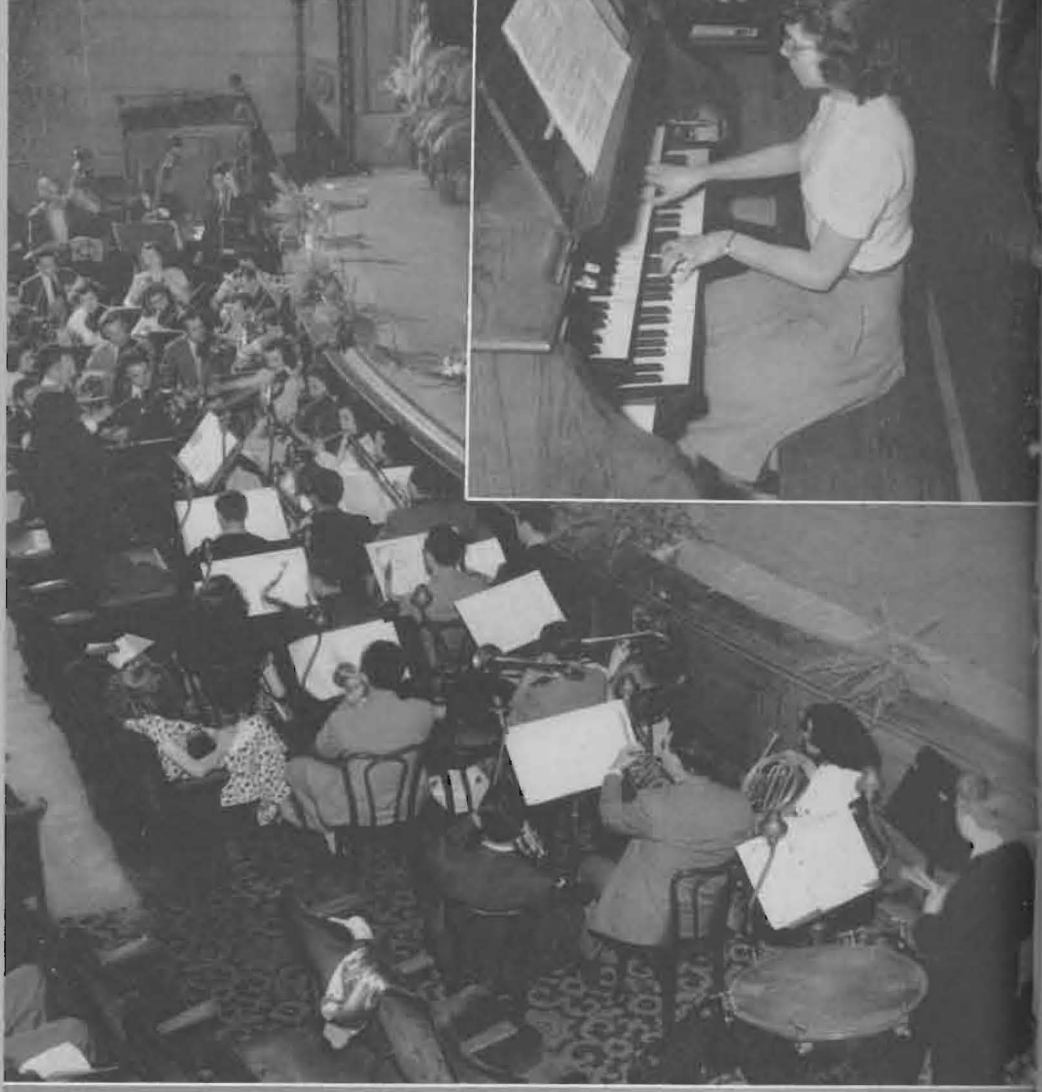

music it provides for two half-hour private lessons a week in the major subject, one half-hour private lesson a week in the minor subject, and use of practice rooms. To this sum are added any course-fees or other special fees applicable during a particular semester.

Additional applied music lessons, or any courses in excess of a total of 15 semester hours, are payable at the pertinent rates as stated on page 80.

Part-Time Students

A part-time student for the degree of Bachelor of Music is charged for applied music at the rates listed below under "Tuition Rates for Applied Music," and, for any other course he takes, at the ordinary rates for part-time students.

Special Students in Applied Music

A student from another unit of the college who studies applied music pays at the rates listed below under "Tuition Rates for Applied Music". These charges are in addition to his regular tuition and are payable under the same conditions as all other college fees. (Such a student must first see the dean of the School of Music for assignment to a teacher.)

Private Students in Applied Music

A student from outside the college who studies with any of the School of Music faculty pays at the rates listed below under "Tuition Rates for Applied Music". The following policies prevail:

Arrangements for lessons and for assignment to teachers must first be made at the office of the dean of Dana School of Music.

Payment must be made either in advance for the complete term (semester or summer session), or under an installment contract arranged through the business office (see page 85). All payments are made to the cashier in the Main Building, 410 Wick Avenue. In case of official withdrawal during a term, fees paid in advance will be refunded according to the number of lessons taken during that term. No student may enroll for a new term until all his previous lessons have been paid for.

No private student may enroll for less than a full term. Lessons may be taken on a weekly basis only. Lessons missed (with satisfactory excuse) must be made up by the end of the term. No lessons will be carried over from one term to another.

Preparatory Department

Music instruction in applied music (piano, voice, band. and orchestral instruments) is offered to pre-college students from 7 to 18 years of age. It is designed to prepare the student for entrance to the college courses in Dana School of Music. The student has the choice of three plans of study:

1. Private instruction only. Private lesson fees are listed below under "Tuition Rates for Applied Music."

2. Private and class instruction combined, each student receiving one private lesson a week and taking part in a weekly musicianship class. The cost is based on the teacher's private lesson rate (see below) plus $23.00 for the musicianship class.

3. The musicianship class only. The fee is $23.00 for a semester.

From the beginning, the child's ability is made the foundation upon which all later work is built. Harmony, ear-training, rhythms, sight reading, transposition, and biography are included in the class work, in which each child has a share. Public recitals are held frequently.

Lessons and class instruction in the Preparatory Department are offered after school and on Saturdays. All private lesson fees are payable as stated above under "Private Students in Applied Music."

Tuition Rates for Applied Music

The following rates apply to all students in applied music except full-time music students, whose special Applied Music Charge is stated and explained on page 80.

	Semester of Eighteen Weeks	
	One half-hour lesson a week	Two half-hour lessons a week
Brass		
Raymond H. Dehnbostel (trumpet or French horn)	$54.00	$108.00
John W. Remick (trombone or tuba)	54.00	108.00

Organ		
Samuel S. Badal	54.00	108.00
Henry V. Stearns	54.00	108.00
Percussion		
Myron J. Wisler	54.00	108.00
Piano		
Theodore Baar	54.00	108.00
Mary E. Fankhauser	54.00	108.00
Henry V. Stearns	54.00	108.00
Strings		
Theodore Baar (violoncello)	54.00	108.00
" " (contrabass)	54.00	108.00
Alvin Myerovich (violin or viola)	54.00	108.00
Voice		
Kathryn T. Guarnieri	54.00	108.00
Kenneth R. Kitchen	54.00	108.00
Leah MacDonald McIlroy	54.00	108.00
William Hugh Miller	54.00	108.00
Woodwinds		
Mark C. Dolliver, Jr.	54.00	108.00
Harry L. Joyce	54.00	108.00
Preparatory Department		
Instruction in any instrument or in voice	27.00	54.00

Special Fees

1. *Piano Practice Fee.* The fee for piano practice is $5.00 a semester for a major and $2.00 a semester for a minor.

2. *Organ Practice Fee.* The charge for practice on the college pipe organ is $40.00 a semester for a major (10 hours of practice a week) or $20.00 a semester for a minor (5 hours of practice a week).

3. *Instrument Rental Fee.* Although students in instrumental classes are expected to provide their own instruments, the School of Music has a limited number which may be rented for a fee of $5.00 a semester for each instrument. The student will receive the instrument in playing condition; thereafter he must supply his own strings, reeds, etc., is responsible for the care and safe-keeping of the instrument, and must return it in as good condition as when he received it.

4. *Band Uniform Rental Fee.* Each member of the Marching Band is charged a uniform-rental fee of $2.00, of which $1.00 is refunded if the uniform is in good condition when returned.

5. *Theory Placement Examination Fee.* A fee of $5.00 is charged any student who is given the placement examination in the theory of music. The fee is payable upon application to take the examination.

ADMISSION

Application and Examinations

An applicant for admission to Dana School of Music must satisfy the general requirements for admission to the college (pages 62-65). His application for admission to the School of Music must be submitted to the dean of the School of Music (from whose office application forms are obtainable) on or before August 1 for the fall semester or January 1 for the spring semester.

Every freshman takes a placement examination to determine his proficiency in applied music. These examinations are usually given one week before the opening of a semester.

A placement examination in music theory will be given upon application and payment of a fee of $5.00. A passing grade permits the applicant to enter Music 103-104, Theory I, without first taking Music 109, Fundamentals of Music.

The entering student must give considerable thought to the branch of applied music in which he will specialize, as a change of curriculums later on is likely to delay his graduation.

Admission to Courses Leading to the Degree of Bachelor of Music

Scholastic Requirements

The applicant must present 16 units of high school credit, as follows:

English	3 units
A foreign language	2 units
Mathematics	1 unit
Science or history	1 unit
Others	9 units

Musical Proficiency

It is expected that the applicant will have developed a certain proficiency in one or more branches of applied music before entering college, as he must meet certain standards in technique and repertory. His qualifications are determined by the placement tests mentioned above; and the student not qualifying for the first regular course in his major branch of applied music takes preparatory work, without credit, until he is ready to undertake credit courses.

The student wishing to specialize in music theory or in composition, or to prepare for advanced study after graduation from college, should present evidence of his ability to handle the materials of music. This ability may be determined in part by placement tests. If he wishes to place the major emphasis on composition, he must present original compositions as evidence of creative talent.

Admission from Other Colleges

The general policy is stated on page 64. Advanced standing in applied music and in aural and written theory is granted tentatively and must be validated by examinations or by completion of more advanced courses in Dana School of Music.

Special Students

The general policy is stated on page 64. Accordingly, the School of Music provides training for mature students who wish to improve their playing ability or to study music for cultural purposes, but who for technical reasons cannot enter the degree courses. Private lessons on all instruments and in voice are available to such students.

REQUIREMENTS FOR DEGREES

Following are the requirements for the degrees for which the major study is done in this unit. It is the student's responsibility to see that he satisfies all graduation requirements. The general requirements for all degrees are stated on pages 66 ff. Students enrolled or planning to enroll in the R. O. T. C. should note the relevant information on pages 67-68.

The Degree of Bachelor of Music

To receive the degree of Bachelor of Music, the student must fulfill the general requirements for all degrees and satis-

factorily complete one of the curriculums described on pages 216-221. Each curriculum includes courses that satisfy one of the following sets of requirements:

For the Major in Instrument, Voice, Theory, Composition, or Sacred Music

Communication ..... Satisfactory proficiency (9 hours)

The director of the Division of Language and Literature is the judge of this proficiency. Ordinarily, he will grant a certificate to a student who has received a grade of C or higher in the final semester of his required course in communication or its equivalent.

Health and Physical Education ..... 4 hours

Physical Education 107 and 108 (health education), 2 hours; and four semesters of eurhythmics, totaling 2 hours. Any substitution of other courses for these requirements must be approved by the dean of Dana School of Music and the head of the Department of Health and Physical Education.

Orientation 100 ..... Credit

Not required of night students.

Social Science 101 and 102 ..... 6 hours

Not required of transfer students with 30 or more hours of credit acquired elsewhere.

Religion ..... 3 hours

A course in the Department of Philosophy and Religion, or Humanities 401 or 402.

Science ..... 4 hours

Music 205-206 (Acoustics of Music).

History 201 and 202 ..... 6 hours

Not required of transfer students with 60 or more hours of credit acquired elsewhere.

Psychology 201 and 304 ..... 6 hours

Music ..... 83-99 hours

These figures do not include Music 205-206 (Acoustics of Music).

Electives (Upper Division) ..... 0-3 hours

For the Major in Music Education

Communication ..... Satisfactory proficiency (9 hours)

The director of the Division of Language and Literature is the judge of this proficiency. Ordinarily, he will grant a certificate to a student who has received a grade of C or higher in the final semester of his required course in communication or its equivalent.

Health and Physical Education ..... 4 hours

Physical Education 107 and 108 (health education), 2 hours; and four semesters of eurhythmics, totaling 2 hours. Any substitution of other courses for these requirements must be approved by the dean of Dana School of Music and the head of the Department of Health and Physical Education.

Orientation 100 ..... Credit
Not required of night students.

Social Science 101 and 102 ..... 6 hours
Not required of transfer students with 30 or more hours of credit acquired elsewhere.

Religion ..... 3 hours
A course in the Department of Philosophy and Religion, or Humanities 401 or 402.

Science ..... 4 hours
Music 205-206 (Acoustics of Music).

History 201 and 202 ..... 6 hours
Not required of transfer students with 60 or more hours of credit acquired elsewhere.

Psychology 201, 202, and 304 ..... 9 hours

Music ..... 73-98 hours
The figures include music education courses, but not the acoustics course.

Education ..... 15 hours

Electives (Upper Division) ..... 2-6 hours

For Two Majors, in Music and in Music Education

A student wishing to complete a major in an instrument or in voice, theory, composition, or sacred music, and also a major in music education, may do so by satisfying all the requirements of (a) one of the first four curriculums given below, and (b) one of the music education curriculums. Such a combined program of study may be arranged in consultation with the dean of Dana School of Music.

The Degree of Bachelor of Arts with Major in the History and Literature of Music

For the degree of Bachelor of Arts with the major in the history and literature of music, only the courses for the major are taken in Dana School of Music. The rest is done in the College of Arts and Sciences, and the other requirements for the degree will be found, accordingly, on page 94.

The music study for this degree is regarded as purely cultural and non-professional, and includes no courses in music education. The major consists of 45 semester hours, as follows:

*Course 203-204 in voice or an instrument	4 hours
**Music 103-104, Theory I	8 hours
Music 203-204, Theory II	8 hours
Music 205-206, Acoustics of Music	4 hours
Music 305-306, History of Music	4 hours
Music 307-308, Survey of Music Literature	4 hours
Music 327-328, Form and Analysis	4 hours
Music 335, Counterpoint I, or 336, Counterpoint II	3 hours
Music 427-428, Symphonic Literature	4 hours
Music Ensemble	2 hours

Curriculums

The student not qualifying for a 101 or 103 applied music course (whichever his curriculum requires) takes the relevant course 45, without credit, until his deficiency is overcome.

A student who can meet the applied music proficiency requirements of his curriculum without taking the courses designed to develop that proficiency, may earn in other applied music courses as many hours of credit as he would in the courses not taken.

The student may qualify for Music 103-104 (Theory I) either by receiving a passing grade on a placement examination in music theory, which he may take on application and payment of a fee, or by receiving a grade of C in Music 109 (Fundamentals of Music).

For the Degree of Bachelor of Music with Major in Instrument, Voice, Theory, Composition, or Sacred Music

INSTRUMENT MAJOR

Designed for the student primarily interested in performance and/or in teaching (other than in public schools). Piano, if not the major, is desirable as the minor.

First Year	Hrs.
Major instrument 101-102	6
Minor instrument 105-106	2
Mus. 103-104 Theory I	8
Music ensemble	2
Comm. 105-106 Basic Course I-II	6
Soc. Sci. 101 & 102 Introduction to the Social Sciences I & II	6
Phys. Ed. 107 & 108 Health Ed. I & II	2
Phys. Ed. 121 & 122 Eurhythm. I & II	1
Orientation 100 Freshman Or.	Credit
	33

Second Year	Hrs.
Major instrument 201-202	6
Minor instrument 205-206	2
Mus. 203-204 Theory II	8
Mus. 205-206 Acoustics of Music	4
Music ensemble	2
Comm. 107 Basic Course III	3
Hist. 201 & 202 The United States	6
Psych. 201 General Psychology	3
Phys. Ed. 221 & 222 Eur. III & IV	1
	35

*If the student demonstrates that he has already attained this level of proficiency, he may substitute other music courses, according to his choice and his qualifications.

**Prerequisite: grade of C or better in Music 109, or passing grade in placement examination in theory.

Third Year	Hrs.
Major instrument 301-302	6
Minor instrument 305-306	2
Mus. 301-302 Sight Singing and Ear-Training I	2
Mus. 305-306 History of Music	4
Mus. 307-308 Survey of Music Literature	4
Mus. 319-320 Conducting	2
Mus. 327-328 Form and Analysis	4
Mus. 335 & 336 Counterpoint I & II	6
Music ensemble	2
Psych. 304 Psychology of Music	3
	35

Fourth Year	Hrs.
Major instrument 401-402	6
Minor instrument 405-406	2
Mus. 401-402 Sight Singing and Ear-Training II	2
Mus. 405, 406 Instrumental Conducting and Score-Reading	2
Mus. 409-410 Orchestration	4
Mus. 421-422 Composition I	4
Mus. 427-428 Symphonic Literature	4
Music ensemble	2
Recital	1
Philosophy and Religion elective, or Humanities 401 or 402	3
Elective (Upper Division)	3
	33

VOICE MAJOR

Designed for the student primarily interested in performance and/or in teaching (other than in public schools). Piano is required as the minor.

First Year	Hrs.
Major: Voice 101-102	6
Minor: Voice 105-106	2
Mus. 103-104 Theory I	8
Music ensemble	2
Comm. 105-106 Basic Course I-II	6
*Ital. 101-102 Elementary Italian	6
Phys. Ed. 107 & 108 Health Ed. I & II	2
Phys. Ed. 121 & 122 Eurhythm. I & II	1
Orientation 100 Freshman Or.	Credit
	33

Second Year	Hrs.
Major: Voice 201-202	6
Minor: Piano 205-206	2
Mus. 203-204 Theory II	8
Mus. 205-206 Acoustics of Music	4
Music ensemble	2
Comm. 107 Basic Course III	3
*French 101-102 Elementary French	6
Psych. 201 General Psychology	3
Phys. Ed. 221 & 222 Eur. III & IV	1
	35

Third Year	Hrs.
Major: Voice 301-302	6
Minor: Piano 305-306	2
Mus. 301-302 Sight Singing and Ear-Training I	2
Mus. 307-308 Survey of Music Literature	4
Mus. 319-320 Conducting	2
Music ensemble	2
*Germ. 101-102 Elementary German	6
Hist. 201 & 202 The United States	6
Soc. Sci. 101 & 102 Introduction to the Social Sciences I & II	6
	36

Fourth Year	Hrs.
Major: Voice 401-402	6
Minor: Piano 405-406	2
Mus. 305-306 History of Music	4
Mus. 327-328 Form and Analysis	4
Mus. 335 & 336 Counterpoint I & II	6
Mus. 401-402 Sight Singing and Ear-Training II	2
Mus. 403, 404 Choral Conducting	2
Music ensemble	2
Recital	1
Philosophy and Religion elective, or Humanities 401 or 402	3
Psych. 304 Psychology of Music	3
	35

THEORY OR COMPOSITION MAJOR

Designed for the student wishing to specialize in music theory or composition, and/or to prepare for advanced study and specialization at the graduate level. Such a student should demonstrate his ability to handle the materials of music, and if wishing to major in composition, must furnish evidence of his creative talent.

If the student lacks proficiency in piano of the level of Piano 305, he must elect piano (unless it is his major instrument) until such proficiency is achieved.

First Year	Hrs.
Major instrument, or Voice 103-104	4
Minor instrument, or Voice 105-106	2
Mus. 103-104 Theory I	8
Music ensemble	2
Comm. 105-106 Basic Course I-II	6
Soc. Sci. 101 & 102 Introduction to the Social Sciences I & II	6
Phys. Ed. 107 & 108 Health Ed. I & II	2
Phys. Ed. 121 & 122 Eurhythm. I & II	1
Orientation 100 Freshman Or.	Credit
	31

Second Year	Hrs.
Major instrument, or Voice 203-204	4
Minor instrument, or Voice 205-206	2
Mus. 203-204 Theory II	8
Mus. 205-206 Acoustics of Music	4
Music ensemble	2
Comm. 107 Basic Course III	3
Hist. 201 & 202 The United States	6
Psych. 201 General Psychology	3
Phys. Ed. 221 & 222 Eur. III & IV	1
	33

* May be omitted if the student has two high school credits in the language.

Third Year	Hrs.
Major instrument, or Voice 303-304	4
Minor instrument (string) 105-106	2
Mus. 301-302 Sight Singing and Ear-Training I	2
Mus. 305-306 History of Music	4
Mus. 307-308 Survey of Music Literature	4
Mus. 319-320 Conducting	2
Mus. 327-328 Form and Analysis	4
Mus. 335 & 336 Counterpoint I & II	6
Mus. 421-422 Composition I	4
Music ensemble	2
	34

Fourth Year	Hrs.
Major instrument, or Voice 403-404	4
Minor instruments (woodwind and brass) 105	2
Mus. 401-402 Sight Singing and Ear-Training II	2
Mus. 403, 404 Choral Conducting, or 405, 406 Instrumental Conducting	2
Mus. 409-410 Orchestration	4
Mus. 427-428 Symphonic Literature	4
Mus. 429 Canon and Fugue	2
Mus. 430 Modern Harmony	2
*Mus. 431-432 Composition II, or 433-434 Pedagogy of Theory	4
Music ensemble	2
‡Recital	1
Philosophy and Religion elective, or Humanities 401 or 402	3
Psych. 304 Psychology of Music	3
	35

SACRED MUSIC MAJOR

Designed for the voice or organ major wishing to specialize in sacred music with a view to becoming a minister of music and/or preparing for advanced study and specialization at the graduate level.

First Year	Hrs.
Major: Organ or Voice 101-102	6
Minor: Organ, Piano, or Voice 105-106	2
Mus. 103-104 Theory I	8
Music ensemble	2
Comm. 105-106 Basic Course I-II	6
Soc. Sci. 101 & 102 Introduction to the Social Sciences I & II	6
Phys. Ed. 107 & 108 Health Ed. I & II	2
Phys. Ed. 121 & 122 Eurhythm. I & II	1
Orientation 100 Freshman Or.	Credit
	33

Second Year	Hrs.
Major: Organ or Voice 201-202	6
Minor: Organ, Piano, or Voice 205-206	2
Mus. 203-204 Theory II	8
Mus. 205-206 Acoustics of Music	4
Music ensemble	2
Comm. 107 Basic Course III	3
Hist. 201 & 202 The United States	6
Psych. 201 General Psychology	3
Phys. Ed. 221 & 222 Eur. III & IV	1
	35

Third Year	Hrs.
Major: Organ or Voice 301-302	6
Minor: Organ, Piano, or Voice 305-306	2
Mus. 301-302 Sight Singing and Ear-Training I	2
Mus. 305-306 History of Music	4
Mus. 307-308 Survey of Music Literature	4
Mus. 319-320 Conducting	2
Mus. 335 & 336 Counterpoint I & II	6
Mus. 361 Hymnology	2
Mus. 362 Gregorian Chant	2
Mus. 363-364 Junior and Senior Choir Methods	4
Music ensemble	2
	36

Fourth Year	Hrs.
Major: Organ or Voice 401-402	6
Minor: Organ, Piano, or Voice 405-406	2
Mus. 327-328 Form and Analysis	4
Mus. 401-402 Sight Singing and Ear-Training II	2
Mus. 403, 404 Choral Conducting	2
Mus. 429 Canon and Fugue	2
Mus. 461 History of Sacred Music	2
Mus. 463-464 Choral Literature	4
Music ensemble	2
Recital	1
Philosophy and Religion elective, or Humanities 401 or 402	3
Psych. 304 Psychology of Music	3
†Elective (Upper Division)	3
	36

For the Degree of Bachelor of Music with Major in Music Education

These curriculums lead to the special certificate to teach music in the public schools of Ohio. The certification requirements of the various states differ greatly, and if a student wishes

* The composition major takes 431-432, the theory major 433-434.
†Music 465 required of organ majors.
‡Instead of a recital, the composition major submits a one-hour program of his own work for public performance. The theory major may do likewise, or he may present a recital in his major applied music field.

to be certified in another state, it is his responsibility to bear in mind that state's requirements in his choice of courses. Courses satisfying such requirements usually give credit toward the degree, but some additional courses may be found necessary.

Piano takes precedence over all other applied minors.

Music Education Major: VOCAL

For certification purposes this curriculum is called "vocal" regardless of whether the applied major is in voice or piano.

First Year	Hrs.
Applied major: Voice or Piano 103-104	4
Applied minor: Piano or Voice 105-106	2
Mus. 103-104 Theory I	8
Music ensemble	2
Comm. 105-106 Basic Course I-II	6
Educ. 101 Introduction to Education	3
Soc. Sci. 101 & 102 Introduction to the Social Sciences I & II	6
Phys. Ed. 107 & 108 Health Ed. I & II	2
Phys. Ed. 121 & 122 Eurhythm. I & II	1
Orientation 100 Freshman Or.	Credit
	34

Second Year	Hrs.
Applied major: Voice or Piano 203-204	4
Applied minor: Piano or Voice 205-206	2
Mus. 203-204 Theory II	8
Mus. 205-206 Acoustics of Music	4
Mus. 311-312 Class Voice Methods	2
Music ensemble	2
Comm. 107 Basic Course III	3
Psych. 201 General Psychology	3
Psych. 202 Psychology of Education	3
Phys. Ed. 221 & 222 Eur. III & IV	1
	32

Third Year	Hrs.
Applied major: Voice or Piano 303-304	4
Applied minor: Piano or Voice 305-306	2
Mus. 301-302 Sight Singing and Ear-Training I	2
Mus. 307-308 Survey of Music Literature	4
Mus. 315-316 Music in the First Six Grades	4
Mus. 319-320 Conducting	2
Music ensemble	2
Educ. 301 Principles of Teaching	3
Educ. 304 Classroom Management	3
Hist. 201 & 202 The United States	6
Elective (Upper Division)	2
	34

Fourth Year	Hrs.
Applied major: Voice or Piano 403-404	4
Applied minor: Piano or Voice 405-406	2
Mus. 403, 404 Choral Conducting	2
Mus. 409-410 Orchestration	4
Mus. 411-412 Junior and Senior High School Methods	4
Music ensemble	2
Recital	1
Educ. 404 Student Teaching	6
Psych. 304 Psychology of Music	3
Philosophy and Religion elective, or Humanities 401 or 402	3
	31

Music Education Major: INSTRUMENTAL

Applied music options are stated below the curriculum.

First Year	Hrs.
Applied major 103-104	4
Applied minor 105-106	2
Mus. 103-104 Theory I	8
Music ensemble	2
Comm. 105-106 Basic Course I-II	6
Educ. 101 Introduction to Education	3
Soc. Sci. 101 & 102 Introduction to the Social Sciences I & II	6
Phys. Ed. 107 & 108 Health Ed. I & II	2
Phys. Ed. 121 & 122 Eurhythm. I & II	1
Orientation 100 Freshman Or.	Credit
	34

Second Year	Hrs.
Applied major 203-204	4
Applied minor 205-206	2
Applied minor 105-106	2
Mus. 203-204 Theory II	8
Mus. 205-206 Acoustics of Music	4
Mus. 225-226 Woodwind Methods	2
Music ensemble	2
Comm. 107 Basic Course III	3
Psych. 201 General Psychology	3
Psych. 202 Psychology of Education	3
Phys. Ed. 221 & 222 Eur. III & IV	1
	34

Third Year	Hrs.
Applied major 303-304	4
Applied minor 105-106	2
Applied minor 105-106	2
Mus. 301-302 Sight Singing and Ear-Training I	2
Mus. 307-308 Survey of Music Literature	4
Mus. 318 Percussion Methods	1
Mus. 319-320 Conducting	2
Mus. 329-330 Brass Methods	2
Music ensemble	2
Educ. 301 Principles of Teaching	3
Educ. 304 Classroom Management	3
Hist. 201 & 202 The United States	6
	33

Fourth Year	Hrs.
Applied major 403-404	4
Applied minors 105	2
Mus. 325-326 String Methods	2
Mus. 405, 406 Instrumental Conducting	2
Mus. 409-410 Orchestration	4
Mus. 417 Instrumental Problems	2
Mus. 419 Band Organization	2
Music ensemble	2
Recital	1
Educ. 404 Student Teaching	6
Philosophy and Religion elective, or Humanities 401 or 402	3
Psych. 304 Psychology of Music	3
	33

For the applied music major and minors for the curriculum above, either of the following options may be chosen:

Option I

Piano as the major, with the following minors (a maximum of 4 hours and a minimum of 2 hours in each, except where a lower minimum is indicated):

a. violin
b. clarinet
c. trumpet
d. other string or wind instrument
e. cello (1 hour)
f. percussion (1 hour)

Option II

String, wind, or percussion major, with the following minors (4 hours in piano and 2 hours in each of the others, except as indicated, unless it is the major instrument):

a. piano
b. violin
c. clarinet
d. trumpet
e. other string or wind instrument
f. cello (1 hour)
g. percussion (1 hour)

Music Education Major: VOCAL AND INSTRUMENTAL

A five-year curriculum; it may be completed in four years and five summers by starting with a summer session. Applied music options follow the curriculum.

First Year	Hrs.
Applied major 103-104	4
Applied minor 105-106	2
Mus. 103-104 Theory I	8
Music ensemble	2
Comm. 105-106 Basic Course I-II	6
Educ. 101 Introduction to Education	3
Soc. Sci. 101 & 102 Introduction to the Social Sciences I & II	6
Phys. Ed. 107 & 108 Health Ed. I & II	2
Phys. Ed. 121 & 122 Eurhythm. I & II	1
Orientation 100 Freshman Or.	Credit
	34

Second Year	Hrs.
Applied major 203-204	4
Applied minor 205-206	2
Mus. 203-204 Theory II	8
Mus. 205-206 Acoustics of Music	4
Mus. 225-226 Woodwind Methods	2
Music ensemble	2
Comm. 107 Basic Course III	3
Psych. 201 General Psychology	3
Psych. 202 Psychology of Education	3
Phys. Ed. 221 & 222 Eur. III & IV	1
	32

Third Year	Hrs.
Applied major 303-304	4
Applied minor 305-306	2
Applied minor 105-106	2
Mus. 301-302 Sight Singing and Ear-Training I	2
Mus. 307-308 Survey of Music Literature	4
Mus. 311-312 Class Voice Methods	2
Mus. 315-316 Music in the First Six Grades	4
Mus. 318 Percussion Methods	1
Mus. 319-320 Conducting	2
Music ensemble	2
Hist. 201 & 202 The United States	6
	31

Fourth Year	Hrs.
Applied major 403-404	4
Applied minor 105-106	2
Applied minor 105-106	2
Mus. 325-326 String Methods	2
Mus. 329-330 Brass Methods	2
Mus. 401-402 Sight Singing and Ear-Training II	2
Mus. 403, 404 Choral Conducting	2
Mus. 409-410 Orchestration	4
Mus. 411-412 Junior and Senior High School Methods	4
Music ensemble	2
Recital	1
Educ. 301 Principles of Teaching	3
Educ. 304 Classroom Management	3
	33

Fifth Year	Hrs.
Applied minor 105-106	2
Applied minors 105	2
Mus. 405, 406 Instrumental Conducting	2
Mus. 417 Instrumental Problems	2
Mus. 419 Band Techniques	2
Music ensemble	2
Educ. 404 Student Teaching	6
Philosophy and Religion elective, or Humanities 401 or 402	3
Psychology 304 Psychology of Music	3
Electives (Upper Division)	6
	30

For the applied music major and minors in the foregoing curriculum, one of the following options may be chosen:

Option I

Piano major, with the following minors (6 hours in one and 2 hours in each of the others except as indicated):

a. voice
b. violin
c. clarinet
d. trumpet
e. other string or wind instrument
f. cello (1 hour)
g. percussion (1 hour)

Option II

Voice major, with the following minors (6 hours in piano and 2 hours in each of the others except as indicated):

a. piano
b. violin
c. clarinet
d. trumpet
e. other string or wind instrument
f. cello (1 hour)
g. percussion (1 hour)

Option III

String, wind, or percussion major, with the following minors (6 hours in piano and 2 hours in each of the others, except as indicated, unless it is the major instrument):

a. voice
b. piano
c. violin
d. clarinet
e. trumpet
f. other string or wind instrument
g. cello (1 hour)
h. percussion (1 hour)

COURSES OF INSTRUCTION

It is important that the student familiarize himself with the course-numbering system and its significance. It is explained on page 87. *H. c.* stands for "semester hours of credit."

Applied Music

Students desiring credit must enroll for not less than one semester.

Advanced standing in applied music is granted tentatively after a placement examination given by members of the faculty. Final classification is made at the end of the first semester of residence study.

Instruction is in two half-hour lessons a week in major courses, and in one half-hour lesson a week in minor courses.

A student may transfer from a minor course to a major course if he has the approval of the faculty concerned. He is then assigned an appropriate major course number on the basis of his proficiency and repertory.

Proficiency examinations in applied music are given at the end of each semester. Promotion to the next applied course depends upon quality of performance and quantity of repertory.

No credit will be given in an applied music course if the student misses more than three lessons, if a minor, or six lessons, if a major. In case of prolonged illness, the lessons may be made up at the discretion of the instructor.

As far as teaching staff and practice rooms are available, enrollments in applied music will be accepted in the following order:

1. Full-time music majors
2. Other students of the college
3. Private students

A student's choice of instructor will be respected as far as possible, but final assignment rests with the dean of the School of Music.

ENSEMBLES

Eight to ten semester hours of ensemble credit are required of all music majors for the Bachelor of Music degree; for the

music education major with an applied major or minor in an instrument, two hours of this ensemble credit must be in Marching Band.

There is no tuition charge for any ensemble credit. Several ensemble courses are open to all students of the college who are qualified for them. However, the awarding of credit for any ensemble course presupposes satisfactory participation. One hour of Marching Band credit may be substituted for one hour of the health and physical education activity requirement.

Any ensemble course may be repeated any number of semesters, on the approval of the dean of the School of Music.

A Cappella Choir. Open to any student of the college who can qualify. *1 h. c. each semester*

Concert Band. Open to any student of the college who can qualify. *½ or 1 h. c. each semester*

Laboratory Band. For students who need additional training to qualify for the Concert Band or Marching Band. *½ h. c. each semester*

Marching Band. Open to any student of the college who can play an instrument. Functions only during the football season. Three hours a week. One hour of Marching Band credit may be applied toward the physical education activity requirement. (For the uniform rental fee, see page 85). *½ h. c. each semester*

Mixed Chorus. Open to any student of the college who can qualify. *1 h. c. each semester*

Symphony Orchestra. Open to any student of the college who can qualify. *1 h. c. each semester*

String Ensemble. Open to any student of the college who can qualify. *½ h. c. each semester*

Woodwind Ensemble. Limited to students of the School of Music. *½ h. c. each semester*

Brass Ensemble. Limited to students of the School of Music. *½ h. c. each semester*

String Quartet. Limited to selected students of the School of Music. *½ h. c. each semester*

Madrigal Singers. Limited to selected students of the School of Music. *½ h. c. each semester*

PIANO

45. For those who do not qualify for Piano 101 or 103. This course may be repeated. *No credit.*

Major Courses

101-102. Studies such as Czerny, Op. 299; Loeschorn, Op. 66; Phillip, *Studies.* Bach, *Two-* and *Three-Part Inventions;* Mozart and Haydn sonatas; earlier Beethoven sonatas; romantic and modern compositions. Chords, major and minor scales, arpeggios, octaves. *3 + 3 h. c.*

201-202. Cramer, *Studies;* Czerny, Op. 740; Preyer, Kullak, or other octave studies. Bach: *Three-Part Inventions, French* and *English Suites, The Well-Tempered Clavichord;* Beethoven sonatas of a more advanced grade: a Mendelssohn, Mozart, or Beethoven concerto in C major or C minor. Schumann, *Andante and Variations* for two pianos. Selected Chopin nocturnes, waltzes, mazurkas, polonaises; classic, romantic, and modern compositions. *3 + 3 h. c.*

301-302. Clementi, *Gradus ad Parnassum,* or Czerny, Op. 740. Bach: *English Suite, The Well-Tempered Clavichord.* Beethoven sonata, one of three in Op. 31 begun here and completed in 402. Chopin compositions, more advanced. One major concerto, completed in 402. Debussy and Ravel compositions. *3 + 3 h. c.*

401-402. Bach: one partita; advanced compositions such as toccatas, the *Italian Concerto,* and *Chromatic Fantasy and Fugue.* Beethoven sonata, advanced. Concerto completed. Romantic compositions such as Brahms rhapsodies, Chopin ballades, and Liszt rhapsodies. Compositions by standard American and foreign composers such as MacDowell, Debussy, Ravel, Rachmaninoff, Griffes, Ibert, Medtner, and others. The student prepares a recital program of serious content and difficulty, ranging from classic to modern music; also, a major piano concerto is prepared for performance with orchestra. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of performance is insisted upon. A recital is required.

103-104. See Piano 101-102. *2 + 2 h. c.*

203-204. See Piano 201-202. *2 + 2 h. c.*

303-304. See Piano 301-302. *2 + 2 h. c.*

403-404. See Piano 401-402. *2 + 2 h. c.*

Minor Courses

105-106. Bilbro, *First Melody Book;* Burrows, *The Adult Explorer;* Bach-Schaum. Three pieces from *53 Piano Solos.* Chords, sight reading. *1 + 1 h. c.*

205-206. All major scales. Sight reading of part songs and duets. Bach-Carroll, Vol. I; Hanon; Czerny-Germer, Vol. I, Part I; Burgmuller, Op. 100. Romantic and modern compositions. *1 + 1 h. c.*

305-306. Added technical work. All the minor scales. Bach-Carroll, Vol. II, or Bach-Foote, *First Year;* Czerny-Germer, Vol. I, Part II; Heller, *Studies,* Op. 47. Sonatinas by Clementi, Kuhlau, and others. Romantic and modern compositions. Arpeggios: tonic, dominant seventh, diminished seventh. Major and minor triads played in three positions. Sight reading, transposition. *1 + 1 h. c.*

405-406. For those who can qualify. *1 + 1 h. c.*

ORGAN

45. Intended for those who do not qualify for Organ 101 or 103. The course may be repeated. *No credit.*

Major Courses

101-102. Schneider-Warren, *Studies*; Buck, *Pedal Phrasing Studies*; preparatory manual exercises. Bach: chorale preludes for manuals; trios for manuals and pedals; chorale and preludes from *Das Orgelbuechlein*; Variation II from *Sei Gegrusset* (Book V, ed. Peters); short preludes and fugues; *Canzona Fugue in B minor* (Corelli); *Prelude and Fugue in E Minor* (Lesser, ed. Schirmer). Also modern compositions. *3 + 3 h. c.*

201-202. Continuation of Schneider and Buck studies; Neilson, *Pedal Studies*. Bach: *Fantasie and Fugue in C Minor* (Book III, ed. Schirmer); *Fugue in G Minor* (Book II, ed. Schirmer); *Prelude and Fugue in A Major*; *Prelude in C Minor* (Book III, ed. Schirmer); *First Sonata*; *Prelude in F Minor*; chorale preludes. Mendelssohn: *Second Sonata*. Pieces by the old masters from *Historical Series* (Vol. I, ed. Bonnet). Modern compositions by American, French, English, or German composers. *3 + 3 h. c.*

301-302. Bach: chorale preludes; *Prelude and Fugue in E Minor* (Wedge); *Prelude and Fugue in A Minor* (Book IV, ed. Schirmer); *Second Sonata*; *Toccata and Fugue in D Minor* and *Toccata in D Minor* (Dorian); *Prelude and Fugue in G Major*. Franck: *Cantabile*; *Prelude, Fugue, and Variation*; *Pastorale*; *Piece Héroique*. Mendelssohn: *Third Sonata*. Modern compositions. *3 + 3 h. c.*

401-402. Bach: *Third Sonata*; chorale preludes; *Fantasie and Fugue in G Minor*; *Toccata, Adagio, and Fugue in C Major*; *Prelude and Fugue in E Flat* ("St. Ann's"); *Passacaglia and Gugue in C Minor*; *Prelude and Fugue in B Minor*. Franck: *Chorale in A Minor*. Mendelssohn: *First Sonata, Sixth Sonata*. Vierne: selected movements from the six symphonies. Widor: *Sixth Symphony*. Sowerby: *Suite, Symphony in G Minor*. Roger-Ducasse: *Pastorale*. Bennett: *Sonata in G*, shorter compositions suitable for recitals. Concerto for organ and orchestra. Public recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high level of proficiency is insisted upon, and a recital is required.

103-104.	See Organ 101-102.	*2 + 2 h. c.*
203-204.	See Organ 201-202	*2 + 2 h c.*
303-304.	See Organ 301-302.	*2 + 2 h. c.*
403-404.	See Organ 401-402.	*2 + 2 h. c.*

Minor Courses

105-106.	See Piano 105-106.	*1 + 1 h. c.*
205-206.	See Piano 205-206.	*1 + 1 h. c.*
305-306.	See Piano 305-306.	*1 + 1 h. c.*
405-406.	See Piano 405-406.	*1 + 1 h. c.*

VOICE

45. For those who do not qualify for Voice 101 or 103. The course may be repeated. *No credit.*

Major Courses

101-102. Classification of the voice, vocalizations for tone production, and simple songs in English and Italian classics. Songs from Volumes I and II of *Italian Anthology* (Schirmer edition); two easy oratorio and operatic arias. A selected list of songs by American composers. Prerequisite or concurrent: Italian 101-102. *3 + 3 h. c.*

201-202. Continuation of technical studies for the development of the individual voice. Additional songs from Volumes I and II, *Italian Anthology*. Additional songs in English; songs in French by Debussy, Faure, Lalo, Duparc; two operatic and oratorio arias. A selected list of songs by American composers. Prerequisite or concurrent: French 101-102. *3 + 3 h. c.*

301-302. Advanced literature and technique. Songs in German by Schubert, Brahms, Wolf, Strauss; additional songs in French by Chausson, Saint-Saens, Debussy; Italian songs by Respighi, Donaudy, Sibella; two operatic and three oratorio arias; additional songs by American composers. Prerequisite or concurrent: German 101-102. *3 + 3 h. c.*

401-402. Advanced literature and technique. Additional songs from a selected list of twentieth-century French, German, Italian, Russian, English, and American composers. Six additional opera and oratorio arias. Preparation of the public recital and of one or more programs from the repertoire of the previous courses. *3 + 3 h. c*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of proficiency is insisted upon. A recital is required.

103-104.	See Voice 101-102.	*2 + 2 h. c.*
203-204.	See Voice 201-202.	*2 + 2 h. c.*
303-304.	See Voice 301-302.	*2 + 2 h. c.*
403-404.	See Voice 401-402.	*2 + 2 h. c.*

Minor Courses

105-106. Classification of the voice; breath control; technical exercises and appropriate song material. Amount of repertoire decided by voice faculty. Open to students with no previous training. *1 + 1 h. c.*

205-206. Advanced vocal technique and literature suited to the individual voice. Standard oratorio arias. Songs in foreign languages, at the discretion of the instructor. Amount of repertoire decided by voice faculty. *1 + 1 h. c.*

305-306.	For those who can qualify.	*1 + 1 h. c.*
405-406.	For those who can qualify.	*1 + 1 h. c.*

VIOLIN

45. For those who do not qualify for Violin 101 or 103. The course may be repeated. *No credit.*

Major Courses

101-102. Kreutzer, *Studies*, to No. 32. Concertos by Vivaldi, Nardini, Rode, deBeriot. Sonatas by Corelli, Veracini, Leclair. Technical material including Sevcik, Op. 8 and 9, Schradier, Casorti. Not fewer than six short compositions suitable for recital repertoire. Major and minor scales and arpeggios in three octaves, using fundamental strokes. *3 + 3 h. c.*

201-202. Kreutzer concluded; Fiorillo, Rovelli. Concertos by Bach, Viotti, Kreutzer, deBeriot. Sonatas by Tartini, Mozart, Handel. Not fewer than six compositions added to repertoire. Scales and arpeggios in three octaves continued with secondary strokes. Technical materials of 101-102 continued. *3 + 3 h. c.*

301-302. Rode, *Studies*. Concertos by Mozart, Bruch, Vieuxtemps. Sonatas by Beethoven, Bach. Not fewer than six short compositions added to repertoire. Scales in double stops in all keys. Technical material from Sevcik, Op. 4, Part 4; Schradier, Book II. *3 + 3 h. c.*

401-402. Advanced studies from Wieniawski; Dont, Op. 35; Gavinies and Paganini concertos. Wieniawski, Saint-Saens, Mendelssohn, Lalo, Beethoven, etc. Completion of repertoire requirement; senior recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of proficiency is insisted upon. A recital is required.

103-104. See Violin 101-102. *2 + 2 h. c.*

203-204. See Violin 201-202. *2 + 2 h. c.*

303-304. See Violin 301-302. *2 + 2 h. c.*

403-404. See Violin 401-402. *2 + 2 h. c.*

Minor Courses

105-106. Fundamentals in correct posture and positions of the left hand and of the bow arm. Yost's *Violin Method* supplemented by Riegger's *Exercises*. Studies by Wohlfahrt and Rodin and easy first-position pieces. Scales and arpeggios in keys of not more than four accidentals. *1 + 1 h. c.*

205-206. Beginning of position studies. Maia Bang, Book III. Hans Sitt, Op. 32, Books II and III. Kayser, Op. 20, pieces in first three positions. Not fewer than six compositions by Seitz and Rieding. *1 + 1 h. c.*

305-306. Position studies continued. Maia Bang, Book IV. Schubert sonatinas. Mazas, *Special Studies*. Accozay and Hollander concertos. Easy double stops and scales. Scales and arpeggios in five positions. Not fewer than six new recital pieces. *1 + 1 h. c.*

405-406. Continued study of positions. Maia Bang, Book V. Studies by Mazas and Dont; beginning of Kreutzer. *Allegro Brillante* by Tenhave, concerto by Hollander, sonatas by Handel. Scales in three octaves. *1 + 1 h. c.*

VIOLA

45. For those who do not qualify for Viola 101 or 103. The course may be repeated. *No credit.*

Major Courses

101-102. Studies by Mazas, Kreutzer, Sitt. Schradier technic. Sonatas by Handel, repertoire material; not fewer than six scales. Scales and arpeggios in three octaves. *3 + 3 h. c.*

201-202. Studies by Kreutzer and Fiorillo. Sonatas by Vivaldi and Marcello. Scales and arpeggios continued. Six recital pieces. *3 + 3 h. c.*

301-302. Studies by Rode, Campagnoli, and Bruni. Concertos by Stamitz and Mozart. Scales in double stops. Six recital pieces. *3 + 3 h. c.*

401-402. Studies by Gavinies and Dolesji; sonatas by Bowen, Bach, and others. Scales and arpeggios continued. Senior recital. *3 + 3 h. c*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of performance is insisted upon. A recital is required.

103-104. See Viola 101-102. *2 + 2 h. c.*

203-204. See Viola 201-202. *2 + 2 h. c.*

303-304. See Viola 301-302. *2 + 2 h. c.*

403-404. See Viola 401-402. *2 + 2 h c.*

Minor Courses

105-106. Fundamentals of left and right hand technics. Reading facility in alto clef is developed. Studies by Hofmann. Scales in the first position. Easy pieces. *1 + 1 h. c.*

205-206. Development of left hand facility. Beginning of lower positions. Studies by Kayser. Scales in positions. Pieces in positions. *1 + 1 h. c.*

305-306. First five positions. Studies by Mazas and Dont. Schubert sonatina. Seventeenth- and eighteenth-century sonatas. Six recital pieces. Scales in three octaves. Easy double stops. *1 + 1 h. c.*

405-406. Higher positions. Mazas, Kreutzer. Pieces by Nardini, Sitt, and others. Scales in three octaves. *1 + 1 h. c.*

CELLO

45. For those who do not qualify for String Bass 101 or 103. The course may be repeated. *No credit.*

Major Courses

101-102. Studies from Dotzauer, Op. 35, and Duport. Scales and arpeggios in three octaves. Solos such as Bach, *Suite No. 1*, and Goltermann, *Concerto No. 4*. *3 + 3 h. c.*

201-202. Scales and arpeggios in four octaves. Franchomme studies. Repertoire to include Romberg, *Concerto No. 2*; Bach, *Suite No. 2* or *No. 3*; and Beethoven, *Sonata*, Op. 69, in A Major. *3 + 3 h. c.*

301-302. Scales in octaves, thirds, sixths. Popper, *Studies*. Concert pieces to include Breval, *Sonata in G Major*, or Eccles, *Sonata in G Minor*, and concertos by Boccherini and Lalo. *3 + 3 h. c.*

401-402. All scales in octaves, thirds, sixths, and tenths. Piatti, *Studies*, and Servais, *Caprices*. Repertoire such as Reger, *Solo Suite No 2*, and Haydn or Dvorak concerto. Senior recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses vary only in degree from those listed above. A high standard of proficiency is maintained. A recital is required.

103-104. See Cello 101-102. *2 + 2 h. c.*

203-204. See Cello 201-202. *2 + 2 h. c.*

303-304. See Cello 301-302. *2 + 2 h. c.*

403-404. See Cello 401-402. *2 + 2 h. c.*

Minor Courses

105-106. Kummer, *Method,* and Schroeder, *Studies.* Scales and solos in first position. *1 + 1 h. c.*

205-206. Schroeder, *Studies.* Scales. Klengel, *Concerto in C Major;* Marcello, *Sonata in F Major.* *1 + 1 h. c.*

305-306. Schroeder, *Studies.* Scales. Loeillet, *Sonata in G Major;* Goltermann, *Concerto No. 4.* *1 + 1 h. c*

405-406. For those who can qualify. *1 + 1 h. c.*

STRING BASS

45. Intended for those who do not qualify for Cello 101 or 103. This course may be repeated. *No credit.*

Major Courses

101-102. Simandl, *30 Etudes.* Major and minor scales in two octaves. Solos such as Anderson, *Sonatina,* and Chapini, *Fantasie Concertante.* Bach, *Minuet and Gavotte;* Vivaldi, *Intermezzo.* *3 + 3 h. c.*

201-202. Hrabe, *Studies.* Repertoire, such as Cappuzzi, *Concerto;* sonatas by Galliard and Loeillet; Ratez, *Six Characteristic Pieces,* Op. 46. *3 + 3 h. c.*

301-302. Bille, *Method,* Part II, Books 4 and 5. Concert pieces to include sonatas by Eccles, Antoniotti, and D'Andrieu. *3 + 3 h. c.*

401-402. Kreutzer, *Studies.* Reynolds, *Orchestra Studies;* Strauss, *Orchestra Studies.* Solos to include Koussevitzky concerto or Dragonetti concerto. Senior recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of proficiency is insisted upon. A recital is required.

103-104. See String Bass 101-102. *2 + 2 h. c.*

203-204. See String Bass 201-202. *2 + 2 h. c.*

303-304. See String Bass 301-302. *2 + 2 h. c.*

403-404. See String Bass 401-402. *2 + 2 h. c.*

Minor Courses

105-106. Simandl, *Method*, Part I. Scales. *1 + 1 h. c.*

205-206. Simandl, *Method*, Part II. Bach, *Minuet and Gavotte*; Vivaldi, *Intermezzo*. *1 + 1 h. c.*

305-306. Simandl, *30 Etudes*. Anderson, *Sonatina*. *1 + 1 h. c.*

405-406. For those who can qualify. *1 + 1 h. c.*

FLUTE

45. To be elected by students who do not qualify for Flute 101 or 103. The course may be repeated. *No credit.*

Major Courses

101-102. Studies and solos such as Altes, *Method*, Book II; Kuhlau, *Duets*, Op. 10; Barrere, *The Flautist's Formulae*; Boehm, *24 Caprice Etudes*, Op. 26; Bach-Barrere, *Arioso*; Handel, sonatas; Pessard, *Bolero*. *3 + 3 h. c.*

201-202. Studies and solos such as Altes, *Method*, Book III; Anderson, *Etudes*, Op. 33, Op. 21; Kuhlau, *Duets*, Op. 81; Moyse, *24 Petits Duos Mélodiques*; Bach, *Sonata No. 2*; Rogers, *Soliliquy*; Gluck, scene from *Orpheus*; Briccialdi, *Il Vento*. *3 + 3 h. c.*

301-302. Studies and solos such as Schindler, *Bach Studies*; Anderson, *Etudes*, Op. 30, Op. 15; Kuhlau, *Duets*, Op. 102; orchestral studies; Bach, *B Minor Suite*; Boccherini, *Concerto in D Major*, Op. 27; Mozart, concertos; Telleman, *Suite in A Minor*. *3 + 3 h. c.*

401-402. Jeanjean, *16 Studies in the Modern Style*; Moyse, *48 Virtuoso Studies*; orchestral studies; special work on piccolo; Bach, *Sonatas No. 1 and No. 4 in A Minor Unaccompanied*; Ibert, *Piece*; Griffes, *Poem*. Senior recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of proficiency is insisted upon. A recital is required.

103-104. See Flute 101-102. *2 + 2 h. c.*

203-204. See Flute 201-202. *2 + 2 h. c.*

303-304. See Flute 301-302. *2 + 2 h. c.*

403-404. See Flute 401-402. *2 + 2 h. c.*

Minor Courses

105-106. Altes, *Method*, Book I; Moyse, *The Beginning Flutist*; Magnani, *Clouds and the Moon*; Loeillet solos. *1 + 1 h. c.*

205-206. Altes, *Method*, Book II; Boehm, *24 Caprice Etudes*; Mozart-Barrere, *Minuette in D Major*; Bach, *Polonaise* and *Badinage* from *B Minor Suite*. *1 + 1 h. c.*

305-306. Studies and solos of the level indicated for Flute 101-102. *1 + 1 h. c.*

405-406. Studies and solos of the level indicated for Flute 201-202. *1 + 1 h. c.*

CLARINET

45. To be elected by those who do not qualify for Clarinet 101 or 103. The course may be repeated. *No credit.*

Major Courses

101-102. Studies and solos such as Klose, *Method,* Book II; Rose, *40 Etudes,* Books I, II; Langenus, *Method,* Book III; Von Weber, *Concertino* and *Concerto in F Minor;* Jeanjean, *Clair Matin;* Mozart, *Concerto.* *3 + 3 h. c.*

201-202. Studies and solos such as Rose, *32 Etudes;* Baermann, *Method,* Book IV; Perier, *Etudes de Genres et Interprétation,* Book I; Marty, *First Fantasy;* Lefevre, *Fantaisie Caprice;* Haln, *Sarabande et Themes Varies.* *3 + 3 h. c.*

301-302. Studies and solos such as Rose, *20 Grand Studies;* Baermann, *Method,* Book V; Cavalini, *30 Caprices;* Perier, *20 Sonata Studies;* orchestral studies; Rabaud, *Solo de Concours;* Gaubert, *Fantaisie;* Stravinsky, *Three Pieces;* Schumann, *Phantasiestuecke.* *3 + 3 h. c.*

401-402. Studies and solos such as Stark, *24 Grand Studies;* Jeanjean, *18 Etudes;* Jeanjean, *16 Modern Etudes;* orchestral studies; Widor, *Introduction and Ronde;* Debussy, *Premiere Rhapsodie;* Brahms, sonatas; Milhaud, *Concerto.* Senior recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of proficiency is insisted upon. A recital is required.

103-104.	See Clarinet 101-102.	*2 + 2 h. c.*
203-204.	See Clarinet 201-202.	*2 + 2 h. c.*
303-304.	See Clarinet 301-302.	*2 + 2 h. c.*
403-404.	See Clarinet 401-402.	*2 + 2 h. c.*

Minor Courses

105-106. Klose, *Method,* Book I; Perier, *Le Débutant Clarinettiste, 20 Etudes Melodiques et Faciles;* Gretchaninoff, *Suite Miniature;* Petit, *Piece de Concours.* *1 + 1 h. c.*

205-206. Perier, *20 Etudes Faciles et Progressives;* Rose, *40 Etudes,* Book I; Langenus, *Scale Studies;* Debussy, *First Arabesque for Clarinet;* Avon, *Fantaisie de Concours.* *1 + 1 h. c.*

305-306. Studies and solos of the level indicated for Clarinet 101-102. *1 + 1 h. c.*

405-406. Studies and solos of the level indicated for Clarinet 201-202. *1 + 1 h. c.*

SAXOPHONE

Courses in saxophone are offered but they cannot be taken for credit, nor can they be applied toward any degree. If the student wishes to work for a degree, he must major in clarinet.

OBOE

45. For those who do not qualify for Oboe 101 or 103. This course may be repeated. *No credit.*

Major Courses

101-102. Studies and solos such as Ferling, *48 Etudes;* Sellner, *Etudes for Oboe,* Book II; Handel, *Concerto in G Minor;* Labate, *Villanella;* Schumann, *Three Romances for Oboe.* *3 + 3 h. c.*

201-202. Studies and solos such as Labate, *16 Exercises;* Capelle, *20 Grand Etudes,* Book I; Cimarosa, *Concerto;* Nielson, *Romance;* Foret, *Sonata in G Major;* Ropartz, *Pastorale and Dance.* *3 + 3 h. c.*

301-302. Studies and solos such as Andraud, *Vade-Mecum* (etudes and orchestral studies); Bleuzet, *The Technique of the Oboe,* Book II; Loyon, *32 Modern Etudes;* Saint-Saens, *Sonata;* Hindemith, *Sonata;* Palidilhe, *Concertante.* Work on English horn begun. *3 + 3 h. c.*

401-402. Continued study of English horn. Studies and solos such as Andraud, *Vade-Mecum;* Gillet, *Advanced Studies;* Jeanjean, *Remembrances;* Rivier, *Improvisation and Finale;* Dallier, *Fantaisie Caprice;* Piston, *Suite.* Senior recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of proficiency is insisted upon. A recital is required.

103-104. See Oboe 101-102. *2 + 2 h. c.*

203-204. See Oboe 201-202. *2 + 2 h. c.*

303-304. See Oboe 301-302. *2 + 2 h. c.*

403-404. See Oboe 401-402. *2 + 2 h. c.*

Minor Courses

105-106. Studies and solos such as Andraud, *Method* (1949); Niemann-Labate, *Oboe Method;* Bakaleinikoff, *Elegy;* Templeton, *Siciliana;* J. Wagner, *Three Pastorales.* *1 + 1 h. c.*

205-206. Studies and solos such as Gekeler, *Method,* Book II; Verroust, *24 Etudes,* Op. 65, Books I, II; Pares, *Daily Technical Studies;* Klemcke, *Pastorale;* Handel, *Sonata in C Minor;* Gliere, *Chanson;* Bach-Gillet, *Three Little Pieces.* *1 + 1 h. c.*

305-306. Studies and solos of the level indicated for Oboe 101-102. *1 + 1 h. c.*

405-406. Studies and solos of the level indicated for Oboe 201-202. *1 + 1 h. c.*

BASSOON

45. For those who do not qualify for Bassoon 101 or 103. The course may be repeated. *No credit.*

Major Courses

101-102. Studies and solos such as Weissenborn, *Duets;* Oubradous, *Enseignement Complet du Basson,* Book I; Jancourt, *Reverie;* Foret, *Three Pieces;* Mozart, *First Concerto.* *3 + 3 h. c.*

201-202. Studies and solos such as Milde, Book II; Oubradous, *Enseignement Complet du Basson,* Book II; orchestral studies; Hindemith, *Sonata;* Handel, *Concerto in C Minor;* Jeanjean, *Capriccioso.* *3 + 3 h. c.*

301-302. Studies and solos such as Bozza, *Daily Studies;* Oubradous, *Enseignement Complet du Basson,* Book III; orchestral studies; Saint-Saens, *Sonata;* Grovlez, *Sicilienne* and *Allegro Giocoso;* Jancourt, *Cantilene;* Bruns, *Concerto.* *3 + 3 h. c.*

401-402. Studies and solos such as Giampieri, *Daily Studies;* Orefice, *Bravura Studies;* orchestral studies; Pierne, *Prelude de Concert;* Bozza, *Concerto,* Op. 49; Bozza, *Fantaisie;* Jeanjean, *Prelude and Scherzo.* Senior recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of proficiency is insisted upon. A recital is required.

103-104.	See Bassoon 101-102.	*2 + 2 h. c.*
203-204.	See Bassoon 201-202.	*2 + 2 h. c.*
303-304.	See Bassoon 301-302.	*2 + 2 h. c.*
403-404.	See Bassoon 401-402.	*2 + 2 h. c.*

Minor Courses

105-106. Studies and solos such as Weissenborn, Op. 8, Book I; Jancourt, *Studies,* Book I; Isaak, *Jolly Dutchman;* Ziesi, *Souvenier.* *1 + 1 h. c.*

205-206. Studies and solos such as Weissenborn, Op. 8, Books I and II; Jancourt, *Studies,* Books I and II; Bakaleinikoff, *Ballad;* Weissenborn, *Capriccio.* *1 + 1 h. c.*

305-306. Studies and solos of the level indicated for Bassoon 101-102. *1 + 1 h. c.*

405-406. Studies and solos of the level indicated for Bassoon 201-202. *1 + 1 h. c.*

TRUMPET

45. To be elected by those who do not qualify for Trumpet 101 or 103. This course may be repeated. *No credit.*

Major Courses

101-102. The development of a daily practice routine suitable to the individual, for the purpose of acquiring a correct and lasting command of fundamental skills such as tone production, embouchure, breath control, flexibility, and legato and staccato articulations, using Arban's *Method* for cornet, *Etudes* by Hering, *Daily Drills and Studies* by Schlossberg. Major and minor scales and chords, introduction to transposition, sight reading, and the study of cantabile solos such as the *Lieder* of Schubert, Brahms, Schumann, and other solos of grade III difficulty. *3 + 3 h. c.*

201-202. Concentration upon basic techniques; slurs, scales, chords, intervals, and single, double, and triple articulations in major and minor keys, using Arban, *Method;* Schlossberg, *Daily Drills and Studies;* Clark, *Studies;* Brandt, *Orchestral Studies;* Sachse, *Transposition Studies.* Cantabile solos, and other solos of grade III and IV difficulty. *3 + 3 h. c.*

301-302. Continuation of technical studies: Arban, *Method;* Schlossberg, *Studies;* Paudert, *Studies;* Brandt, *Orchestral Studies;* Petit, *Studies;* Sachse, *Transposition Studies.* Sight reading. Solos of grade IV and V difficulty by Fitzgerald, Vidal, Barat, Goeyens, Deboeck, Busser, and others. *3 + 3 h. c.*

401-402. Advanced studies by Clark, Peitzsch, Laurent, Petit, Charlier; Sachse, *Transposition Studies;* sight reading. Solos of grade V and VI difficulty. Concertos by Haydn, Vidal, Williams, Brandt, Delcroix. Senior recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of perfection is insisted upon. A recital is required.

103-104. See Trumpet 101-102. *2 + 2 h. c.*

203-204. See Trumpet 201-202. *2 + 2 h. c.*

303-304. See Trumpet 301-302. *2 + 2 h. c.*

403-404. See Trumpet 401-402. *2 + 2 h c.*

Minor Courses

105-106. Introduction to problems of brass instrument playing, stressing formation of embouchure, attack and release, breath control, tone quality, flexibility, legato and staccato articulation. Elementary exercises showing these skills in the Edwards-Hovey *Method,* Arban's *Method,* or equivalent studies. Introduction to scales. Selected cantabile solos. Open to students without previous training. *1 + 1 h. c.*

205-206. Continued stress on fundamentals of grade I with extension of range. Scale studies to include all major and minor keys. Selected cantabile solos. Material stressing these skills in World's *Method for Cornet,* Hering's *Studies,* or equivalent. *1 + 1 h. c.*

305-306. Extension of range, using scale studies in major and minor keys and broken chords. Flexibility studies as in Schlossberg's *Daily Drills.* Additional progress in World's *Method for Cornet,* Hering's *Studies,* or equivalent studies. Selected cantabile solos. *1 + 1 h. c.*

405-406. For those who can qualify. *1 + 1 h. c.*

FRENCH HORN

45. For those who do not qualify for French Horn 101 and 103. The course may be repeated. *No credit.*

Major Courses

101-102. Development of the fundamental skills, such as tone production, embouchure, breath control, and legato and staccato articulations, using Franz, Kopprasch, Alphonse, Michiels. Major and minor scales and chords; transposition, sight reading. Cantabile solos, and other solos of grade III difficulty. *3 + 3 h. c.*

201-202. Studies by Franz, Kopprasch, Alphonse, Pottag. Slurs, scales, chords, intervals, legato and staccato articulations in major and minor keys. Transposition and sight reading. Cantabile solos, and other grade III and IV solos. *3 + 3 h. c.*

301-302. Continuation of technical studies, using Pottag, Gallay, Alphonse, Gumbert. Transposition and sight reading. Solos of grade IV and V difficulty. *3 + 3 h. c.*

401-402. Advanced studies, including studies by Pottag, Gallay, Alphonse; Gumbert's *Orchestral Studies.* Transposition and sight reading. Grade V and VI solos. Senior recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. Quality of performance is insisted upon. A recital is required.

103-104. See French Horn 101-102. *2 + 2 h. c.*

203-204. See French Horn 201-202. *2 + 2 h. c.*

303-304. See French Horn 301-302. *2 + 2 h. c.*

403-404. See French Horn 401-402. *2 + 2 h. c.*

Minor Courses

105-106. Special studies for development of embouchure, breath control, articulation, flexibility, tone control. Pottag-Hovey, *Method for French Horn;* Horner, *Primary Studies.* Introduction to scales. Selected cantabile solos. *1 + 1 h. c.*

205-206. Horner, *Studies.* Continued stress upon fundamentals of grade I. Scale studies in major and minor keys. Extension of range. Selected cantabile solos. *1 + 1 h. c.*

305-306. Extension of range, using scale studies in major and minor keys and broken chords. Flexibility studies as in Schlossberg's *Daily Drills.* Additional progress in World's *Method for Cornet.* Hering's *Studies,* or equivalent studies. Selected cantabile solos. *1 + 1 h. c.*

405-406. For those who can qualify. *1 + 1 h. c.*

TROMBONE

45. To be elected by those who do not qualify for Trombone 101 or 103. This course may be repeated. *No credit.*

Major Courses

101-102. The development of a daily practice routine to enable the individual to acquire the fundamental skills, such as tone production, embouchure, breath control, flexibility, and legato and staccato articulations. Major and minor scales and chords; introduction to transposition; sight reading. Materials include Mueller, Rochut, Dieppo, Mantia. Cantabile solos, and other solos of grade III and IV difficulty. *3 + 3 h. c.*

201-202. Continuation of basic technical studies. Slurs, scales, chords, intervals, single, double, and triple articulations in major and minor keys,

transposition, and sight reading, using Mueller, Rochut, Dieppo, Mantia. Cantabile solos, and other grade III and IV solos. *3 + 3 h. c.*

301-302. Studies from Mueller, Rochut, Blume, Kopprasch. Transposition and sight reading. Grade IV and V solos. *3 + 3 h. c.*

401-402. Advanced studies by Mueller, Voboran, Rochut, Blazevitch. Transposition and sight reading. Solos of grade V and VI difficulty. Senior recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of perfection is insisted upon. A recital is required.

103-104. See Trombone 101-102. *2 + 2 h. c.*

203-204. See Trombone 201-202. *2 + 2 h. c.*

303-304. See Trombone 301-302. *2 + 2 h. c.*

403-404. See Trombone 401-402. *2 + 2 h. c.*

Minor Courses

105-106. Studies to develop embouchure, attack, release, breath control, tone quality, flexibility, knowledge of positions. Studies by Cimera-Hovey, Endressen. Selected cantabile solos. *1 + 1 h. c.*

205-206. Continuation of development of skills stressed in grade I. Scale studies, stressing legato and staccato articulation. Extension of range. Studies by Mueller, Cimera. Study of cantabile solos for development of legato-cantabile style. *1 + 1 h. c.*

305-306. Extension of range, using scale studies in major and minor keys and broken chords. Flexibility studies as in Schlossberg's *Daily Drills.* Additional progress in World's *Method for Cornet,* Hering's *Studies,* or equivalent studies. Selected cantabile solos. *1 + 1 h. c.*

405-406. For those who can qualify. *1 + 1 h. c*

TUBA

45. For those who do not qualify for Tuba 101 or 103. The course may be repeated. *No credit.*

Major Courses

101-102. The development of the fundamental skills, such as tone production, embouchure, breath control, flexibility, and legato and staccato articulations. Major and minor scales and chords. Sight reading. Material includes studies by Bell, Eby, Arban. Cantabile solos, and other solos of grade III difficulty. *3 + 3 h. c.*

201-202. Studies by Arban, Eby, Blazevitch. Slurs, scales, chords, intervals, and legato and staccato articulations in major and minor keys. Sight reading. Study of orchestral and band works. Cantabile solos, and other solos of grade III and IV difficulty. *3 + 3 h. c.*

301-302. Continuation of technical studies, material by Arban, Eby, Blazevitch. Sight reading. Study of orchestral and band works. Solos of grade IV and V difficulty. *3 + 3 h. c.*

401-402. Continuation of technical studies. Study of band and orchestral works. Sight reading. Solos of grade V and VI difficulty. Senior recital. *3 + 3 h c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high degree of proficiency is insisted upon. A recital is required.

103-104. See Tuba 101-102. *2 + 2 h. c.*

203-204. See Tuba 201-202. *2 + 2 h. c.*

303-304. See Tuba 301-302. *2 + 2 h. c.*

403-404. See Tuba 401-402. *2 + 2 h. c.*

Minor Courses

105-106. Introduction to fundamental skills, such as tone production, development of embouchure, attack and release, breath control, tone quality, flexibility. Introduction to scales. Studies by Eby, Arban, Bell. Cantabile solos. *1 + 1 h. c.*

205-206. Continuation of development of skills stressed in grade I. Scale and chord studies. Extension of range. Studies by Eby, Arban, Bell. Cantabile solos. *1 + 1 h. c.*

305-306. Extension of range, using scale studies in major and minor keys and broken chords. Flexibility studies as in Schlossberg's *Daily Drills.* Additional progress in World's *Method for Cornet,* Hering's *Studies,* or equivalent studies. Selected cantabile solos. *1 + 1 h. c.*

405-406. For those who can qualify. *1 + 1 h. c.*

PERCUSSION

45. To be elected by those who do not qualify for Percussion 101 or 103. The course may be repeated. *No credit.*

Major Courses

101-102. Snare drum: review and/or complete twenty-six rudiments. Stone, *Stick Control;* Wilcoxon, *Modern Methods.* Studies for independence of hands. Gardner, *Progressive Studies,* Book III; Moeller, *Rudimental Drumming.* Relaxation. Bass drum, cymbals, and accessories. —Mallet instruments, including bells, xylophone, marimbas, and vibraharp: malleting, roll, scales, arpeggios. Peterson, *Rubank Elementary Method;* graded violin, saxophone, and clarinet exercises. *3 + 3 h. c.*

201-202. Snare drum: Moeller, *Rudimental Solos;* Wilcoxon, *Rudimental Swing.* Foot studies for bass drum. Gardner, *Post-graduate Studies;* Rale and Morales, *Latin-American and Afro-Cuban Rhythms.* —Mallet instruments: keyboard harmony, phrasing, expression; solos and excerpts from standard compositions; Peterson, *Three- and Four-mallet Playing.* —Tympani: position, mechanics, attack, single strokes, tuning; ear-training exercises; Gardner, Sietz, and Cross methods. *3 + 3 h. c.*

301-302. Snare drum: Moeller, Wilcoxon, and Bellson methods. —Mallet instruments: solos for two, three, and four mallets. —Tympani: advanced studies; technical problems, cross-sticking, fast tone changes. Excerpts from classic and modern compositions. Use of pedal, pedal effects, glissandi. Gardner, Sietz, Cross, and Zettleman methods. *3 + 3 h. c.*

401-402. Snare drum: hand and foot independence studies; rudimental solos. —Mallet instruments: Musser transcriptions of Chopin; Musser, *Masterworks for Vibraharp.* Modern solos by Norvo and others. —Tympani: modern arrangements, concertos, and solos by Stock, Berlioz, Stiegler, and others. Recital. *3 + 3 h. c.*

Major Courses for Music Education

The following courses differ only in degree from those listed above. A high standard of proficiency is insisted upon. A recital is required.

103-104.	See Percussion 101-102.	*2 + 2 h. c.*
203-204.	See Percussion 201-202.	*2 + 2 h. c.*
303-304.	See Percussion 301-302.	*2 + 2 h. c.*
403-404.	See Percussion 401-402.	*2 + 2 h. c.*

Minor Courses

105-106. Snare drum: position, mechanics of playing, muscular action, method of attack, relaxation. Rudiments, including single-stroke roll, double-stroke roll, five-, seven-, and nine-stroke rolls, flams, three- and four-stroke ruffs. Primary exercises. Harr, Book I and II. Gardner, *Progressive Studies*, Book I. *1 + 1 h. c.*

205-206. Snare drum: rudiments, including flam taps, flam accents, flamacues, single, double, and triple paradiddles, half-drags, single drags. Exercises. Harr, Book II. Gardner, *Progressive Studies*, Book II. *1 + 1 h. c.*

305-306. Snare drum: Stone, *Stick Control*; Wilcoxon, *Modern Methods*; Gardner, *Progressive Studies*, Book III. —Mallet-played instruments (bells, xylophone, marimba, vibraharp): malleting, roll scales, arpeggios. Exercises; Peterson, *Rubank Elementary Method*. Graded violin, saxophone, and clarinet exercises. *1 + 1 h. c.*

405-406. For those who can qualify. *1 + 1 h. c.*

Theory, Composition, History, and Literature of Music

103-104. THEORY I. A unified course of study consisting of part-writing, ear-training, sight singing, and keyboard harmony. Harmony-chord structures; diatonic triads, triad forms, chord progressions, simple cadences, harmonization of melodies; uses of inversions, sequences, open harmony, non-harmonic tones, the dominant seventh chord, dominant ninth, and modulation to nearly-related keys; application of materials to simple compositions. Harmonic analysis of simple compositions. Harmonic ear-training and keyboard practice: exercises in singing, playing, dictation, and notation; special attention to memorization of the tonal effects of chords and their progression. Solfeggio and sight singing; melodic reading and dictation; use of syllables; study of meter and rhythm; development of reading skill. Meets five hours a week. Prereq.: Music 109 with grade of C or better, or passing grade in entrance examination in theory. *4 + 4 h. c.*

109. FUNDAMENTALS OF MUSIC. A comprehensive introduction to the theoretical factors of music, including staffs, clefs, key signatures, rhythms, intervals, and chords. Simple exercises in sight singing and ear-training. *3 h. c.*

201, 202. INTRODUCTION TO THE LISTENER'S WORLD OF MUSIC. Designed to promote the cultural growth of the non-music student by helping him to develop an intelligent appreciation of the art of music. Illustrated lectures on musical forms, comparisons of compositional styles, and discussions of the chief developments in the history of music, amplified through assigned readings and extensive listening. Open to all students of the college. No prior training in music is required. Fee: $3.00 each semester. *2 + 2 h. c.*

203-204. THEORY II. Continuation of Music 103-104. Study of diminished and dominant seventh chords, augmented sixth chords, modulation to remote keys, and compositions in smaller forms. Ear-training, sight singing, and keyboard harmony, correlated with theoretical work in harmony. Meets five hours a week. Prereq.: Music 103-104 with grade of C or better. *4 + 4 h. c.*

205-206. ACOUSTICS OF MUSIC. The nature of vibrations and sound waves. Sources of musical sounds: strings, air columns, percussion, voice. Scales, intervals, and temperament. Acoustics of rooms. Recording, reproduction, and synthesis of sound. Designed especially for music majors. Fee: $2.00 each semester. *2 + 2 h. c.*

301-302. SIGHT SINGING AND EAR-TRAINING I. Two-part sight-singing exercises on modal basis; three-part exercises for soprano, alto, and baritone. Melodic dictation: difficult diatonic skips and chromatic tones in both major and minor keys and in treble, bass, tenor, and alto clefs. Rhythmic dictation: phrase, irregular phrase, period form, major and minor keys, bass and treble clefs, and two-part exercises using the bass and treble clefs, and two-part exercises using the bass and treble clefs combined, with time and key signatures indicated by the student. Intervals: quality, consecutive intervals in bass and treble clefs, major and minor keys with chromatic tones, two-part intervals combining bass and treble clefs. Chords: quality; chord progressions introducing all the diatonic seventh chords and chromatic triads in addition to the chords already studied. Two recitations a week. *1 + 1 h. c.*

307-308. SURVEY OF MUSIC LITERATURE. A psychological and aesthetic approach to listening to music, with discussion of the problems of listening. The first semester includes a study of the elements of music and the fundamental principles of analysis. The second semester deals with form, from the simpler da capo to the larger and more complex forms. Lectures, outside reading, scores, and representative recordings. Fee: $3.00 each semester. *2 + 2 h. c.*

305-306. HISTORY OF MUSIC. A study of music from earliest times to the present, with special reference to the relation of the history of music to that of the other arts and to the political and religious hisory of the corresponding period. Fee: $1.00 each semester. *2 + 2 h. c.*

327-328. FORM AND ANALYSIS. A study of musical form, beginning with the phrase and continuing through the song form to the rondo forms and sonata allegro. *2 + 2 h. c.*

335. COUNTERPOINT I. A study of the medieval modes and vocal polyphony, with emphasis on the works of Palestrina and other sixteenth-century composers. *3 h. c.*

336. COUNTERPOINT II. A study of eighteenth-century counterpoint, with emphasis on the style of J. S. Bach. *3 h. c.*

401-402. SIGHT SINGING AND EAR-TRAINING II. Three- and four-part sight-singing exercises for soprano, alto, tenor, and bass voices. Melodic dictation of maximum difficulty in all clefs and keys. Rhythmic dictation: phrase, irregular phrase, and period form exercises in two parts using bass and treble clefs combined, with time and key signatures indicated by the student. Intervals of maximum difficulty introducing modulation to nearly-related and remote keys. Chord progressions using all the diatonic and chromatic chords with modulations to nearly-related and remote keys. Two recitations a week. *1 + 1 h. c*

409-410. ORCHESTRATION. A study of the instruments of the modern orchestra, their technic, and their tone color, individually and in combination. Writing and arranging for them singly, in groups, and in full score. *2 + 2 h. c.*

421-422. COMPOSITION I. A study of the phrase and section leading to the two- and three-part forms, theme and variations, and sonatina. As a corollary, the student composes in these forms for piano, alone or in combination with some other instrument or voice. For those working toward a major in composition. *2 + 2 h. c.*

427-428. SYMPHONIC LITERATURE. The historical development of the symphony from its beginning to the present. Symphonic poems, suites, overtures, and miscellaneous compositions for the modern orchestra. Fee: $3.00 each semester. *2 + 2 h. c.*

429. CANON AND FUGUE. Double counterpoint; instrumental and vocal canon. Analysis of the fugues in Bach's *Well-Tempered Clavichord*. Writing of two-, three-, or four-part fugues. Prereq.: Music 336. *2 h. c.*

430. MODERN HARMONY. A study of harmonic trends in modern music, including polytonality, atonality, and other factors. Prereq.: senior standing, with major in music. *2 h. c.*

431-432. COMPOSITION II. A continuation of Composition I. Writing for the string quartet and larger instrumental groups in the sonata allegro, overture, symphonic poem, rhapsody, and rondo designs. *2 + 2 h. c.*

433-434. PEDAGOGY OF THEORY. The methods, materials, and special problems in the teaching of theory. *2 + 2 h. c.*

Sacred Music

361. HYMNOLOGY. The history of the hymn and hymn tune; types of hymns and their uses; analysis and interpretation of hymns; evaluation of standard hymnals. *2 h. c.*

362. GREGORIAN CHANT. The practical and artistic aspects of Gregorian chant in general choir work, the fundamentals of Gregorian rhythm, and authentic and plagal modes and notation. *2 h. c.*

363-364. JUNIOR AND SENIOR CHOIR METHODS. Organization, methods, child psychology, the child voice, and materials suitable for choirs. The second semester deals with the organization and motivation of the volunteer choir; achieving balance, blend, intonation; interpretation of choral literature, program building, and methods; psychology in rehearsal. *2 + 2 h. c.*

461. HISTORY OF SACRED MUSIC. The development of great religious music from earliest times to the present, with a study of the Jewish and Christian liturgies and their music, and the Church Year. *2 h. c.*

463-464. CHORAL LITERATURE. The study and interpretation of the standard oratorios, with emphasis on solos, choruses, and accompaniment. A practical course for the singer, organist, and choirmaster. Representative oratorios covered are from the Baroque, Classic, Romantic, and Modern periods. *2 + 2 h. c.*

465. SERVICE-PLAYING AND EXTEMPORIZATION. The fundamentals of improvisation, modulation, and transposition. Service-playing of hymns, anthems, and solos. *2 h. c.*

Music Education

121. INTRODUCTION TO MUSIC, FOR ELEMENTARY TEACHERS. Fundamental knowledge of the problems of notation and development of skill in sight singing and ear-training. *2 h. c.*

221. MUSIC LITERATURE AND APPRECIATION, FOR ELEMENTARY TEACHERS. A general orientation course to meet the needs

of the classroom teacher and the average music lover, with emphasis on the human values of music and its relationship to art, literature, geography, history, and other curricular interests. Prereq.: Music 121. *2 h. c.*

225-226. WOODWIND METHODS. Each student selects a woodwind instrument, which he learns to play as well as possible during the time allotted. As soon as enough progress has been made in playing the instrument chosen, other instruments of the woodwind group may be selected and studied. The problems underlying the teaching of these instruments are kept constantly before the class. Meets two hours a week. Fee: $2.00 each semester. *1 + 1 h. c.*

311-312. CLASS VOICE METHODS. Fundamentals of correct voice production. Methods of conducting voice classes, glee clubs, and choirs, with a survey and evaluation of materials. Meets two hours a week. *1 + 1 h. c.*

315-316. MUSIC IN THE FIRST SIX GRADES. General methods of teaching public school music in the first six grades. A study of rote songs and rhythmic and tonal problems, and analysis of student vocal problems in successive years, with demonstration of methods used in elementary grades. *2 + 2 h. c.*

318. PERCUSSION METHODS. Like Music 225-226, but for percussion instruments. Meets two hours a week. Fee: $2.00. *1 h c.*

319-320. CONDUCTING. A practical course in conducting that stresses baton technique, interpretation, and leadership. Interpretative studies are in chorals, anthems, part-songs, opera, and symphony. Meets two hours a week. *1 + 1 h. c.*

321. MUSIC EDUCATION FOR ELEMENTARY TEACHERS. A study of the child voice and its care. Rote songs, materials for rhythmic expression and listening, and the teaching skills and methods which the classroom teacher needs to work effectively under supervision. Prereq.: Music 221. *2 h. c.*

325-326. STRING METHODS. Like Music 225-226, but for string instruments. Meets two hours a week. Fee: $2.00 each semester. *1 + 1 h. c.*

329-330. BRASS METHODS. Like Music 225-226, but for brass instruments. Meets two hours a week. Fee: $2.00 each semester. *1 + 1 h c.*

403, 404. CHORAL CONDUCTING AND SCORE-READING. The organization and conducting of choral groups. Practical work with chorus. Practice in score reading. Prereq.: Music 319-320. *1 + 1 h. c.*

405, 406. INSTRUMENTAL CONDUCTING AND SCORE-READING. The organization and conducting of instrumental groups. Practical work with orchestra and band. Practice in score reading. Prereq.: Music 319-320. *1 + 1 h. c.*

411-412. JUNIOR AND SENIOR HIGH SCHOOL METHODS. Classification, problems, materials, methods, organization, and management. Prereq.: Music 311-312. *2 + 2 h. c.*

417. INSTRUMENTAL PROBLEMS. Methods of organizing and conducting instrumental classes, bands, and orchestras in the public schools, with a survey of materials. *2 h. c.*

419. BAND ORGANIZATION, DRUM MAJORING, AND FIELD TECHNIQUE. Organizing and conducting concert and military bands. Materials, seating plans, marching formations, balanced instrumentation, preparation for rehearsals, and problems of conducting. Opportunity for study and practical experience in drum majoring, with emphasis on military baton signals, field techniques, and drum figures. *2 h c.*

The School of Law

COMMITTEE ON THE SCHOOL OF LAW

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GENERAL INFORMATION

Objectives and Methods of Instruction

The School of Law has the following objectives: to familiarize the student with the history of our laws and institutions; to study the rules of law, their development, and the reasons for their existence; to teach the student the fundamental rules and principles of law and to apply them to actual cases; to develop the ability for legal research; to inculcate legal ethics and the professional point of view; and to prepare the student for the practice of law.

The system of instruction is the case method. Cases that have actually been decided are used as texts. From an analytical study of each case the student determines the operative facts and the rule of law upon which the decision has been based and finds the governing principles of law by the inductive method of reasoning.

Thus the student learns to discriminate between the material and the immaterial; to weigh and estimate relative legal values; to discover fallacies in reasoning; and to express his own conclusions clearly and concisely.

The Academic Year

The School of Law operates on the quarter plan. The quarters are designated as fall, winter, spring, and summer. Four quarters constitute the school's year; the work of the summer quarter is not optional.

Libraries

The law collection in the college library contains more than 12,000 volumes. Of those added in recent years, several hundred have been made available through a special arrangement with the Mahoning Law Library Association.

Faculty and students of the School of Law are privileged to use the library of the Mahoning Law Library Association, in Mahoning County Courthouse, and members of the association may use the law collection of the college.

The Gessner Law Club

The Gessner Law Club is a voluntary organization of students and alumni. Its program includes regular monthly meetings and a series of lectures by visiting speakers and specialists in various fields of law. All students must attend the lectures, without credit (see page 247).

Prize

The Land Title Guaranty and Trust Company of Youngstown awards annually a prize of $100 to the student making the highest grade in the subject of real property based on examinations in the courses Real Property I, II, and III.

Tuition and Fees

See pages 79-86.

Admission

Normally, new students are admitted at the beginning of the fall quarter only. The policy has been to admit about thirty students to the first-year class.

The minimum requirements for admission to the School of Law are 90 semester hours of undergraduate credit*. This

*Exclusive of non-academic courses (orientation, required health and physical education courses, and music ensemble courses open to all students).

is in accordance with a resolution adopted by the American Bar Association, effective September 1952.

An applicant may expect to be given preference in the following order:

1. If he is a graduate of an accredited college.

2. If he has qualified under the combined course leading to the degrees of Bachelor of Arts and Bachelor of Laws (see page 96). The student planning to enter the law school under the combined course should select his undergraduate subjects to meet the requirements for the Bachelor of Arts degree.

3. If he presents not less than 90 semester hours of undergraduate credit and is of high scholastic standing.

Each applicant must take the Law Aptitude Test, the results of which are used for guidance purposes. The applicant makes arrangements for the test at the Testing Office, after his application has been approved by the dean or assistant dean.

Application for admission to the law school must be made on a form obtainable at the office of the Registrar of Youngstown College, and must be filed in the same office by August 10 for the ensuing year. If approved by the dean of the School of Law, the application is referred to the Committee on Admissions, and the applicant must appear personally before the committee, which has final authority over admissions.

Admission to Advanced Standing

Advanced standing will be given only on the basis of credits earned in residence in Ohio law schools which are members in good standing of the League of Ohio Law Schools, or in law schools outside Ohio which are approved by the American Bar Association or are members of the American Association of Law Schools.

A student entering from another law school will be admitted only upon presentation of a letter of recommendation from the dean of the school from which he is transferring.

Attendance, Examinations, and Grades

Attendance. The right to take examinations is conditioned upon regular attendance in classes.

Examinations. Written examinations are given at the conclusion of each subject. A student who is frequently unprepared or absent in any course, or whose work is otherwise of low grade, may be denied the privilege of taking the examination in that course.

Grades and Grade Requirements. The School of Law follows the grading system used in the rest of Youngstown College (see pages 74 ff.). A student must have a point average of 1.0 or better to graduate.

The law student normally enrolls for two subjects each quarter. Failure in one subject places him on probation. Failure in both subjects results in his exclusion from the law school. A student whose point average for any quarter falls below 1.0 may be excluded from the school by action of the dean in consultation with the faculty. A student whose point average falls below 1.0 for any school year is automatically excluded from the school. No re-examination is given for a subject failed; the student must repeat the subject if he is eligible to continue in school.

Incomplete Work. If a student is unable to take an examination with his class because of illness or for any other unavoidable reason, he must complete the examination within the first quarter after his return or repeat the course.

The Student Load

Two subjects, or four semester hours, are the normal schedule. A student who has completed the first year with a grade average of B or better may thereafter schedule a third subject as an elective, if he has the approval of the faculty.

Times of Classes

A student carrying the normal load attends classes two evenings a week, usually Monday and Wednesday, from 7 to 10 o'clock. Third subjects are offered during certain quarters on Thursday evening from 7 to 10 o'clock.

Requirements for the Bar Examination

Every law student upon enrolling in the School of Law should ask for an instruction sheet regarding admission to the bar. The candidate must have been a legal resident of Ohio for

the year immediately preceding his taking the bar examination. Other important information is included on the instruction sheet, and each entering law student should study it carefully so that he may plan to fulfill all requirements.

CURRICULUMS

Suggested Pre-Law Curriculum

The student should note that htis curriculum is suggested, not required, and should consult with his adviser. For further information on the combined course leading to the degrees of Bachelor of Arts and Bachelor of Laws, see pages 64 and 96-97.

First Year	Hrs.
‡Accounting 201-202, or History 105, 106	6
†Biology or chemistry	8
*Communication 105-106	6
**Foreign language (or elective)	6
Social Science 101 and 102	6
Physical Education (activity)	1
Orientation 100	Credit
	33

Second Year	Hrs.
Communication 107	3
**Foreign language (or elective)	6
History 201 and 202	6
History 215, 216	6
Political Science 201, 202, or Accounting 201-202	6
Psychology 201	3
Physical Education 107 and 108	2
Physical Education (activity)	1
	33

Third Year	Hrs.
English or American literature	3
History, political science, sociology, economics, accounting (in any selection or combination)	18
Mathematics or science	3
Philosophy and Religion elective, or Humanities 401 or 402	3
Elective (Upper Division)	3
	30

*English 101-102 and Speech and Dramatics 115, 116, totaling 10 hours, may be substituted for Communication 105-106-107.

**Foreign language requirements are explained on pages 97-98.

†Eight hours of biology can not be completed in two semesters; the student electing it must rearrange this curriculum slightly, and should consult his adviser.

‡The law student with less than six hours of accounting in his undergraduate work must take the accounting course offered in the law school. (See the paragraph on electives, below.)

Curriculum for the Degree of Bachelor of Laws

To receive the degree of Bachelor of Laws, a student must have credit for 78 semester hours, with a point average (see page 76) of not less than 1.0, in the following courses:

First Year

Civil Procedure	4 hrs.	Personal Property	2 hrs.
Contracts	6 hrs.	Torts	4 hrs.
Legal Bibliography	2 hrs.		

Second Year

Agency	2 hrs.	Real Property III	2 hrs.
Criminal Law	2 hrs.	Sales	2 hrs.
Negotiable Instruments	2 hrs.	Torts	2 hrs.
Real Property I	2 hrs.	*Accounting	2 hrs.
Real Property II	2 hrs.		

Third Year

Equity	5 hrs.	Trusts	2 hrs.
Evidence	2 hrs.	*Insurance	2 hrs.
Legal Ethics	1 hr.	*Taxation	2 hrs.
Private Corporations	2 hrs.		

Fourth Year

Conflict of Laws	2 hrs.	Pleading and Practice	4 hrs.
Constitutional Law	4 hrs.	Wills	4 hrs.
Partnership	2 hrs.	*Labor Law	2 hrs.

Fifth Year

Domestic Relations	2 hrs.	*Future Interests	2 hrs.
Quasi Contracts	2 hrs.	*Mortgages	2 hrs.
*Administrative Law	2 hrs.	*Muncipal Corporations	2 hrs.
*Creditors' Rights	2 hrs.	*Suretyship	2 hrs.

*Elective

Electives

Of the 78 semester hours needed for graduation, 66 are in required courses. For the other 12 hours the student may choose from the following courses: Accounting, Administrative Law, Creditors' Rights, Future Interests, Insurance, Labor Law, Mortgages, Municipal Corporations, Suretyship, Taxation. The Accounting course is required of any student who has not received credit for six hours of accounting as an undergraduate: it is prerequisite to the Private Corporations course.

Lectures

In addition to the regular curriculum, all students must attend the lectures arranged by the Gessner Law Club (page 243). No credit toward the degree is given for such attendance. The lectures pertain to the following subjects:

Labor Law	Problems of the Practice of Law
Jurisprudence	Taxation Practice and Procedure
Trial Practice	Federal Jurisdiction and Procedure
Administrative Law	Brief-making and Preparation of Cases
Probate Practice and Procedure	Drafting and Construction of Statutes

COURSES OF INSTRUCTION

Normally, each course is offered once a year. However, in view of abnormal enrollment conditions, courses will be offered as and when justified by enrollment.

The letters "h. c." stand for "(semester) hours of credit".

ACCOUNTING. Introduction to financial statements and bookkeeping, followed by critical examination of selected problems illustrating generally accepted accounting principles governing recognition of revenue, matching cost against appropriate revenues, reserves, capital and surplus transactions, and consolidation. No previous accounting is required. *2 h. c.*

ADMINISTRATIVE LAW. Federal and state judicial decisions, statutes, administrative rules and orders. *2 h. c.*

AGENCY. Distinction between law of principal and agent, and law of master and servant; formation of relation of principal and agent, by agreement, by ratification, by estoppel, and by necessity; termination of the relation by act of the parties and by operation of law; irrevocable agencies; obligations and duties of agent; torts and frauds of agents; admission and notice; contracts made by agent on behalf of his principal, and torts between agent and third parties. *2 h. c.*

CIVIL PROCEDURE. An introduction to the procedures involved in litigation, to give the beginning student an understanding of the judicial process and of the relationship between the adjective and the substantive law; the organization of the courts in England and in the United States; the forms of action at common law, and the effect of their abolition; the purposes and functions of pleadings, at common law and under codes, practice acts, and rules of court; the trial of an action at law; the functions of the jury and the extent of the court's control of the jury; the validity and effect of judgments, with special reference to the requirements of due process of law in the exercise of jurisdiction over person or property; the history of equity, and an outline of the proceedings in suits in equity; the enforcement and effect of decrees; the effect of merger of law and equity. Emphasis is laid throughout upon the fundamentals of procedure in the courts today. *4 h. c.*

CONFLICT OF LAWS. The legal principles governing the application of laws of different jurisdictions to a cause of action arising in one jurisdiction and enforced in another. Judgments, obligations, personal rights, property rights, and a general study of the subject. *2 h. c.*

CONSTITUTIONAL LAW. The general principles of delegation of governmental powers; due process; police power; taxation powers of state and federal governments; interstate commerce; unconstitutional laws generally. *4 h. c.*

CONTRACTS. Place of contract in our law; essentials of a valid contract; void, voidable, and unenforceable contract; offer and acceptance; Statute of Frauds; consideration; capacity to contract; mistake, misrepresentation, fraud, duress, and undue influence; legality of object; contracts for benefit of third person; assignment in the law of contract; impossibility as affecting contracts; breach of contract and its legal effect; discharge of contract. *6 h. c.*

CREDITORS' RIGHTS. Composition agreements, receiverships, assignments for benefit of creditors, and proceedings in bankruptcy. *2 h. c.*

CRIMINAL LAW. The general principles relating to crimes, and some of the essentials in criminal procedure. *2 h. c.*

DOMESTIC RELATIONS. Statutes and cases embracing the law of marriage, divorce, and alimony; property and contract rights of husband and wife; antenuptial and postnuptial agreements: actions by one spouse against the other; parent and child; guardian and ward; rights and liabilities of infants, care, custody, and control of infants. *2 h. c.*

EQUITY. In two parts. Equity I embraces the origin, history, general principles, and scope of equity jurisprudence. Equity II deals with maxims and special heads of equity jurisprudence, such as rescission, reformation, and cancellation; specific performance; injunction; receivers; estoppel; election; subrogation; equitable remedies. *5 h. c.*

EVIDENCE. Reasons for and the rules of admission and exclusion of proffered evidence; development of rules of evidence; introduction of evidence; objections to evidence; rulings upon evidence; exceptions to rulings, making or protecting a record in the trial court for reviewing courts, and courts of last resort. *4 h. c.*

FUTURE INTERESTS. Conditions, reversions, remainders, and conditional limitations; Rule in Shelley's Case; future interests in personalty; powers; rules against perpetuities. *2 h. c*

INSURANCE. Fire, life, and accident insurance, with respect to: insurable interests; concealment; misrepresentation; warranties; other causes of invalidity of contract; amount of recovery; subrogation; conditions; waiver; estoppel; election and powers of agents; assignees and beneficiaries. *2 h. c.*

LABOR LAW. The historic background of the law relating to labor relations; the development and modern legal status of labor contracts; legality of strikes, lockouts, and boycotts; injunctions and damage suits; federal and state statutes. *2 h. c.*

LEGAL BIBLIOGRAPHY. The various types of law books, including statutes, court decisions, textbooks, encyclopedias, digests, etc. Methods of search are outlined and problems in legal research assigned. *2 h. c.*

LEGAL ETHICS. A study of the canons of legal ethics and cases demonstrating the application thereof. *1 h. c.*

MORTGAGES. Theory of mortgages in various jurisdictions, forms, debts, foreclosure, redemption, sales, writ of restitution, and recording requirements. *2 h. c.*

MUNICIPAL CORPORATIONS. Creation, control, powers, liabilities, and dissolution of municipal corporations; their charters, proceedings, officers, and agents; powers of agents; assignees and beneficiaries. *2 h. c.*

NEGOTIABLE INSTRUMENTS. Drawing forms of negotiable papers; formal requisites; acceptance, transfer, and extinguishment; obligation of parties; effect of delay and diligence; bills of exchange; notice and protest; forgery and alteration. Special attention is given to the uniform negotiable instrument law and the judicial construction thereof. *2 h. c.*

PARTNERSHIP. The creation of partnership; the purpose for which a partnership may be formed; the advantages and disadvantages of a partnership; the incidents of partnership; the rights and duties of partners toward each other; partnership property and the interest of partners and creditors therein; actions by and against the firm; dissolution of partnership; final accounting; limited partnerships and partnership associations. *2 h. c.*

PERSONAL PROPERTY. Distinction between real and personal property; gifts, bailments, common law and statutory liens; chattel mortgages and conditional sales contracts; pledges; fixtures and emblements. *2 h. c.*

PLEADING AND PRACTICE. Designed to prepare the student to state accurately and concisely a cause of action or defense. After a general review of the substantive law preceding, attention is given to forms of action and all pleadings. This is followed by a history of procedure and a careful study of the codes as exemplified by the statutes of New York and

Ohio and illustrated and clarified by the study of cases. To enable the student to feel at home in both office and courtroom, considerable attention is directed to trial procedure from the filing of a petition and issuing of summonses to the final determination of a case in an appellate court. *4 h. c.*

PRIVATE CORPORATIONS. Forms of business organizations; formation of corporations; the separate corporate entity; criminal and tort liability; directors and management; rights and liability on contracts; rights and powers of shareholders; issue of shares and subscriptions; underwriting and marketing of securities; stock structure; capital requirements and dividends; liability of shareholders, directors, and promoters; transfer of shares; fundamental changes in corporate organization; shareholders' actions. Prerequisite: the Accounting course, or its equivalent. *2 h. c.*

QUASI CONTRACTS. Nature of obligation; restitution at law for benefits conferred under mistake of fact or mistake of law; benefits conferred in misreliance upon contract invalid, illegal, unenforceable, or impossible of performance; benefits conferred through intervention in another's affairs; benefits conferred under constraint; restitution as alternative remedy for breach of contract and for tort. *2 h. c.*

REAL PROPERTY I. Introduction to the law of real property; the feudal system, theory of estates, non-possessory interests in land, joint ownership, disseizin, history of uses. Rights incidental to possession, including water rights in the land of another, including profit, easements, and licenses. *2 h. c.*

REAL PROPERTY III. Future interests; conditions, reversions, remainders, and conditional limitations; Rule in Shelley's Case; future interests in personalty; powers; rules against perpetuities. *2 h. c.*

SALES. Subject matter of sales, executory and executed sales, stoppage in transit, warranties, remedies for breach of warranties, fraud, Statute of Frauds, and the uniform commerical acts. *2 h. c.*

SURETYSHIP. Guaranty and suretyship defined and distinguished; application of the Statute of Frauds; commercial guaranty bonds to secure private obligations; bonds of public officers; subrogation, contribution, and indemnity; surety defenses. *2 h. c.*

TAXATION. A study of the legal principles of taxation; jurisdiction and constitutional limitations on the power to tax; the major types of modern taxation. *2 h. c.*

TORTS. Assault, battery, malicious prosecution, false imprisonment, negligence, deceit, slander, libel, and other disputes. *6 h. c.*

TRUSTS. Voluntary trusts, language and formalities necessary to the creation of a trust, resulting trusts, oral trusts, constructive trusts, executed and executory interests of trustees. *2 h. c.*

WILLS. Testamentary capacity; dispositions in contemplation of death; execution, revocation, republication, and revival of wills; descent; liability of heirs for debt; probate and administration; title and powers of executors and administrators; payment of debts; legacies and distributive shares. *4 h. c.*

NOTE—Subjects taught and hours of instruction, as well as admission requirements, tuition charges, grading system, case books, and all similar matters, may be changed at any time by the dean and the president.

DEGREES CONFERRED
June 4, 1952

Bachelor of Laws

Charles F. Axtmann, Jr. ..... Canfield
Marx Alton Barth ..... Youngstown
Sidney Irwin Franklin .... Youngstown
Rolles Edgar Graham ..... Warren
Paul F. Hrabko ..... Youngstown
Edward Gordon Johnson ..... Niles
Philip Alfred Morgante ... Youngstown
Paul Hendrix Smith ..... Youngstown

Bachelor of Arts

Madge Johnson Addeo .. Louisville, Miss.
Roslyn Mollie Bernstein ... Youngstown
Betty Lipply Boyer ..... Youngstown
Florence Brooks Brown .. Reno, Nevada
George Andrew Bukovan ..... Warren
Richard Eugene Byrnes ..... Warren
James Joseph Cappy ..... Youngstown
Susan Carol Carlyle ..... Youngstown
Joseph Nicholas Cavalier ..... Campbell
Frank Anthony Ciotola .... Farrell, Pa.
Carolyn Marie Clark ..... Warren
Robert Harold Clayton ... Youngstown
Douglas Parker Collins .... Youngstown
Guy Frank Damore ..... Youngstown
Elizabeth Jean Davies ..... Lowellville
Daniel Patrick DeGenova .... Struthers
Marion June Farnell ..... Youngstown
Barbara June Flint ..... Youngstown
Syretha Catherine French .. Youngstown
George David Glosner ..... Youngstown
Major John Graham, Jr.... Mercer, Pa.
John Leslie Gross ..... Youngstown
Otis Crinton Higgs ..... Youngstown
Robert John Hritzo ..... Youngstown
John Matthew Hudzik ..... Youngstown
Michael Andrew Kachmer . Youngstown
Hilda Joann Kerola ..... Youngstown
John Joseph Kerola ..... Youngstown
George William Lininger ..... Niles
James Albert Mahoney ... Youngstown
Joseph Edward Mahoney... Youngstown
Joseph Paul Matune ..... Campbell
James Arthur Mayhew, Jr.... Warren
William Eugene McCardell, Jr. ..... Youngstown
Russell Earl McQuiston ..... Hubbard
Alexander John Muntean ..... Niles
Charles Walter Oliver.... E. Palestine
Michael John Petrucci .... Youngstown
Stanley Petryk ..... Masury
Herbert Hoover Pridbam Youngstown
Chester Edward Rufh ..... Campbell
Leonard James Sainato .... Youngstown
Clyde Daniel Schoenfeld ... Youngstown
Emmett Clair Shaffer, Jr. .. Brookfield
Julius Joseph Shurilla ..... Poland
Edward Andrew Strauch .. Youngstown
Stephen Vardinna ..... Struthers
Raymond George Wagstrom ..... Youngstown
John Dennis Walsh ..... Sharon, Pa.
Mary Katherine Weichsel . Youngstown
Norman Eugene Williams .... Warren
Arthur Dale Wolfcale, Jr.. Youngstown
Justine Agnes Young... New Castle, Pa.

Bachelor of Science

Dominic Bosco ..... Youngstown
George Cataland ..... Campbell
John Robert Cleary ..... Youngstown
Robert DeWitt ..... Youngstown
Elmer Raymond Grandstaff. Youngstown
John Paul Kalla ..... Youngstown
William John Kasmer .... Youngstown
Vera Mchar ..... Youngstown

Bachelor of Science in Education

Anthony Joseph Accordino, Jr. ..... Youngstown
Lucille Andrews ..... Youngstown
Paul James Andrish ..... Youngstown
Paul Arvin ..... Youngstown
Richard Williams Baehler .. Youngstown
William Charles Barnes ..... Girard
Evelyn Freida Booth ..... Youngstown
Joseph Patrick Brahney... Youngstown
Harold H. Brooks ..... Hubbard
Annie Lee Brown ..... Youngstown
Loretta A. Carney ..... Struthers
Berniece S. Chain ..... Youngstown
Doris Elaine Davis ..... Youngstown
Joseph DeVincent ..... Youngstown
Evelyn Innes Downie ..... Youngstown
Cecil L. Duffett ..... Youngstown
Inis Tavenner Dustman ... Youngstown
John George Fatolitis ..... Campbell
Peter Guy Finamore ..... Youngstown
Elizabeth Ann Flick ..... Canfield
Louis H. Flickinger ..... Youngstown
William Edward Godward ..... Poland
Ralph Peter Goldston ..... Youngstown
William Hamilton Harris ... Boardman
Robert W. Hedland ..... Youngstown
Sister Marie Hughes ..... Youngstown
James Jarvis ..... Hubbard
Richard Morgan Jones ..... Sharon, Pa.
Samuel A. Loree ..... Youngstown

Carol June Lowry .....Struthers
Michael John Malys .....Lowellville
Konstantine Demetre Mamounis
.....Youngstown
Dominic L. Martin .....Youngstown
James Richard Matta .....Niles
Victor A. May .....New Springfield
Thomas George McAndrew. Youngstown
Neal F. McBride .....Niles
Frank James O'Connell .....Girard
Jean Ellen Pennock .....Youngstown
Earl J. Popovich .....Wheatland, Pa.
Michael Prokop .....Warren
Elizabeth D. Pyzick .....Youngstown
Cyril James Quarterson ...Sharon, Pa.
Anita Salanti .....Farrell, Pa.
Gertrude Patricia Sandusky...Campbell
Bette Louise Savage .....Youngstown
Paul Thomas Savka .....Hubbard
Alfred Joseph Scali .....Youngstown
Violet Eva Strabley .....Warren
Frances D. Stuber .....Warren
Gladys B. Swartz .....Youngstown
William R. Whan .....Poland
Anna Marie Wilson .....Girard
Joseph Leo Wilson .....Youngstown
Estelle Irene Winger .....Youngstown
Peggy Ann Yeaton .....Youngstown
Joseph Yurcho .....Struthers
Mary Elizabeth Zimmerman .....Niles
Michael Anthony Zockle .....Campbell

Bachelor of Science in Business Administration

Gust Achladis .....Warren
Glenn Roy Allen .....Youngstown
William Edmund Alsnauer .....
.....Sharpsville, Pa.
Harry Altman .....Youngstown
Edward Deane Baehler..Morrisville, Pa.
Howard Balogh .....Struthers
Donald James Baynes .....Youngstown
Robert William Betts .....Youngstown
Joseph Thomas Bohanes ...Sharon, Pa.
John L. Breckenridge .....Warren
Robert Wilbur Brill .....Youngstown
Stanley Brizoski .....Campbell
Henry Virgil Brock .....Youngstown
Lawrence Walter Bryer ....Lowellville
Andrew Francis Burosky ..Youngstown
Everette Earle Byers .....Youngstown
Edward Patrick Cerimele ....Struthers
Alex Christoff .....Youngstown
Michael Mathey Cica .....Farrell, Pa.
Harley Booth Comstock ...Sharon, Pa.
Jack Leonard Conlan .....Warren
Thomas M. Cooksey, Jr. ...Youngstown
Charles Robert Corey .....Youngstown
Robert Kenneth Crane ....Youngstown
Allen Crouch .....Youngstown
Robert Earl Davidson.....Sharon, Pa.
Richard Charles Davis .....Poland
James William Dunn .....Youngstown
Paul Myron Dykes .....Youngstown
Edward Gerald Fannon ....Youngstown
Claude Ernest Farmer .....Struthers
Charles William Ferguson .....
.....Sharpsville, Pa.
John Stanley Franklin.....Sharon, Pa.
Pat H. Frazzini .....Youngstown
Mary Ellen Frye .....Hubbard
Joseph Charles Galich .....Campbell
John Carroll Gibson .....Warren
Robert H. Gill .....Sharon ,Pa.
Randall Dale Goehring .....Canfield
Joseph John Gorski, Jr. .....Hubbard
Michael Vincent Granitto..Youngstown
Joseph Bernard Green..New Castle, Pa.
Edward A. Grenga .....Youngstown
William J .Grover .....Youngstown
John Raymond Hallden ...Youngstown
Charles James Hanna ....Youngstown
C. James Henry .....East Palestine
George Hershey .....Youngstown
George Stephen Hurtuk .....Struthers
Thomas George Kachulis...Sharon, Pa.
Doris Jean Kibler .....Warren
Edmund C. Kochis ....Greeenville, Pa.
Valent Bernard Kozusko .....Struthers
Warren Edward Lawrence .....Niles
Kathleen Teresa Long .....Warren
Mark Markos .....Youngstown
Stan L. Martin .....Youngstown
James A. Marucci .....Campbell
John Franklin McCaughey .....Poland
Oscar Edward McCorkle, Jr. ...Girard
Robert Charles McFarland.Youngstown
John Joseph McCoogan....Youngstown
Kenneth Leroy McMillin.North Jackson
Richard Elton Mowery .....Poland
Robert Carroll Mullaly ....Youngstown
Elton Charles Neumann...Youngstown
James Nestasie .....Hillsville, Pa.
Raymond Ord Nye .....Poland
John Pacinda .....Farrell, Pa.
James Joseph Perry .....Youngstown
Joseph Paul Pesut .....Youngstown
William Sankey Pitzer .....
.....New Wilmington, Pa.
Thomas Cyril Puhalla .....Youngstown
William Francis Quinn ....Youngstown
Elmer Ragghanti .....Youngstown
Charles Edward Rhodes .....Hubbard
William J. Richards .....Sharon, Pa.
John L. Sheetz .....Youngstown
Lawrence Allen Shakley .....Warren
James William Simeo .....Youngstown
Philip Arnold Snyder .....Youngstown
Ralph James Stokes....New Castle, Pa.
Donald Lloyd Streets .....Canfield
Frank J. Talbot .....Youngstown
Milan Tatalovich .....Brookfield

Paul Richard Tipper .....Youngstown
Albert George Tobias .....Sharon, Pa.
Kenneth William Totten, Jr....Warren
Paul Roger Ulam .....Brookfield
Wilbur Richard Valentine..Youngstown
Frank Joseph Vross, Jr....Youngstown
Robert John Weisner .....Warren
Paul James Williams .....Youngstown
Max Wolansky .....Sharon, Pa.
George Edward Wood .....Niles
James Richard Wright ....Youngstown
Joseph Michael Yasher.New Castle, Pa.
Anthony Joseph Zill .....Niles
Alice M. Zipay .....Sharon, Pa.
Charles Basil Zubyk .....Girard

Bachelor of Engineering

Charles A. Akins .....Warren
Steve Barna .....Youngstown
Walter E. Baron .....Sharon, Pa.
George Wendall Bevan..New Castle, Pa.
Andrew Clifford Blake ....Youngstown
Jerome Bloomberg .....Youngstown
George William Bregar ...Youngstown
Frederick Wayne Breslyn, Jr. ...
.....Youngstown
William Edward Breslyn...Youngstown
Robert Hill Clark, Jr. ....Youngstown
James Randall Dolvin .....Hubbard
James H. Donegan .....Niles
James Robert Duby .....Youngstown
Robert Laurn Fink .....Youngstown
Michael Fitas .....Campbell
Thomas Miller Ford .....Farrell, Pa.
James Earl Forsythe .....Girard
Richard M. Hannis .....Youngstown
David McKean Harl .....Warren
Theodore Joseph Herman..Youngstown
John Paul Hollis .....Youngstown
Leslie James Irvine .....Sharon, Pa.
William Glyndwr Jones....Sharon, Pa.
Ted Kaszubowski ....Youngstown
Edward Joseph Kelch .....Sharon, Pa.
James Wayne Kelly .....Poland
Daniel E. King .....North Jackson
M. Edward Komp .....Youngstown
Joseph John Labozan .....Youngstown
Peter Lackwasky ....Hubbard
Arthur Glen Lambrecht ...Sharon, Pa.
Herbert Stanley Lampe, Jr..Youngstown
William C. Lane .....Youngstown
John H. Lehman .....Canfield
Lawrence D. Lesh ....New Castle, Pa.
Edwin Rolland MacDougall.Youngstown
Dudley James Masters.....Youngstown
Arthur Wilbert McBride...Youngstown
Anthony Mediate .....Struthers
Albert William Mercer .....Struthers
Joseph David Nastasy .....Sharon, Pa.
George Paul Pantelas .....Warren
Thomas William Pfahles .....
.....New Castle, Pa.
George A. Plevniak .....Youngstown
Harry Edward Ponikvar .....Warren
Edward T. Price .....Girard
William G. Price .....Hubbard
Francis Leo Ryan .....Sharon, Pa.
Howard W. Sass .....Bristolville
William Edwin Schnitgen .....Warren
James J. Stork .....Wellsville
Eliseo Tareshawty .....Youngstown
Anthony Francis Thomas..Youngstown
Frank Unick .....Struthers
Thomas Ivan Volk .....Youngstown
Alex Carl Walczak.....Youngstown
Arthur Winfield Whiteside.Youngstown
Frank Matt Zuzga .....Campbell

Bachelor of Music

Gordon William Brooks .....Niles
Anthony Buonpane.....New Castle, Pa.
Julie Karavara .....Youngstown
Thomas A. Kennedy .....Girard
Sister Mary Cecilia Morano ...
.....Youngstown
James Edward Penn .....Youngstown
Dominick Joseph Perell....Farrell, Pa.
James Earl Ramsey .....Poland
Stephen William Safran ...Youngstown
Dahlia J. Vitucci .....Youngstown

TITLE CONFERRED
June 4, 1952

Associate in Business Administration

John E. Beck .....Youngstown
Helen Dolores Bryan .....Petersburg
Rocco Phillip Cannatti ....Youngstown
Charles Howell Conway ...Youngstown
Esther Marie Delisio.....Lowellville
Nancy Ann Ferguson .....Youngstown
Donald C. Getz .....Canfield
Elmer William Jenkins ....Sharon, Pa.

Morris A. Means .....Sharon, Pa.
Harry Edward Moon .....Sharon, Pa.
Carole Ruth Owen .....Girard
Stella Elaine Puscher .....Youngstown
Lou Ann Reeder .....Hubbard
Findley Robert Sankey..New Castle, Pa.
Mildred Emily Stefanick...Sharon, Pa.
Calvin L. Vermeire .....Farrell, Pa.

DEGREES CONFERRED

August 16, 1952

Bachelor of Laws

John H. Davidson .....Youngstown
Mervin Jack Heselov .....Youngstown
John J. Moran .....Hubbard

Bachelor of Arts

Anne Marie Adamosky ....Youngstown
Cameron Reynolds Argetsinger ... .Youngstown
William Elmer Clark, Jr. .....Niles
Charles Benny Cross .....Youngstown
Claude Melvin Mayfield, Jr. Youngstown
William LaVerne Pegues..Youngstown
Michael John Perlick .....Youngstown
David Lee Quinby .....Sharon, Pa.
Robert Leroy Whittaker.Mineral Ridge
Albert Yurko .....Struthers

Bachelor of Science

Mildred June Hilliard .....Youngstown
Anthony James Kubilis, Jr. Youngstown
Samuel Louis Magni .....Youngstown
Victor Hannibal Monzon ....Guatemala City, Guatemala
Rose Joan Nastas ....Ellwood City, Pa.
Michael Robert Tirpak .....Campbell
Anne Vonovick .....Youngstown
Jean Hogg Welsh .....Poland

Bachelor of Science in Education

Mary Teresa Bacon .....Youngstown
Florence Blana .....Youngstown
John Junior Boliver.....Greenville, Pa.
David Alfred Borrow .....Lisbon
Betty Jane Camuso .....Hubbard
Ann Marie Centofanti.....Struthers
James Wadell Cook ...New Castle, Pa.
Irena M. Craver .....Ycungstown
Opal Myrl Davies .....Warren
Mary Elizabeth Feicht .....Canfield
Vera Elizabeth Fraysier....Columbiana
George William Gales, Jr. .....Niles
Kathryn Marie Gintert ....Youngstown
Sara McClelland Grove .....Warren
William Hall .....Youngstown
Wilson Shannon Hamilton.Youngstown
Twila Elizabeth Hochmann.....Lisbon
Maurice E. Jones .....Diamond
David F. Joseph .....Farrell, Pa.
Virginia Helen Kreidler .....Poland
Marjorie Lehman .....Columbiana
Sam P. Maiorca .....Niles
Sister Gabriel Manley .....Youngstown
Alice K. McCafferty .....Warren
Dorothy A. Miller .....McDonald
Marvin A. Naylor, Sr. ....Youngstown
Donald Julius Peters .....Masury
Virginia Esther Pitts .....Youngstown
Mary Lou Rawson .....Youngstown
Christine Elk Reble .....Hubbard
Sara Beatrice Rosenberg ...Farrell, Pa.
Faye Lingo Rufener .....Niles
Eileen I. Russo .....Youngstown
Lillian Jean Salem .....Youngstown
Dale Robert Sheely...New Springfield
Mary Ewing Soller .....Youngstown
Larry William Steiner .....Poland
Herbert Griffith Thomas .....Warren
Nellie L. Thorne .....Lisbon
Lena Carole Vasconi .....Sharon, Pa.
Dolores Eileen Williams.North Jackson
Isabel Wilson .....Youngstown

Bachelor of Science in Business Administration

Zack Brandes, Jr. ..... Ellwood City, Pa.
William Henry Brigham, Jr. ..... Youngstown
Robert A. Brook ..... Youngstown
Budd Ritter Brothers ..... Youngstown
Earl Perry Brown ..... New Castle, Pa.
Joseph Victor Ciavarella ..... Youngstown
Arnold Collins ..... Girard
Joseph Charles Conroy ..... Youngstown
Leroy James Crossley ..... Poland
Jack Jardine Crytzer ..... Youngstown
Richard A. Flore ..... Youngstown
Cyril Furman ..... Youngstown
George Galanses ..... Campbell
James Genos ..... Warren
Thomas Robert Higley ..... Girard
John P. Jones ..... Youngstown
Karl Allison Kelly ..... Youngstown
Felix Joseph Kikel ..... Youngstown
Edward Harry Miller ..... New Castle, Pa.
John David Motok ..... Warren
Pete George Nicora ..... Warren
William P. O'Horo, Jr. ..... Youngstown
Steve Joseph Pachan ..... Farrell, Pa.
Stephen A. Pompura ..... Youngstown
Robert Lane Remaley ..... Youngstown
John Emil Roscoe ..... Sharon, Pa.
Felix Joseph Rutecki, Jr. ..... Lisbon
William Samol ..... Sharon, Pa.
Benjamin J. Santine ..... Youngstown
Donald C. Sawders ..... Niles
Edward L. Sellers ..... Youngstown
Michael Senoyuit, Jr. ..... Sharon, Pa.
John Simko, Jr. ..... Campbell
William Jesse Snyder ..... Sharon, Pa.
Phillip H. Staaf ..... Youngstown
John Joseph Stephens ..... Youngstown
Joseph Richard Warner ..... Youngstown

Bachelor of Engineering

John P. Brandozzi ..... Youngstown
Raymond A. Feranchak ..... Youngstown
Salvador Vincent Gurgiolo ..... New Castle, Pa.
Norbert Janusz ..... Youngstown
Henry Joseph Marik ..... Youngstown
Stanley Mika ..... Youngstown
Sandy Edward Monaco ..... Campbell
John Riley Smith ..... Youngstown
Robert Stoyanoff ..... New Castle, Pa.

TITLE CONFERRED
August 16, 1952

Associate in Business Administration

Charles Ora Kapp ..... Youngstown
Ethel Marie Kuthy ..... Hubbard
Marvin James Lowdermilk ..... Canfield
Richard Cleve Miller ..... East Claridon

HONORS AND AWARDS

for 1951-1952

YC Pins

Barbara June Flint
James Albert Mahoney
Emmett Clair Shaffer, Jr.
Bette Louise Savage

The Youngstown College Awards

For the best all-around student:

Bette Louise Savage

For scholarship in the humanities:

Barbara June Flint, *first*
John Secondo Barbero, *second*

For scholarship in English:

James Albert Mahoney, *first*
Marion June Farnell, *Second*

For scholarship in the social science sequence:

Emmett Clair Shaffer, Jr., *first*
Michael Patrick Lavery, *Second*

The Greek Prize

James Dewey Young

The Chi Omega Alumnae Award

(in the social sciences)

Syretha Catherine French

The Roberts Deliberating Club Award in the Social Sciences

Alexander John Muntean

The Scudder Award

(in chemistry)

Michael Robert Tirpak

The Student Council Purchase Prize

(in art)

Joseph Charles Dailey

The McCall Prize in Art

Lucille Heyman

The Sigma Kappa Phi Fraternity Scholastic Award

(in business administration)

(no award)

The Professional Engineers Award

(in memory of Louis A. Deesz)

Anthony Mediate

The American Society of Mechanical Engineers, Youngstown Section, Awards in Mechanical Engineering

George William Bregar
George Albert Plevniak
Leslie James Irvine

The Nathan Hale Chapter, Sons of the American Revolution, Awards

Advanced Course: Lieutenant Emmett Clair Shaffer, Jr.
Basic Course: Cadet Alfred Bernard Colson, Jr.

The Mahoning Chapter, Reserve Officers Association, R.O.T.C. Honor Awards

Advanced Course: Lieutenant Harlan Luzerne Doud
Basic Course: Cadet Joseph Mazur

The United States Anti-aircraft Association Medal

Cadet Joseph Hrecz

The Mahoning Chapter, Daughters of the American Revolution, Awards

General Excellence: Cadet Dean Alvah Boop, Jr.
Leadership: Cadet John Blase DeLeo

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ADDENDA ET CORRIGENDA

Additions

Page 35. To the paragraph beginning "Other classrooms", add: "South Hall is on Rayen Avenue east of Wick Avenue and houses the mathematics department."

Page 51. After the "Radio and Television Programs" paragraph, add:

"R. O. T. C. Rifle Team

The Youngstown College R. O. T. C. Rifle Team is a member of the Lake Erie Intercollegiate Rifle Conference and the National Rifle Association. It is a frequent participant in national and regional meets as well as in conference competition, and enjoys its share of success in these contests."

Page 52. After paragraph 8, add:

"The National Society of Pershing Rifles is an honorary society for the promotion and development of interest and proficiency in the basic course of the R. O. T. C. program. Company P, 1st Regiment, is established at Youngstown College."

Page 55. After the Scudder Award paragraph, add this paragraph:

"The Student Council Purchase Prize. Youngstown College Student Council offers a purchase prize of $50 to the winner in oils at the Annual Youngstown College Art Exhibition."

Page 57. Above the "Essay Contests" paragraph, add these paragraphs:

"The Corps of Cadets Awards. Medals are awarded annually by the professor of military science and tactics to R. O. T. C. cadets as follows:

"A silver medal is awarded to the Corps of Cadets squad leader whose squad is selected, through competitive drill, as the most proficient in squad drill.

"A silver medal is awarded to the first-year military science student who is selected, through competitive drill, as the most proficient freshman in individual drill, school of the soldier, and personal appearance."

Corrections

See following page.

Corrections

Page 6, under "James L. Wick, Jr.":
for "President" read "Chairman of the Board"

Page 9, opposite "Oliver Perry Cash": for "Music Education" read "Music"

Page 16, under "Donald Eugene Marcy":
for "Graduate study:" read "Ph. D.," (effective June 1953)

Page 37, line 3:
for "engineering" read "the engineering, mathematics, and physics"

Page 42, under "Social Opportunities", line 1:
for "offers its students" read "students are offered"

Page 44: for "Physical Education Program" read "Physical Development Program"

Page 49, under "Publications", paragraph on the Neon:
add "It is financed through the Neon Fee (see page 82)."

Page 53, page heading: for "General Information" read "Student Activities"

Page 57, page heading: for "General Information" read "Awards and Prizes"

Page 79, under "Tuition and Fees for One Term", line 8:
for "82 ff." read "82-83"

Page 93, under "Other departments":
add "Department of Health and Physical Education"
delete "Department of Physical Education"

Page 105, under "Chemistry", lines 2-4:
for "109 or 111, 110 or 112," read "100, 109, or 111; 110 or 112;"
for "421," read "421;"

Page 112, under "Education", paragraph 1, line 7:
for "printed" read "given in full or cross-referenced"

Page 148, paragraph 4, line 2: before "major" add "combined"

Page 168, last paragraph, line 2: before "physical" add "in health and"
" " , " " , line 4: before "physical" add "health and"

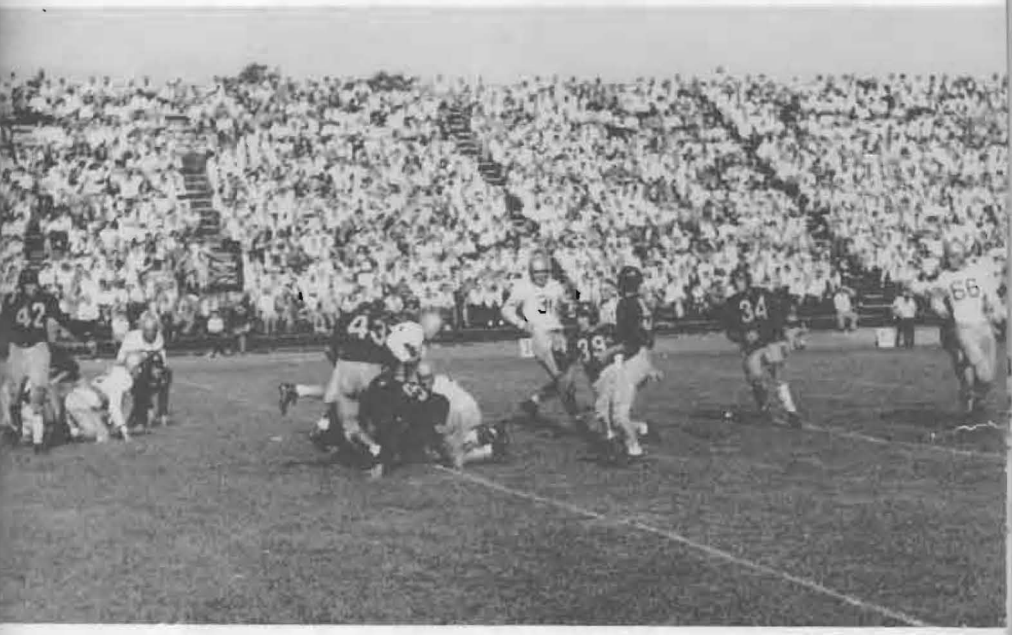
Page 208, under "Full-time Students", line 4:
before "student activities" add "the college yearbook and other"

FORMS OF BEQUEST

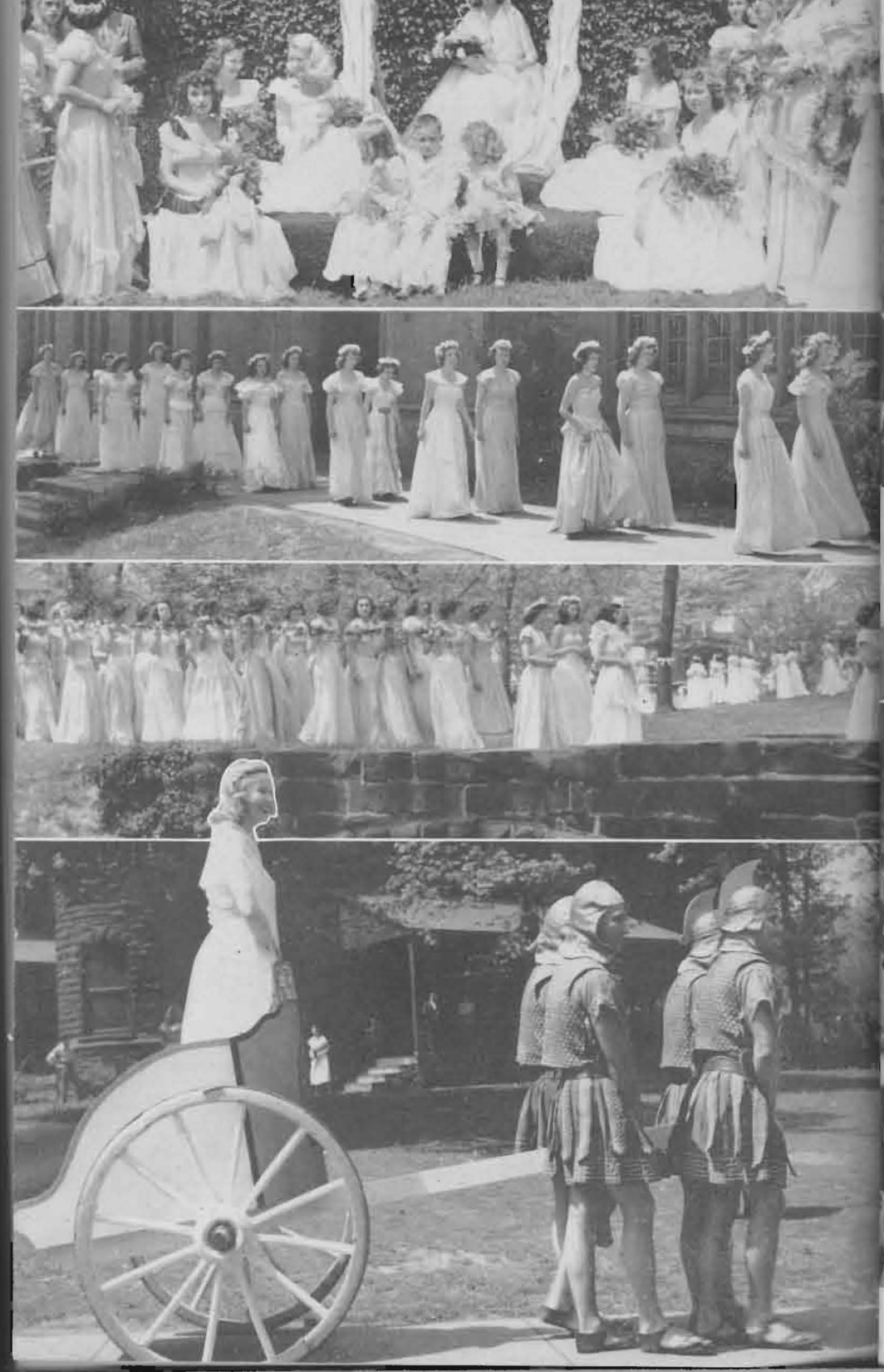
I give and bequeath to The Youngstown College, Youngstown, Ohio, the sum of $.....to be used by the Board of Trustees of said college for such purpose or purposes as they may deem appropriate.

I give and bequeath to The Youngstown College, Youngstown, Ohio, the sum of $.....to be used by the Board of Trustees of said college, the income therefrom to be used for the following purposes:

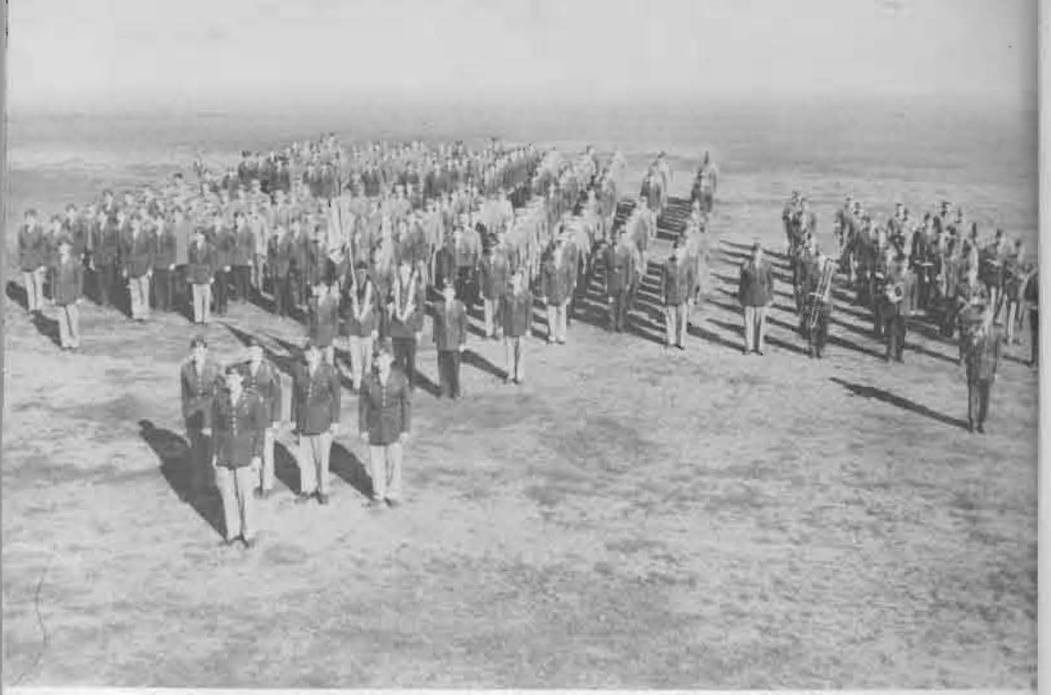
A Big Game



The Marching Band



The Annual May Fete and Prom



Corps of Cadets

Commencement at Stambaugh Auditorium

28386